

Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.

An Exploratory Study of the Strategic Marketing Practices of
ICT Firms in India

A thesis presented in partial fulfilment of the requirements for the Degree of

Doctor of Philosophy
in
Marketing

Massey University, Wellington,
New Zealand

Thelma Pauline Moses

2015

ABSTRACT

India is one of the fastest growing economies in the world. Even though the economic growth rate is attributed to tremendous progress across all industries, the information and communication sector (ICT) in particular holds significant promise. The rapid developments in this sector coupled with the country's efforts to capitalise on the ICT revolution have propelled India into the global arena as a leader in this sector.

Marketing is a crucial element for the success of all high technology firms, including ICT firms. Given the importance of ICT firms to the Indian economy and the importance of marketing for the success of these firms, there is a need to examine the marketing practices adopted by these firms and their influence on firm performance. In view of the limited research in this area, this study aims to address the gap in literature and intends to enhance the understanding of the marketing practices of the ICT firms in India.

This research seeks to answer the question: how do the marketing practices adopted by the ICT firms in India contribute to firm performance? In order to answer this question, a conceptual framework was developed based on extant review of related literature. An integrated approach was employed to develop this framework in which the marketing management perspective, relationship marketing perspective and social media were integrated. Data was collected through Web survey using structured questionnaires from the marketing decision makers in these ICT firms. Then the data was analysed using a range of statistical methods.

The analysis revealed a wide variety of marketing practices that are adopted by the ICT firms in India. Empirical evidence supports the emergence of social media as a new construct and the use of social media for marketing purposes. Social media has been embraced by the ICT firms in India as it is intertwined with relationship marketing and market research practices thereby supporting the marketing activities of these ICT firms. The results also brought to light unique product practices that appear to be exclusive to these firms.

An examination of the influence of the identified marketing practices on customer satisfaction and firm performance yielded significant results. Relationship marketing practices, product practices positioning practices and promotional practices significantly

influences firm performance; Relationship marketing practices, product practices positioning practices, targeting practices, social media practices and pricing practices have significant influence on customer satisfaction in the ICT firms in India. It is also evident that relationship marketing practices, product practices, targeting practices and social media practices have an indirect effect on firm performance through customer satisfaction in these firms.

The findings of this study contribute to theoretical and practical knowledge in the field of marketing in the ICT sector in India. The research is significant in that it identifies and documents industry-specific marketing practices that influence firm performance. It makes a contribution to the existing social media literature by enhancing the understanding of the use of social media by the ICT firms and clarifies the role of social media in relationship marketing and market research. The research also provides a framework that can guide an examination of the marketing practices of ICT firms in the context of other economies in the world.

ACKNOWLEDGEMENTS

I thank my beloved husband Moses and my two wonderful children, Cheryl and Johann for their consistent support and encouragement. You are a joy to me and I cherish every moment I live with you. Thank you, Moses for helping me with my work. I also thank my parents, my mother-in-law, my extended family and all of my friends for their prayerful support.

I would like to express my gratitude to my supervisors, Dr Raja Peter and Dr Barbara Crump for their excellent guidance, enthusiasm and prolonged patience. I offer my sincere appreciation for their dedicated involvement throughout the process and for all the help they provided during these years.

Above all, I thank my Lord and Saviour Jesus Christ. His grace was sufficient for me; His love sustained me; His favour surrounded me; His goodness and mercy over took me; His strength was made perfect in my weakness. To HIM be all the glory and honour.

TABLE OF CONTENTS

ABSTRACT	I
ACKNOWLEDGEMENTS	III
LIST OF TABLES	IX
LIST OF FIGURES	XI
CHAPTER ONE: INTRODUCTION TO THE STUDY	1
Background to the Research Study	2
ICT Sector Overview	2
ICT Sector in India	5
Marketing Scenario in India.....	8
High Technology Marketing.....	10
Marketing of high technology is different.	12
Different marketing environment requires different marketing strategies.....	14
Importance of marketing to high technology firms.	14
Need for the study of marketing practices of ICT firms.....	15
Research Question and Objectives	17
Significance of the Study	18
Organisation of the Dissertation	18
CHAPTER TWO: LITERATURE REVIEW	20
Theoretical Background	21
Historical Developments in Marketing	21
Neoclassical microeconomic theory.....	23
Period of formative marketing.....	24
Marketing management perspective.....	25
Relationship marketing theory.....	28
Approaches to Understanding Marketing Practices in Firms.....	31
Social Media	35
Strategic Marketing Practices and Firm Performance	39
Customer Satisfaction	41
Preliminary Conceptual Framework of the Strategic Marketing Practices of ICT Firms and their Influence on Firm Performance.	43
Social Media	44
Relationship Marketing.....	47
Market Research	50
Segmentation	53
Targeting.....	57
Differentiation.....	61

Positioning	65
Marketing Mix	68
Product mix.	69
Pricing mix.	72
Place mix.	75
Promotion mix.	77
Customer Satisfaction	79
Customer satisfaction and firm performance.	81
Firm Performance	82
Conclusion	84
CHAPTER THREE: RESEARCH DESIGN	85
Research Design.....	85
Data Collection Method	88
Questionnaire design.	88
Sampling design.	90
Survey method.....	91
Sources of errors in web surveys.....	92
Measurement and Scaling of Constructs.....	95
Measurement scales for Social Media practices.	97
Measurement scales for Relationship Marketing practices.	98
Measurement scales for Market Research practices.	99
Measurement scales for Segmentation practices.	100
Measurement scales for Targeting practices.....	100
Measurement scales for Differentiation practices.	101
Measurement scales for Positioning practices.	101
Measurement scales for Product practices.....	101
Measurement scales for Pricing practices.....	102
Measurement scales for Distribution practices.....	103
Measurement scales for Promotional practices.	103
Measurement scales for Customer Satisfaction.	104
Measurement scales for Firm Performance.	105
General questions.	105
Survey Implementation	105
Data Analysis	106
Ethical Issues	106
Conclusion	107
CHAPTER FOUR: RESULTS OF THE DESCRIPTIVE ANALYSIS	108
Descriptive Analysis.....	108
Social Media practices	109
Relationship Marketing practices	113
Market Research practices	117

Segmentation practices	120
Targeting practices.....	123
Differentiation Practices	125
Positioning practices	127
Product practices.....	128
Pricing practices.....	132
Distribution Practices.....	134
Promotion practices	136
Customer satisfaction.....	138
Firm Performance	141
General Information.....	143
Respondents' position in the organisation.	143
Respondents' Length of Service in the ICT sector.	144
Respondents' length of service in the current organisation.	145
Highest level of formal education of the respondents.	145
Ownership nature of the organisation.	145
Conclusion	146
CHAPTER FIVE: DATA ANALYSIS AND DISCUSSION OF RESULTS.....	147
Multivariate Data Analysis.....	147
Cleaning the Data	149
Identifying and handling missing data.....	149
Identifying and handling outliers.....	150
Normality.....	151
Factor Analysis	152
Key Terms and Statistics Associated with Factor Analysis	152
Variance.	152
Correlation.....	153
Correlation matrix.	153
Factor loadings.	153
Communality.....	153
Cronbach's alpha.....	154
Factor Analysis Model.....	154
Assumptions in Factor Analysis	155
Steps in Factor Analysis	156
Formulate the problem.	157
Construct the correlation matrix.	158
Determine the method of factor analysis.	158
Determine the number of factors.	159
Rotate factors.....	160
Interpret factors.	161
Calculate factor scores or summated scores	161
Determine the model fit.....	161
Results of the Exploratory Factor Analysis	162
Discussion of the EFA Results	172
Key findings from the results of the EFA.....	173
Social Media in Relationship Marketing practices.....	173
Social Media in Market Research practices.	174

Social Media practices	175
Unique Product practices	176
Average summated scores	178
Reliability and Validity	179
Reliability	179
Validity	180
Multiple Regression Analysis	182
Multiple Regression Model	183
Key Terms and Statistics in Multiple Regression Analysis	184
Predictor variables	184
Outcome variable.	184
Residuals.	184
Standard error.	184
Coefficient of determination (R^2) and adjusted R^2	184
Regression coefficient.	185
F-statistic.	186
t-statistic.	187
Assumptions in Multiple Regression Analysis	187
Linearity of the phenomenon.....	188
Constant variance of the error term (homoscedasticity).	188
Independence of the error terms.	188
Normality of the error term distribution.	189
Other Practical Considerations	189
Ratio of cases to IVs.....	189
Multicollinearity.....	190
Choice of the IVs, DV and the MV for regression analysis.....	191
Estimating the Regression Model.....	192
Testing the Conceptual Framework Using Stepwise Regression Analysis.....	192
Results of the Regression Analysis.....	194
Mediation Analysis	200
Mediation Model	200
Results of the Mediation Analysis	203
Discussion of the Results of the Mediation Analysis.....	204
Relationship Marketing practices.	204
Product practices.	204
Targeting practices.	205
Social Media practices.....	205
Summary of the Data Analysis	205
Revised Framework of the Strategic Marketing Practices of the ICT Firms in India	207
Relationship Marketing practices.	208
Product practices.	208
Positioning practices.....	209
Promotional practices.	209
Targeting practices.	209
Social Media practices.....	210
Pricing practices.	210

Conclusion	210
CHAPTER SIX: CONTRIBUTIONS AND IMPLICATIONS OF THE RESEARCH	212
Overview of the Research	212
Contributions of this Research	214
Contribution to Marketing Literature.....	215
Contribution to Social Media literature.	218
Implications of this Research.....	219
Social Media practices.	219
Product practices.....	220
Relationship Marketing practices	221
Promotional practices.	222
Targeting practices.....	222
Positioning practices	222
Pricing practices.....	223
Limitations of this Research	223
Directions for Future Research	225
Conclusion	227
REFERENCES	229
APPENDICES.....	276
APPENDIX A.....	276
WEB SURVEY INVITATION LETTER.....	276
APPENDIX B	278
WEB SURVEY QUESTIONNAIRE	278
APPENDIX C.....	296
LIST OF PUBLICATIONS.....	296

LIST OF TABLES

Tables	Page
3.1 International Standard Industrial Classification (ISIC) codes.....	91
4.1 Social Media practices: frequencies and percentages.....	112
4.2 Relationship Marketing practices: frequencies and percentages.....	116
4.3 Market Research practices: frequencies and percentages.....	119
4.4 Segmentation practices: frequencies and percentages.....	122
4.5 Targeting practices: frequencies and percentages.....	124
4.6 Differentiation practices: frequencies and percentages.....	126
4.7 Positioning practices: frequencies and percentages.....	128
4.8 Product practices: frequencies and percentages.....	131
4.9 Pricing practices: frequencies and percentages.....	133
4.10 Distribution practices: frequencies and percentages.....	135
4.11 Promotion practices: frequencies and percentages.....	138
4.12 Customer Satisfaction: frequencies and percentages.....	141
4.13 Firm Performance: frequencies and percentages.....	143
4.14 Respondents' Position in the organisation.....	144
4.15 Respondents' Length of Service in the ICT sector.....	144
4.16 Respondents' Length of Service in the current organisation.....	145
4.17 Highest level of formal education of the respondents.....	145
4.18 Ownership nature of the organisation.....	146
5.1 KMO and Bartlett's Test.....	156
5.2 Summary of the extracted factors.....	163
5.3 Relationship Marketing practices, Factor Loadings and Communalities.....	164
5.4 Product practices, Factor Loadings and Communalities.....	166
5.5 Distribution practices, Factor Loadings and Communalities.....	167
5.6 Promotion practices, Factor Loadings and Communalities.....	168
5.7 Market Research practices, Factor Loadings and Communalities.....	168
5.8 Social Media Factor, Loadings and Communalities.....	169
5.9 Segmentation practices, Factor Loadings and Communalities.....	170
5.10 Targeting practices, Factor Loadings and Communalities.....	171

5.11	Pricing practices, Factor Loadings and Communalities.....	171
5.12	Positioning practices, Factor Loadings and Communalities.....	172
5.13	Summary the factors used in the subsequent analysis	178
5.14	Correlations between the composite measures.....	182
5.15	Multiple Regression Analysis.....	193
5.16	Regression 1: Coefficients, t and p values, tolerance and VIF.....	195
5.17	Regression 2: Coefficients, t and p values, tolerance and VIF.....	196
5.18	Regression 3: Coefficients, t and p values, tolerance and VIF.....	197
5.19	Regression 4: Coefficients, t and p values, tolerance and VIF.....	199
5.20	Results of the mediation analysis.....	203

LIST OF FIGURES

Figures	Page
1.1. World ICT market value 2008-2012.....	4
1.2. Indian ICT market value 2008-2012.....	6
2.1. Historical developments in marketing	20
2.2. Preliminary conceptual framework of the Strategic Marketing Practices of the ICT firms and their influence on firm performance...	44
4.1. Social Media practices.....	110
4.2. Relationship Marketing practices.....	115
4.3. Market Research practices.....	118
4.4. Segmentation practices.....	121
4.5. Targeting practices.....	123
4.6. Differentiation practices.....	125
4.7. Positioning practices.....	127
4.8. Product practices.....	130
4.9. Pricing practices.....	133
4.10. Distribution practices.....	135
4.11. Promotion practices.....	137
4.12. Customer Satisfaction.....	139
4.13. Firm Performance.....	142
5.1. Steps in conducting factor analysis.	157
5.2a Illustration of the direct effect. IV affects DV.....	201
5.2b Illustration of a mediation design. IV affects DV through MV.....	201
5.3 Revised model of the Strategic Marketing Practices of the ICT firms and their influence on Firm Performance.....	207

CHAPTER ONE: INTRODUCTION TO THE STUDY

The rapid technological advancements in the world since the 1990s have led to the emergence of the information age in the 21st century. In this information age, the world has experienced unprecedented changes. The changes have been accelerated by the rapid developments in the scope of access to information and the speed of information exchange which is predominantly fostered through the extensive use of information and communication technologies (ICTs). These technologies have brought together countries and societies by transforming the interactions between people, governments and firms all over the world. ICT is considered a major driving force of international integration thereby facilitating globalisation through deeper intensity of interaction and interdependence among the different economies of the world (Borghoff, 2011).

India is widely recognised as one of the fastest growing economies in the world, with significantly increasing economic growth rates over the last 20 years. This surge in economic growth rates is fuelled in part by the intensified growth in the ICT sector. India is well-known as a global leader in the ICT sector and has witnessed exponential growth in this sector since the turn of this century. Technological innovations in ICT have accelerated dramatically and have propelled the country into the global arena.

Indian ICT companies such as Tata Consultancy Services (TCS), Wipro Technologies, Infosys Technologies, Cognizant Technologies and Bharati Telecommunications, to name a few, are counted among the world's best ICT service providers. These firms have not only contributed to the growth and economic development of the country but have provided a plethora of opportunities for academicians and researchers alike to unravel and assess the management practices that have facilitated the success of these firms. This research contributes to the literature by exploring the strategic marketing practices and their influence on firm performance in the ICT firms in India.

The chapter begins with discussion of the background to the research study and includes an overview of the global ICT sector in general and the Indian ICT sector in particular. Then discussion pertaining to the marketing scenario in India and marketing of high technology products/services are presented which leads on to examining the existing gap in literature in understanding the marketing practices of ICT firms in India.

Thereafter, the general research question and the research objectives of the research study are presented. The chapter ends with a discussion on the significance of the study and a brief note on the organisation of the dissertation.

Background to the Research Study

The aim of this section is to present the background of the study, starting with an overview of the global ICT sector and the Indian ICT sector. Then the need for the research on the marketing practices of the ICT firms in India is established from a review of the studies on marketing of high technology products and the marketing scenario in the Indian context. The research question and objectives are then presented.

ICT Sector Overview

ICT is commonly defined as those distinct set of technological tools and resources which are used for creating, distributing, storing and managing information. The World Bank's Comprehensive Development Framework defines ICTs as all "hardware, software, networks and media for collection, storage, processing, transmission, and presentation of information" (World Bank Report, 2003, p.3). Locke (2004) pointed out that the two forms of technology - information technology and communication technology converged to create a new type of technology known as information and communication technology. This convergence of information technology and communication technology drives the growth of the ICT sector in the global economy.

Information technology (IT) refers to computers and electronic-based technologies, including the development, installation and implementation of computer systems and applications. Communication technology comprises of "the hardware equipment, organisational structures and social values by which individuals collect, process and exchange information with other individuals" (Rogers, 1986, p.2). Thus ICT facilitates the exchange of information particularly through computer and electronics-based communication systems on a many-to-many basis (Locke, 2004). Broadly speaking the ICT sector includes both the ICT manufacturing sector (manufacturing and assembling of ICT equipment) and the ICT products and services sector which range from telecommunications to software development and from providing interconnectivity services to IT-related consulting.

According to Kramer, Jenkins and Katz (2007), there are a number of important attributes that signify the role of ICTs in modern economic growth and development. ICTs offer instantaneous connectivity thereby improving efficiency, accuracy and transparency of voice, data and visual information. It is an effective substitute for other expensive means of communication and transactions. Hence it reduces costs and helps to improve productivity. ICTs provide access to goods and services in the market place, which are unavailable otherwise, thus increasing the choice of products/services for the market. The geographic scope of the potential markets is widened through effective use of ICT. Also it helps build a knowledge economy by channelling knowledge and information of all kinds and disseminating them in real time.

The Global Information Technology report (2013) indicates that the ICT sector accounts for about 7.5% of the worldwide gross domestic product (GDP). According to a white paper on the “Economic Impact of the ICT sector” (Net!works, 2012), the worldwide ICT market volume during the year 2011 was about 2500 billion Euros. The biggest ICT market was USA with a market share of 28.7%, followed by the European Union (EU25 excluding Germany), 20.1%; Japan, 9.3%; China, 8.1%, Germany, 5.1% and the rest of the world, 28.7%. Figure 1.1 shows the estimated and the projected market value of global ICT from 2008 till 2012. (The data and the forecast were based on the information available as of May 2011).

As can be seen in figure 1.1 the world ICT market value was estimated to increase considerably from 2319.5 billion Euros in 2009 to 2645.7 billion Euros in 2012. The world telecommunications market value was expected to touch 1630.6 billion Euros in 2012. A significant growth in market value was also projected for the IT sector. The IT sector was expected to grow from 879.7 billion Euros in 2009 to 1015.1 billion Euros in 2012 (Net!works, 2012).

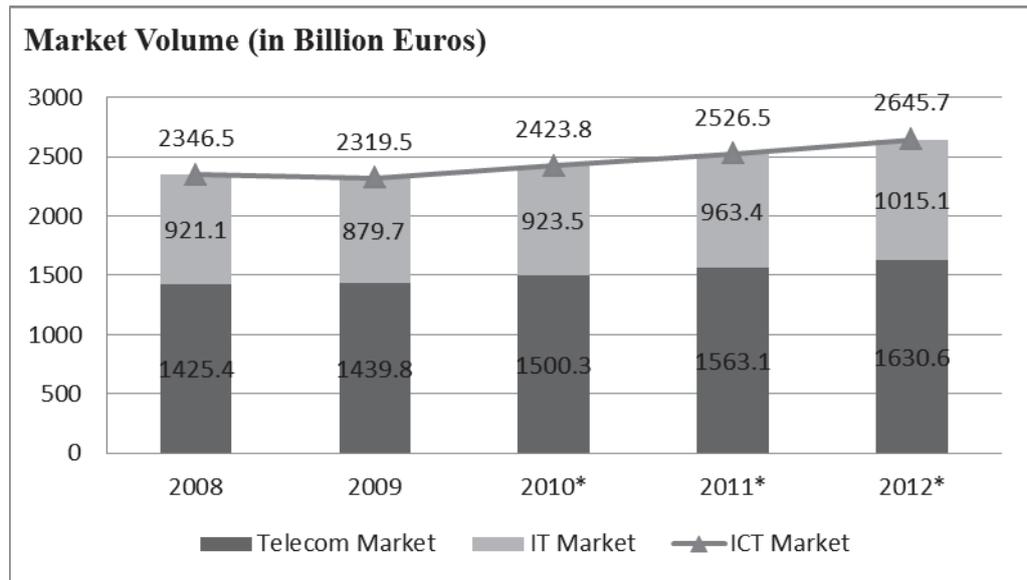


Figure 1.1. World ICT market value 2008-2012*. Reprinted from Net!works, 2010, Retrieved from http://www.networks-etp.eu/fileadmin/_user_upload/Publications/Position_White_Papers/Net_Works_white_Paper_on_economic_impact_final.pdf; *:estimates

The research firm Gartner (2013) projected the worldwide ICT spending to total US\$3.7 trillion which will be a 4.2% increase from 2012's US\$3.6 trillion. Another research firm International Data Corporation (2013) estimated an increase of 6.9% in 2013 in ICT spending from that of the worldwide ICT spending in 2012. It was suggested that the increases in ICT spending results from developments in ICT infrastructure which creates highly skilled employment, improves both national and international competitiveness and creates opportunities in many other industries (spill-over effect). ICT also facilitates effective creation, distribution and consumption of information thereby improving national and global commerce, building more competitive business enterprises and facilitating export of ICTs between trade partners (Intel, 2010).

The ICT sector contributes significantly to the economic growth of countries all over the world. For example, in New Zealand, ICT contributes to 5.1% of the country's GDP (Ministry of Business, Innovation and Employment, 2013). Exports of computer and information services had a compound annual growth rate of 11% during the period 2006-12. Key services exports from this sector were valued at 1.6 billion NZ\$ in the year 2012 (Statistics, NZ). Employment growth was driven by this sector as it provided 62,220 (excludes self-employed) jobs in 2012. Data obtained from the Australian Computer Society (2013) indicates that the revenue generated by the ICT sector in Australia, as of December 2011 was AUS\$ 91 billion. The export of ICT products and

services was AUS\$ 4.5 billion during the financial year 2008-09. As of February 2012, the ICT sector provided approximately 550,000 jobs in Australia.

ICT Sector in India

Since the late 1990s India has witnessed significant and rapid economic growth which is predominantly fostered by the spectacular growth in the services based ICT sector. This sector has emerged as one of the fastest growing industrial segments (Kuriyan, Ray & Toyama, 2008; Das & Narayanan, 2005). The Indian ICT sector has evolved in three phases (Malik & Ilavarasan, 2011). The first phase of this sector was the pre-1984 period wherein there was minimal differentiation between the software and hardware sectors. The government of India attempted to run the industry and until 1984 the ICT sector was not established as a commercial sector. During the second phase (between 1984 and 1990), the Indian government realised that the software industry was a practical and sustainable option for income generation and technological capability enhancement.

It was during the third phase - post 1990s that the software export industry emerged in India. The government proposed an export driven growth model for the software industry and the sub-national governments aggressively promoted software exports. Since then there has been a phenomenal surge in the ICT sector which has resulted from the country's economic progress and export demand for IT products/services. The competitive advantage created by the talented pool of professionals in this sector and the hugely supportive government policies were other factors that contributed to this growth (Malik & Ilavarasan, 2011).

In a report prepared on this sector by the Ministry of Statistics & Programme Implementation (MOSPI) on "Value addition and employment generation in the ICT sector in India", ICT firms are defined as those firms that are "primarily intended to fulfill or enable the function of information processing and communication by electronic means, including transmission and display" (p. 6). Thus the ICT industries in the country include telecommunication services, information technology services and information technology-enabled services (ITeS).

In India ICT is broadly viewed under two sectors namely the information technology sector and communication sector. The contribution of both these sectors to the Indian

economy has increased at a faster rate than any other sector in the country. India is regarded as a pioneer in software development and a prominent provider of IT-enabled services (ITeS).

According to Gartner (2013), the Indian IT market is the third-largest among emerging economies and the fourth-largest among the Asia/Pacific countries. Also the country has emerged as one of the fastest growing communication technology markets in the world. The Indian ICT market value was projected to significantly increase from 46.9 billion Euros in 2009 to 73.8 billion Euros in 2012 (See Figure 1.2). As can be seen, the telecommunications and the IT market values were also estimated to increase from 35.8 billion Euros and 11.2 billion Euros in 2009 to 56.4 and 17.4 billion Euros in 2012 respectively.

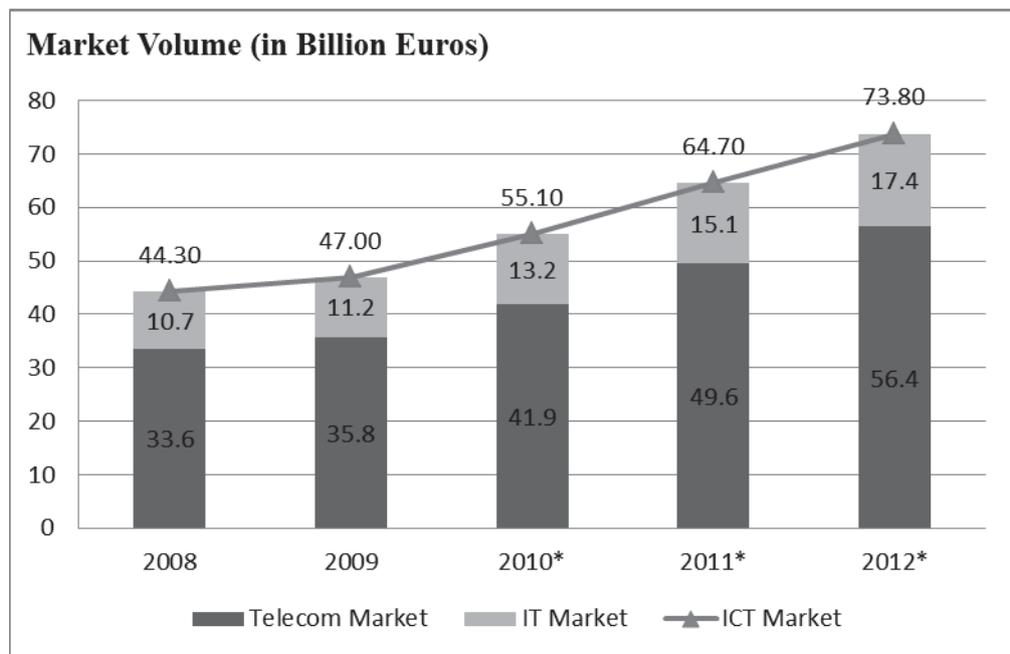


Figure 1.2. Indian ICT market value 2008-2012*. Reprinted from Net!works, 2010, Retrieved from http://www.networks-etp.eu/fileadmin/_user_upload/Publications/Position_White_Papers/Net_Works_white_Paper_on_economic_impact_final.pdf; *:estimates

The report by the Central Statistical Office (MOSPI, 2011), India, pointed out that ICT has pervaded the Indian society so profoundly that it has influenced the economic, social, political, cultural, environmental, ethical and the behavioural aspects of the country and its people. ICT contributes to Gross Domestic Product (GDP), employment generation, market diversification, foreign exchange earnings, poverty reduction and economic growth. On the political front, through e-governance, the Central Statistical

Office notes that ICT helps to promote effective governance and administration throughout the country. It fosters socio-cultural development by promoting social cohesion, harmony and national integration. ICT also facilitates knowledge development and helps spread education in the country. Apart from contributions to the economy the ICT sector is seen as a source for productivity enhancement in all industries and is posited to have long term benefits for India's industrialisation and growth (Arora & Athreye, 2002).

The Indian IT sector has emerged as a major contributor to the GDP of the country. This sector plays an important role in driving economic growth in the country through employment and exports. According to the information technology annual report issued by the Department of Electronics and Information Technology (2012), it has been estimated that the IT industry's contribution to India's GDP has increased from 7.1% in 2010-11 to 7.5% in 2011-12. The communications sector was approximated to contribute up to 4% of the GDP in the year 2011-2012 compared to 0.9% in 2000-01. The share of the ICT sector to GDP has grown from 1.50% in 1990-91 to 4.21% in 2000-01 and further increased to 12.25% in 2009-10 (MOSPI, 2011).

India is also known as a powerhouse in the global IT outsourcing industry. The aggregate revenue generated by the IT-business process outsourcing (IT-BPO) industry in India has crossed the US \$100 billion in the financial year 2012 (Ernst & Young, 2012). A report by the National Association of Software and Services Companies (NASSCOM) indicates that this sector contributed to 7.5% of the GDP in the financial year 2011. The Indian ICT sector constitutes an estimated share of 16% in the overall exports of India (Parekh, 2012). It exports software to over 90 countries in the world.

The IT and the IT enabled services (ITes) sector in India are the biggest employment generators in the country (Parekh, 2012). Between the years 2012-13 direct employment in this industry was at 2.97 million which was 7% higher than 2011-2012 (NASSCOM, 2013). The phenomenal growth in the IT and the ITes sector has also spawned the explosion of several ancillary industries. It was estimated that these ancillary industries provided indirect employment to over 8.9 million people in 2012. Industry estimates suggest that the growth in both direct and indirect employment created by this industry will reach a landmark number of 14 million jobs by 2015 and around 30 million jobs by 2030. Based on the reports available from NASSCOM (2013), the technology sector in

India received US\$6.2 billion through Foreign Direct Investment (FDI) in the year 2011, an increase of 46% from the previous year. The investment has an estimated 41,607 jobs in the industry.

From the above discussion it is evident that the ICT sector is an important emerging sector in contemporary India and contributes significantly to the economic growth and development of the country. In the ensuing section, the marketing scenario in the Indian context is elaborately discussed.

Marketing Scenario in India

Marketing being one of the key economic activities for industrial growth and expansion, was almost neglected in India prior to the 1990s. Before 1991, the Government of India pursued an over-regulated economic development model (Sharma, 2009). This model enforced many regulations including control of entry for new entrants into industries, governmental intervention in investments and imports, high priority to build heavy and capital goods industry, pursuance of import substitution strategy to reduce dependence on foreign supplies (emphasis on self-reliance) and undue reliance on small scale and public sector enterprises (Neelamegham, 2008).

Due to these legislative measures the country was isolated to a larger extent from the rest of the world. According to Sharma (2009), some of the B2B firms even monopolised the market, with customers having little or no choice except to buy from them. Hence there was no pressure for these firms to improve or change and to remain competitive (Jagadeesh, 1999). Hence the economy was more production-based with limited focus on customers.

Even though these measures seemed to work well in the Indian context it contributed to high cost of operations, low quality, lack of technological upgradation and lack of competitiveness in the Indian market. The demand for majority of the products exceeded the supply because of an increased growth in population, slow growth of production and the restrictions on supply. This created a sellers' market wherein any product, as long as there was a need for it, was sold with little or no marketing effort (Neelamegham, 2008).

In 1991, the Government of India took a series of initiatives to globalise the economy. Local industries were exposed to global competition and were encouraged by the government to build and develop linkages with the global economy and industries (Ramaswamy & Namakumari, 2013; Neelamegham, 2008). This process of economic liberalisation gained momentum after July 1991, predominantly due to the relaxation of licensing and other market entry regulations (Govindarajan, 2007).

The economic reforms brought about dramatic changes in the Indian market place. There were major shake-ups with the opening up of the economy and the entry of multinational companies in India. Markets grew in size and sophistication and multitude of products and services entered the Indian market (Ramaswamy & Namakumari, 2013). This new competition challenged the traditional marketing methods and practices that were adopted in the country and brought about radical changes in the marketing arena.

The economic liberalisation revolution also forced the firms to undergo a paradigm shift from a production-led philosophy to a customer-oriented approach, resulting in a greater emphasis on marketing in the Indian sub-continent (Govindarajan, 2007; Sureshchander, Rajendran, Anantharaman & Kamalanabhan, 2002). Increased competition eventually pressured firms to focus and improve on quality which was necessary for the growth and survival in the global market (Khanna, Vrat, Shankar, Sahay & Gautam, 2003). Because of these tremendous fast paced changes the country has been recognised as one of the fastest growing economies attracting multinational investments from countries all over the world.

The opening-up of the Indian economy resulted in the rapid transformation of the B2B markets as well. The B2B firms had to shift from being production-oriented to customer-oriented in order to survive in the globally competitive environment (Sarin, 2012). This shift has broadened the role and scope of the marketing function in the B2B firms in India. The market sizes of these firms have increased in greater proportions and they have become agile and globally competitive.

In the current era, the global competition, technological changes and demanding customers have created a more knowledge intensive, turbulent and complex environment in the B2B market place. Because the Indian market place has become extremely competitive and changed dramatically in the last 25 yeras, there is a

compelling need to understand strategic marketing from the Indian perspective. This is more so in the light of the paradigm shift in the marketing practices that have taken place since the 1990s (Sharma, 2009).

Also there have been calls for more research into marketing theories and practices in B2B firms in India given the unique set of challenges presented by the social, cultural and political environment in the Indian context (Singh & Seshadri, 2012). Sarin (2012) addressed the need to undertake a focussed attempt to understand the dimensions of the marketing strategies of the B2B firms in the Indian context. He also emphasised the need to uncover and understand the marketing of high technology product in general, and ICT products/services in particular, in the Indian context.

Given the importance of the ICT firms to the Indian economy there is an evident lack of research on the marketing practices of B2B firms in India in general, and ICT firms in particular. The focus of this research is to enhance the understanding of the marketing practices that are adopted by the high technology firms in the ICT sector in India. The next sub-section introduces the high technology marketing followed by discussion on the need to understand the marketing practices of the high technology firms.

High Technology Marketing

The ICT revolution, coupled with the liberalization of trade restrictions and globalisation has resulted in an increase in the number of high technology firms in countries all over the world (Galbraith, Rodriguez & Denoble, 2008). Over the past two decades governments and development agencies around the globe actively encourage the development of high technology firms as they are clearly identified as significant contributors for economic development and as source of competitive advantage (O'Regan & Sims, 2008).

Keogh and Evans (1999) contended that these high technology firms play an important role in the economy as they potentially grow into major employers and flourish in international markets. They are viewed as a powerful medium for the creation of new jobs, for economic regeneration and for enhancing technological innovation rates and international competitiveness (Akgün, Lynn & Byrne, 2004; Berry & Taggart, 1998). Even in the early 1990s these high technology firms were known to be established sources of both competition and employment creation (Oakey, 1991).

Moriarty and Kosnik (1989) attributed the emergence of high-tech marketing to the late 1970s. With the introduction of high technology products and computers, market research firms like International Data Corporation (IDC) and Gartner Group had begun to provide increased competitive intelligence and market forecasts for firms that bought and sold technology-intensive products. Also, best-selling books that addressed high technology marketing issues were written by authors including McKenna (1985), who addressed the issues of communication and Davidow (1986), who took a more comprehensive overview of high technology marketing. Other authors, for example, Shanklin and Ryans Jr (1987) discussed the essentials of marketing high technology.

Several attempts have been made in the marketing and management literature to define high technology products. Grunenwald and Vernon (1988) defined high technology products as those devices, procedures, processes, techniques, or sciences that are portrayed as leading-edge developments and usually have short and volatile lives. Moriarty and Kosnik (1989) defined high-technology as those involving intense market and technological uncertainties.

Meldrum (1995) argued that the definitions of high technology, including the few discussed above, focussed more on the technological aspects than the marketing aspects. Hence for the purpose of marketing management, Meldrum (1995) defined high technology to include

products which have been developed in a highly technical environment; incorporates a new or advanced technology which acts as a focus for their evaluation; are associated with a high degree of technologically-based uncertainty on the part of both the supplier and the customer; are not currently accepted as natural solutions for the problems they have been designed to address; do not yet have an associated external infrastructure (p.48).

This definition emphasised the importance of factors influencing the relationship between the suppliers, products and the markets, which are posited to be more relevant to studies in marketing management (Gardner, Johnson, Lee & Wilkinson, 2000; Meldrum, 1995).

Moriarty and Kosnik (1989) proposed that the marketing of high technology products and services differs significantly from the marketing of low technology products and

services. This difference was attributed to the distinctive nature of the marketing environment of the high technology firms, as the marketing practices adopted by firms are influenced by their marketing environment. The unique nature of the high technology marketing environment is discussed in detail in the next sub-section.

Marketing of high technology is different. Since the emergence of high technology marketing as a separate field of study in marketing management it is acknowledged that the marketing of high technology products and services is different from that of the low technology products and services. Various studies recognised that high technology firms exist in a unique marketing environment which gives rise to challenges and issues in high technology marketing (Gerhard, Brem, Baccarella & Voigt, 2011; Mohr, Sengupta & Slater, 2010; Mohr & Sarin, 2009; Yadav et al., 2006; Mohr et al., 2005; Rosen, Schroeder & Purinton, 1998; Moriarty & Kosnik, 1989). These authors posited that high technology marketing is influenced by different industry/market situations which are widely recognised to give rise to challenges and issues in marketing high technology products/services.

A review of the high technology marketing literature reveals uncertainty as an overarching central tenet of high technology marketing. In particular, uncertainty exists in the marketing environment of both the producers and the customers of high technology products/services. It was observed that the high technology marketing environment is inherent with three common characteristics. They are market uncertainty, technological uncertainty and competitive volatility (Yadav et al., 2006; Mohr et al., 2005; Moriarty & Kosnik, 1989). The interaction of these three characteristics typifies a high technology marketing environment. The three identified characteristics are discussed below.

Market uncertainty refers to the ambiguity about the type and extent of the customer need that can be satisfied by a particular technology (Mohr et al., 2005; Moriarty & Kosnik, 1989). Market uncertainty arises from customer fear, uncertainty and doubt about what needs the new technology will address and how well it will meet those needs. Customer needs often changes rapidly in high technology markets and such uncertainties make satisfying consumers' needs a moving target. Customer anxiety is also perpetuated by the lack of clear standards for new innovations in a market. Uncertainty exists among both consumers and the manufacturers over how fast the

innovation will spread. Finally, uncertainty over how fast the innovation will spread contributes to an inability for the manufacturers to estimate the size of the market.

Technological uncertainty exists when the customer does not know whether the technology or the company providing it can deliver on its promise to meet specific needs (Yadav et al., 2006; Mohr, 2000; Moriarty & Kosnik, 1989). Five factors give rise to technological uncertainty. The first comes from questions about whether the new innovation will function as promised or not. The second relates to the time schedule for the availability of the new product. The third technological uncertainty arises from concerns about the credibility of the supplier of the new technology and about how effectively the supplier can service the product. The fourth concern arises over the unanticipated consequences or the side effects. Finally, in high tech markets technological uncertainty exists because of the rapid obsolescence of technology.

Competitive volatility refers to changes in competitive landscape in the market place (Yadav et al., 2006; Mohr et al., 2005; Moriarty & Kosnik, 1989). There are three sources of competitive volatility. Uncertainty over which firms will be new competitors in the future makes it difficult for the firms to understand the high-technology markets. New competitors from outside existing industry boundaries bring their own set of competitive tactics which the industry incumbents may be unfamiliar with. New competition often arises as product form competition, or new ways to satisfy customer needs and problems.

The marketing of high technology products occurs at the intersection of the above discussed variables, viz, market uncertainty, technological uncertainty and competitive volatility. This marketing environment is best described as uncertain and turbulent, influences the marketing strategies that are adopted by firms and hence differentiates high technology marketing from the marketing of other low technology products. Numerous authors (Yadav, Swami & Pal, 2006; Kaynak & Hartley, 2005; Mohr, 2005; Gardner et al., 2000; John, Weiss & Dutta, 1999; Beard & Easingwood, 1996; Meldrum, 1995) have based their studies on this proposition as they researched different aspects of marketing in high technology firms.

Apart from the uncertain and turbulent marketing environment, high technology products/services are also characterised by continuous shortening of product and market

cycles, high research and development expenses and rapid obsolescence of products/services (Yadav et al., 2006; Qian & Li, 2003; Benkenstein & Bloch, 1994; Romer & van Doren, 1993).

Different marketing environment requires different marketing strategies. It is well known that the marketing practices adopted by the firms are influenced by the marketing environment in which the firms exist. As discussed in the previous section, high technology marketing is influenced by different industry/market situations. Apart from the three inherent characteristics of the marketing environment, viz, market uncertainty, technological uncertainty and competitive volatility, these products are also characterised by continuous shortening of product and market cycles, high R&D expenses and rapid obsolescence.

John et al., (1999) stated that as a result of the unique characteristics of high technology products, marketing must be adapted and modified to effectively handle the complicated environment. Further, it is posited that the difference in the business environment requires modification in the marketing strategies and the tactics that are adopted by high technology firms (Yadav et al., 2006; Usley et al., 2004; Weerawardena & O’Cass 2004; Gardner et al., 2000; Mohr 2000; Meldrum, 1995).

Berry and Taggart (1998) also suggested that the contribution of the marketing practices to firms’ success needs to be related more directly to the different industrial settings, strategic environments and the individual company circumstances. Cravens et al., (2000), pointed out that the turbulent marketing environment together with the rapid advancement in technology necessitates high technology firms to have more distinctive marketing strategies which should be implemented effectively for success in high technology markets.

Importance of marketing to high technology firms. The importance of marketing in bringing high technology to the market is well documented in literature by various researchers (Mohr, Slater & Sengupta, 2010; Traynor & Traynor, 2004; Usley, Malhotra & Citrin, 2004; Boussouara & Deakins, 1999; Berry & Taggart, 1998; Davies & Brush, 1997; Meldrum, 1995). It is recognised that marketing is crucial for the success of technology-oriented products (Usley et al., 2004; Boussouara & Deakins,

1999) and a focus on marketing aspects is critical for the survival of high technology firms (Boussouara & Deakins, 1999; Berry & Taggart, 1998; Oakey, 1991).

Historically, high technology firms relied on their unique technological superiority as a source of competitive advantage and paid less attention to the marketing aspects. Traynor and Traynor (2004) stated that these high technology firms are increasingly finding it difficult to build and maintain competitive advantage through technological superiority. This is because technological competencies like innovation and agility contribute to only short-term competitiveness. Also as a consequence of the technology-oriented culture, firms struggled to match their capabilities with customer needs. It was found that as the firm progresses in size, competitiveness and sophistication of technology, a clearly defined marketing strategy is critical along with the technological superiority to remain competitive (Kaynak & Hartley, 2005; Traynor & Traynor, 2004; Weinstein, 1994). Also, in literature, marketing is identified as the single dominant interface that connects firms and their customers. This emphasises the need for understanding and employing strategic marketing practices in high technology firms (Uslay et al., 2004; Boussouara & Deakins, 1999).

Need for the study of marketing practices of ICT firms. The importance of marketing to high technology firms and the need to modify the marketing strategies to suit the high technology industry/market conditions are widely recognized. However, researchers contend that there is a dearth of research in the marketing of high technology products and services. Boussouara and Deakins (1999) pointed out the limited research in explaining how marketing is practiced by technology based firms. The need for the research on marketing of high technology products and services is highlighted by researchers including Uslay et al. (2004), Mohr and Shooshtari (2003) and Gardner et al. (2000).

Hills and Sarin (2003) recognised the inadequacies in the current marketing philosophies for addressing issues and problems specific to high technology industries and products. The gap in literature for the general theory development related to the marketing for high technology firms has also been identified by Uslay et al. (2004). In their study they noted that there is a need for both conceptual and empirical research regarding the marketing of high technology products. The need for more sophisticated

and effective marketing strategies for high technology industries was also put forward by Davies and Brush (1997).

As discussed earlier, it is recognised that marketing is crucial for the success of technology oriented products (Uslay et al., 2004; Boussouara & Deakins, 1999), including the ICT firms. Despite the significance of marketing in high technology firms, various researchers contend that not much attention is paid to marketing, and the development of marketing practices in high technology firms (Boussouara & Deakins, 1999). Berry and Taggart (1998) and Uslay et al. (2004) have pointed out that very little research has been undertaken into the strategic management practices of these firms in general and strategic marketing in particular.

A review of the existing B2B marketing literature in the Indian context also revealed the lack of research that explored the marketing practices of such firms. Sarin (2012) called for more research into the marketing of high technology firms with special attention to ICT marketing because of the importance of these firms to the Indian economy. Literature also evidenced limited few studies that explored the marketing practices of ICT firms, with none relating to the Indian context. This is all the more necessary given the multi-faceted contribution of these firms to the Indian economy.

The above discussion on the background of the study brings out three strands of literature that helps to define the central problem which needs to be addressed - the lack of research on high technology marketing, the gap in literature on the study of the strategic marketing practices of the ICT firms in general and the lack of research on strategic marketing in the ICT firms in the Indian context in particular. Thus the objective of this research study was to explore the strategic marketing practices of the ICT firms in India.

All management practices in firms are developed and adopted to improve firm performance. In strategic marketing management literature there are many empirical studies that have examined the association between the marketing practices that are adopted by firms and the firms' performance (Sweeney et al., 2011; Lee et al., 2006; Doyle & Wong, 1998). It has been argued in high technology marketing literature that marketing's influence on the overall business outcomes and returns must be demonstrated in order to significantly strengthen the role of marketing in high

technology firms (O'Sullivan, Abela & Hutchison, 2009). Hence in this research study, it was proposed to examine the influence of the strategic marketing practices adopted by the ICT firms on firm performance in these firms.

The above discussion establishes the need to understand the Strategic Marketing practices adopted by the ICT firms and eventually their impact on firm performance. This research seeks to enhance the understanding of the strategic marketing practices of the firms in the ICT sector and its influence on firm performance. The next section presents the research questions and objectives.

Research Question and Objectives

The aim of this research is to contribute to both theory and practice by seeking to answer the broad question:

How do the marketing practices adopted by ICT firms in India contribute to firm performance?

By answering this question, the research aims to identify a set of best marketing practices for the firms in the ICT sector in India.

The specific research objectives are:

1. To develop a conceptual framework of the Strategic Marketing Practices adopted by the ICT firms in India.
2. To identify the Strategic Marketing Practices of the ICT firms in India.
3. To assess the influence of these Strategic Marketing Practices on Firm Performance.
4. To establish a recommended best set of marketing practices for the ICT firms in India.

The results of this research will contribute to the understanding of managers and practitioners in respect of the marketing practices which contributes to Firm Performance in the ICT firms in India. It will also form the basis for the application and extension of these practices to other high technology industries and in other countries.

Significance of the Study

This study is a pioneering effort to examine the influence of the strategic marketing practices adopted by the ICT firms on Firm Performance, in the context of India's emerging economy. The objective of the study is to propose the best set of strategic marketing practices that contributes to Firm Performance in these ICT firms. To achieve this objective, the marketing management and the relationship marketing perspectives are integrated into the conceptual framework that was developed for this research. This research also took into consideration the emerging technological developments that support marketing practices in firms. Thus the current research gains significance as it integrates the latest information technology tool, Social Media, into the conceptual framework in order to understand its contribution to strategic marketing management and firm performance in these firms.

The obvious contribution of this research to literature is the identification of the industry-specific marketing practices adopted by the ICT firms. The ICT sector is a priority sector in India and is clearly of growing importance in its economy. Given the importance of the ICT sector for the Indian economy, insights into their marketing practices enhances the understanding of their contribution to Firm Performance. The present study assumes significance in that it identifies, analyses and documents those marketing practices that are adopted by the ICT firms in India. The study would provide the practitioners with information on the successful Strategic Marketing practices for the ICT market, which would enable managers to adapt them to their firm's requirements. The results of the research are expected to expand the body of theoretical and practical knowledge in the area of marketing of products and services in the high technology sector, with reference to the ICT firms.

Organisation of the Dissertation

This dissertation is organised into six chapters. Chapter two, that follows this introductory chapter presents the review of related literature along with the theoretical foundation upon which the conceptual framework was developed. This chapter also demonstrates the need for the research that is reported. Empirical and conceptual literature relevant to studying the strategic marketing practices in firms is discussed in this chapter.

Chapter three describes the research design adopted for this study and provides a description of the data collection method, sampling procedures and questionnaire design following which the survey implementation method is presented. Data analysis is covered in chapters four and five. The results of the descriptive analysis are discussed in chapter four. In chapter five, the results of the exploratory factor analysis and multiple regression analysis are presented. The thesis concludes with chapter six where the findings of the research, theoretical and managerial implications, contributions and implications of this research, and areas for further research are presented.

CHAPTER TWO: LITERATURE REVIEW

This chapter presents the review of the conceptual and empirical literature relevant to examining the strategic marketing practices of the ICT firms in India and their influence on firm performance in these firms. The aim of this section is to review extant literature in order to develop a preliminary conceptual framework that will guide the researcher to achieve the research objectives that were presented in chapter one.

The presentation of the review of literature is divided into two sections. In the first section the theoretical perspective that enabled the researcher to develop the conceptual framework for this research is presented. Initially, the historical developments in marketing were traced starting from the neoclassical micro-economic theory of the 1900s. Then the marketing schools of thought that emerged during the period of formative marketing (between 1900 and 1950) are discussed. Further, discussions pertaining to the marketing management perspective (late 1950s) and the relationship marketing perspective (1980s) are presented. An overview of these historical developments in marketing is shown in figure 2.1.

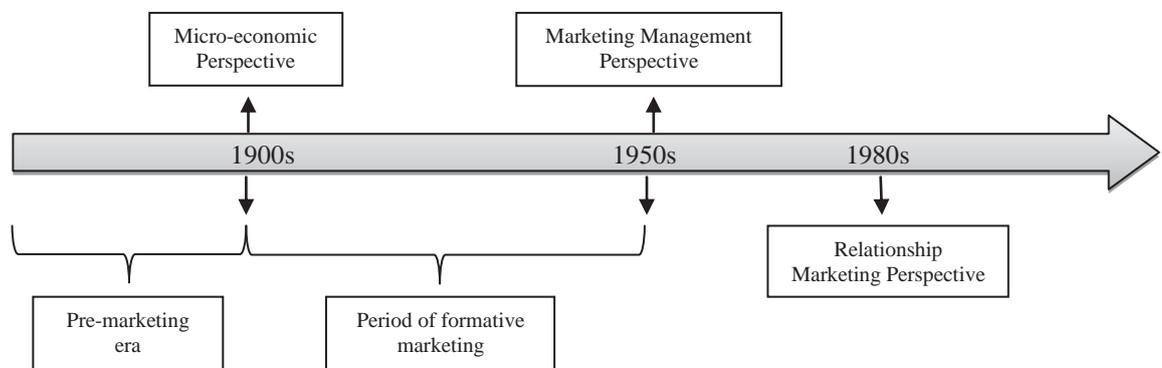


Figure 2.1. Historical developments in marketing

Further discussion in this section establishes the case for integrating the two perspectives in order to develop the conceptual framework. Extant literature on the recent web-based technological developments that supports marketing practices in firms are examined and the need to integrate such practices in the conceptual framework is addressed. Finally the reasons for the choice of customer satisfaction as the mediating variable and firm performance as the independent variable in the conceptual framework are also discussed.

In the second section the conceptual framework is presented where the individual constructs and their relationships with the mediating variable, customer satisfaction and the dependent variable, firm performance is postulated. Literature pertaining to the individual constructs and the proposed relationships between these constructs are discussed.

Theoretical Background

The historical method of literature review was employed in this research study as this method focuses on exploring research within a discipline over a period of time starting with the first time a concept or theory emerged in literature and then tracing its evolution (Shaw, 2009). The purpose of this type of literature review is to place research in a historical context in order to show familiarity with the advanced developments and to identify future research directions. This perspective allows researchers to analyse how literature in a specific field of study evolved over time and how the various concepts or constructs can be linked to build theories. Such a systematic historical review of literature is posited as the precursor to systematically build a strong theoretical foundation in any field of study (Shaw, 2009).

The aim of this section is to explain the historical developments in marketing and to explain how the various concepts that evolved over time can be linked to lay the foundation in building the conceptual framework that guided the researcher in achieving the research objectives. In the ensuing section, the conceptual framework is discussed in detail.

Historical Developments in Marketing

Marketing as a practice has been around for centuries. However, marketing as an academic field of study was formally accepted shortly after the turn of the twentieth century (Tamilia, 2011; Wilkie & Moore, 2003). This marked the beginning of an important era in the development of the marketing discipline. Since then, marketing as a discipline has made enormous progress. Over the last century the academic field of marketing has undergone remarkable changes and a rich body of marketing literature has been developed. The continuous changes in industrial and marketing environments have rendered numerous interesting insights into the field of marketing and have facilitated the inclusion of several dimensions into the concept of marketing since the 1900s.

Egan (2011) posited that much of what we see today as marketing practice was present long before its formal inception as a separate field of study in the early twentieth century. Wilkie and Moore (2003) called the era before the turn of the twentieth century as the “pre-marketing” era. It was contended that considerable thought about marketing related phenomena was present in this era, long before the formal beginnings of marketing as a separate field of study. Accordingly marketing concepts such as markets, marginal analysis, value, production, humans as social and economic entities, competition and the role of governments were long established and were frequently contemplated from the time of the ancient Greeks through the time of the great economists (including Smith, Malthus, Jevons, Ricardo, Mill and Marshall) of the 1700s and the 1800s (Dixon, 2002).

In addition to these early developments in marketing practice, marketing thought was also a topic of intellectual pursuit among philosophers and economic thinkers. Evidence from literature proves the existence of marketing thought well before the 1900s. Prior to the emergence of marketing as an academic discipline, ancient Greek philosophers, including Plato and Aristotle had discussed macro marketing issues and how marketing was integrated into the society (Shaw & Jones, 2005). Then during the medieval times, ancient philosophers (such as Plato, Aristotle and Cicero) and scientists (including St Augustus of Hippo, St Thomas of Aquinas) considered micro marketing responsibilities such as how people could practice marketing ethically (Shaw, 2009).

Bartels (1951) studied the influences on the development of marketing thought from the year 1900-1923. In their study, academicians including Edward D. Jones, Simon Litman, George M. Fisk and James E. Hargety were identified as the earliest contributors to marketing thought (1902-1905). These early scholars of marketing traced the course of the products to the market, observed the operation of marketing institutions and analysed the cost incurred by middlemen. They explained and interpreted marketing phenomena, created concepts and coined phrases and defined terms.

These progressive developments in both marketing thought and practice led to the emergence of marketing as a separate academic discipline in the early 1900s. Since then there has been a profound change in the concept and practice of business which continually reshapes the marketing discipline (Wilkie & Moore, 2003). Interests in developing a theory for marketing also dates back from the early 1900’s when

numerous authors proposed theories based on existing market conditions. Cox and Alderson (1948) commented on the need for the development of marketing theory and directed academic research into proper organisation of marketing theory into an integrated whole. The theories that emerged since the inception of marketing as a separate field of study are discussed below.

Neoclassical microeconomic theory. As discussed in the latter part of the previous section, it is widely acknowledged in marketing literature that marketing as a discipline emerged as an extension of the field of economics. The general economic theory was considered as the most evident source of contribution to a meaningful theory of marketing (Cox & Alderson, 1948) and was posited as the root of both managerial and academic marketing literature (Varadarajan, 2010; Vargo & Lusch, 2004; Wulf & Odekerken-Schroder, 2001; Bartels, 1951).

The primary emphasis of the micro economic paradigm was on profit maximisation in competitive markets. The central tenet of this paradigm was mass production and commodities being exchanged through intermediaries. All of its concerns centered on the functions performed by the wholesalers as marketing institutions (Sheth & Parvatiyar, 1995). Arndt (1983) stated that the goal of this perspective was to explain relative prices, market equilibrium, and income distribution.

The parties involved in the product exchange had no influence on the price of the products. Their selling transactions neither had any effect on the market nor on the changes in the rate of production. Their sales had very limited influence on the market price of the firm's products. The parties involved were also utility maximisers (attempted to get the greatest value possible from spending least amount of money) under well-defined and stable structures in the marketing environment (Sheth & Parvatiyar, 1995; Dabholkar, Johnston & Cathey, 1994; Pandya & Dholakia, 1992).

Webster (1992) postulated that under the microeconomic paradigm, transactions were characterised by the absence of brand name, recognition of the buyer by the seller, or buyer preference or loyalty. Each transaction was independent of all the other transactions. The marketing function during these times was restricted to simply finding buyers as it was assumed that all necessary information is contained in the price of the product that is exchanged.

Period of formative marketing. Between 1900 and 1950 the study of marketing concentrated on the distribution and exchange of commodities and manufactured products (Vargo & Lusch, 2004). This period was identified as the period of formative marketing, wherein three separate schools of thought evolved: Marketing Functions School, Marketing Institutions School and Marketing Commodities School. Marketing Functions School was the first of the traditional schools to emerge in the period of formative marketing. This school of thought, posited as the most significant development, was introduced during the 1910s. Shaw (1912), a pioneer in this school of thought identified five functions of the marketing middlemen: “sharing the risk, transporting the goods, financing the operations, selling (communication of ideas about the goods) and assembling, assorting and re-shipping” (p.29). Other scholars including Weld (1917) also contributed towards the understanding of the functions that are performed by the marketing middlemen. Thus this school addressed the functions or activities that constituted marketing.

The Institutions School focussed on the marketing institutions through which the products were brought to the markets - like brokers, wholesalers, retailers and other middlemen in the exchange of goods (Webster, 1992). The Commodity School discussed activities that were centered on the characteristics of goods (Copeland, 1923). This school addressed the distinctive characteristics of goods, how the different types of goods were classified and how they were related to the different types of the marketing functions (Shaw & Jones, 2005).

The major focus of these schools of thought was on the transactions between the buyer and the seller and on how the marketing functions added value to the commodities exchanged. The three traditional schools of marketing thought were dominated by the distribution orientation which was the focus of the marketing discipline until the mid-1950s. Thus the central tenet of distribution orientation was to explain how goods move from producers to the ultimate consumers in the markets.

The micro economic paradigm was significant in the development of marketing theory because it explained the value distribution among the parties involved in the exchange process (Wulf & Odekerken-Schroder, 2001; Sheth & Parvatiyar, 1995). However, the limitations of this theory are acknowledged by marketing academics. The assumptions such as price and cost being the decision criteria in marketing and the market structure is well-defined and stable, very rarely occurred in practice. Hence the basic principles of

this paradigm were found by researchers as irrelevant in their application for the dynamic marketing environment. Also during the period of formative marketing, marketing was primarily distribution oriented and focussed on moving goods from the sellers to the buyers. These limitations on the micro economic theory and formative marketing perspectives led to the development of the marketing management perspective which is discussed below.

Marketing management perspective. In the 1950s there was a major shift in the marketing discipline from the distribution orientation of marketing to managerial orientation in solving marketing problems. Wilkie and Moore (2003) identified this as the paradigm shift from traditional approaches to modern schools of marketing thought. Shaw and Jones (2005) pointed out that Alderson as one of the pioneering authors who played a significant role in moving the unit of analysis from the market to individual firms thereby providing the leverage for the marketing management school of thought. Thus the functional school began to be transformed into the marketing management school.

The “managerial approach” to the study of marketing evolved in the 1950s and the 1960s (Weber, 1992). This school of thought was characterised by a decision-making approach to managing the marketing functions with an extended focus on the customers (Levitt, 1960; Drucker, 1954). According to McCarthy (1960) marketing is “the performance of business activities that direct the flow of goods and services from producer to consumer or user in order to best satisfy consumers and accomplish the firm’s objectives” (p.33). It was posited as a decision-making activity that is focussed not only on satisfying customers at a profit but also on making ideal decisions on the marketing mix elements or the 4Ps (product, price, place and promotion).

The marketing mix theory/concept had its origin in the 1960’s. Grönroos (1994) contended that the expression “mixer of ingredients” was originally used by Culliton (1948), to connote the concept of the “marketer” in a study of marketing costs in 1947 and 1948. Accordingly, the marketer plans diverse means of competition and blends them into a “marketing mix”, to optimise the profit function.

Borden’s (1964) seminal work on the marketing mix identified 12 elements – product, pricing, branding, distribution, personal selling, advertising, promotions, packaging, display, servicing, physical handling, and fact finding and analysis. He suggested that

these elements, when properly managed, would result in a profitable business operation. These Borden factors were reduced to a simple four element framework: Product, Price, Promotion and Place.

In literature, the proposition that emerged as the 4Ps marketing mix theory is often recognised as the traditional view of marketing. It is also called transaction marketing or marketing mix management. According to this view, firms focus on managing the marketing mix decision variables - Product, Price, Promotion and Place (distribution) in order to attract customers and to generate a transaction. Thus transaction marketing involves a firm managing the elements in the marketing mix to attract potential buyers and satisfy them (Coviello, Bordei & Munro, 2000). Based on this paradigm shift the American Marketing Association (1985) defined marketing “as the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods, and services to create and satisfy individual and organisational objectives” (p.1)

The majority of marketing practitioners began to use the marketing mix as a toolkit of transaction marketing and a classical model for operational marketing planning (Grönroos, 1994). Several studies also confirmed that the 4Ps mix was the trusted conceptual platform for dealing with tactical/operational marketing issues in firms (Coviello et al., 2000; Romano & Ratnatunga, 1995; Sriram & Sapienza, 1991).

The 4Ps mix also played a significant role in the advancement of the marketing management discipline. It was developed as a fundamental concept of the commercial philosophy with theoretical foundations in optimisation theory (Webster, 1992; Kotler, 1967). The theoretical affirmation of the mix gave prominence to the idea that the prospect of successful marketing activities would increase if the decisions and the resource allocations on the marketing mix activities were optimised.

Marketing research also gained significance in marketing management practice during this period as an instrument for aligning the firms’ productive capabilities with the needs of the market place (Webster, 1992). Also during this period segmentation and targeting, differentiation and positioning were introduced in the marketing literature. Pels, Möller and Saren (2009) posited that the marketing management approach included the development of the optimal marketing mix solutions by solving key questions relevant to optimising marketing mix, segmentation solution and offering positioning. These marketing mix elements are characterised as relatively controllable

elements which the marketing decision makers can modify and adapt to suit the volatile environmental variables that influence the process of reaching and satisfying the customers.

The managerial school of marketing thought aided the occurrence of important developments in the later part of the 1970s. Marketers realised the advantages of focussing on specific groups of customers. They recognised that they could tailor their marketing programs for these specific groups of customers and could effectively differentiate themselves from their competitors (Peterson, 1962). Thus market segmentation and targeting became important tools for marketing planning (Sheth & Parvatiyar, 1995). The concept of market segmentation was introduced in marketing literature by Wendell Smith in 1956.

Even though the 4 Ps marketing mix perspective was established as a major theoretical and practical parameter of contemporary marketing, several academics expressed doubts and objections regarding the value and the future of the marketing mix elements. Many recommended possible variations to these elements that ranged from minor modifications to the mix to the total rejection of the marketing mix elements. In spite of all the limitations the marketing mix theory is considered by many as a trusted conceptual platform for practitioners (Constantinides, 2006; Coviello et al., 2000; Romano & Ratnatunga, 1995; Sriram & Sapienza, 1991). Thus up till the early 1970s, it can be said that the marketing exchanges that were analysed were primarily exchange transactions (Pels, 1999; Kotler, 1972).

Based on the marketing management school of thought El-Ansary (2006) developed a taxonomy for marketing management and posited that marketing management includes both marketing strategy formulation and implementation processes. The marketing strategy formulation process, which is the core marketing strategy, is defined as “the total sum of the integration of segmentation, targeting, differentiation and positioning strategies designed to create, communicate and deliver an offer to a target market” (El-Ansary, 2006, p.4). This involves understanding customer behaviour (market research), segmenting, targeting, differentiating and positioning the offer in the customers mind.

The marketing strategy implementation process is defined by (El-Ansary, 2006) as the “process of creating the value (product/price), communicating the value (promotion) and delivering the value (channels)” (p.6). It is the process of deploying the marketing

mix to create, communicate and deliver value. Based on this view of marketing management, in this research it was proposed to include market research, segmentation, targeting, differentiation, positioning and marketing mix as the components of marketing management practices.

Slater and Olson (2001) also posited that marketing management includes all related decisions concerning segmentation, targeting and the development of strategies for positioning based on product, price, promotion and distribution decisions. Based on this view of marketing management, in this research it was decided to include market research, segmentation, targeting, differentiation, positioning and marketing mix as the components of marketing management practices.

The most notable change in the marketing literature in the 1970s was the emergence of services marketing literature. Several scholars pointed out that mainstream marketing management have neglected the aspect of long term relationships with customers and other stakeholders (Gummesson, 1997; Morgan & Hunt, 1994; Grönroos, 1994; Dwyer, Schurr & Oh, 1987; Berry, 1983; Hunt, 1976). During this period of time, marketing primarily moved from a product-dominant view, in which tangible products and transactions were central, to a service-dominant view, in which intangibility, exchange processes and relationships were central (Vargo & Lusch, 2004). These perspectives gave rise to the relationship marketing theory, which is discussed in the next sub-section.

Relationship marketing theory. Since the 1970s, the services marketing discipline acquired a distinct position as more researchers began to emphasise the unique characteristics of the services (for example, see Shostack, 1977; Bessom & Jackson, 1975). According to Constantinides (2006) two major elements contributed to the development of the services marketing literature: firstly, services became an important source of corporate revenue and a major instrument of all economic activities. Secondly, service was introduced as a significant dimension of product differentiation and also as an important basis of competitive advantage. Increasingly services became a part of the physical products and were mentioned as an important element of the augmented product dimension as noted by Kotler, Armstrong, Saunders and Wong (2000).

In the 1980s the world economy became a predominant services economy, with its focus on customer service (Sheth & Parvatiyar, 2002). Several unique properties of services such as intangibility, interactivity, perishability and proximity were conceptualised (Sheth & Parvatiyar, 2002; Grönroos, 1990). These unique characteristics shifted the orientation from transaction orientation to relationship orientation in firms. Hence concepts like customer retention and customer repurchase intention, which were hugely undermined during the 1960s and the 1970s were emphasized in the 1980s (Constantinides, 2006).

Due to the advent of the services marketing perspectives, the marketing management traditions were questioned by those researchers who studied the marketing of services. The primary concern of such researchers was that that the marketing-mix approach did not include the modelling and the managing of the relationships between the service provider and the customers (Möller & Hallinen, 2000). The emphasis on the importance of the development and the maintenance of buyer-seller relationships led to the emergence of relationship marketing.

Since the 1980s the marketing literature focussed on the importance of managing buyer-seller relationships as strategic assets. During this decade companies competing in both consumer and industrial markets sought the help of their suppliers to support them to achieve stronger competitive advantage by supplying them with higher quality products, improved services, and efficient distribution systems. To achieve this, the buyers had to abandon the model where the buyer pitted suppliers against one another to achieve lower prices. Instead they began to embrace a more co-operative model of buyer-seller relationships. Accordingly, the parties attained and settled for lower total costs by working together to ensure efficient management of inventories, to share risks and to eliminate unnecessary tasks and procedures (Lewin & Johnston, 1997).

These “discrete” market relationships were progressively displaced by closer, long-term relationships between the buyers and the sellers (Lewin & Johnston, 1997). Relationship marketing was noticed among businesses as they learnt to collaborate to compete in the highly competitive global environment (Palmer, 1997; Morgan & Hunt, 1994). Since then there has been a significant increase of interest in theory, research and practice focussing on the buyer-seller relationships in marketing (Lewin & Johnston, 1997; Dwyer et al., 1987; Anderson & Narus, 1990; Ganesan, 1994; Morgan & Hunt, 1994). The aspect of long-term relationships with customers and other stakeholder groups

which were often overlooked in mainstream marketing management literature were also revealed (Gummesson, 1997; Sheth & Parvatiyar, 1995; Grönroos, 1994; Morgan & Hunt, 1994; Dwyer et al., 1987).

The implicit notions of this phenomenon were in place in the work of McGarry (1953). He emphasized contractual relationships between various agencies when other academicians focussed on flow of goods from one marketing agency to another in the channel of distribution. It was suggested that marketing was important to mould and shape human relationships and attitudes, rather than involving only the physical handling and distribution of goods.

The term “relationship marketing” was first alluded by Thomas in 1976. This term was explicitly used by Berry (1983) in the context of services marketing. Berry (1983) defined relationship marketing as “attracting, maintaining and - in multi-service organisations - enhancing customer relationships” (p.25). Servicing and selling to existing customers is viewed to be just as important to long-term marketing success as acquiring new customers (Berry, 1983). Since then, relationship marketing has received widespread attention among the academicians.

According to Hunt, Arnett and Madhavaram (2006), customers engage in relational exchange with a particular firm if they perceive that the benefits of such engagement exceeds the cost incurred. These benefits are identified as one of the key antecedents for commitment that characterises a customer who engages in a relational exchange (Morgan & Hunt, 1994). Customers desire to be partners with firms who they can trust. Trust is associated with the exchange partner’s reliability, integrity and competence (Hunt et al., 2006). Customers perceive that working with trusted partners reduces the risks associated with relational exchanges.

Sheth and Parvatiyar (1995) asserted that customers achieve greater efficiency in decision making, share the task of information processing, realise cognitively consistent decisions and reduce the perceived risks associated with future choices. Customers also engage in relational exchanges with firms who share their values (Morgan & Hunt, 1994). Thus customers’ sense of morality also motivates them to be partners with firms. They seek to partner with firms who agree with them as to what is important, right, appropriate and significant versus what is unimportant, wrong, inappropriate and

insignificant. For example, some customers will engage in a relationship with firms that are socially responsible (Hunt et al., 2006).

It has been contended in literature that the fundamental imperative with which a firm enters into a relational exchange with customers is to achieve competitive advantage and thereby superior firm performance (Hunt et al., 2006; Gummesson, 2002; Webster, 1992). They propose that engaging in such relationships enable firms to compete better in the competition intensive market-based economies. Webster (1992) suggested that the primary focus of building closer relationships with customers is to overcome problems of acquiring competitive advantage, to cope with rapidly changing technological environment and to efficiently introduce new products by reducing the time to market.

Hunt et al. (2006) indicated that building relationships with customers increases the competitiveness of firms when such relationships contribute to the firms' ability to produce market offerings that are customised to the tastes and preference of the customers. Thus relationship marketing becomes a strategic choice for firms to compete in the market. Accordingly firms should identify, develop and nurture relationship portfolio that enhances the efficiency and the effectiveness of relationships between the firms and their customers (Hunt & Derozier, 2004). Offering customised products based on the tastes and preferences of the customers and offering relational benefits enhances customer satisfaction in firms.

The above discussions presented the historical developments in the field of marketing by summarising the evolution of marketing since its inception in the early 1900s. The next sub-section examines the approaches that can be employed to assess the marketing practices in firms.

Approaches to Understanding Marketing Practices in Firms

As discussed, there are two major schools in marketing that offer diverse perspectives and suggest a distinct focus of analysis. They are the transaction perspective and the relationship perspectives. The role of the exchange relationships in the marketing concept was, and still is, widely debated. However, a review of extant literature identified three major alternatives marketing scholars use in understanding the marketing practices in firms. Pels (1999) advocated that academicians follow one of these alternatives in understanding the marketing strategies in firms. These three

approaches and the rationale for the choice of the suitable approach that was employed to build the conceptual framework for this research are discussed below.

The first approach that emerged with the shift in focus to the relationship dimensions of the exchange suggested that there is an essential need to move from transactional marketing to relationship marketing. The proponents of this school of thought argued that the transaction marketing perspectives were totally outdated and were not relevant to the dynamic marketing trends and the service orientation of firms (Gummesson, 1997; Sheth & Parvatiyar, 1995; Webster, 1992). The shift towards relationship orientation in marketing was attributed to the continuing growth of the services economy. Hence it was reasoned that this new paradigm offers a better explanation of the marketing phenomena in the current era (Harker & Egan, 2006). It was believed that exchange relationships can be characterised as a new paradigm and therefore recommended a “paradigm shift in marketing” from transaction marketing to relationship marketing.

The second proposition distinguished exchange transactions and exchange relationships and suggested that both concepts may co-exist (Pels, 1999). The advocates of this approach proposed building a continuum wherein the exchange transactions and exchange relationships existed at the opposite ends of the continuum (Harker & Egan, 2006; Dwyer et al., 1987). In other words, it was posited that there exists a continuum of transactions: from exchanges to relationships. Each type of exchange was limited to either a specific product/services category or particular types of markets.

Thus in this simple model attempts were made to place various (categories) goods and services or different types of markets at the appropriate place in the continuum. Transaction marketing was assumed to be at one end of the continuum: this completely transactional approach was appropriated for consumer packaged goods, consumer durables and industrial products. At the other end of the spectrum was relationship marketing. Business-to-business service firms were categorised as completely relational and were placed at the other end of the continuum. These firms were described as those that largely focus in building relationships with the customers.

The third school supports the view of adding the relationship perspective to the traditional marketing management perspective, that is, the relationship dimension to the marketing management approach. Pels, Coviello and Brodie (2000), referred to this as

the “marketing mix - plus” perspective. The exponents of this approach argued that there has neither been a shift from transactional marketing to relationship marketing nor these perspectives exists in a continuum that is linked to a specific product/service category or the type of market served. These authors noted that marketing practices are likely to be interrelated, even though they are distinct and hence a pluralistic conceptualisation of practices is appropriate to understand the practices that are adopted by the firms.

The idea of combining the mix and relationship approaches has received very little direct attention in marketing research. Lehtinen (2011) argued that exploring the combination of these approaches was relevant for many significant reasons. The current dynamic marketing environment is complicated and challenging and hence there exists the need for a comprehensive approach to marketing. Even though these approaches are mutually exclusive, they also complement one another. In other words, the weakness of one approach is complemented by the strength of the other. It was posited that these approaches have never been fully separated not only in marketing practice but also in theory. The elements of one approach are inevitably integrated into the elements from the other approach to one extent or another.

Combining these basic approaches can be a useful way to fill gaps within the separate theories and between theory and practice. Lehtinen (2011) suggested that no one approach is superior to the other. Firms may adopt different integrated marketing practices. When developing marketing theory, the similarities between the different approaches must be analysed and the strong points of the traditional marketing must be considered.

There are limited studies in marketing literature that were designed to identify the marketing practices of firms. Of interest for this research is the work done by Coviello, Brodie, Danaher and Johnston (2002). They studied the implementation of marketing practices in service firms in the United States, Canada, Finland, Sweden and New Zealand. The results of this research showed that many service firms give importance to transactional rather than relational approach. This is so in spite of the proposition that service oriented firms are inherently relational and are expected to employ relational marketing in their decisions and actions concerning the market. They found that transactional marketing was prevalent in 41 percent of the service firms and 27 percent

of the B2B firms. Only 29 percent of the consumer service firms and 41 percent of the B2B firms adopted a relational approach. The remainder of the firms that were surveyed employed a hybrid approach.

Among the business-to-business firms studied, 32 percent took a combined approach in adopting marketing practices that emphasised both transactional and relational practices. These findings are consistent with Vargo and Lusch's (2004) views that in recent years marketing is characterised by both the marketing management school of thought and relationship marketing school of thought (Coviello, Winklhofer & Hamilton, 2006).

Hence it was concluded that in order to capture the scope of what is being practiced the theoretical framework should include the full spectrum of marketing types. They proposed that studies attempting to assess marketing practices in firms must include all types of marketing to capture the scope of what is really being practiced. Pels (1999) and Fruchter and Sigué, (2005) were also in line with this proposition. They also contended that marketing is about both exchange transactions and exchange relationships.

Drawing from these empirical studies it was proposed in this research to simultaneously examine the marketing management practices and relational practices to explore the marketing practices that are adopted by the ICT firms. In adopting this theoretical perspective, this research captures both the transactional (marketing management) and relational marketing practices of the ICT firms. This theoretical perspective is found to be more relevant to understand the marketing practices of the ICT firms in India.

In the present times, radical technological developments have a profound impact on the marketing practices that are adopted by firms (Ramaswamy & Namakumari, 2012). Since the 1990s it has been posited that the developments in marketing will closely be intertwined with the technological developments, specifically with the developments in the information technology sector (Brady, Saren & Tzokas, 2002; Moncrief & Cravens, 1999; Webster, 1992). Sheth & Parvatiyar (1995) recognised the impact of the technological advancements in marketing when they concluded that "the impact of the technological revolution is changing the nature and the activities of the marketing institutions" (p. 409).

Brady et al. (2002) argued that marketing is context dependent and when one of the contextual element like the technological environment changes, it has a significant

impact on the nature and scope of the marketing discipline. Hence the developments in technology were expected to have a radical impact on how marketing is being practiced in firms.

Among the various technological developments, the advent of the internet created a profound influence on marketing which has resulted in a marketing revolution. According to Arnott and Bridgewater (2002), the internet opened up a market space that is distinctly characterised as being shared, real-time, global and open. This market space offers an endless marketing opportunity which is widely acknowledged by both academicians and practitioners. It also empowered customers to search, browse, learn, buy offerings and contribute knowledge in a more transparent and a social way (Varini & Srisi, 2012).

There are a number of internet-based technologies that have transformed businesses. Out of these social media has dramatically influenced businesses and industries in the current internet era. Social connectivity through this online platform has become the key to marketing in firms (Geho & Dangelo, 2012). In recent years firms have adapted themselves to harness this web technology and are adopting strategic approaches to use this online tool for the benefit of the firm. In the ensuing sub-section, discussion pertaining to social media and the need to integrate social media into the conceptual model is presented.

Social Media

The exponential increase in the use of the World Wide Web and its widespread applications has resulted in the emergence of an online media platform called social media. This worldwide explosion of social media usage was enabled by the launch of Web 2.0 technologies in the late 1990s (Varini & Srisi, 2012). According to Kaplan & Haenlein (2010) Web 2.0 is a term that was first used in 2004 in order to describe an innovative way in which software developers and end-users utilised the World Wide Web, wherein the content and applications were continuously modified by all users in a participatory and collaborative fashion. Thus the advent of web 2.0 created a new way to communicate, collaborate and share content. This web 2.0 technology provided the platform for the evolution of social media.

Social media is one of the most important information technology tools which have a transformative impact on business enterprises. It includes a variety of online

information sharing platforms covering all social networking sites (for example, Facebook, LinkedIn and Myspace), creativity work-sharing sites (for example, YouTube and Flickr), collaborative websites such as Wikipedia and microblogging sites (for example, Twitter) (Mangold & Faulds, 2009). These social media platforms have revolutionised the ways firms relate to market place thereby creating a new world of possibilities in all management practices in firms (Aral, Dellarocas & Godes, 2013; Schultz, Schwepker & Good, 2012).

According to Statista (2013) a statistics portal, the number of worldwide social network users was expected to grow from 1.41 billion users in 2012 to 2.33 billion users in 2017. Social networking watch (2013), an online agency which provides news on social networking and social media industry forecasted that total global revenue generated by the social networking sites will surpass \$30.1 billion by 2017, increasing from the \$16.2 billion expected this year.

In literature, there are numerous descriptions and definitions for social media. In a broader sense, social media has been defined in literature as the digital content and the network based interactions which are developed and maintained by and between people (Cohen, 2011). Kaplan and Haenlein (2010) defined social media as "... a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creations and exchange of user generated content" (p.61). User generated content describes the various forms of media content that are created by the end-users and are made publicly available.

Social media constitutes both the conduits and the content that are disseminated through interactions between individuals and firms (Kietzman, Hermkens, McCarthy & Silvestre, 2011). The contents comprise of text, pictures, videos and networks. The conduits comprise of an array of channels through which the interaction between individuals and firms, is facilitated and disseminated (Berthon, Pitt, Plangger & Shapiro, 2012). All these definitions and many other related definitions of social media highlight two primary themes of social media use - digital content creation and network-based interactions. Many authors see the technologies relating to social media not solely as a technological phenomenon but as a paradigm shift that has enabled a new culture of participation, primarily based on the users interacting and collectively creating and sharing knowledge over the internet (for eg. Vuori, 2012; Schneckenberg, 2009).

Social media has received increasing attention from practitioners, researchers and policy-makers alike because of its ability to capture the attention of customers, to expose their business and to reduce investments in other marketing activities and communication tools (Rafiee & Sarabdeen, 2013). As the number of people using social media is rapidly increasing, it is inevitable for firms to be present where their customers are, in order to know the needs of their customers and to satisfy them. Rafiee and Sarabdeen (2013) stated that in recent years “companies have realised the importance of utilising social media as an important tool to enhance their marketing effectiveness and to improve their marketing activities” (2013, p. 933). It is considered as an influential strategic tool to reach customers.

Being present in these socially active networks provides significant benefits for firms (Agnihotri, Kothandaraman, kashyap & Singh, 2012). They acquire privileged access to customers, early discovery of customer needs and customer referrals resulting in new revenue. Social media presence also provides close proximity to customers thereby facilitating inter-organisational efforts to coordinate value co-creation and to deliver superior value through customer relationships (Plouffe & Barclay, 2007). Social media provides unique advantages to firms in the B2B market place. B2B firms form long term relationship with their customers (Kaplan & Sawhney, 2000), engage in co-creation of mutual value (Vargo & Lusch, 2011) and have long, complex and multifaceted sales cycles (Ramos & Young, 2009), which are facilitated through social media.

According to Sashi (2012), “The interactive nature of social media with its ability to establish conversation among individuals and firms in communities of sellers and customers, and involve customers in content generation and value creation has excited practitioners with its potential to serve customers and satisfy their needs” (p.254). Hence businesses are increasingly learning to exploit the potential of social media. Use of social media in the commercial context is widely recognised as an effective and powerful business tool because of the valuable benefits it offers to organisations (Hutchings, 2012).

Thus, over the years social media has evolved and has an increasingly significant impact on the marketing environment. The use of social media as a component of a firms’ marketing strategy is widely recognised by marketing practitioners (Akar & Topcu, 2011). Promotions, market research, marketing communications, product and customer

management are identified as the sub-disciplines of marketing that may use social media.

As the potential use of this online platform is becoming evident, marketers have embraced the ability of these tools to assist in marketing practices in firms (Andzulis, Panagopoulos & Rapp, 2012). In this research, all those aspects of social media that are increasingly recognised to provide potential value to the firms in the business context are included in the study. These aspects are elaborately discussed in the later part of this chapter.

The emergence of academic literature in the use of social media for marketing purposes in firms, underscores the fact the social media is becoming a mainstream marketing strategy of the practitioners in firms. Despite a large body of social media and marketing literature, it is conceded that a practical understanding of how social media is deployed in firms to reap maximum benefits is still in its infancy (Agnihotri, 2012). Naylor, Lamberton and West (2012) also indicated that social media practitioners seek best practices for contexts in which it is widely applicable.

Naudé and Holland (2004) argued that marketing has moved from the transactional approach, through the relationship approach, into a new era where information exchange is facilitated by the use of online tools. In this new era the successful acquisition, analysis and deployment of information is the key to marketing success. The most successful marketing organizations in this era will be those that effectively use Information technology tools in developing their marketing strategy (Brennan & Croft, 2012; Naudé & Holland, 2004).

Social media is the latest tool to emerge that has huge impact on marketing practices in firms. Of late, it has become an unavoidable tool in marketing (Rafiee & Sarabdeen, 2013). More firms use social media platforms to directly communicate with buyers and hence social media has become an integral part of the firms' marketing strategy (Rodriguez, Peterson & Krishnan, 2012). Hence social media was integrated in to the conceptual framework as a strategic marketing practice.

From a firm's perspective, social media has become a ubiquitous set of tools that can be used in various ways. There are limited studies in literature that examines the influence of social media on the performance of firms. However, it is proposed that social media applications have an effect on marketing performance in firms (Akar & Topcu, 2011).

Hence it becomes imperative to understand its relative importance and its interrelatedness to firm performance (Stephen & Galak, 2009). It is also essential to understand how firms utilise social media as part of their marketing strategy to leverage their competitive advantage and thus enhance their firm performance (Vuori, 2012).

It is evident from the above discussion that social media is a new phenomenon in marketing and is a significant addition to the marketing practices adopted by firms in the B2B sector. Hence it was proposed in this research to integrate social media practices together with the simultaneous examination of the transactional and the relational practices that are adopted by the ICT firms in India.

In summary, a combined pluralistic approach is employed in this research to identify the full scope of marketing practices that are adopted by the ICT firms in India. Accordingly marketing management practices, relationship marketing practices and social media practices are proposed as various strategic marketing practices that are adopted by these firms. These practices are posited as the independent variables (IVs) in this research study. In the next sub-section, the influence of these marketing practices on firm performance is discussed.

Strategic Marketing Practices and Firm Performance

Strategic marketing practices are crucial for successful firm performance. The marketing empirical literature explains the contribution of strategic marketing management to firm performance (for example, Sweeney, Soutar & McColl-Kennedy, 2011; Lee, Yoon, Kim & Kang, 2006). Brooksbank and Taylor (2002) highlighted the important contribution of strategic marketing to high performance of New Zealand companies. Doyle & Wong (1998), found a strong correlation between marketing and business performance. In their study, they contended that marketing strategy and marketing planning are highly correlated with firm performance. Knight (2000) argued that in the globalised environment, adopting suitable marketing strategies to suit the uncertain and turbulent environment is positively associated with firm performance. Knight (2000) also posited that marketing strategy is designed to generate tactics and other actions that satisfies the demands of the consumers in specific markets that leads to desired corporate objectives.

It is acknowledged that application of strategic marketing management practices in high technology firms increases customer satisfaction and thus enhances firm performance

(Mohr et al., 2010). Stratis and Powers (2001) also contended that under conditions of strategic uncertainty, strategic marketing management practices are significantly more important as determinants of long term performance. Since high technology environments are fraught with change and uncertainty (Mohr et al., 2010), it is posited that application of strategic marketing management practices in these firms increases customer satisfaction and thus enhances firm performance.

Successful relationship marketing strategies have been linked to improvements in competitive advantages in the market place (Hunt et al., 2006; Smith & Barclay, 1997; Day, 2000; Hunt, 1997) and superior financial performance (Boles, 2000; Boles, Johnson & Barksdale, 2000; Hunt & Lambe, 2000; Walter & Gemunden, 2000; Kalwani & Narayandas, 1995). Arnett and Badrinarayanan (2005) asserted that successful inter- organisational relationships leads to superior financial performance. Relationship marketing practices are empirically evidenced to promote long term advantages for firms (Hunt & Lambe, 2000; Hunt 1997) because the relationships between firms and their customers are difficult to develop and cannot be imitated.

Social media facilitates firms to talk to their customers directly and to listen to what their customers are saying about them and their products and services, thereby enhancing the relationship between them. Because social media helps to know the pulse of the customer and deepens the relationship with the customers, it is proposed that it would influence customer satisfaction. It is found to drive customer purchase intentions, build brand image thereby influencing the performance of the firms. Social networking capabilities also enable firms to generate the required market knowledge which facilitates firms to develop and deploy information (Heirati, O’Cass & Ngo, 2013). This is regarded as a superior marketing capability that influences firm performance in firms.

Building on the evident relationships in literature between the proposed marketing practices and firm performance it is postulated in this research study that the marketing management practices, relationship marketing practices and social media practices influence firm performance in the ICT firms in India. Hence firm performance is proposed as the dependent variable (DV) in this research study. In the next sub-section, the rationale for introducing customer satisfaction as the mediating variable is discussed.

Customer Satisfaction

Customer satisfaction is widely recognised as the central tenet of marketing thought and practice (Churchill & Surprenant, 1982). In literature customer satisfaction is established as a major outcome of all marketing activities. It is central to the marketing exchange process as it is acknowledged that profits are generated through the satisfaction of customer needs and wants (Martin-Consuegra, Molina & Esteban, 2007). The marketing concept starts with a well-defined market, focuses on customer needs, coordinates all the activities that affect customers, and produces profit by satisfying customers (Kotler & Keller, 2012).

Secondly, the firm's ability to satisfy customers provides a sustainable competitive advantage which is necessary to operate in today's dynamic and competitive global environment (Kotler, 2007; Smith & Wright, 2004). In response to market place, managers seek to improve organizational effectiveness by identifying organizational metrics which contribute to long term success in firms (Sui-Hua, 2007; Garver, 2003). Organizations are pushing for continuous improvement strategies to stay ahead of the competition.

In order to drive continuous improvement more importance is placed on understanding and measuring organizational performance from the customer's perspective. Hence a growing number of organizations are using customer satisfaction measures in developing, monitoring and evaluating product and service offerings (Anderson, Fornell & Lehmann, 1994). Providing an understanding of the antecedents and consequences of customer satisfaction will have significant practical implications for firms in the ICT sector.

Thirdly, there is increasing evidence in literature that establishes the link between customer satisfaction and financial performance in firms (Morgan, Anderson & Mittal, 2005; Anderson et al., 1994). Higher customer satisfaction is posited as the best indicator of a firm's future profits (Anderson & Sullivan, 1993). Customer satisfaction is identified as a fundamental indicator of firm's performance due to its link to behavioural and economic consequences that are beneficial to the firm (Anderson, Fornell & Rust, 1997). According to Gupta and Zeithaml (2006), customer satisfaction is expected to lead to repurchase behaviour (behavioural consequence), which translates into increased sales and profits (economic consequence).

This behavioural intention to return to the service provider was attributed to the overall customer satisfaction, that results from the ability of the service to fulfil the customers' needs and expectations in relation to the service provided (Sharma & Patterson, 2000). Hence it is argued that managers are keen to discover ways to improve customer satisfaction and thus business performance in firms (Westbrook, 2000; Piercy & Morgan, 1995). According to Oliver (1999) both product and service providers earnestly pursue achieving the goal of maximising customer satisfaction.

In the earlier discussions it was established as to how the proposed strategic marketing practices (IVs) influence firm performance (DV) in the ICT firms in India. This proposition will lead to understanding the extent to which the IVs affect the DV. However, deeper understanding is gained when the process that produces the effect is realised (Preacher & Hayes, 2004). By introducing a third explanatory variable called the mediator, researchers have attempted to depict the mechanisms that explain the relationship between the IVs and the DV. From a theoretical perspective, the most common purpose of introducing a mediator variable is to explain why a relationship exists between the two variables that is, the IVs and the DV (Hair, Black, Babin & Anderson, 2010). Introducing mediating variables in conceptual models have been pervasive in existing literature as they explain how or why two variables are related (MacKinnon & Fairchild, 2009).

Mediators are variables that influence the association between the IVs and the DV. It is considered as an indirect effect that specifies how the association occurs between the IVs and the DV (MacKinnon, Fairchild & Fritz, 2007). The application of the mediating variable (MV) in a conceptual framework helps to comprehend the changes in the DV of interest by providing a more detailed understanding of the relationships that exists between the variables (MacKinnon et al., 2007). In addition to examining the proposed direct relationship between the IVs and the DV, mediation models test the hypothesised relationship between the IVs and the MV and the MV and DV. Investigating mediation provides an interesting insight into the relationship between two variables by providing an understanding of the causal chain of events that describes how one variable influences the other (Gelfand, Mensinger & Tenhave, 2009).

A wide range of constructs may serve as potential mediators in explaining the causal relationships between two variables. Customer satisfaction being the central tenet of marketing was found not only to provide sustainable competitive advantage in firms but

to significantly influence firm performance in firms. Empirical studies from extant literature showed that the components of the strategic marketing practices that were identified for this research as IVs influence customer satisfaction in firms. The association between these strategic marketing practices and customer satisfaction are elaborately discussed in depth in the ensuing section.

The discussions presented above established the need to employ an integrated approach to identify and understand the strategic marketing practices that are adopted by the ICT firms in India. The integrated approach facilitated the use of the marketing management perspective together with the relationship marketing perspectives to achieve the research objectives. Social media is integrated into the model as the new construct in this research. Grounded on extant literature, these proposed marketing practices are posited to influence firm performance in the ICT firms in India. Because customer satisfaction was evidenced to influence firm performance and was established as the outcome of these marketing practices, it was proposed as the mediating variable in this study. Drawing from the above discussions, the preliminary conceptual framework was developed and is presented in the next section. The association between the variables in the model are also discussed.

Preliminary Conceptual Framework of the Strategic Marketing Practices of ICT Firms and their Influence on Firm Performance.

In this section the preliminary conceptual framework is presented. It has been developed based on the theoretical perspective that was discussed in the previous section. This model is established to address the existing gap in current literature in the area of marketing practices and firm performance in the ICT firms in India.

The proposed conceptual framework (figure 2.1) postulates that the strategic marketing practices of the ICT firms leads to customer satisfaction which in turn influences firm performance in these firms. The strategic marketing practices identified for this research were appropriated from the above discussed theoretical perspective which proposed the pluralistic use of the marketing management practices and relationship marketing practices in understanding the full scope of marketing that is practised in firms. Because social media is identified as an emerging tool that supports marketing practices in firms, it is conceptualised as a new construct and is included in the model. These strategic marketing practices were contended to influence customer satisfaction and firm performance in the ICT firms in India.

As shown in figure 2.1, the independent variables that were identified as strategic marketing practices in the model are social media, relationship marketing, marketing research, segmentation, targeting, differentiation, positioning and marketing mix (product, price, distribution and promotion) practices. Firm performance is posited as the dependent variable and customer satisfaction, the mediating variable. The relationships among the constructs are explored in the ensuing discussion.

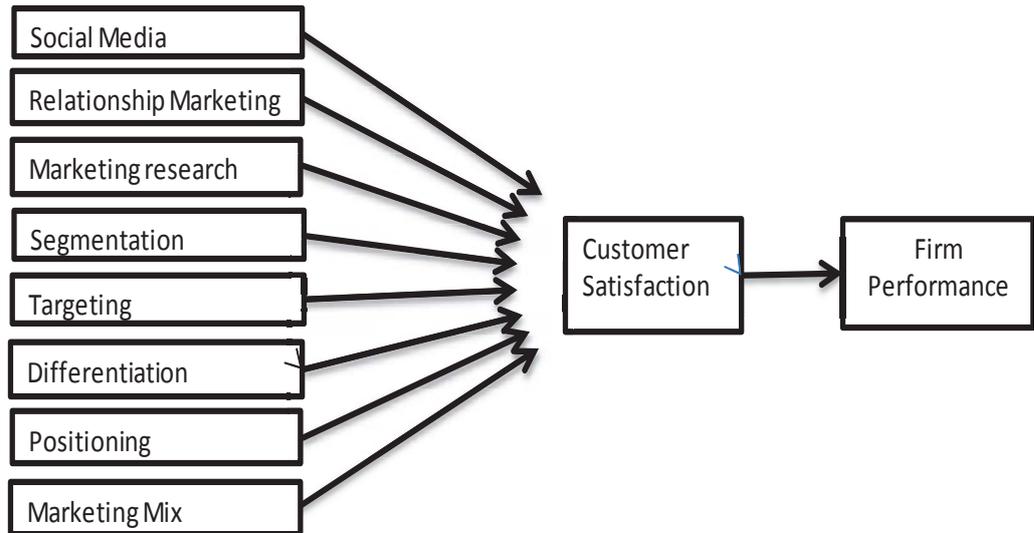


Figure 2.2. Preliminary conceptual framework of the Strategic Marketing Practices of the ICT firms and their influence on firm performance.

In the following sub-sections the associations between the proposed constructs in the preliminary conceptual framework are discussed.

Social Media

As discussed in the previous section, social media is the latest information technology tool to emerge that has a significant impact on the marketing practices of firms. The reach, accessibility and transparency of the online networks have empowered marketers to use social media to support their marketing practices. It is well-known that social media has been widely used for marketing consumer products. However B2B marketers have begun to explore social media and have developed social media strategies for their firms.

A review of the studies on the usage of social media in B2B firms suggests that the employment of social media to reach B2B clients is relatively a new phenomenon and

remains largely unexplored in literature (Järvinen, Tollinen, Karjaluoto & Jayawardhena, 2012; Schultz et al., 2012). In this research study the social media practices of the ICT firms are examined. ICT firms have the technological competency to use online networks and their customers are proficient in internet use. These firms rely on the internet more than any other firms in the business sector. Hence engagement in social media platforms has become a strategic choice for the success of these firms.

The common thread that runs through the social media literature is the fact that firms use to communicate and to interact with their customers (Järvinen et al., 2012; Schultz et al., 2012; Trainor, 2012; Fisher, 2009; Smith, 2009; Deans, Gray, Ibbotson, Osbourne & Knightbridge, 2003; Moen, Endresen & Gavlen, 2003). Social media is widely used by firms to attract, develop and enhance their relationships with their customers. Academicians and practitioners agree that social media networks have become an important facilitator of customer relationships in firms. Constant and continuous interaction with customers through social media helps to maintain relationships with customers.

The major component on which relationships are built is the trust between the exchange partners. Listening to customers is the primary element in building trust in customers (Rapp et al., 2012). In this regard, social media offers a forum for customers to be heard understood and appreciated and offers a value proposition to firms. Social media, not only facilitates “listening” to customers but it also promotes and encourages listening. Secondly, participating in social networks accelerates the development of trust and relationship building (Van Zyl, 2009). Because of the shortened response time, social media helps build rapport with customers by providing a nurturing, supportive, collaborative, trusting environment (Pullin, 2010).

Social media allows rapid and simultaneous engagement with customers as well. This online engagement with the customers is recognised as the key to building long-term advocates of the firms, who not only purchase for themselves but also recommend to others. Social media tools have facilitated firms and their customers to co-create their experiences (Trainor, 2012). According to Moen et al. (2008) the internet is used to develop projects with customers. Thus social media strengthens and enhances customer relationships by fostering meaningful interactions between the firm and its customers.

Social media is advocated as an important online tool for information search in firms (Fisher, 2009; Smith, 2009; Moen et al., 2008). Clients in B2B markets have progressed from being passive consumers of information to active participants in creating and sharing information through social media, which have brought customers closer to the firms (Trainor, 2012). Such close proximity to customers has allowed marketers to discover customer needs and to identify market opportunities in user generated blogs in online communities (Moen et al., 2008). Firms use market research information to categorise profitable and unprofitable customers, to provide customised service and to achieve greater customer retention (Trainor, 2012).

Through social media firms constantly monitor the reviews of their own products and services and check on competitor's offerings as well. Smith (2009) suggested that social media platforms are embraced as research platforms as they have become platforms for collecting opinions, content and data. Social media is identified as a low-cost platform through which a firm can build its reputation (Moen et al., 2003). Shultz et al. (2012) also indicated that social media tools are important to build brand awareness and firm's reputation.

There is limited research in literature that examines the influence of social media practices on customer satisfaction and firm performance in firms. However, this review of the literature revealed that social media is extensively used by firms for building relationships with customers. Interaction with customers and continuous engagement with customers helps firms to know the customer better and strengthens the relationship with their customers. Hence it was proposed in this research that social media practices that are adopted by the ICT firms influences customer satisfaction in these firms. The ability to discover the needs of the customers through online platforms and to satisfy their needs is expected to influence customer satisfaction.

Social media practices adopted by firms are found to drive customer purchase intentions, build brand image thereby influencing the performance of the firms. Järvinen et al., (2012) noted that this digital environment permits firms to decrease costs by increasing the effectiveness of exchanges in terms of communications and transaction. Social networking capabilities also enable firms to generate the required market knowledge which facilitates firms to develop and deploy information (Heirati et al., 2013). This information sourcing and deployment is recognised in literature as a superior marketing capability that impacts firm performance. Social media has also

opened up new opportunities for firms to connect efficiently with their target market thereby driving sales and increasing brand equity (Pfeiffer & Zinnbauer, 2010).

In summary the objectives of employing social media practices in firms are in line with marketing objectives, which are acquiring new customers and developing current customer relationships. Hence it was proposed in this research that the social media practices that are adopted by the ICT firms in India influences customer satisfaction and firm performance.

Relationship Marketing

The concept of relationship marketing has been defined by a large number of academicians and practitioners along different industry verticals and in different contexts. However the central tenet of all definitions is the acquisition and retention of customers that results in profitability. Based on previous research findings on relationship marketing, Agariya and Singh (2011) provided an overview of the definitions of relationship marketing and the major elements that defined this construct. The authors reported 72 different definitions of relationship marketing and 50 defining elements of this construct. Out of the 50 defining dimensions identified, trust, commitment, communication and customer relationship orientation of the firms were contended as the major components that defined relationship marketing in firms.

Trust is acknowledged as an essential dimension of any successful relationship (Sin, Tse, Yau, Chow & Lee, 2005; Lewin and Johnston, 1997; Morgan & Hunt, 1994). The importance of trust in building relationships is well documented in the marketing literature. As of 2011, there were 167 studies that identify trust as the primary dimension that defines relationship marketing in firms (Agariya & Singh, 2011). Trust is posited as the central element of all relational exchanges. This aspect of relationship marketing is primarily related to trust that exists during an exchange. Trust is conceptualised to exist “when one party has confidence in an exchange partner’s reliability and integrity” (Morgan & Hunt, 1994, p.4). Lawson-Body, Willoughby and Logossah (2010) described trust as the degree to which customers believe that the firm has motives and intentions that are beneficial to them and the firm is concerned about creating positive outcomes for them.

According to Anderson and Narus, (1990), when trust is established between firms they realise that coordinated joint efforts will lead to better outcomes than what the firms

would achieve by themselves, in their own best interests. Once trust is instituted between the exchange partners, it provides a basis for future collaborations between the firms (Dwyer et al., 1987). In literature, assessment of the trust component focussed on the extent to which the customers can rely on the firms to keep the promises that were made to them; the extent to which the firms can be trusted by customers at all times and the extent to which the firms go about rewarding employees who solve customer problems thereby providing positive beneficial outcomes to their customers (Lawson-Body et al., 2010).

Trust, in turn, is found to lead to the prominent second dimension of relationship marketing, which is commitment. Relationship commitment is described as the long-term desire between the firm and its customers to maintain a valued relationship (Moorman, Zaltman & Deshpande, 1992). In other words, it indicates the partners' efforts to preserve and maintain the crucial relationship. Commitment in a relationship is posited to reflect the desire in the exchange partners to make the relationship work successfully (Morgan & Hunt, 1994) and hence is considered as the core of all working relationships. Commitment provides a solid foundation upon which the other elements of relationships can be built upon (Arnett & Badrinarayanan, 2005).

Commitment to one another in the exchange process is said to develop a mutually beneficial relationship and trust and commitment are posited as the important components of successful relational exchanges (Morgan & Hunt, 1994; Dwyer et al., 1987). Commitment is established when firms have long term relationship with their customers (Sin et al., 2005). Firms display commitment when they make significant investments (in terms of time and resources) in building relationship with their customers (Palmatier, Gopalakrishna & Houston, 2006) and when they fulfill all obligations and promises they make to their customers (Negi & Ketema, 2010).

Communication is identified as the third major dimension of relationship marketing. It includes both the formal and the informal exchange and sharing of meaningful and timely information between the business partners. Information exchange is highlighted as the crucial element in business relationships (Sin et al., 2005). Anderson and Narus (1990) and Morgan and Hunt (1994) insisted that communication helps to build commitment and trust in a relationship. The various aspects of communication include providing timely information to the customers, communicating frequently to express opinions (Negi & Ketema, 2010; Sin et al., 2005), communicating effectively to avoid

potential conflicts and communicating about new products and services (Ndubisi, Malhotra & Wah, 2009).

Customer relationship orientation is observed to be rooted in the firm's overall culture and is deeply embedded in the values and beliefs that establish the norms for appropriate behaviour in firms (Jayachandran, Sharma, Kaufman & Raman, 2005). Thus customer relationship orientation can be defined as an organisational culture which affects the firm's choice of outcomes to be customer-centric and the means to accomplish these outcomes (Moorman, 1995). In service encounters, the interaction with customers creates a favourable setting to establish customer relationships and therefore service providers in B2B markets are seen as naturally customer oriented than most other firms (Grönroos, 1995).

The customer relationship oriented process includes "customer information gathering, segmentation, creating value by differentiation and managing customer profitability" (Reijonen & Laukkanen, 2010, p.3). In literature, customer relationship orientation is gauged by scales that reflect the cultural propensity of the firms (Jayachandran et al., 2005). Assessment of this dimension of relationship marketing focussed on the shared values of a firm that are consistent with customer relationship orientation, such as: emphasising customer retention, considering customer relationships as a valuable asset, emphasising the importance of relationships and rewarding employees based on customer satisfaction.

As discussed relationship marketing includes all those activities that are focussed towards establishing, developing and maintaining relationships with customers. Empirical evidence suggests that relationship marketing is one of the most successful competitive strategies as it enhances the ability of the firms to provide superior value to its customers. This ability acts as the means of differentiation between firms and helps to achieve sustainable competitive advantage (Grönroos, 1994). Through relationship marketing customers benefit in terms of getting higher value, better quality offerings and increased levels of customer satisfaction. Firms are found to benefit from increased sales volumes, positive word-of-mouth publicity, improved customer feedback and decreased marketing expenses (Reichheld & Sasser, 1990).

The relationship marketing practices that were adopted by firms were found to have substantial association with a firm's business performance, indicated by customer

retention, market share, sales growth and return on investment (Sin et al., 2005). Building and maintaining successful relationships with customers are often linked with superior financial performance by quickening product awareness, promoting repeat purchases and retaining satisfied customers (Srivastava, Shervani & Fahey, 1999; Sheth & Parvatiyar, 1995). Customer retention is positively linked to a firm's long-term profitability (Reichheld & Sasser, 1990). Findings from the studies in the B2B sector also indicate that relationship marketing efforts leads to relational ties that influences customer value to the firm by increasing the various dimensions of the buying relationship and generating positive word of mouth (Palmatier et al., 2006).

Several studies indicate that customer satisfaction is an important dimension of relationship marketing (Chen, Tsou & Huang, 2009). It is imperative for partners in a business relationship to deliver high levels of satisfaction during each business transaction as it is claimed that satisfaction is an important tool in assessing the health of customer relationships (Ata & Toker, 2012; Rossomme, 2003; Sheth & Parvatiyar, 1995). Hence relationship marketing based strategies are found to lead to increased levels of customer satisfaction in firms (Ganesan, 1994; Dwyer et al., 1987). Higher levels of customer retention are generally perceived as the result of increased customer satisfaction that the relationship has fulfilled by meeting the needs and wants of the customers (McDougall & Levesque, 2000).

From the above discussion it is was proposed in this research that the relationship marketing practices that are adopted by the ICT firms in India influences customer satisfaction and firm performance in these firms.

Market Research

Market research is the heart of any marketing program in B2B markets (Zimmerman & Blythe, 2013). It is often used in firms for forecasting, developing trends, finding market potential and competitor analysis. Research related to product attributes and product acceptance also comes under the scope of market research in firms. Malhotra (2012) defined market research as “the systematic and objective identification, collection, analysis, dissemination and use of information that is undertaken to improve decision making related to identifying and solving problems in marketing” (p.5).

Market research includes the set of processes that are employed to obtain information about customer needs and market conditions (Vorhies, Harker & Rao, 1999). Firms need information about customer needs and wants, complementary information for effective market segmentation and information pertaining to products and services so that the needs of the potential customers in the targeted segments are met (Kohli & Jaworski, 1990).

Market research links the customers and the public to the marketer, as it provides information that are necessary to identify and define marketing opportunities and problems. The information generated helps to develop, evaluate and refine marketing actions so that specific marketing activities can be made more effective (Malhotra, 2010). Thus, marketing research is widely recognised as a major source of information for marketing decision making, as it serves as the firm's formal communication link with the environment (Hart & Diamantopoulos, 1993). It helps in the identification of viable market opportunities, reduction of uncertainty and a better coordination of marketing activities. Market research is the most important basis for modifying products to meet the needs of consumers (Knight, 2000). In high tech markets marketing research is diligently used to gather information from the marketplace, to incorporate consumer needs into the product development and the marketing process (Mohr et al., 2010).

Market research is one of the primary steps in developing marketing strategies for both large and small firms (Brooksbank, 1991). Accordingly, market research is described as the process by which information pertaining to all the aspects of the market place, including market size and trends, firm's actual and potential customers - their needs and wants, satisfaction levels, and firm's competitor activity and competitor performance. Firms also use secondary information available through trade publications, government publications, business directories and online resources like white papers that are available online. In recent years the advent of web technologies, including social media, has had a major impact on the gathering of both primary and secondary data for market research, particularly in high technology in firms.

Existing literature postulates that three facets of market research practices can be assessed in a research study: one, whether market research was conducted by the ICT firms, two, how market research information was generated by these firms and three, what type of information was sought after by the ICT firms. Hart and Diamantopoulos (1993) suggested that first and foremost, it must be established as to whether any market

research is conducted by the firms concerned. This is done by assessing whether market research is done by firms internally, by an in-house department or section and externally, through specialist agencies or external contractors. Relevant research information can be collected in firms either by meeting customers formally or gathering the needed information through informal networks (Vorhies et al., 1999). Market research databases that are published online by large firms can also be sources of information (Brooksbank, 1991).

A review of studies on market orientation in firms showed market research as a major element of the “intelligence generation” component of market orientation (Vorhies et al., 1999; Jaworski & Kohli, 1993). These studies collectively reflect the firms which regularly and extensively conduct market research studies about customers, competitors and environmental trends that are genuinely marketing oriented. Such firms are truly customer focussed and all the firm’s efforts/activities are coordinated to serve the chosen target market. Thus literature portrays market research as a way to integrate the firms activities and focus them on the needs of the market place, thereby, enabling the firm to fulfil the marketing concept.

Firms that show superiority in identifying customer needs and have an understanding of the factors that affects customer purchase decisions are said have strong marketing capability (Dutta, Narasimhan & Rajiv, 1999). These firms will be able to achieve better targeting and positioning of its products and services relative to the competitor’s. Firms that act on the market knowledge that was generated through market research were found to enhance firm performance (Vorhies, Orr & Bush, 2011).

Market research is identified as a quality management practice in firms. It helps to identify customer needs. As firms meet these needs, the level of customer satisfaction increases, providing firms with the competitive advantage which is vital for their operations (Kuratko, Goodale & Hornsby 2001). Analoui and Karami (2002) found a positive impact of marketing research on firm performance. The positive effect of marketing research on firm performance is also identified in the study on marketing strategy making process by Lee et al. (2006).

Thus, in the light of the above discussions, it was proposed in this research that the market research practices that are adopted by the ICT firms in India influences customer satisfaction and firm performance in these firms.

Segmentation

Market segmentation is one of the most established concepts in marketing and is widely recognised as a fundamental principle in marketing management (Sausen, Tomczak & Herrmann, 2005; Wind, 1978). Throughout the entire body of marketing literature the strategic importance of market segmentation is continually emphasised. Because of its significance in marketing management, segmentation has received more scholarly attention in literature than any other managerial marketing concept (Quinn, 2009).

The concept of market segmentation was first introduced in marketing literature by Wendell Smith in 1956. Smith (1956) distinguished market segmentation and product differentiation and presented market segmentation as a substitute to product differentiation in imperfectly competitive markets. He described market segmentation as a process which views heterogeneous markets characterised by divergent demands as several smaller homogenous markets. This approach gained widespread acceptance because of the contention that firms cannot normally serve all of the customers in the market (Dibb, Stern & Wensley, 2002).

Market segments consist of group of customers or consumers who share the same or similar needs. McDonald and Dunbar (2013) define market segmentation as the “process of splitting customers, or potential customers in a market into different groups, or segments” (p.9). Segmenting the market helps the firms to target and reach individual segments with distinct marketing mix. Thus segmentation refers to the notion that customer groups comprising a market can be divided into subgroups, each of which has specific needs and wants. These needs and wants are unique to the individual subgroups.

Once the subgroups have been identified, marketers focus all their marketing efforts on satisfying the needs of each subgroup. These different homogenous segments require different product offerings, pricing structures, communication strategies and delivery methods. Identifying and choosing the key market segments to serve is central to marketing strategy and the corporate strategy in firms. In B2B markets segmentation techniques enable firms to craft their marketing strategies to meet the expectations of each actual or potential customer (Barry & Weinstein, 2009). Hence deciding on the most profitable market segments is an important strategic decision in firms.

Dibb and Simkin (2008) presented a four step process for market segmentation. The first step was to identify segments in a particular market by considering the base variables to group customers into segments. The identified base variables must either be related to the profile of the customers or to the way in which the offered product is used by the customers. The base variables must also be distinguished for consumer markets in business markets. The second step was to use a single base variable or a combination of variables to group customers into segments. The third step involved profiling and examining the identified segments and customers. This provides insights into specific customer values, needs and preferences and builds an excellent understanding of the customers which is crucial for effective segmentation. The final step is to check for the validity of the segments that emerged from this process.

For segmentation to be an effective marketing tool the most appropriate variable or variables to subdivide the heterogeneous groups of customers into viable segments of sufficient size must be identified. Multiple segmentation approaches are identified with a variety of variables serving as a basis for segmentation. Three main classes of variables were used in segmenting consumer markets. They are background customer characteristics, customer attitudes and customer behaviour (Hooley, Piercy & Nicoulaud, 2012; Reijonen & Laukkanen, 2010). The most common class of variables that were used for segmenting markets are based on background customer characteristics such as demographic, Socio-economic, consumer life cycle, personality and lifestyle characteristics.

Customer attitudes towards the products and brands were important bases of segmentation as well (Kotler & Keller, 2012). An understanding of the benefits sought from the offering and the study of perceptions and preferences of the customers formed a base for this class of market segmentation. Customer behaviour characteristics included purchase behaviour, consumption behaviour, communication behaviour and the relationship requirements of the customers.

In B2B markets variables like the standard industrial codes, firm size and corporate culture were used as bases for segmentation. One of the frequently used segmentation strategy in B2B high technology markets was based on horizontal or vertical market segments (Mohr et al., 2010). Vertical market segments are industry-specific where offerings are specifically designed to cater to one specific industry. When the value or the customer use of the technology product varied by industry and required different

value propositions, then vertical market segmentation was employed. Horizontal market segmentation is appropriate when customers across different industries share the common benefits or use they acquire in adopting a particular technology. Hence horizontal market segments are often used when a specific technology is applicable over a cross section of different industries.

According to Kotler and Keller (2012), there are five key criteria that can be used to assess the effectiveness of a market segment. First, the market segment must be measurable in terms of the size, purchasing power and the characteristics of the segments. Second, the segment should be substantial. The segment should be large, profitable enough and worth following with a tailored marketing program. Third, the segment needs to be accessible, so that they can be effectively reached and served. Fourth, the segment must be differentiable. The segments have to respond to different market mix elements and programs differently and hence must be distinguishable. Finally, the segment must be actionable so that effective marketing programs can be formulated to attract and serve the segment. Chosen market segments must rate satisfactorily on all the above discussed key criteria.

Dunn, Hulak and White (1999) discussed segmenting high technology markets based on the level of added value demanded by the customers. The model focussed on the different solutions that are available for customers in high-tech markets. High technology firms offer specialised solutions, customised solutions, value solutions and packaged solutions. A specialised solution is developed to meet the unique needs of those customers who consistently want to leverage their technology. Such customers are the first buyers of the products and they desire to gain competitive advantage by advancing over existing technology. Customised solutions are developed for a whole set of targeted group of users of the offering who seek to increase productivity and gain competitive advantage from technology. However the seller leverages the experience gained in the first project to offer a similar solution to the others.

Value solutions are offered to customers who recognize the need for a solution. These customers are shopping around for it, or issuing requests for proposals for vendors to respond to. The key characteristic of this segment is that the users know what they want as the markets and solutions are developed and known. Packaged solutions appeal to the mass-market segments, where competition is based on product features, functions, price

and performance. These products are user-installable and have minimal technological expertise requirements Dunn et al. (1999).

Bayer (2010) analysed the customer segmentation practices in the telecommunications industry. The four segmentation bases that were relevant to this sector were customer value segmentation, customer behaviour segmentation, customer life cycle segmentation and customer migration segmentation. Customer value segmentation was centered on segmentation based on identifying the contribution of a customer to the overall firm profitability based on the current relationships with the firm. Customer behaviour segmentation involves segmenting according to the behaviour of the customers. In the telecommunications industry, it included quick talkers, SMS but will talk, valuable roamers, SMS but high top-ups and outbound voice sociables.

Customer life cycle segmentation documents customers in terms of their relationship with the firm (Hooley et al., 2012). Customer migration segmentation, which according to Bayer (2010), is the least considered segmentation base used by marketers. This segmentation considers the customers' standing in different points in time. It clearly identifies those customer segments that increase in value and those that head downwards.

Segmentation was identified as an important marketing concept in the context of relationship marketing as well (Storbacka, 1997). The central theme of relationship marketing is to build and enhance relationships with the existing customers for which the needs of the existing customer base must be clearly understood. The historical analysis of the current customer base facilitates the examination of the customer relationship profitability which forms a base for segmenting customers in firms (Storbacka, 1997). Reijonen and Laukkanen (2010) and Sausen et al. (2005) also suggested that profitability within the customer base should be a key attribute to be used in segmentation, because it can be used to identify the most and the least profitable customers for firms. Segmentation is seen as the key to focussing on the firm's most profitable customers (Peppers & Rogers, 2004).

An efficient segmentation practice uncovers the needs and wants of the market segments and enables firms to identify markets with unexploited niche segments and markets with unexploited market opportunities (McDonald & Dunbar, 2013; Sausen et al., 2005). Thus firms segment markets to identify gaps in the market which offers new

product/market opportunities. It helps firms to identify customer segments whose needs are not being met by any existing products or services that are offered by them (Tynan & Drayton, 1987).

The advantages of effective market segmentation strategies have been widely accepted in the marketing management literature (Quinn, 2009; McDonald & Dunbar, 2013; Dibb et al., 2002). Segmentation enhances marketing effectiveness and improves an organisations ability to capitalise on existing marketing opportunities (Dibb et al., 2002). Adopting suitable segmentation strategies helps firms to offer differentiated marketing activities to the chosen segments (Reijonen & Laukkanen, 2010).

Several empirical studies show that effective market segmentation is a distinctive marketing competency that leads to competitive advantage (Vorhies et al., 1999; Piercy & Morgan, 1993; Conant, Mokwa & Varadarajan, 1990). Dibb et al. (2002) inferred that market segmentation is grounded in economic pricing theory, which suggests that profits can be maximized when pricing levels discriminate between segments.

Segmentation helps to homogenise market heterogeneity. This helps the firms to target specific segments which allows for improved organisational performance (Dibb et al., 2002). Effective market segmentation strategies can uncover the needs and wants of the market segments, which when fulfilled by the firms will enable the firms to enhance their profitability. Also creative market segmentation strategies provides firms with a strategic competitive advantage, facilitating greater customer retention and assist in developing marketing efficiencies for increased profitability (Neal & Wurst, 2001).

Segmentation strategies aid in gaining an excellent understanding of the customers and thus facilitate and improve customer satisfaction in firms (Quinn, Hines & Bennison, 2007; Sausen et al., 2005; Dibb et al., 2002). Through market segmentation, the subgroups that exhibit homogenous characteristics are discovered which permit the identification and the eventual fulfilment of specific needs and wants of customers resulting in satisfaction. Drawing from the above discussion, it was proposed in this research that the segmentation practices that are adopted by the ICT firms influence customer satisfaction and firm performance in these firms.

Targeting

Targeting refers identifying customer segments for whom the firm's product or offering is fitting and to whom the firm will direct the majority of its marketing time,

resources, and attention to achieve organisational objectives (Cahill, 1997). In targeting, particular segments of customers are targeted in an attempt to effectively satisfy their distinct needs, as opposed to attempting to appeal to the mass market through a compromise strategy (Peterson, 1991). The primary steps in targeting includes identifying profitable customers, understanding their values, analysing the offerings they need and use, directing marketing activities on them and monitoring their satisfaction (Cahill, 1997).

Freytag and Clarke (2001) offered three primary processes that a firm must adopt while choosing the target market segment it wishes to serve. Firstly, firms must determine the attractiveness of the market segments (Zimmerman & Blythe, 2013; McDonald & Dunbar, 2012; Weinstein & Britt, 2007; Freytag & Clarke, 2001). Segment attractiveness is described as the measure of the potential of a segment to generate growth in sales and profits. Growth rate, accessible segment size and profit potential are considered as the three important criteria for assessing the attractiveness of the segments. Other factors to be considered while assessing segment attractiveness include relative risk, competition, government/environmental considerations, customer demands, technology and the implications of serving the segment on the present and future relationships with the current and future customers (Dibb & Simkin, 2008; Freytag & Clarke, 2001).

Mohr et al. (2010) stated that high technology firms should evaluate segments based on four important criteria in order to choose the target market to pursue. The four criteria on which to evaluate each segment are size, growth, level of competition and capabilities to serve the needs of the segments. With regard to size, the size of the market in terms of the number of customers in the market and the purchasing volume is important in assessing the attractiveness of the target market. Segments that grow in size enable the firms to capitalise on the customers' needs and to capture new customers coming into the market.

Evaluating the level of competitive intensity within each segment provides an understanding of the cost that will be incurred in pursuing a targeted segment. If there is intense competition in a segment it poses risks to the firms and hence the segment remains unattractive. According to Mohr et al. (2010) firms must also assess whether they have the capabilities to serve the needs of the particular segment by critically analysing their core competencies and strengths.

Porter (1980) discussed five forces that determine the long-run attractiveness of a market segment. They are industry competitors, potential entrants, substitutes, buyers and suppliers. Porter (1980) stated that these five forces pose threats to the attractiveness of the market segments. A segment is unattractive if it has a number of aggressive competitors as it increases the threat of intense segment rivalry. A segment is deemed attractive if the threat of new entrants is significantly low. Such segments are those in which the entry barriers are high and the exit barriers are low. When there are substitutes for the product in a segment, then that segment is least attractive as they influence product price and profits. Strong and growing bargaining power of the buyers as well as sellers also pose a threat to the attractiveness of a market segment.

Secondly, firms should decide whether they have the resources to serve the chosen segment (Zimmerman & Blythe, 2013; Freytag & Clarke, 2001). Resources in terms of technology, relationships, human resources (in all functional areas), image, capital investment and product development are required to serve the segment must be assessed (Zimmerman & Blythe, 2013). Thirdly, firms must examine whether serving the segment will fit with their overall objectives which include the corporate direction, management's commitment and organisational requirements that are necessary to implement the strategy (Freytag & Clarke, 2001).

Target market decisions are guided by a range or continuum of the various possible levels of segmentation (Kotler & Keller, 2012). At one end of the continuum is the mass market, essentially considering the market as one single segment. Individuals or segments consisting of one person are placed at the other end of the continuum. Mass marketing strategy involves offering a single product to most of the market. This approach is used when marketers sense that there are fairly minor differences in customer needs and buying behaviour (Dibb & Simkin, 2008). Kotler and Keller (2012) described four possible approaches for evaluating and selecting market segments. They are full market coverage, multiple segment specialisation, single-segment concentration and individual marketing.

Full market coverage approach is used by those large firms who attempt to serve all customer groups with all the products they might need. These firms cover the whole market through differentiated or undifferentiated marketing (Zimmerman & Blythe, 2013). Undifferentiated marketing is mass marketing, wherein the firm goes after the whole market ignoring the segment differences. Firms seeking to offer different

products to all the different segments of the market adopt differentiated marketing. Firms that specialise in multiple segments objectively select attractive and appropriate subset of segments from all possible segments in the market (Kotler & Keller, 2012). By adopting this approach firms sell a certain product to several different market segments (product specialisation) or serve the various needs of a particular customer group (market specialisation).

With single-segment concentration, firms focus their marketing efforts on only one particular segment (Dibb & Simkin, 2008). This involves developing a single offering to cater to a carefully defined target market. Through this concentrated marketing effort firms gain a deeper understanding of the customers' needs and benefits from the operating economies by specialising in production, distribution and promotion. Niche markets are identified by dividing these segments into sub-segments (Kotler & Keller, 2012). A niche is a diligently defined customer group who seek a distinctive mix of benefits in a segment. Individual marketing is the fourth approach described by Kotler and Keller (2012). It is also called as "customised marketing" or "one-to-one" marketing. This approach to targeting is regarded as the ultimate form of target marketing wherein a particular product is tailored to the specific needs of an individual customer.

Bonoma and Shapiro (1983) recommended two major criteria in choosing target segments in B2B markets - customer conversion analysis and segment profitability analysis. Customer conversion analysis determines the number of potential prospects in a particular segment who were converted to customers and the size of the served segment. Segment profitability analysis establishes the contribution margin per dollar invested to serve the segment. It was suggested that a combination of these approaches must be used to determine which segment the firms should serve.

In their study on the marketing of new high technology products Easingwood and Koustelos (2000) posited that clearly targeted high-tech products diffused more rapidly and successfully than non-targeted ones. Firms in this sector were found to target innovative customers, who were constantly looking to leverage their products and services. These segments are significant in the high technology sector as they have the ability to see the potential of the new technologies and tend to maintain good relationships with the service providers.

High technology firms were found to target those customers that have a clear need to adopt new technologies. These customers constantly desired to retain and improve competitiveness incrementally with a measurable and predictable progress (Moore & Benbasat, 1991). Kotler and Keller (2012) noted that in B2B markets firms segment based on the nature of the existing relationships. Because these firms focussed on maintaining relationships with customers, they targeted customers with whom they can have long term relationships. With B2B customers, purchases are expected to be repeated over a long period of time and hence they target those customers who have the potential of giving them long term or downstream profit. This long term purchase behaviour reveals the customers' potential needs and so high technology firms often target customers whose potential needs they are aware of.

Target marketing forces a strategic focus to the firm to determine the best fit between the customer and its product and directs the firms to be customer focussed (Cahill, 1997). Effective targeting practices help to identify and fulfil the distinct needs of the targeted segments thereby enhancing customer satisfaction. El-Ansary (2006) also pointed out that targeting ensures customer satisfaction. When targeting strategies are well formulated, they produce stronger customer satisfaction and brand loyalty thereby giving firms an edge against their competitors (Peterson, 1991). Slater, Hult and Olson (2007) in their study on high technology marketing found that targeting appropriate market segments is a critical marketing activity with the ultimate goal of achieving superior firm performance. A study on successful marketing practices by Brooksbank (1991) also pointed out that the consistent usage of targeting in the marketing planning process contributes to firm performance in successful firms.

Differentiation

The concept of product differentiation has long been discussed in literature. It emerged as a result of the observed differences in buyer preferences which resulted in different demand curves for the products or services (Dickson & Ginter, 1987). Product differentiation was simply described as differentiating the goods of one seller from the other on any basis that was vital to the buyers and that led to a preference. It was then recognised that the differences could be not only in customer preferences but also non-physical product characteristics which could be real or imagined, arising from distinct product, packaging, distribution differences, prestige value of the trademark or the trade name.

According to Kotler (2007) differentiation is the “process of adding a set of meaningful and valued differences to distinguish the company’s offering from competitors’ offering (p.315). Thus differentiation seeks to make an offering distinct and different in the market-place (Hooley, Broderick & Möller, 1998). Differentiation results in the customer’s perceptions of the firms’ offering to be consistently different on important attributes from the competitors’ offerings (Chenet, Dagger & O’Sullivan, 2010). The difference will be stronger to the extent to which it satisfies the criteria of being important, distinctive, superior, pre-emptive, affordable and profitable (Prajogo, 2007).

Porter (1980) identified cost leadership and differentiation as the two fundamental sources of competitive advantage in firms. A cost leadership strategy enables firms to lower prices to match or beat competitors by providing customers with products comparable to those offered by rivals at lower prices. This strategy was more suitable for firms that supplied standard, high volume products to customers at the most competitive price. Also cost leadership strategy was reported to work best in conditions of environmental stability (Li & Li, 2008; Ward, Bickford & Leong, 1996). In contrast, differentiation strategies attempt to create value that are perceived by customers as unique thus enabling the firms to command premium prices for the products that are offered to its customers (Myers & Harvey, 2001; Porter, 1980). Ward et al. (1996) found that differentiation strategies perform best in uncertain environments, which is the characteristic of high technology marketing environment.

Various authors discussed several means by which firms can differentiate their products and services from that of its competitors. According to Hooley et al. (2012), differentiation can be achieved by identifying competence resources that are unique to the firm (Hooley et al., 2012). Based on the uniqueness of the resources, firms that seek to differentiate themselves from competitors can adopt product differentiation, pricing differentiation, promotional differentiation, distribution differentiation and brand differentiation.

Product differentiation is possible at four main levels of products or services that are offered to customers (Hooley et al, 2012). The four levels as suggested by Levitt (1986) were the core product, the expected product, the augmented product and the potential product. The core product or the generic product can be differentiated by offering a new or a different way to satisfy the basic needs and wants. Differentiation of the expected product can be achieved by offering more to customers than the core product in terms of

quality, packaging, warranties and service. With the augmented product, new benefits such as credit facilities, branding, delivery and other additional features act as differentiators. All other criteria that could be used to differentiate from a competitor's offering are considered as differentiators of the potential product. Products can be differentiated based on technological sophistication, innovative features, higher quality standards, image or by providing higher customer service.

According to Kotler and Keller (2012) price differentiation can be attained by offering the same product to different customer groups at different prices (customer-segment pricing); different versions of the product that are priced differently (product-form pricing); the same product at two different levels based on image differences (image pricing); different prices depending on the point of purchase (channel pricing); the same product priced differently at different locations (location pricing) and pricing based on time of purchase (time pricing). If a firm enjoys cost advantage then lower price was an effective means of differentiation. However, there exists scope for using premium pricing as a differentiator if the product has actual or perceived advantages to the customer (Hooley et al., 2012).

If a firm uses different means to bring the product to the market then it is said to adopt distribution differentiation. Firms attempting distribution differentiation have to constantly find new ways to add value by using different networks or a different coverage of the market to remain differentiated. Using different promotional tools, promotions of different intensity and of different content are included under promotional differentiation. Brand name was also identified as a strong source of differentiation from competitors (Song & Parry, 1997).

Firms also use the following basis to differentiate their offerings: employees (who are well-trained and provide superior customer service), image (powerful and captivating images to appeal to customers' social and psychological needs) and services (providing effective and efficient solutions to customers by designing reliable, resilient and innovative services system). Socially and environmentally responsive firms may project reputation as their point of differentiation (Boehe & Cruz, 2010).

In B2B service firms delivering superior service quality was identified to drive differentiation. Research studies asserted that service quality is one of the primary means through which service firms achieve differentiation (Rust, Moorman & Dickson,

2002). It adds value to the services offered and therefore the clients are less likely to switch providers as they will be satisfied with the firms offering (Chenet et al., 2010). Differentiation through service quality was regarded as an effective management strategy as it lowers customer sensitivity to price and protects the firms from competitive forces that reduce price-cost margins (Chenet et al., 2010; Homburg, Kuester, Beutin & Menon, 2005). Ease of ordering, delivery, installation, customer training, customer consulting and maintenance and repair were also indicated as the main service differentiators in firms (Kotler & Keller, 2012).

High technology firms offer differentiated products that are customised to the needs of the target customers or the target market (Mohr et al., 2010). In B2B settings service support, personal interaction, recognition and the ability to improve customers' operational efficiency are indicated as core differentiators that enable firms to strongly differentiate their products and help achieve high levels of customer satisfaction (Linton, 2012; Ulaga & Eggert, 2006). These differentiators were found to be more important than product quality and delivery performance. Further firms also differentiated by adopting strategies based on developing new technologies and new products. Using these innovation differentiation strategies such firms strove to create innovative and attractive products by leading competitors in design innovations, efficiency and quality (Liu & Wu, 2011). In the high technology sector, building on a product platform and developing different versions of the product for specific market sectors facilitates product differentiation (Linton, 2012).

El-Ansary (2006) contended that differentiating a product ensures customer satisfaction and increases their loyalty towards the product. Differentiation strategy enhances customer satisfaction by meeting a particular need through innovative products, superior quality and technology, a differentiated brand image and good service which distinguishes the brand from its rivals (Li & Li, 2008). Thus it enables firms to meet customers' wants more accurately than competition. It creates customer value through means that distinguishes the firm from its rivals (Li & Li, 2008; Frambach, Prabhu & Verhallen, 2003; Porter, 1980). Differentiation also represents an external focus on characteristics that are intended to enhance customer satisfaction and to create customer loyalty by meeting the specific needs of the customers (Li & Li, 2008; Mittal, Anderson, Sayrak & Tadikamalla, 2005).

Product differentiation resulted in an increase in demand for the producer's product and thereby incrementing the price level for the existing commodity (Shaw, 1912). The choice of a suitable differentiation strategy enables the firms to target and profit from niche markets more effectively (Li & Li, 2008). Doyle and Wong (1998) pointed out that the long term performance of the business depends most crucially on its ability to create a differential advantage. It was also posited that the differentiation strategy ensures durable performance superiority after it has been established (Knight & Cavusgil, 2004, Li & Li, 2008). Hooley et al. (1998) suggested differentiation as one of the fundamental approaches adopted by firms to create advantage over their competitors. Firms that adopt effective differentiation strategies were posited to target and profit from niche markets more effectively (Brouthers & Xu, 2002).

Thus, in the light of the above discussions, it was proposed in this research that the differentiation practices that are adopted by the ICT firms in India influences customer satisfaction and firm performance in these firms.

Positioning

The first step in the marketing planning process is segmentation which involves grouping customers together along common variables. The next step is targeting which refers to identifying customer segments that are most attractive for the firm to focus its marketing efforts. The third step is deciding how best to differentiate the product based on customer needs and wants. The final step is to develop a positioning strategy which attempts to place the firm and/or the offering distinctively in the minds of the customers. The marketing strategy will then be implemented by the firm around the position it has developed.

According to Blankson and Kalafatis, (2007, p.435) "Positioning is concerned with the attempt to modify the tangible characteristics and the intangible perceptions of a marketable offering in relation to the competition". It is a deliberate, proactive and an iterative process of designing company's offering and image to occupy a unique place in the mind of the target market. Blankson, Kalafatis, Cheng & Hadjicharalambous (2008) contended that the firm's choice of how to position itself and its offerings is central to the creation of the marketing strategy and dictates the implementation of the marketing mix. Thus strategic positioning can be described as the strategic action designed by firms to find the best mix of strategies to defend themselves against the competitive forces in the industry.

Positioning refers to customers perception of a product, service or a brand name (Amonini, McColl-Kennedy, Soutar & Sweeney, 2010; Blankson & Kalafatis, 2004; Ries & Trout, 2001). The end result of positioning is the successful creation of a customer-focussed value proposition which will be a convincing reason as to why the target market should buy the product. Positioning is important for any type of product as predominantly it refers to the way in which a market perceives a particular offering in relation to its alternatives (Meldrum, 1995). Positioning strategy seeks to find a match between market requirements and company abilities to serve them (Hooley et al., 1998).

Through effective positioning firms uncover different needs in the market place, targets only those needs that it can satisfy in a superior way and positions its products in the minds of the target market so that they recognise the firm's distinctive offering and image. The various definitions of positioning discussed above bring out four important aspects of positioning. They are: positioning is the perception of the customers; the emphasis is on the perceptions of the target market; only the significant features and/or benefits of the offering must be effectively communicated and it is important that the perception is relative to the competition.

Successful positioning efforts help firms to efficiently modify the tangible characteristics and the intangible perceptions of a given marketable offering in relation to the competition (Arnott, 1992). Blankson, Cowan, Crawford, Kalafatis, Singh & Coffie (2013) noted that a well-implemented market positioning strategy results in more favourable perceptions of the offering. Maintaining a clear market position is entailed as the most critical strategic marketing actions in the increasingly changing and competitive market place (Nicovich, Dibrell & Davis, 2007; Hooley & Greenley, 2005).

There are different ways in which firms position themselves in the market. In his pioneering work, Porter (1980) suggested cost leadership and differentiation, on either a focussed or a market-wide scale, as key choices to position a product. Hooley, Saunders and Piercy (2004) posited that positioning depends on the importance that firms place on six major dimensions. They are price, technical quality, service, innovation, customisation and uniqueness. Various authors examined positioning strategies and attempted ways to achieve differentiation through brand names, innovativeness, superior quality, price positions, relationships or new product developments (Hooley & Greenley, 2005; Matear, Gray & Garrett, 2004; Day & Wensley, 1988).

One of the most widely examined approaches to differentiate a firm's position was through service or product quality and/or value (price). In competitive markets where customers demand high levels of customisation, additional value-added services, better responsiveness service, product quality and value strategies become significantly important (Amonini et al., 2010; Theoharakis & Hooley, 2003; Grönroos, 1997). Positioning based on services offered including extensive after sales support requires extensive knowledge about the customers and their requirements together with the ability to deliver the service efficiently (Hooley & Greenley, 2005; Morgan, Strong & McGuinness, 2003).

Strategic marketing management literature suggests that a strong brand provides a basis for competitive positions in firms (Mazzarol & Soutar, 1999; Easingwood & Mahajan, 1989). Brand positioning involves differentiating a brand and establishing competitive superiority (Rao & Klein, 2013). In the high technology sector brand positioning is highly relevant as it helps to establish reputation and credibility in the market place. The firms' capabilities, quality, value and other buying criteria that cannot be evaluated easily prior to purchase are expressed through the pre-positioned brand image (Amonini et al., 2010; Yonggui, Hing & Yer, 2003).

Products can be described as bundles of attributes which are capable of generating streams of benefits to the target market. These attributes are efficiently developed so that the benefits generated match the unique requirements of the targeted segment. These product attributes include not only the functional characteristics of the products but also the features like brand name, packaging and styling. Using these product attributes for positioning is called product positioning. Firms may also decide to position their offering either at the lower end or the higher end of the price spectrum relative to their competition (Hooley & Greenley, 2005).

The importance of market positioning strategy for the success of firms has been continually acknowledged in the marketing literature (Blankson et al., 2013; Hooley et al., 1998; Pelham, 1997). Clearly distinct and high quality positioning strategies are claimed to be associated with superior firm performance. Development of a well-established brand reputation is identified as an enduring source of competitive advantage as it is socially complex, earned over time and imperfectly imitable (Day & Montgomery, 1999). Proactive positioning efforts are found to contribute to financial benefits for a firm (Blankson et al., 2013). Brooksbank (1994) examined high and low

performing firms and found that have well-positioned offerings were successful in the long term. Positioning is geared towards creating value for any firm and its offerings, thus enhancing firm performance and reducing systematic risk.

It is evident that positioning is a marketing process which helps in designing value to the customer to ensure their satisfaction and gain their loyalty (El-Ansary, 2006). Positioning satisfies targeted customers because positioning strategies are designed to create customer focussed value propositions (Hooley, Greenlay, Fahy & Cadogan, 2001). It enhances the competitive advantage of firms, as any position created in the market place has long term sustainability (Hooley & Greenley, 2005). Hence it was proposed in this research that the positioning practices adopted by the ICT firms will influence customer satisfaction and firm performance in these firms

Marketing Mix

Marketing mix is defined as the set of marketing tools the firm employ to pursue its marketing objectives in the target market (Kotler & Keller, 2012). As discussed earlier under the theoretical background section the marketing mix concept consists of four P's: Product, Price, Place (distribution) and Promotion with each "P" comprising a set of decision elements which together defines the firm's offering to its target market. The 4Ps must work together in a single marketing plan to satisfy the customer's needs and allow the firm to reach its objectives. Marketing mix elements are viewed as controllable variables because they can be modified to suit the market and the environmental dynamics. The decisions pertaining to the 4Ps are best described as the end result of the management's efforts to creatively combine marketing activities (Zineldin & Philipson, 2007).

The purpose of all marketing mix activities is to offer the right product at the right place (that is, distribution channels) with the right promotion at the right price in order to satisfy customers' needs better than competitors, thus achieving a firm's objectives (Indounas, 2006; Zineldin & Philipson, 2007). Coviello, Winklhofer & Hamilton, (2006) contended that firms use marketing mix to attract and satisfy customers. The marketing mix of successful firms is found to possess a strong competitive advantage which is seen as key to competitive success (Brooksbank, 1994). El-Ansary (2006) also asserted that the marketing mix is a strategic marketing implementation process through which the firm's corporate financial objectives are attained.

In the following sub-section, the four elements of the marketing mix - product, price, place and promotion are discussed. The relationship between these individual elements and firm performance and customer satisfaction are also presented.

Product mix. According to Kotler and Keller (2012) “a product is anything that can be offered to a market to satisfy a want or need, including physical goods, services, experiences, events, persons, places, properties, organisations, information and ideas” (p.347). It is a combination of both tangible and intangible attributes like benefits, features, functions and uses.

David, Nigel & Ashley (2000) suggested that products provide the basis for an organization’s value proposition. The product strategy of a firm comprises of making decisions about the entire offering including the core product/benefits (value to customer: features/functions/benefits), product attributes (brand, design, price, packaging) and the support services (delivery, installation, after sales service, warranty). To be successful, the specific product strategies selected by the firms needs to be guided by the unique opportunities and threats in the market and competitive environment (Zimmerman & Blythe, 2013; David et al., 2000).

The product strategy of any high technology firm consists of three dimensions. They are product platforms, product lines and individual products (McGrath, 1995). The significance of product platforms for high technology firms has been emphasised in literature (Gabrielsson, Gabrielsson, Darling & Luostarinen, 2006; Robertson & Ulrich, 1998; Sawhney, 1998). By developing a competitive product platform a firm can efficiently develop and introduce wider range of products in the market. Firms in the high technology sector understand the customer requirements and develop a conceptual design, which is usually presented to the customer for feedback. In the highly competitive high technology marketing environment, developing a competitive product platform is a crucial capability as it is cost effective and enhances product innovation rates (Gabrielsson et al., 2006).

The second dimension is the product lines dimension. A product line consists of a group of closely related products which may be similar in their function, are sold to the same or similar customer groups, may fall within a similar price range and/or marketed through the same types of outlets (Kotler, 2007). This dimension defines the number of the product lines (the width of the product line), the number of products in each line

(length of the product line) and the positioning of products in each line (Gabrielsson et al., 2006).

The individual products that are launched on the market comprise the third dimension of the product strategy. This includes the precise and exclusive product category and all of its contents. Products may be classified into goods, services, know-how or systems (Gabrielsson et al., 2006). Goods include components, materials, equipment and machines. Services are often simultaneously produced and consumed, and are more or less intangible. Know-how products are usually licensable and are unique. They are frequently protected with a trademark or patents (Pavia, 1990). Systems represent a total solution to customers' needs and are often seen as a combination of goods, services and/or know-how.

The above discussed product categories consist of specific contents that can be divided into three levels: the core product, the actual product and the augmented product (Rao & Klein, 2013; Kotler & Keller, 2012). The core product is the one that offers basic benefits which is the offering the customer actually buys. In the ICT sector, the core product includes elements like the technology, main functional features and the performance (Gabrielsson et al., 2006). The actual product is what is really seen or experienced by the customer. This includes the brand name, features, styling and quality. The augmented product includes additional services, features and benefits that are beyond the expectations of the customer.

In today's global market place product innovation is essential for the survival and success of any high technology firms (Rubera & Kirca, 2012). The introduction of an innovative product technology or design in a given market is becoming increasingly important for all high technology firms in the global market place (Griffith & Rubera, 2014). Innovative product technology represents the changes in the functionalities of the product and innovative design represents the changes in the external appearance of the product (Rubera & Droge, 2013). Firms in the high technology sector are found to be ahead of competitors with respect to product innovation (Prajogo, 2007).

In the high technology sector, sometimes customers participate actively in the product development process (Ramaswami, Srivastava & Bhargava, 2008). Firms typically co-design products with their customers. Because of the increased intensity of competition in both domestic and international markets, firms closely involve customers in the

actual design of the product itself. A product prototype will be developed by the firms based on the information obtained from the customers. The product prototype was then tested with the customer and feedback information is received. Using the feedback, further product improvements were made. This cycle will be repeated until the customer is satisfied with the solution that is provided by the firms (Gabrielsson & Gabrielsson, 2004; Easingwood, Moxey & Capleton, 2006).

High technology firms also provide exclusive products and services, by being a specialist shop and always provide a pool of highly trained personnel expertise for customer specific products (Morgan et al., 2003). Technology intensive firms also provide extensive customer support from product conceptualization to product delivery (Hooley & Greenley, 2005). When a new high technology product is introduced into the market, they are found to use technologically superior products to dominate a niche, because competition in the early stages of product introduction is likely to be technology-based than marketing based (Easingwood et al., 2006).

Product plays a central role in determining a firm's performance. David et al. (2000) asserted the positive impact of product strategy on firm performance. Carpano and Chrisman (1995) investigated the relationship between international product strategies and firm performance. It was found that the extent to which a product is standardized influenced a firm to unlock opportunities for competitive advantage and thus has strongest implications for competitive success. Also products that are customised and modified to meet the needs of the customers are posited to win higher market share (Langerak, Hultink & Robben, 2004).

Research demonstrates the importance of product innovations - both technological and design innovations as a competitive strategy in high technology firms (Griffith & Rubera, 2014). Govindarajan and Trimble (2012) show that high technology firms that focus on introducing new products into a market with technological and design advantages over competitors are able to gain substantial market share. When the environmental uncertainty is high as in high technology markets, a broad product scope is particularly important (Giarratana & Fosfuri, 2007). Firms existing in unstable environments benefit from product portfolio breadth which refers to the firm's coverage of the types of technological offerings available in the market (Fernhaber & Patel, 2012) as it enhances the firm's capability to serve wider segments. Catering to wider markets

by broadening the product portfolio is suggested to strengthen market share in firms (Griffith & Rubera, 2014).

In the B2B sector firms customising complex offerings provide greater value to the customers as it meets their needs better leading to increased satisfaction (Mohr et al., 2010). The increased satisfaction provides value to the firms as it earns customer loyalty and profits. Market driven product strategies are found to deliver superior value to the customers and thereby enhancing customer satisfaction (David et al., 2000).

Drawing from the above discussions, it was proposed in this research that the product practices that are that are adopted by the ICT firms influence customer satisfaction and firm performance in these firms.

Pricing mix. Pricing is one of the core elements of the 4Ps in the marketing mix and pricing mix has warranted considerable attention from marketing scholars. The price tag on a particular offering communicates to the market the firm's proposed value positioning of the product or brand (Kotler & Keller, 2012). While making pricing decisions marketers must take into account the firm, the customers, the competitors and the marketing environment. The choice of the suitable pricing strategy depends on extensive industry analysis that assesses the nature and the complexity of the available products and the market structures (Dixit, Whipple, Zinkhan & Gailey, 2008).

Decisions regarding effective pricing must also be consistent with the firm's overall marketing strategy, target markets and brand positioning. Also pricing decisions are made in conjunction with other marketing mix variables (Indounas, 2006). It has been argued that price is the most flexible element in the marketing mix. Pricing decisions can be made relatively quickly and at a low cost when compared with the other elements of the marketing mix (Avlonitis & Indounas, 2005).

In order to establish a successful pricing strategy, a firm must consider three vital components - costs, competition and customers, also known as the 3 C's of pricing (Mohr et al., 2010). Costs are what the firm incurs to produce the goods and services. Costs provide the floor below which the firm cannot price the product. For any firm, competition offers a benchmark against which they can evaluate their price. A firm might establish its price below, equal to or above those of the competitors after letting them set their price. The third vital component is the customers for whom the products are produced. Customers' perceptions of the value of the products offered provide the

price ceiling above which the firms should not price. The product benefits or the value as perceived by the customer might include functional benefits, operational benefits, financial benefits and/or personal benefits.

In order to recover the high research and development costs associated with the development of high technology products and services, all high tech firms might desire a higher price level for their offerings. However, the pricing environment of these firms are influenced by unique product and market characteristics that pose significant challenges in developing suitable and profitable pricing strategies for the high tech products and services (Rao & Klein, 2013; Mohr et al., 2010). The high tech firms exist in a volatile environment which is characterised by continuous-shortening of product life cycles, with unpredictable rapid change of pace and the possible obsolescence of products. A high degree of research and development intensity results in the introduction of product versions with better price-performance ratios, thereby creating downward pressure on the existing price levels.

Two other factors that have important implications on high technology pricing are network externalities and unit-one costs (Mohr et al., 2010; Smith, Sinha, Lancioni & Forman, 1999). These factors are posited to create pressure to lower price structures in high technology firms. Network externalities denote those situations in which the value of an offering increases with an increase in the number of users adopting it. Individual customers using technologies driven by network externalities will not benefit from the technology if no other users have adopted that technology. For most high technology products the cost of producing the first unit is very high relative to the cost of producing the subsequent units. Unit-one costs refer to such situations where the cost of reproducing a product is significantly lower than its original production costs.

The other factors that must be considered in pricing strategy decisions in high tech firms are: customer's perception of the cost versus benefits derived from the technology also affects the pricing strategy; competitive volatility - new entrants in the market may come in with disruptive innovations (any innovation that disrupts the existing market and helps to create a new market by displacing the existing technology), that significantly increases the competitive volatility in high tech markets; cost transparency created by the internet which allows customers to compare prices and negotiate for lower prices; backward compatibility of the new products (whether the new product version can work with the inputs from its older versions); availability and the price of

product derivatives and the continuously evolving industry standards (Rao & Klein, 2013; Mohr et al., 2010).

Kotler and Keller (2012) presented six steps that summarised the price setting process in firms. They are: selecting the pricing objective; determining demand; estimating costs; analysing competitor's costs, price and offers; choosing a pricing method and selecting the final price. Pricing strategies are designed based on the pricing objectives. The most common pricing objectives of firms are: pricing to attain a target return on investment, maintenance of price and margin, pricing to achieve a target market share and pricing to face competition (Peter & Donnelly, 2013). An empirical study by Pasura and Ryals (2005) assessed those factors that influenced the pricing decisions in the ICT firms in India. The factors identified included the cost incurred in producing the product/service; the profit objectives of the company; the uniqueness of the products and services; competitor pricing for similar products and services and the benefits that were provided along with the product/service offering (like brand, delivery, innovation, training, after sales support, on-going support).

Pricing has been emphasised as an important factor of customer satisfaction in marketing literature. Studies support the premise that whenever consumers evaluate the value of a purchased product or a service they usually think of price (Cronin, Brady & Hult, 2000; Anderson & Sullivan, 1993; Zeithaml, 1988). Customers rank cost effectiveness as one of the primary criteria that is particularly important when selecting a product or service (Huber, Herrmann & Wricked, 2001). This is empirically supported by a study on the influence of price fairness on customer satisfaction by Hermann, Lan, Monroe and Huber (2007). According to this study price is an important element in consumer's purchase decisions and therefore it has a significant influence on customer satisfaction judgements. Price fairness perceptions are found to be positively correlated to customer satisfaction. Negative customer responses are likely to occur if customers perceive that the firm's pricing practices are unfair (Martin-Consuegra et al., 2007).

Among all the marketing mix elements, pricing is the only element that directly generates an inflow of resources that produces revenue (Martin-Consuegra et al., 2007; Vaidyanathan & Aggarwal, 2003). Only pricing brings revenues for a firm. All the other three marketing mix elements involve the outlay of resources from firms. Lancing (2005) pointed out that a company's pricing strategy has a substantial economic impact on firm performance. Pricing is also recognised as a powerful marketing tool and leads

to profitability in the long-run (Indounas, 2006). Thus pricing is empirically evidenced to have an impact on customer satisfaction and firm performance in firms. Hence in this research it was proposed that the pricing practices that are adopted by the ICT firms influence customer satisfaction and firm performance in these firms.

Place mix. The place or the distribution mix describes all decisions pertaining to making the product or service available to the customer at the right place for consumption (Pitt, 1999). The set of independent organisations or the intermediaries that are involved in the process of making the offering available for consumption are the channels of distribution. These distribution channels render the right product or service available at the right place at the right time. The distribution strategies of an organisation are primarily influenced by the characteristics of the product and the nature of competition in the market place (Wu, Ray & Whinston, 2008). Marketing channel decisions are critical because they have strong linkages to all other components of the marketing mix (Pitt, 1999).

According to Mohr et al., (2010), distribution channel systems include two primary activities. It includes activities pertaining to the traditional logistics and physical distribution functions and those activities involving the structuring and management of channel relationships. By managing these activities, firms can coordinate the distribution processes efficiently to provide better value for the customers. However, the choice of the distribution channel depends on the firm's marketing strategy with respect segmentation, targeting and positioning (Kotler & Keller, 2012).

There are three steps in designing an effective market channel system. They are: analysing customer needs and wants, establishing channel objectives and constraints, and identifying and evaluating major channel alternatives (Kotler & Keller, 2012). Customers tend to choose the channels they prefer based on price, convenience, product variety and purchasing objectives (Ansari, Mela & Neslin, 2008; Balasubramanian, Raghunathan & Mahajan, 2005). While designing a channel system marketers must be aware of the different customers and their varying needs during the purchase process.

The ensuing step is to establish the channel objectives and define the constraints. Channel objectives must be established centered on the type of product offered as it varies with the product characteristics. Based on the objectives, the major channel alternatives must be identified and evaluated against criteria as each channel alternative

will produce different levels of sale and incur different levels of costs. Firms must also select channels that provide high adaptability so that channel structures and policies can respond to change and uncertainty in the external environment (Kotler & Keller, 2013).

Different channels of distribution that are preferred by high technology firms have been identified. Many firms prefer direct distribution of their products and services as they use their own sales force to reach key customer/market segments, while others engage certified resellers to distribute their products and services (Mohr et al., 2010; Easingwood & Koustelos, 2000). Another type of direct channel high technology firms utilise is the company-owned retail outlets.

Some high technology firms adopt horizontal marketing systems whereby two or more firms share resources and capabilities thereby meeting customers' extraordinary needs, or to exploit an emerging marketing opportunity (Narus & Anderson, 1996). For example, larger firms form tactical alliances with smaller firms to help put a "complete product" for their customers (Easingwood et al., 2006; Easingwood & Koustelos, 2000) or they gain distribution rights through joint ventures, as a result of the collaborative development of a new technology (Easingwood & Koustelos, 2000). Some firms are exclusive distributors of their products and services (Easingwood et al., 2006), while others rely on distributors to deliver pre-packaged solutions (Dunn et al., 1999).

Narus and Anderson (1996) have established that effective distribution of products and services satisfies customer needs. They stated that distribution channels were being widely recognized as an unexploited opportunity for major cost savings and productivity improvements. Firms strive to maximise the overall value on the channels of distribution thereby maximising profits. Thus distribution strategies are regarded as a source of competitive advantage for the success of firms (Morash, 2001).

Distribution channels are often posited as a long term mechanism in reaching, satisfying and keeping customers for life. Chaturvedi (2005) asserted that the right choice of the distribution strategy augments customer satisfaction. Because it is evident that distribution practices influence customer satisfaction and firm performance, it was proposed in this research that the distribution practices that are adopted by the ICT firms will also influence customer satisfaction and firm performance in these firms. Hence in this research study, distribution practices that are adopted by the ICT firms in India are posited to influence firm performance and customer satisfaction in these firms.

Promotion mix. Promotion is a critical component of any marketing program. It is the communication function of the marketing mix and its components are used to deliver information to the customers with whom a firm interacts (Shannon, 1996). Promotional tools are employed to communicate customer value by informing the customers about the benefits of the products or services (Gardener & Trivedi, 1998). Thus, promotion is the communication function of the marketing mix and its role is a critical component in any marketing program. Promotional mix provides the main channels of communication utilised by a firm to present its messages to potential customers. The three major promotional objectives as cited by Preece and Male (1997) are to communicate, to compete and to convince.

The ongoing conceptual and theoretical developments have demonstrated that the promotion mix is more than just advertising and sales promotion messages. It was suggested that this marketing mix element should be more strategic, be results driven and should include two-way as well as one-way communications (Reid, Luxton & Mavondo, 2005). Hence, over the years the concept of promotion mix was replaced with the concept of “integrated marketing communications” (IMC) since 1991.

According to Mangold and Faulds (2009), firms attempt to achieve various organisational objectives by coordinating and controlling the various elements of the promotional mix through IMC to generate a unified customer-focussed message to communicate with their target markets. The elements of the promotional mix includes advertising, personal selling, public relations, publicity, sales promotion, and direct and interactive marketing (Kotler & Keller, 2012). These elements are to be prudently managed, so that the information transmitted through them will consistently communicate cohesive messages that largely reflect the fundamental values of the organisation. This increases the impact of communication as it facilitates greater consistency in the message that is communicated (Zimmerman & Blythe, 2013).

A review of the studies on the promotional activities of high technology firms indicated the various promotional tools adopted by these firms (Gabrielsson & Gabrielsson, 2004; Traynor & Traynor, 2004; Deans et al., 2003; Davies & Brush, 1997). The tools included conducting technical seminars and presentations; organizing industry conferences and leadership forums; print advertising; online advertising; using customer references in advertisements; promoting through word-of-mouth; submitting white papers online; actively engaging in press relations and sponsoring events.

B2B markets are generally smaller than consumer markets. Hence in B2B markets there is a greater emphasis on personal selling (Zimmerman & Blythe, 2013). This is largely due to the smaller number of buyers and the higher order values. Also in a B2B environment, the firm and the customer are likely to establish a long-term relationship and hence personal contact is widely emphasised.

The emergence of internet-based social media has facilitated an explosion of transmission of information about numerous products and the firms that provides them. Social media was posited as a hybrid element of the promotion mix as it enables firms to talk to their customers and customers to talk directly with one another (Mangold & Faulds, 2009). Social media have enabled firms to influence the various aspects of consumer behaviour. These aspects include creating awareness, acquiring information, shaping opinions and attitudes, purchasing behaviour and post-purchase communication and evaluation (Mangold & Faulds, 2009).

Successful integrated marketing communications significantly contribute to the achievement of a firm's performance goals as it reflects the values expressed in a firm's mission statement (Mangold & Faulds, 2009). The modes of IMC are means to communicate with target customers with the goal to increase sales and profits (Peter & Donnelly, 2013). These communication activities facilitate increase in sales and contribute to brand equity by creating brand awareness, forging brand image and strengthening customer loyalty.

IMC is considered important to organisational performance as it provides sustainable competitive advantage to firms (Janek & Michael, 2005). Promotions have enormous impact on sales and brand loyalty (Gardner & Trivedi, 1998). Price promotions are found to cause short term increase in sales (Trivedi & Morgan, 1996) and to have an impact on sales volume (Kotler, 2007), which is a financial measure of firm performance.

Promotion is posited as a strategic marketing process that forms part of the value-creating activities a firm develops for its customers (Trivedi & Morgan, 1996) and hence it was posited that promotional strategies adopted by firms leads to customer satisfaction (El-Ansary, 2006). By strategically influencing the messages sent to the target group of customers IMC facilitates the process of creating and nourishing profitable relationships with customers (Reid et al., 2005). It was also recognised as an

on-going interactive cross-functional process that integrates all the parties in the exchange in order to maximise mutual satisfaction of each other's needs and wants (Reid et al., 2005; Duncan & Muller, 2004). Based on this premise it was suggested in this research that the promotional practices adopted by the ICT firms influence customer satisfaction and firm performance.

The above discussion explained the individual constructs in the conceptual framework. The relationships among the independent variables, dependent variables and the intervening variable have been explored. In the following sub-section discussions pertaining to customer satisfaction and firm performance are presented.

Customer Satisfaction

In response to the competitive market place, firms seek to improve organizational effectiveness by identifying organizational metrics which contribute to their long term success (Sui-Hua, 2007; Garver, 2003). Organizations are said to tout for continuous improvement strategies to stay ahead of competition. One such organisational metric that drives continuous improvement in firms is customer satisfaction. A growing number of organizations use customer satisfaction measures to develop, monitor and evaluate product or service offerings (Yeung, Lee Chew & Ennew, 2002) and to evaluate, motivate and compensate employees (Anderson et al., 1994). This is because the firm's ability to satisfy customers provides a sustainable competitive advantage which is necessary to operate in today's competitive global environment (Kotler, 2007; Smith & Wright, 2004; Garver, 2003).

Kotler and Keller (2012) defined satisfaction as "a person's feelings of pleasure or disappointment that result from comparing a product's perceived performance (or outcome) to expectations" (p.150). According to Gupta and Zeithaml (2006), customer satisfaction is the consumer's judgement that a product or service meets or falls short of their expectations. However, Hung and Wong (2007) observed two major types of definitions of customer satisfaction in literature. The first type of definition is in line with the mainstream customer satisfaction research that focusses on what customers' value from goods and services and is measured by evaluating the actual perception of individual customers. Based on this definition customer satisfaction is explained as the fulfilment of customers' requirements and needs (Fournier & Mick, 1999).

The second type of definition takes the firm's perspective of customer satisfaction. Accordingly, customer satisfaction is posited as the firm's ability to fulfill the business, emotional and psychological needs of its customers (National Business Research Institute, 2005). This perspective is in line with the view which suggests that firms are active participants in providing satisfaction to customers (Price, Arnould & Tierney, 1995).

Hung and Wong (2007) built a model based on an extant literature review and assessed how managers in organisations perceive and evaluate the level of satisfaction of their customers. The definition of the organisational perception of customer satisfaction relates to how firms perceive the extent to which their customers are satisfied (Premkumar, Ramamurthy & Saunders, 2005).

Two major antecedents to organisational perception of customer satisfaction were identified in the literature. The first of the two antecedents relate to the customer-related outcomes, including behavioural intentions and behaviours (Luo & Homburg, 2007). Studies done from this perspective found that customer satisfaction increases customer loyalty and influences repurchase intentions and positive behaviour (Olsen, 2002; Mittal & kamakura, 2001; Szymanski & Henard, 2001). Positive behaviours included customers frequently returning for additional businesses and firms acquiring more businesses through positive word of mouth from existing customers.

The second element identified is related to the processes and efforts the firms expend to satisfy their customers. These processes and efforts were posited to generate the expected results (customer satisfaction), as firms tend to believe that they have the capability and the capacity to make customers satisfied (Hung & Wong, 2007). Examples of such efforts by firms include the level of investment put in for the provision of customer services, the way firms respond to customer requests, integrating all departments to serve customers, delivering the offering in the time frame the customer desires, responding quickly to changing customer requirements obtaining feedback from customers and effectively handling customer complaints (Hung & Wong, 2007; Makarem, Mudambi & Podoshen, 2007; Boyd, 2002).

A review of customer satisfaction literature showed at least two different conceptualisations of customer satisfaction that can be clearly distinguished: transaction-specific and cumulative (Sui-Hua, 2007; Anderson et al., 1994).

Transaction-specific satisfaction provides diagnostic information about a particular product or a service encounter as it is the post choice evaluative judgement of a specific purchase occasion (Oliver, 1993). Cumulative satisfaction provides an overall evaluation constituting the total purchase and consumption experience with a product or a service over time. It is recognised as a more fundamental indicator of the firm's past, present and future performance (Fornell, 1992). Anderson et al. (1994) contended that only cumulative satisfaction motivates a firm's investment in customer satisfaction. It was decided to use the cumulative perspective in this research study as the customers' aggregate consumption experience is assessed in this research.

Customer satisfaction and firm performance. The literature shows burgeoning interests in the nature of customer satisfaction, its antecedents and consequences in firms (Yeung et al., 2002). Both researchers and practitioners believe that satisfaction will drive improved performance in firms. Numerous studies recognise the important link between customer satisfaction and a firm's financial performance (Fornell, Mithas, Morgeson & Krishnan, 2006; Gruca & Rego, 2005; Anderson, Fornell & Mazvancheryl, 2004; Rust, Moorman & Dickson, 2002; Anderson et al., 1997). Firms seek to increase customer satisfaction as satisfied customers ultimately lead to financial benefits to the firms who serve them (Ranaweera & Prabhu, 2003).

The benefits of customer satisfaction are well recognised and accepted in marketing literature. It is acknowledged that consistently providing customer satisfaction increases customer loyalty and enhances firms' reputations (Wangenheim & Bayon, 2004; Anderson & Sullivan, 1993). A positive causal relationship between customer satisfactions and customer loyalty has been documented in various empirical studies (Mittal & Kamakura, 2001; Anderson & Sullivan, 1993). Customer loyalty is associated with increased purchase intentions thus helping firms to secure future revenues and reducing the cost of future transactions (Homburg & Fürst, 2005; Keiningham, Perkins-Munn & Evans, 2003).

There is a positive relationship between customer satisfaction and customer retention (Yeung et al., 2002). A wide variety of studies supports the proposition that there exists a positive relationship between customer satisfaction and repurchase intention (Anderson & Fornell, 2000; Anderson & Sullivan, 1993; Fornell, 1992). The link between satisfaction, loyalty and retention is widely accepted to have an important impact on financial performance in firms because retained customers are cheaper to

service than new customers, thereby, reducing the firm's cost. Anderson (1996) also noted that satisfied customers are less price sensitive and are less likely to switch firms due to price increase in products and services. Enhanced reputation aids in introducing new products by providing instant awareness and lowers the costs associated with attracting new customers (Robertson & Gatignon, 1986).

There exists significant evidence in the marketing literature that customer satisfaction is an important driver of a firm's profitability. For example, Anderson et al. (1994) and Rust, Moorman, and Dickson (2002) reported a positive impact of customer satisfaction on financial performance. The firm performance measures included return on investment and return on assets. Yeung and Ennew (2000) studied the impact of customer satisfaction on profitability. Their research results suggested that satisfaction have a positive impact on profitability. A study on the personal computers industry by Smith and Wright (2004), suggested that the firm's ability to satisfy its customers provides a sustainable competitive advantage that allows higher average prices, higher sales growth and higher return on assets. Customer satisfaction is also recognised as one of the market assets that can be leveraged to produce superior financial performance (Clark, 1999). Customer satisfaction is also recognised as a leading indicator of firms' financial performance (Gupta & Zeithaml, 2006).

Drawing from the above discussions, it was proposed in this research that customer satisfaction in the ICT firms in India influences the firm performance in these firms.

Firm Performance

In all areas of management research the measurement of firm performance is important as researchers attempt to examine whether strategic management practices that are adopted by firms contribute to firm performance. For example, in human resources management (HRM) research, studies examine how the relevant HRM practices like selection, training, employee relations, contribute to firm performance. There exists more academic interest in understanding the performance benefits of practices as just-in-time and total quality management in operations management. Similarly in strategic marketing management literature, there are many empirical studies that have attempted to examine the association between the marketing practices and firm performance (Sweeney et al., 2011; Lee et al., 2006; Doyle & Wong, 1998).

Since the turn of this century there has been increased interest in documenting how marketing activities can contribute to the firm's financial performance. For example, in 2006, Grønholdt and Martensen reviewed key marketing performance measures and provided a foundation for the development of a list of the most valuable marketing performance measures. The importance of assessing the financial accountability of the marketing function in firms, including high technology firms, has been continually highlighted in marketing literature (O'Sullivan, Abela & Hutchison, 2009; Grønholdt & Martensen; 2006; Rust, Lemon & Zeithalm, 2004). It was posited that marketing's influence on the overall business outcomes and returns must be demonstrated so that the role of marketing in organisations would be significantly strengthened.

According to O'Sullivan et al. (2009), two primary factors contributed to the intense pressure in understanding marketing accountability in terms of firm performance in high technology firms. First, high technology firms are naturally technology oriented rather than marketing oriented. Hence there exists executive scepticism towards the value of marketing in these firms (Ward, Light & Goldstine, 1999; Meldrum, 1995) and senior executives continuous demand for marketing accountability (O'Sullivan et al., 2009). Second, due to the collapse of the technology boom of the late 1990s, the necessity for marketing and the value of marketing in high technology firms were questioned and came under intense scrutiny (Mohr & Shooshtari, 2003). It is a challenge faced by marketers in high technology firms to demonstrate the effectiveness and the value (contribution) of the marketing practices to their firms' performance.

As discussed earlier all management practices in firms are designed and adopted for successful firm performance. Over recent years there has been increased academic interest in documenting how marketing activities can contribute to a firm's financial performance, especially in high technology firms. Firm performance is frequently used as a dependent variable in strategic management research in various fields of study (For example, Richard, Devinney, Yip & Johnson, 2009; Cho & Pucik, 2005; Wiklund & Shepherd, 2003).

Many empirical studies have been carried out to examine the linkages between the various strategic marketing practices and firm performance (for eg. Sweeney et al., 2011; Lee et al., 2006; Doyle & Wong, 1998). All these studies clearly demonstrated that they had a significant positive influence on firm performance. Hence in this

research it was proposed that the strategic marketing practices that are adopted by the ICT firms in India influences firm performance in these firms.

In order to assess firm performance in the ICT firms, perceptual measures were used in this research. Previous research showed that the scales which measure perceived firm performance correlate positively and have strong associations with objective firm performance measures (Heirati et al., 2013; Wall, Michie, Patterson, Wood, Sheehan, Clegg & west, 2004; Jaworski & Kohli, 1993). Also objective measures were almost impossible to obtain because of confidentiality factors (Heirati et al., 2013; Wall et al., 2004). Hence using perceptual measures was considered a preferred approach in most firm performance research in academic literature. These perceptual measures are subjective and tend to focus on the overall performance of the firms whereas the objective measures are typically absolute financial indicators. Using the subjective measures the research aimed to ask the respondents to rate their firms' performance relative to their competitors.

In literature, firm performance was gauged using several subjective measurement scales. The most frequently used measures in marketing management literature were profitability, return on investments, growth in sales revenue, market share relative to competition, productivity, acquiring new customers, increasing sales to current customers and exports (Chen et al., 2009; Pelham & Wilson, 1996; Germain, Dröge & Daugherty, 1994; Hart & Diamantopoulos, 1993).

Conclusion

In this chapter, the theoretical perspective upon which the research propositions were built was discussed. The preliminary conceptual framework that was developed based on this theoretical perspective guided the researcher in achieving the objectives of this research. The rationale for the choice of the constructs and the association between the identified constructs in the conceptual framework was presented. To summarise, 11 independent variables were identified namely: social media, relationship marketing, market research, segmentation, targeting, differentiation, positioning, product, price, distribution and promotional practices; firm performance was the dependent variable and customer satisfaction, the mediating variable. In the chapters that follow initial capitals are used when these variables are discussed. In the next chapter, the research design that was adopted for this research study is explained in detail.

CHAPTER THREE: RESEARCH DESIGN

In this chapter the research design that was employed in this study is presented. It begins by explaining and justifying the research design followed by a detailed discussion of the data collection method. Then the rationale for the choice of the data collection method, questionnaire design, sampling design, instrumentation and survey implementation are described. The chapter concludes with a note on the data analysis methods, the ethical issues that were addressed and a summary of the key points that were presented in the chapter.

Research Design

A sound research design is the central element of all empirical research. It is an important tool for the effective planning of any research study (Crook, Shook, Morris & Madden, 2010; Jonker & Pennink, 2010; Grunow, 1995). Research design is defined as “a framework or blue print for conducting the marketing research project that specifies the procedures necessary to obtain the information needed to structure and/or solve the marketing research problem” (Malhotra, 2012, p.66). A prudent research design is therefore the master plan that details the methods and procedures that must be pursued in the research (Zikmund & Babin, 2012). Effective implementation of a well devised research design ensures that enough evidence is obtained to enable the researcher to answer the research question as precisely as possible (De Vaus, 2001).

According to Jonker & Pennink (2010), research design is influenced by the general research question and the specific research objectives that the study purposes to achieve. The broad research question for this study is:

How do the marketing practices adopted by the ICT firms in India contribute to firm performance?

By answering this question, this research aimed to identify the best set of marketing practices that contributes to Firm Performance in the ICT firms in India.

The specific research objectives were:

1. To develop a conceptual model of the Strategic Marketing Practices adopted by the ICT firms in India.

2. To identify the Strategic Marketing Practices of the ICT firms in India.
3. To assess the influence of these Strategic Marketing Practices on Firm Performance.
4. To establish a recommended best set of marketing practices for the ICT firms in India.

The first step in any research design is to determine the classification or the type of the research design that will be adopted for the study. There are a number of ways to classify research designs. Based on the type of the research strategies used in the research and the specific data collection methods employed, research designs can be classified into qualitative, quantitative and mixed method research designs (Creswell, 2009; Marczyk, DeMatteo & Festinger, 2005). Qualitative research employs a flexible approach and includes a wide variety of data collection methods which enables participants to reflect upon and state their views or to observe their behaviour (Malhotra, 2012). In marketing research, it is predominantly exploratory in nature and is designed to provide insight and understanding of the research problem.

In quantitative research formal, structured questions with predetermined response options are used to collect data (Zikmund & Babin, 2012). The questionnaires are administered to large number of respondents and the data obtained, analysed using statistical methods. This type of research method is either descriptive or causal in nature. In this research, the researcher examined the relationship between the variables constituting the Strategic Marketing Practices, Customer Satisfaction and Firm Performance, with reference to the ICT firms in India. The identified variables were then assessed using a structured questionnaire and the quantitative data that was obtained was analysed using statistical procedures. Hence for the current study, a quantitative research design was adopted. If the researcher develops creative methods in which a combination of qualitative and quantitative designs are used, then mixed method research design will be employed.

Another way to classify research design is in terms of the fundamental purpose of the research (Malhotra, 2012; Zikmund, Babin, Carr & Griffin, 2010; Hair, Lucas, Miller, Bush & Ortinau, 2008). Based on the purpose of the research, research designs can be classified as exploratory, descriptive or causal. Exploratory research is conducted to gain ideas and insights into the problems addressed by the researcher. Zikmund et al.,

(2010) posited that exploratory research helps to clarify ambiguous situations and is not designed to provide absolute evidence to determine a particular course of action. However, exploratory research helps build the foundation for both descriptive and causal studies.

Descriptive research design addresses *who, what, when, where and how* questions of a given situation (McDaniel & Gates, 2010; Zikmund et al., 2010). Descriptive assertions about the defined population are made in these types of research. This research design is particularly useful when the research question seeks to describe a marketing phenomenon, identify relationships or make predictions (Malhotra, 2012). Causal research design explains cause-and-effect relationships between two or more decision variables (Hair et al., 2010).

The research design used in this research can be explained as both exploratory and descriptive. It was exploratory as the insights obtained from the review of high technology marketing literature revealed the gap in understanding the Strategic Marketing practices of high technology firms. It also revealed that the contribution of these marketing practices to the performance of such firms have received little research attention, even though it is recognised that marketing is crucial for the success of high technology firms.

Additionally, the research design employed was descriptive in nature. The purpose of this study was to establish the interrelationships between the Strategic Marketing Practices adopted by the ICT firms, Customer Satisfaction and Firm Performance and to determine the degree to which they are associated. Review of related literature identified Social Media practices, Relationship Marketing practices, Market Research practices, Segmentation practices, Targeting practices, Differentiation practices, Positioning practices and Marketing Mix practices as the relevant Strategic Marketing practices of ICT firms. The current research investigated the effects of these identified marketing practices, which are the independent variables, on Firm Performance, the dependent variable. Customer Satisfaction was posited as the mediating variable as it is likely to influence the strength of the relationship between the independent and the dependent variables.

The research question was clearly defined and the specification of the needed information was clearly identified. Data for this study was collected in a structured fashion using the web survey method. All these characteristics affirmed the applicability of a descriptive research design and hence the research design adopted is descriptive in nature (Malhotra, 2012; Zikmund & Babin, 2012).

The next section describes the primary data collection method that was used in this research. It includes discussions on the decisions relating to the method used for data collection, questionnaire design, sampling design, instrumentation and the data collection procedure.

Data Collection Method

The descriptive research design supported the use of survey method of the data collection for this research study. Several authors (Malhotra, 2012; Zikmund & Babin, 2012; McDaniel & Gates, 2010; Hair et al., 2008) assert that the survey method is one of the two main ways of capturing quantitative descriptive data. The other method is observation in which the behaviour patterns of people, events and processes are observed to obtain information for the research. In the survey method the required descriptive will be gathered by communicating with the representative sample of the population that is under study.

Survey methods can be classified based on the mode used to administer and elicit specific information from the respondents in the sample. These classifications include telephone interviewing, personal interviewing; mail interviewing and electronic interviewing (Zikmund et al., 2010). The choice of the suitable survey method depends on the specific research context and the advantages of the chosen method over the other options. This study was conducted on the ICT firms in India and hence the sample population had access to the internet. Therefore, the Web survey method of data collection was adopted for the study. A formal, well-structured questionnaire was used to obtain relevant information from the sample population. The following sub-section presents the questionnaire design for the Web survey method of data collection.

Questionnaire design. A review of related literature and a series of informal discussions with academic staff and experts in the ICT sector guided the development of the survey instrument for this study. Structured, fixed alternative questions were used in

the Web survey questionnaire because it was easier for the respondents to answer. It enabled comparability of answers, facilitated coding, tabulation and interpretation of data for the researcher. The structured responses provided a more time efficient means for collecting, processing and analysing the primary data (Zikmund & Babin 2012; McDaniel & Gates, 2010; Hair et al., 2008).

In a survey, respondents might potentially undermine the accuracy of their answers, possibly by misinterpreting the questions they were asked (Peytchev, Conrad, Couper, & Tourangeau, 2010). A number of studies have identified that these comprehension problems substantially reduces the accuracy of survey results (Peytchev et al., 2010; Conrad & Schober 2000). To minimise this risk, the definitions of the key concepts in the questions were made available to the Web survey respondents in the questionnaire (Schober, Conrad & Fricker, 2004). This reduced the possibility of misinterpreting the questions thereby increasing the accuracy of the results. Evidence from literature also indicated that when definitions for key concepts were presented along with the questions in a Web survey, respondents are more likely to consult the definition before answering the questions (Peytchev et al., 2010; Galesic, Tourangeau, Couper & Conrad, 2008). Bearing this in mind, all the key concepts were clearly defined in the questionnaire.

All the items assessing a construct were presented on the same page in the survey questionnaire. This facilitated easy referencing to the definitions of the construct and effectively led the respondents through to complete the questionnaire. All the questions and the definitions for the key concepts were highlighted. A “progress bar” to indicate the percentage completion of the questionnaire was included in each page of the questionnaire. The “back button” option was added to assist respondents if they wanted to go back and change the answers. The respondents were required to access a uniform resource locator (URL) to take the survey. Care was taken to ensure that the respondents could access the survey from a particular computer only once. Because of the “save and continue” option in the questionnaire, they also had the flexibility of completing the survey at their convenience within the stipulated time frame of two weeks. The web survey questionnaire is presented in Appendix B.

Once the questionnaire was developed, it was pretested with a small group of respondents as suggested by Zikmund and Babin (2012). The questionnaire was pre-tested to check for clarity of questions, relevance and completeness. Further modifications to the questionnaire content, format, wording and response alternatives were made based on the results of the pre-test. Every effort was undertaken to ensure that the final questionnaire was as respondent-friendly as possible. The sampling design that was adopted for this research study is presented in the next sub-section.

Sampling design. Sampling is one of the important components of any research design. It involves identifying the subgroups of the elements or the respondents of the population selected for participation in the study (Hair et al., 2010; Jonker & Pennink, 2010). The first step in any sampling design process is to identify the target population. Malhotra (2012) defined target population as “the collection of elements or objects that possess the information sought by the researcher and about which inferences are to be made” (p. 315). “Element” referred to the respondents from whom the information was desired. The element of the target population for this research involved senior employees in ICT firms who play an active role in making marketing related decisions in those firms. This included marketing managers, owner managers or other functional managers who were responsible for the marketing related decisions in the ICT firms in India.

Sampling unit refers to a single element or group of elements subject to selection in the sample to gather information of the whole (Zikmund et al., 2010). This research was undertaken to enhance the understanding of the marketing practices of ICT firms in India. Hence, the sampling unit in this study is the individual ICT firm in India.

In order to facilitate clear understanding of the definition of ICT firms in India, International Standard Industrial Classification (ISIC) codes were used in this study. Table 3.1 specifies the code and its description.

Table 3.1

International Standard Industrial Classification (ISIC) codes

ICT Services Industries		
Sr.no.	ISIC code*	description
A	61	Telecommunications Services
B	62	Information Technology service activities
1	6201	Computer programming activities
2	6202	Information Technology Consultancy activities
C	631	Web Portals, data processing, hosting and related activities

Note: Downloaded and adopted from Ministry of statistics and programme implementation (MOSPI), India.

*International Standard Industrial Classification (ISIC) Rev. 4.0 released in 2008

The sampling frame for this research comes from the list of registered online panel members of a reputable market research agency who provided the data collection services for this research. The survey was sent to all the elements or respondents in the sampling frame identified for this research. Screening questions were used in the survey to overcome the sampling frame error (that the list might contain more than the desired population). All those ICT owner managers/managers/functional managers, who did not participate in making marketing decisions in the firms, were screened from participating in the survey (See Appendix B). The next sub-section presents a detailed discussion on the survey method of data collection that was adopted for this research, including the sources of errors in web surveys and how it was overcome in this study.

Survey method. In order to obtain the primary data for this study, a self-administered Web survey method of data collection was used. The major advantage of Web surveys is instant access to a high number of potential respondents, irrespective of their geographical locations (Braunsberger, Wybenga & Gates, 2007; Duffy, Smith, Terhanian & Bremer, 2005; Ilieva, Baron & Healey, 2002; Couper, 2000). Other advantages include the low cost associated with implementing the survey, better display of the questionnaire (in terms of design tools, interaction and clear presentation) and shorter response times (Van Selm & Jankowski, 2006; Evans & Mathur, 2005; Ilieva et al., 2002; Couper, 2000). Also, in a Web survey the respondents are free to complete the survey at their convenience which increases the likelihood of participation (Sax, Gilmartin & Bryant, 2003).

Since Web surveys are self-administered it provides privacy to the respondents and encourages them to complete the survey without any inhibition. Braunsberger et al. (2007), contend that this reduces response errors in Web surveys. It provides an option to programme the questionnaire so that the responses can be fed automatically into data analysis software like SPSS and Excel. This saves time and helps to improve the quality of the data (Ilieva et al., 2002). Questions can be designed with built-in question branching, skip patterns and forced answer prompts to guide the respondents through survey completion (Schillewaert & Meulemeester, 2005).

Many empirical studies have demonstrated that Web surveys are viable alternatives that allow a researcher to conduct high quality research (Braunsberger et al., 2007; Schillewaert & Meulemeester, 2005). The Web survey method was found to produce more reliable data than other methods of data collection. For example, in their study on the response characteristics from web and telephone surveys, Roster, Rogers, Albaum and Klein (2004) found that web survey respondents produced data that were more reliable than telephone survey respondents. Kiernan, Kiernan, Oyler and Gillies (2005) studied the effectiveness of web surveys over mail surveys in terms of response rates among computer users. Their study indicated that web surveys were as effective as mail surveys if the sample population was defined to have access to the World Wide Web. Further Web surveys were found to elicit higher response rates than other survey methods, if the population sample was computer savvy.

Sources of errors in web surveys. There are four potential sources of errors in web surveys (Shropshire, Hawdon & Witte, 2009). They are coverage error, measurement error, sampling error and non-response error. The impact of these errors in web surveys and the ways in which they were minimised in this research are discussed below.

Coverage error refers to the possibility that there will be members of the target population who will not have a chance of being selected into the sample (Gosling & Johnson, 2010). This is commonly identified as the under-coverage error (Bethlehem, 2010). Under-coverage error is described as a bias wherein the sample selection mechanism of the survey will not be able to select some elements of the target population. This error is significant in web surveys where not all members of the target

population may have access to e-mail and to the World Wide Web (Ilieva et al., 2002; Cobanoglu, Warde & Moreo, 2001).

It is contended in literature that this issue of under-coverage error will be of greater or lesser importance depending on whom or what is being researched (Gosling & Johnson, 2010). If the target population was well defined and could be identified to have access to the internet, this error does not arise (Evans & Mathur, 2005; Kaplowitz, Hadlock & Levine, 2004; Couper, 2000). In this research, the target population was well defined. It included a technologically advanced population, who had access to the internet.

Gosling and Johnson (2010) referred to another aspect of coverage error that needed attention with respect to web surveys. This included the potential that some units may have multiple chances of participating in the survey and some units may not even qualify for the survey. Hui-Chih & Her-Sen (2010) explained this type of coverage error, in their study on the issues of Internet-based survey research in service industries. Web surveys can suffer from multiple responses from a single individual and/or responses from individuals outside the population of interest. Both of these issues will lead to biased results in the web survey.

The above mentioned coverage errors were minimised in this research. In the survey tool “Qualtrics” that was used in this research, an option called “prevent ballot box stuffing” was activated, to keep people from taking the survey more than once. Activating this option helped in preventing multiple responses from a single individual, by installing a cookie on their computer thereby preventing access to the survey a second time.

Relevant screening questions at the beginning of the survey helped in preventing individuals outside the population of interest from taking the survey (See Appendix B). The name of the company in which the respondent works was also requested in the survey questionnaire. Only those responses from the target population where valid ICT company names had been provided were taken for data analysis. However the names of the companies were kept confidential. A thorough check of the company names helped the researcher not only to ensure that the respondents were from the ICT firms but also to avoid duplication of responses as well.

Measurement error arises when there is a variation between the information that is required for the research and the information that is obtained by the measurement process applied by the researcher. In order to reduce this error, as suggested by Schober et al. (2004), definitions of key concepts in the questionnaire were made available to the web survey respondents. The researcher explained each of the constructs in the questionnaire in simple terms. These descriptions were placed on each page in the web survey, above the items assessing the construct so that it could be referred to, whenever necessary. This helped the researcher to communicate the intended meaning of the key concepts in the questionnaire to the survey respondents in order to increase the accuracy of the responses.

Non-response error arises “through the fact that not all people included in the sample are willing or able to complete the survey” (Couper, 2000, p.473). Non-response error had increased drastically in web surveys because of the increase in the number of online surveys and pop up surveys in the internet. Non-response error takes two forms: total non-response which referred to individuals failing to return the survey at all and unit/item non-response, which indicated that the survey was returned incomplete. Even though item non-response rates were found to be a significant factor affecting the quality of questionnaire data, Denscombe (2009) identified that the item non-response rates were lower for the online version of the questionnaire. Also fixed-choice questions were used in this research. This contributed to lowering the item non-response rates in the survey.

Researchers encounter *sampling error* problems when conducting online research (Andrews, Nonnecke & Preece, 2003; Howard, Rainie & Jones, 2001). Sampling errors occur when only a portion of the sample is surveyed rather than all the members (Van Selm & Jankowski, 2006; Couper, 2000). These errors are of significance in web surveys because not all members of the target population may have access to e-mail and to the World Wide Web (Ilieva et al., 2002; Cobanoglu et al., 2001). This error was reduced in this research as the target population was well defined and the sample population had access to e-mail and to the World Wide Web. Also, the survey was sent to all the elements in the population. In the next section, the measurement and scaling of constructs that were proposed in the conceptual model (Figure 2.1) are presented.

Measurement and Scaling of Constructs

This is described as the process through which the researcher explains the constructs identified, usually by assigning numbers, so that the characteristics of the concepts are measured rather than the concepts themselves (Malhotra, 2012; Zikmund et al., 2010; Marczyk et al., 2005). The term construct is used to refer to a concept that is specifically defined for a scientific study and is measured with multiple variables (Zikmund et al., 2010; Viswanathan, 2005). Measurement and scaling of constructs is described as the basis for scientific research and as central to understanding the entire research method (Viswanathan, 2005; Marczyk et al., 2005).

As suggested by Zikmund et al. (2010), the measurement and scaling of constructs for this research was guided by the six steps in the measurement process. The steps are to

- Determine what is to be measured
- Determine how it is to be measured
- Apply a rule of measurement
- Determine if the measure consists of a number of measures
- Determine the scales to be used to measure
- Evaluate the measure.

The theoretical background and an extensive review of related literature helped to identify the concepts that must be measured to answer the research question and to achieve the research objectives. The concepts identified from literature for this research are: Social Media practices, Relationship Marketing practices, Market Research practices, Segmentation practices, Targeting practices, Differentiation practices, Positioning practices, Marketing Mix practices, Customer Satisfaction and Firm Performance.

These identified concepts are abstract and must be made operational in order to be measured. The operational definition of the variable takes the construct from being the abstract to the concrete (Marczyk et al., 2005). This step in the measurement process quantifies the variable by specifying the activities or operations necessary to measure it. Accordingly, in this research the constructs were operationalised and the activities (items) that are to be measured were adapted from literature in line with the operational definition of the construct. Care was taken that all the measurement items reflected the underlying construct.

An important aspect of measurement is specifying the rules for assigning numbers to the activities (generated items) defining the constructs. There are four primary scales of measurement described in marketing research literature - nominal, ordinal, interval and ratio scales (Malhotra, 2012; Zikmund et al., 2010). For the purpose of this research, nominal scales and interval scales were used in this study.

Nominal scales of measurement are the simplest form of measurement, wherein, the measures are assigned number symbols in order to label them. These assigned numbers serve only as labels to identify and classify objects. The only characteristic of nominal scales is description and hence the respondents are required to provide a descriptor as the response to questions using this level of scale. The interval scale of measurement has the properties of identity, and magnitude and equal intervals. Each value on the measurement scale has a unique meaning, an ordered relationship to one another and the scale units along the scale are equal to one another (Malhotra, 2012).

Scaling involves generating a continuum upon which the measured objects are located (Malhotra, 2012). The scaling techniques used in marketing research are classified into comparative and non-comparative scales. Non-comparative itemised rating scales were used in this research. The scale was non-comparative as the respondents made a judgement without any reference or having to compare with another item or concept. Of the various itemised rating scales, Likert scales were used to evaluate the items. This kind of scales has a series of statements that expresses either a favourable or an unfavourable attitude toward the concept under study.

In this research, the respondents were asked to indicate their level of disagreement or agreement with each statement. The anchor points were, 1=strongly disagree and 7 = strongly agree with 4 being the neutral point. These multi-item Likert scales were used to measure all the constructs identified in the conceptual model. Even though the assumption of equal intervals between the anchor points in Likert scales are debated in literature, the averages derived from these scales are meaningful, thus rendering this type of scale closer to interval scale than to ordinal scale measurement (Meyers, Gamst & Guarino, 2013). Also multivariate analysis techniques like regression analysis are

robust to deviations from equivalency of intervals between scale units and are not overly susceptible to relaxing interval data requirement.

All of the constructs in the conceptual framework (See Figure 2.1) were measured with a number of items and therefore a multi-item scale was used in this research. It was contended that using different items to measure the same concept provides a more accurate cumulative measure than single-item estimates (Zikmund et al., 2010). These multidimensional scales are widely used in marketing research. The respondents were asked to select from a limited number of ordered categories for each of the statements that measured the various constructs. For further analysis, the composite measure of the multiple items for each construct was obtained to form and to measure all individual constructs.

The next section presents the measures that were employed to assess the constructs used in the conceptual model (See Figure 2.1). The extant literature from where the items were adapted to assess the constructs is also presented.

Measurement scales for Social Media practices. Social Media practices refer to the web based technologies that enable individuals in the firm to mutually interact and communicate with customers. The scale items for this construct were drawn from literature and were not from previously established or published scales. As discussed in chapter two, Social Media is widely used by firms for commercial purposes. In this research the items that were used to measure Social Media practices captured the potential use of social media that were beneficial to the B2B ICT firms in India.

The identified scale items (SM1 to SM11) are:

- a) **SM1:** Managers in our firm actively participate in professional social networks (like Linked In) (Smith, 2009)
- b) **SM2:** Our firm actively searches for market opportunities in user generated blogs in online communities (Smith, 2009; Moen, Madsen & Aspelund, 2008).
- c) **SM3:** Our firm constantly monitors social network sites for reviews of our products and services (Fisher, 2009; Moen et al., 2003).
- d) **SM4:** In our firm, we constantly check online networks to know about competitor's products and services (Moen et al., 2008).
- e) **SM5:** We encourage our customers to participate in live and interactive discussion forums in our website (Moen et al., 2008; Deans et al., 2003)

- f) **SM6:** Our firm has increased efficiency in developing products due to online customer interaction at various stages of product development (Fisher, 2009; Moen et al., 2008; Deans et al., 2003).
- g) **SM7:** Our constant interaction with customers through online networks has improved our customer relations (Moen et al., 2008; Deans et al., 2003).
- h) **SM8:** There is a reduction in online customer support because of the information we provide through our online discussion forums (Fisher, 2009; Deans et al., 2003).
- i) **SM9:** We use our online networks to explain our products/services to customers (Deans et al., 2003)
- j) **SM10:** We use our online networks to facilitate endorsement of our product/services by customers (Pfeiffer & Zinnbauer, 2010)
- k) **SM11:** Our engagement in the online social networks help build our firm's reputation (Pfeiffer & Zinnbauer, 2010; Fisher, 2009; Moen et al., 2003)

Measurement scales for Relationship Marketing practices. The items identified for this construct were specifically aimed at measuring the different dimensions of relationships that exist between the exchange partners in the given context. In the literature four major dimensions of relationship marketing are identified - trust, commitment, communication and customer relationship orientation in firms. Items RM5 to RM10 assessed the trust and commitment dimensions of relationship marketing. The first four measures (RM1 to RM4) assessed the customer relationship orientation of the firms. Measures assessing communication between the exchange partners were included under other constructs like Social Media practices, Product practices and Customer Satisfaction. The Scale items that were adapted to measure Relationship Marketing practices are:

- a) **RM1:** In our organisation, retaining customers is considered to be a top priority (Jayachandran et al., 2005).
- b) **RM2:** In our organisation, customer relationships are considered to be a valuable asset (Jayachandran et al., 2005).
- c) **RM3:** Our senior management emphasizes the importance of customer relationships (Jayachandran et al., 2005).
- d) **RM4:** In our organisation, employees receive incentives based on customer satisfaction measures (Jayachandran et al., 2005).

- e) **RM5:** We can rely on our firm to keep the promises that it makes to the customers (Lawson-Body et al., 2010).
- f) **RM6:** In our relationship with customers, our firm can be trusted at all times (Lawson-Body et al., 2010).
- g) **RM7:** Our firm rewards employees who do their very best to solve customer problems (Lawson-Body et al., 2010).
- h) **RM8:** We fulfil all obligations and promises we make to customers (Negi & Ketema, 2010).
- i) **RM9:** We make significant investments (in terms of time and resources) in building relationship with our customers (Palmatier et al., 2006).
- j) **RM10:** We are committed to establishing long term relationship with our customers (Sin, Yau, Chow, Lee & Lau, 2005)

Measurement scales for Market Research practices. Seven items (MR1 to MR7) were used to assess the Market Research practices of the ICT firms in India. Respondents were asked to indicate how market research information was gathered in their firm and what kinds of information were obtained. The following items were identified for this construct.

- a) **MR1:** In our firm, we do a lot of in-house marketing research (Hart & Diamantopoulos, 1993; Jaworski & Kohli, 1993).
- b) **MR2:** In our firm, we use external contractors to do market research for us (Hart & Diamantopoulos, 1993; Jaworski & Kohli, 1993).
- c) **MR3:** In our firm, we meet our customers formally to find out their future requirements (Vorhies et al., 1999)
- d) **MR4:** In our firm, we use the marketing research database that is published online by large firms (Vorhies et al., 1999).
- e) **MR5:** In our firm, we collect relevant industry information through informal networks (Vorhies et al., 1999).
- f) **MR6:** In our firm, we gather data to understand the market perception of our new products and services (Hart & Diamantopoulos, 1993).
- g) **MR7:** In our firm, we gather data regarding the customer acceptance of our products and services (Hart & Diamantopoulos, 1993).

Measurement scales for Segmentation practices. This construct was operationalised to identify the bases of segmentation in the ICT firms. Items to measure this construct were adapted from studies done by Sausen et al., (2005) and Dunn et al., (1999). The following items (SEG1 to SEG8) were used in the survey to deduce the market segmentation practices adopted by the ICT firms.

- a) **SG1:** We segment the market based on long term customer profitability (Sausen et al., 2005).
- b) **SG2:** We segment the market based on short term customer profitability (Sausen et al., 2005).
- c) **SG3:** We segment the market based on customers who need specialised solutions (Dunn et al., 1999).
- d) **SG4:** We segment the market based on customers who need customised solutions (Dunn et al., 1999).
- e) **SG5:** We segment the market based on customers who need value solutions (Dunn et al., 1999).
- f) **SG6:** We segment the market based on customers who need packaged solutions (Dunn et al., 1999).
- g) **SG7:** We segment the market with unexploited niche segments (Sausen et al., 2005).
- h) **SG8:** We segment the market with unexploited market opportunities (Sausen et al., 2005).

Measurement scales for Targeting practices. Targeting refers to the firm's decision to select the best customer segment, whose needs the firm can satisfy in a better way than their competitors. The items (TGT1 to TGT5) to assess this construct were drawn from high technology marketing literature. The five items are

- a) **TGT1:** We target those customers who are constantly looking to leverage their products and services (Easingwood & Koustelos, 2000).
- b) **TGT2:** We target those customers with a clear need to adopt new technologies (Easingwood & Koustelos, 2000).
- c) **TGT3:** We target those customers with whom we can have a long term relationship (Easingwood & Koustelos, 2000).
- d) **TGT4:** We target those customers with the potential of giving us long term or downstream profit (Easingwood & Koustelos, 2000).

- e) **TGT5:** We target those potential customers whose needs we are aware of (Easingwood & Koustelos, 2000).

Measurement scales for Differentiation practices. Differentiation is the firm's act of adding meaningful and value-added differences to their products and services to distinguish them from those of the competitors. Six items (DF1 to DF5) were adapted from literature to assess the differentiation practices of the ICT firms in India. The identified items are:

- a) **DF1:** Our firm offers products and services which are higher in quality than those offered by competitors (Song & Parry, 1997).
- b) **DF2:** Our products and services are clearly superior to competing products in terms of reliability (Song & Parry, 1997).
- c) **DF3:** Our products and services are clearly superior to competing products in terms of price (Pelham & Wilson, 1996).
- d) **DF4:** Our products offer unique features to customers as compared to competitor's products (Song & Parry, 1997).
- e) **DF5:** Our brand name is a strong source of differentiation from our competitors (Song & Parry, 1997).

Measurement scales for Positioning practices. Market positioning is the firm's act of designing products and services so that it captures a distinctive place in the minds of the customers. Through market positioning firms try to influence the perception of the customers. The measures for positioning were operationalised through three items (PG1 to PG3), which were adapted from existing literature. The items assessed how the firms' customers are likely to perceive their firm as being different from competitors. The scale items are:

We are seen by customers as a firm which:

- a) **PG1:** Provides extensive after sales support (Easingwood et al., 2006).
- b) **PG2:** Has a reputation within the industry (Morgan et al., 2003).
- c) **PG3:** Has the winner image in the market (Easingwood et al, 2006).

Measurement scales for Product practices. The six-item product strategy measures used in this research were adapted from literature to identify the product strategies adopted by the firms in the ICT sector. The following are the scale items (PT1

to PT11) which were used to assess the product strategies adopted by the ICT firms in India.

- a) **PT1:** We develop a common product platform, which is then adapted to customer requirements (Easingwood et al., 2006; Gabrielsson & Gabrielsson, 2004).
- b) **PT2:** We understand the customer requirements and develop a conceptual design, which is then presented to the customer for feedback (Easingwood et al., 2006; Gabrielsson & Gabrielsson, 2004).
- c) **PT3:** We typically co-design our products with our customers (Ramaswami et al., 2008).
- d) **PT4:** We always try to put working prototypes in the user's hands as early as possible (Ramaswami et al., 2008).
- e) **PT5:** We co-design products with partner firms to develop and present a "complete product" for our customers (Easingwood et al., 2006).
- f) **PT6:** We emphasize owning the intellectual property rights (eg. Patenting) for our products and services (Pavia, 1990).
- g) **PT7:** Our firm provides exclusive products and services, by being a specialist shop (Morgan et al., 2003).
- h) **PT8:** Our firm provides a pool of highly trained personnel expertise (Morgan et al., 2003).
- i) **PT9:** Our firm provides niche based technological superiority (Morgan et al., 2003).
- j) **PT10:** Our firm provides extensive customer support from product conceptualization to product delivery (Hooley & Greenley, 2005).
- k) **PT11:** Our firm is always ahead of competitors with respect to product innovation (Prajogo, 2007).

Measurement scales for Pricing practices. The multi-item measures for this construct helped to identify the pricing strategies adopted by the ICT firms in India. Six items (PRI1 to PRI6) were used to measure this construct. Survey respondents were asked to indicate the extent to which they disagree or agree that the scale items influence their firm's pricing setting decisions. The adapted scale items are:

- a) **PRI1:** The cost incurred (Pasura & Ryals, 2005).
- b) **PRI2:** Profit objectives of the company (Pasura & Ryals, 2005).

- c) **PRI3:** Uniqueness of the products and services (Pasura & Ryals, 2005).
- d) **PRI4:** Competitor pricing for similar products and services (Pasura & Ryals, 2005).
- e) **PRI5:** The benefits provided along with the product/service offering (like brand, delivery, innovation, training, after sales support, on-going support) (Pasura & Ryals, 2005).
- f) **PRI6:** Customer value in terms of the potential long term downstream profit (Pasura & Ryals, 2005).

Measurement scales for Distribution practices. Six items were adapted from high technology marketing literature to identify the distribution practices of the ICT firms in India. The items (DT1 to DT6) are:

- a) **DT1:** Our firm always prefers direct distribution of our products and services (Easingwood & Koustelos, 2000)
- b) **DT2:** We engage certified resellers to distribute our products and services (Easingwood & Koustelos, 2000)
- c) **DT3:** Our firm forms tactical alliances with smaller firms to help put a "complete product" for our customers (Easingwood et al., 2006; Easingwood & Koustelos, 2000).
- d) **DT4:** Our firm gained distribution rights through joint ventures, as a result of the collaborative development of a new technology (Easingwood & Koustelos, 2000)
- e) **DT5:** We are the exclusive distributors of our products and services (Easingwood et al., 2006).
- f) **DT6:** Our firm relies on distributors to deliver pre-packaged solutions (Dunn et al., 1999)

Measurement scales for Promotional practices. The scale items for this construct were drawn from the high technology marketing literature. Eleven items (PM1 to PM11) were used to assess the promotional practices of the ICT firms in India. These are:

- a) **PM1:** Participating in technical seminars and presentations (Traynor & Traynor, 2004)
- b) **PM2:** Organizing industry conferences (Davies & Brush, 1997)

- c) **PM3:** Inviting customers to leadership forums (Traynor & Traynor, 2004)
- d) **PM4:** Print advertising (Traynor & Traynor, 2004)
- e) **PM5:** Online advertising (Traynor & Traynor, 2004)
- f) **PM6:** Using customer references in our advertisements (Traynor & Traynor, 2004)
- g) **PM7:** Promoting through word-of-mouth (Traynor & Traynor, 2004)
- h) **PM8:** Submitting white papers online (Gabrielsson & Gabrielsson, 2004)
- i) **PM9:** Actively engaging in press relations (product and corporate press releases) (Davies & Brush, 1997)
- j) **PM10:** Sponsoring events (Traynor & Traynor, 2004)
- k) **PM11:** Using social media such as LinkedIn/Facebook/twitter (Deans et al., 2003)

Measurement scales for Customer Satisfaction. In this research study Customer Satisfaction was measured from the firm's perspective. Nine items (CS1 to CS9) were used to assess Customer Satisfaction. These items include both the firm's assessment of Customer Satisfaction and the practices that they use to enhance Customer Satisfaction. The items are:

- a) **CS1:** We get more clients/business through positive word of mouth from our existing customers (Szymanski & Henard, 2001).
- b) **CS2:** Our customers frequently return for additional business to our firm (Makarem et al., 2007).
- c) **CS3:** All departments are responsive to, and are integrated in serving customers (Hung & Wong, 2007).
- d) **CS4:** We deliver the offering in the time frame that the customer desires or needs (Boyd, 2002).
- e) **CS5:** We respond to customer complaints and suggestions without delay (Hung & Wong, 2007)
- f) **CS6:** We have a system of conflict resolution that is fair to the customer and to us (Boyd, 2002).
- g) **CS7:** Our firm responds quickly to changing customer requirements (Hung & Wong, 2007).
- h) **CS8:** Our firm obtains feedback from our customers through formal review meetings (Makarem et al., 2007).

- i) **CS9:** We often rely on informal networks to assess the satisfaction of our customers with our products and services (Makarem et al., 2007).

Measurement scales for Firm Performance. Firm Performance was assessed using eight items and the respondents were asked to indicate whether their firm's performance met their expectations for each item. Both financial and non-financial measures were used to operationalise this construct. The respondents recorded their extent of disagreement or agreement that their firm's performance meet their expectations on the following measures (FP1 to FP8):

- a) **FP1:** Profitability (Chen et al., 2009; Pelham & Wilson, 1996)
- b) **FP2:** Return on Investments (Pelham & Wilson, 1996)
- c) **FP3:** Growth in sales revenue (Chen et al., 2009)
- d) **FP4:** Market share relative to competition (Chen et al., 2009)
- e) **FP5:** Productivity (Germain, Dröge & Daugherty, 1994)
- f) **FP6:** Acquiring new customers (Chen et al., 2009)
- g) **FP7:** Increasing sales to current customers (Chen et al., 2009)
- h) **FP8:** Exports (Hart & Diamantopoulos, 1993).

General questions. Organisational characteristics were measured through size of the organisation and the ownership nature of the organisation. Size was operationalized by three variables measuring the number of employees, estimate of the firm's initial investment and an estimate of the annual turnover. Individual factors were measured through the respondent's position in the organization, tenure and educational qualification.

Survey Implementation

The web survey was designed by the researcher using the "Qualtrics" survey tool. To implement the survey, initially the researcher approached the Computer Society of India (CSI). The request for assistance in data collection was not acknowledged. Hence, the data for this research was collected through a reputable market research agency, which has offices all over the world. They are continuously offering data collection services to research students. The survey designed in Qualtrics was integrated into the research agency's system and fine-tuned to collect relevant data for the research.

All members in the population were invited to participate in the survey. Managers were used as proxies for firms and thus managers from all 2983 firms were invited to participate in the Web survey. In order to avoid duplication of data from respondents working in the same company at different locations, the respondents were required to specify the name of their firm. Only 187 respondents had provided this information and completed the questionnaire yielding a response rate of 6.3%.

Data Analysis

Data obtained through the Web survey using Qualtrics was downloaded by the researcher into the data analysis software, SPSS. Then the researcher proceeded to analyse the data. Initially relevant statistical tools were used to clean and prepare the data for analysis. Multivariate statistical techniques were employed to examine and understand relationships among the multiple variables in the conceptual model.

Exploratory Factor Analysis (EFA) and multiple regression analysis were used to analyse the data obtained for this research study. Through EFA the Strategic Marketing Practices of the ICT firms in India were identified. Then composite measures were created for all factors that were obtained from factor analysis. These composite measures were then used in multiple regression analysis to understand the relationships among the multiple variables in the model (See Figure 3.1). Mediation analysis was also used in this research to examine the mediating effects of Customer Satisfaction in the relationship between the independent variables (Strategic Marketing Practices) and Firm Performance. Further explanation of the choice and the selection of statistical tools are discussed along with data analysis in chapter five.

Ethical Issues

In this research, all procedures in data collection that involved human subjects were carefully looked into and were overseen by the university's Human Ethics Committee. The web survey questionnaire was sent to all the members in the sample population. A formal invitation letter (See appendix A) was sent to the participants, along with the web link and the password to access the survey. The letter explained the content of the questionnaire and formally requested the respondents to participate in the survey. Confidentiality of the answers to questions and anonymity of the respondents, which were promised to the participants were also rigorously adhered to, in this research.

Conclusion

This chapter provided a detailed discussion of the research design that was adopted in this study. In the next chapter the findings and discussion of the descriptive analysis results of the data are presented and discussed.

CHAPTER FOUR: RESULTS OF THE DESCRIPTIVE ANALYSIS

This chapter presents an overview of the results of the descriptive analysis. It begins with an introduction and proceeds to a description of the analysis of the means, the frequencies and the percentages of the responses to the items for all the constructs included in the proposed conceptual framework. The chapter ends with a brief examination of the results obtained from the general questions which include respondents' position in the organisation, their length of service in the ICT sector, their length of service in the current organisation and the highest level of their formal education. Further, the ownership nature of the firms as indicated by the respondents is also tabulated.

Descriptive Analysis

As discussed in chapter three a self-administered Web survey method of data collection was adopted to obtain the primary data for this study. After all the quantitative data were collected, they were organised, summarised and examined using various descriptive analytical methods. Descriptive analysis is used to condense large quantities of data to a few numbers in a significant way that highlights the most important numerical features of the data. Among the various descriptive analysis techniques, the researcher used the analysis of the means, the frequencies and the percentages to examine the quantitative data obtained for this research.

The mean scale ratings (\bar{x}) for each of the variables used in the questionnaire to measure the constructs were calculated and are graphically presented in the following sub-sections (see Figure 4.1 - Figure 4.13). Each figure shows the mean scale ratings for all the items constituting a construct, beginning from the items with the highest mean value to the one with the lowest mean value. The seven-point Likert scale with 1= Strongly Disagree and 7= Strongly Agree as anchor points is marked on the X-axis, and the codes for the items (For example, SM1 to SM11 for Social Media) with their individual mean values are presented on the Y-axis. The neutral point in the Likert scale is 4, which indicates that the respondents neither disagree nor agree to the statement presented in the questionnaire.

The frequencies and the percentages obtained from the descriptive analysis are also tabulated and examined in this chapter. To determine the frequency of the responses, all the survey respondents who chose 1, 2 and 3 as their response were grouped together as

those who expressed their disagreement and those who marked 5, 6 and 7 were grouped together as those who indicated their agreement for each of the items. In the seven point Likert scale used in this research, 4 denoted a neutral response and therefore the responses of the survey participants who chose 4 for the statements were excluded from the frequency analysis. Hence the sum of the percentages shown in the tables (Tables 4.1 - 4.13) in this chapter will not add to 100 percent.

The constructs used in this analysis included the independent variables, the mediating variable and the dependent variable that constituted the conceptual framework as shown in Figure 2.1 in chapter two. The independent variables are: Social Media practices, Relationship Marketing practices, Marketing Research practices, Segmentation practices, Targeting practices, Differentiation practices, Positioning practices and Marketing Mix (Product, Price, Place, and Promotion) practices. Customer Satisfaction was posited as the mediating variable and Firm Performance as the dependent variable.

This chapter discusses and analyses the mean scale ratings, the frequencies and the percentages of the individual items of all the constructs that were proposed in the conceptual framework.

Social Media practices

Social Media practices of the ICT firms in India pertain to all the web based technologies that enables individuals in the firms to interact and communicate with customers to share information and resources. Eleven items were used to identify the Social Media practices adopted by these firms. The items are

- a) Managers in our firm actively participate in professional social networks (like Linked In) (SM1)
- b) Our firm actively searches for market opportunities in user generated blogs in online communities (SM2)
- c) Our firm constantly monitors social network sites for reviews of our products and services (SM3)
- d) In our firm, we constantly check online networks to know about competitor's products and services (SM4)
- e) We encourage our customers to participate in live and interactive discussion forums in our website (SM5)
- f) Our firm has increased efficiency in developing products due to online customer interaction at various stages of product development (SM6).

- g) Our constant interaction with customers through online networks has improved our customer relations (SM7).
- h) There is a reduction in online customer support because of the information we provide through our online discussion forums (SM8).
- i) We use our online networks to explain our products/services to customers (SM9)
- j) We use our online networks to facilitate endorsement of our product/services by customers (SM10)
- k) Our engagement in the online social networks helps build our firm's reputation (SM11).

Figure 4.1 shows the graphical representation of the mean score ratings for all the eleven items used to measure Social Media practices.

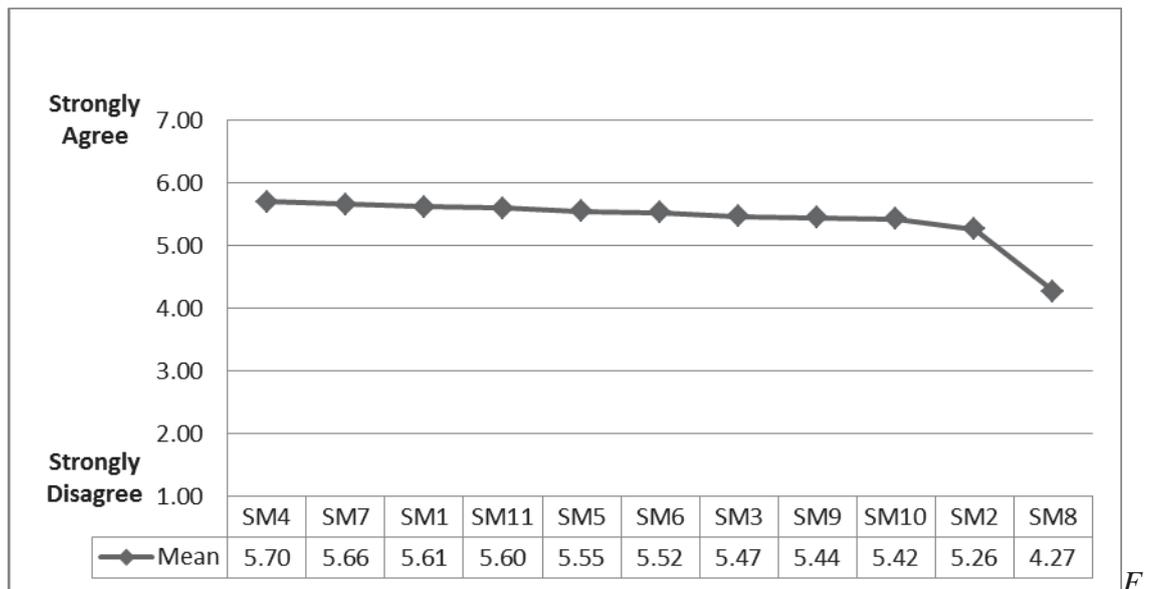


Figure 4.1. Social Media practices

As can be seen in Figure 4.1, the mean values of ten of the eleven items are >5.25. This indicates that the respondents agreed to the ten items measuring the Social Media construct suggesting that these Social Media practices are adopted by the firms in the ICT sector in India. The respondents agreed that their firms constantly check online networks to know about competitors’ products and services (SM4: $\bar{x} = 5.70$); their firms’ constant interaction with customers through online networks has improved their customer relations (SM7: $\bar{x} = 5.66$); managers in their firms actively participate in professional social networks (SM1: $\bar{x} = 5.61$) and their firms’ engagement in online

social networks help build their reputation (SM11: \bar{x} = 5.60). It is evident that these items have very close mean values, indicating that these practices are adopted by the ICT firms.

The mean scores for the next six items range from 5.26 to 5.55, reflecting a strong consensus among the respondents for those statements. They agreed that customers are encouraged to participate in live and interactive discussion forums in their websites (SM5: \bar{x} = 5.55); they have increased efficiency in developing products due to online customer interaction at various stages of product development (SM6: \bar{x} = 5.52); they constantly monitor social network sites for reviews of their products and services (SM3: \bar{x} = 5.47); they use online networks to explain their products and services to customers (SM9: \bar{x} = 5.44) and to facilitate endorsement of their product and services by customers (SM10: \bar{x} = 5.42). The mean rating for SM2 also has a high score of \bar{x} = 5.26, which shows that these firms actively search for market opportunities in user generated blogs in online communities.

SM8 has the lowest mean value of \bar{x} = 4.27. This indicates that the survey respondents neither disagreed nor agreed as to whether there is reduction in online customer support because of the information the ICT firms provide through online discussion forums (SM8). However, the high mean values for the remaining ten items offer evidence that the Social Media practices are adopted by the ICT firms in India and provide insight into the purposes for which Social Media is used by these firms.

Table 4.1 presents the frequencies and the percentages for all the 11 variables used to assess the Social Media practices adopted by the ICT firms in India.

Table 4.1
Social Media practices: frequencies and percentages

Items	Disagree		Agree	
	N*	%**	N*	%**
In our firm, we constantly check online networks to know about competitor's products and services (SM4)	14	7.49	150	80.21
Our constant interaction with customers through online networks has improved our customer relations (SM7).	12	6.42	145	77.54
Managers in our firm actively participate in professional social networks (like Linked In) (SM1)	15	8.02	153	81.82
Our engagement in the online social networks help build our firm's reputation (SM11)	16	8.56	147	78.61
We encourage our customers to participate in live and interactive discussion forums in our website (SM5)	15	8.02	144	77.01
Our firm has increased efficiency in developing products due to online customer interaction at various stages of product development (SM6).	17	9.09	148	79.14
Our firm constantly monitors social network sites for reviews of our products and services (SM3)	20	10.70	148	79.14
We use our online networks to explain our products/services to customers (SM9)	14	7.49	140	74.87
We use our online networks to facilitate endorsement of our product/services by customers (SM10)	18	9.63	143	76.47
Our firm actively searches for market opportunities in user generated blogs in online communities (SM2)	21	11.23	139	74.33
There is a reduction in online customer support because of the information we provide through our online discussion forums (SM8)	62	33.16	91	48.66

Note. N* Number of responses, %** Percentage of responses

The percentages of eight of the remaining nine items range between 74% and 79%. Approximately 79% of the respondents agreed that the firm has increased efficiency in developing products due to online customer interaction at various stages of product development (SM6) and their firm constantly monitors social network sites for reviews of their products and services (SM3). Roughly the same percentage of survey participants (78.6%) also agreed that engagement in the online social networks help build their firm's reputation (SM11). Close to 78% of the respondents agreed that their constant interaction with customers through online networks has improved customer

relations (SM7) and 77% indicated that they encourage their customers to participate in live and interactive discussion forums in their website (SM5).

The other three items whose percentages are higher than 74% are: firms use online networks to facilitate endorsement of their product/services by customers (SM10 - 76.5%); firms use online networks to explain their products/services to customers (SM9 - 74.9%) and firms actively search for market opportunities in user generated blogs in online communities (SM2 - 74.3%). The high percentages for all the ten items show that the respondents acknowledge the use of Social Media by the ICT firms in India for the purposes defined by the statements. However, the percentage of respondents who agreed with SM8 is only 48.66%. It suggests that the respondents neither disagreed nor agreed to whether there is a reduction in online customer support because of the information the firm provides through their online discussion forums.

Relationship Marketing practices

Ten items (RM1 to RM10) were used to assess the Relationship Marketing practices of the ICT firms in India. The first four (RM1 to RM4) measures investigated the customer relationship orientation of the ICT firms. The other six items (RM5 to RM10) measured the trust and the commitment dimensions of relationships that exist between the exchange partners in the given context. The items are:

- a) In our organisation, retaining customers is considered to be a top priority (RM1).
- b) In our organisation, customer relationships are considered to be a valuable asset (RM2).
- c) Our senior management emphasizes the importance of customer relationships (RM3).
- d) In our organisation, employees receive incentives based on customer satisfaction measures (RM4).
- e) We can rely on our firm to keep the promises that it makes to the customers (RM5).
- f) In our relationship with customers, our firm can be trusted at all times (RM6).
- g) Our firm rewards employees who do their very best to solve customer problems (RM7).

- h) We fulfil all obligations and promises we make to customers (RM8).
- i) We make significant investments (in terms of time and resources) in building relationship with our customers (RM9).
- j) We are committed to establish long term relationship with our customers (RM10).

The mean score ratings for all the ten variables that were used to measure this construct are presented in figure 4.2. As seen in the figure, nine of the ten items have mean values (\bar{x}) over 5.70, with two of the values at $\bar{x}= 6.01$. These high mean values indicate that the respondents agreed to all the items that assessed the Relationship Marketing practices of these firms. It suggests that the firms in this sector adopt these practices which lead to attracting, maintaining and enhancing customer relationships. The survey participants indicated that their firms are customer relationship oriented and the firms' Relationship Marketing efforts are directed towards fostering trust and commitment between the firms and their customers.

RM2 and RM3 which measures the customer relationship orientation of the ICT firms have the highest mean value of $\bar{x} = 6.01$. The respondents agreed that the ICT firms in India consider customer relationships as a valuable asset (RM2: $\bar{x}= 6.01$) and senior management in these firms emphasize the importance of customer relationships (RM3: $\bar{x}= 6.01$). The other two variables which measure this aspect of Relationship Marketing include: retaining customers is considered to be a top priority in these firms (RM1) and employees receive incentives based on customer satisfaction measures (RM4). The mean values for these variables are $\bar{x}= 5.89$ and $\bar{x}= 5.38$ respectively. The high mean scores for all four items (> 5.38) show that the respondents agreed to all the four measures that assessed the customer relationship orientation of the firms in this sector.

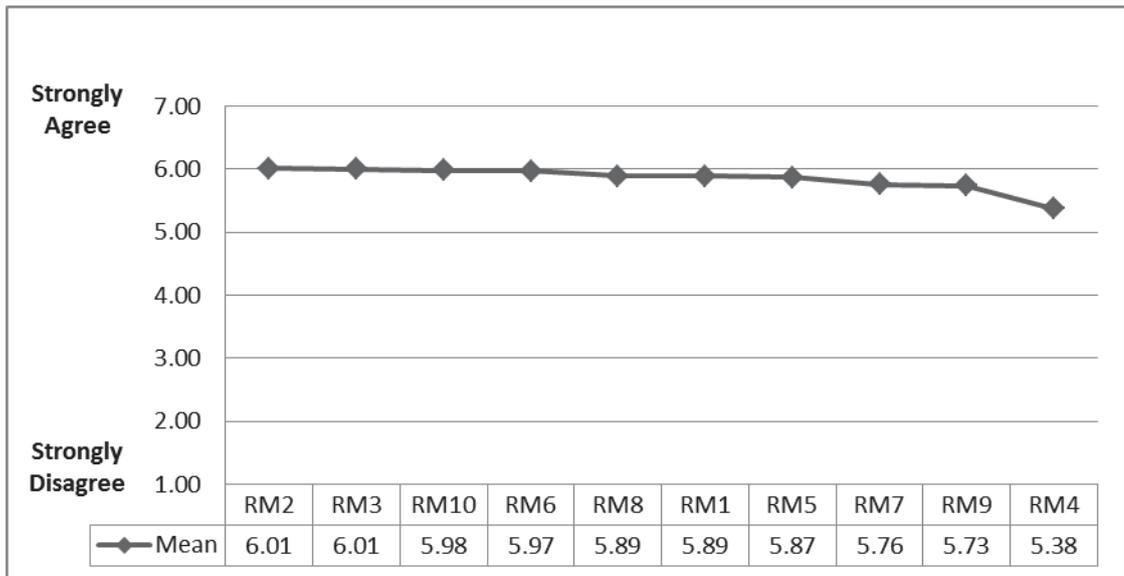


Figure 4.2. Relationship Marketing practices

The “trust” element of Relationship Marketing was investigated using three items - RM5, RM6 and RM7. These items have close mean values: 5.87, 5.97 and 5.76 respectively. The respondents agreed that their firms can be trusted at all times in their relationship with customers, (RM6: \bar{x} = 5.97); their firms can be relied upon to keep the promises it makes to the customers (RM5: \bar{x} = 5.87) and their firm rewards employees who do their very best to solve customer problems (RM7: \bar{x} = 5.76). These results suggest that the ICT firms in India adopt practices which build the trust element in the relationship between the exchange partners.

Fulfilling all obligations and promises the firms make to its customers (RM8: \bar{x} = 5.89), making significant investments (in terms of time and resources) in building relationship with customers (RM9: \bar{x} = 5.73) and being committed to establishing long term relationships with customers (RM10: \bar{x} = 5.98) are the three items that assessed the “commitment” component of Relationship Marketing. High mean values for these three items imply that the ICT firms are committed to establishing long term relationship with their customers and are focussed in maintaining effective relationships with their customers. In summary, the high mean score ratings for all the items measuring this construct clearly indicates that the Relationship Marketing practices are an integral part of the firms’ Strategic Marketing Practices and are effectively adopted by the ICT firms in India.

Table 4.2
Relationship Marketing practices: frequencies and percentages

Items	Disagree		Agree	
	N*	%**	N*	%**
In our organisation, customer relationships are considered to be a valuable asset (RM2).	12	6.42	163	87.17
Our senior management emphasizes the importance of customer relationships (RM3).	11	5.88	163	87.17
We are committed to establish long term relationship with our customers (RM10)	13	6.95	161	86.10
In our relationship with customers, our firm can be trusted at all times (RM6).	10	5.35	164	87.70
In our organisation, retaining customers is considered to be a top priority (RM1).	16	8.56	152	81.28
We fulfil all obligations and promises we make with customers (RM8).	8	4.28	164	87.70
We can rely on our firm to keep the promises that it makes to the customers (RM5).	9	4.81	159	85.03
Our firm rewards employees who do their very best to solve customer problems (RM7).	9	4.81	156	83.42
We make significant investments (in terms of time and resources) in building relationship with our customers (RM9).	11	5.88	151	80.75
In our organisation, employees receive incentives based on customer satisfaction measures (RM4).	19	10.16	139	74.33

Note. N* Number of responses, %** Percentage of responses

The frequencies and percentages for all the ten items assessing this construct are tabulated in Table 4.2. It indicates that more than 74 % of the respondents agreed with all the statements that assessed the Relationship Marketing practices of the ICT firms in India. Four of the ten items measured have percentages more than 87% indicating that the respondents agreed to these statements. Respondents agreed that in their firm's relationship with customers, their firm can be trusted at all times (RM6 - 87.7%) and they fulfil all obligations and promises they make to customers (RM8 - 87.7%). Similarly 87.17% of the survey participants indicated that their firms are customer relationship oriented, by agreeing to the two statements: in our organisation, customer relationships are considered to be a valuable asset (RM2) and our senior management emphasizes the importance of customer relationships (RM3). Further, 86% agreed that

their firm is committed to establishing long term relationship with their customers (RM10).

The percentages of those in agreement with five more items range between 80% and 87%. Their mean values also range from 5.73 to 5.89. These high percentages and high mean values for these items show the consensus among the respondents in indicating their agreement for these statements. The items are: we are committed to establish long term relationship with our customers (RM10 - 86.1%); we can rely on our firm to keep the promises that it makes to the customers (RM5 - 85.03%); our firm rewards employees who do their very best to solve customer problems (RM7 - 83.42%); in our organisation, retaining customers is considered to be a top priority (RM1 - 81.28%) and we make significant investments (in terms of time and resources) in building relationship with our customers (RM9 - 80.75%). 74.33% of the respondents also agreed that in their firm, employees receive incentives based on customer satisfaction measures.

These descriptive measures, including the mean score ratings and the percentages of responses confirm that Relationship Marketing is effectively practiced by the ICT firms in India.

Market Research practices

Seven items (MR1 to MR7) were used to identify the Market Research practices adopted by the ICT firms in India. Respondents were asked to indicate their extent of agreement or disagreement on a seven-point Likert scale, as to how Market Research information was gathered in their firms and what kinds of information were obtained. The items are

- a) We do a lot of in-house marketing research (MR1).
- b) We use external contractors to do market research for us (MR2).
- c) We meet our customers formally to find out their future requirements (MR3)
- d) We use the marketing research database that is published online by large firms (MR4).
- e) We collect relevant industry information through informal networks (MR5).

- f) We gather data to understand the market perception of our new products and services (MR6).
- g) We gather data regarding the customer acceptance of our products and services (MR7).

Figure 4.3 displays the mean values for all the variables used to investigate the Market Research practices of the ICT firms in India.

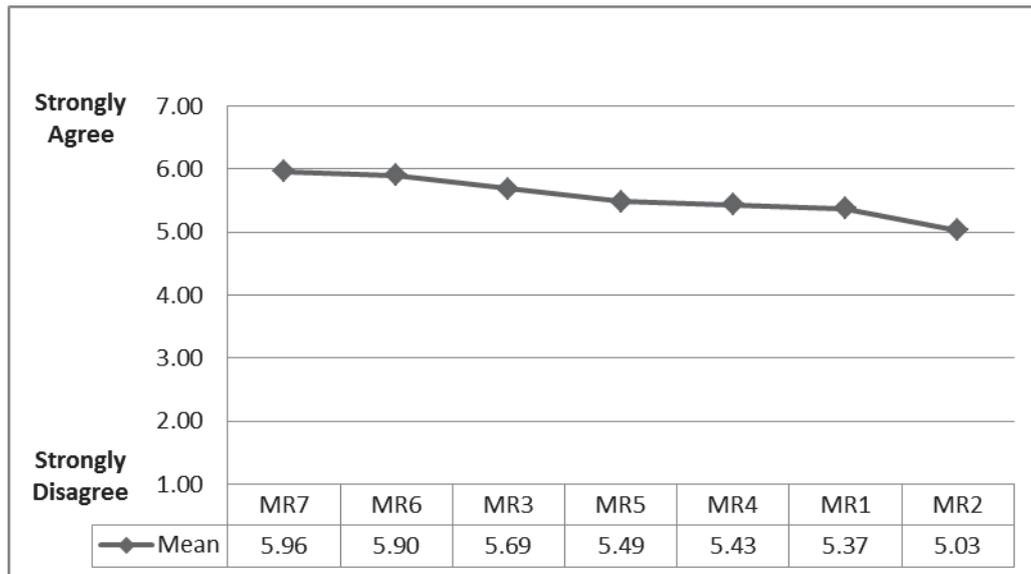


Figure 4.3. Market Research practices

It is evident from figure 4.3, that the mean values for all the seven items assessing the Market Research practices of the ICT firms fall between 5 and 6, with the highest value being $\bar{x} = 5.96$ (MR7) and the lowest being $\bar{x} = 5.03$ (MR2). These scores indicate that the respondents agreed with all the statements that were used to measure the marketing research activities of the ICT firms in India.

As can be seen in figure 4.3, MR6 and MR7 have high mean values of 5.90 and 5.96 respectively. These two items examined the kinds of information that are obtained through market research, by these firms. The Items are: we gather data regarding the customer acceptance of our products and services (MR7) and we gather data to understand the market perception of our new products and services (MR6). The participants of the survey agreed that their firms obtain data through market research to understand the customer acceptance of the firms' existing products and services and the market perception of their new products and services.

The other five items that assessed this construct explained how market research information is gathered in the ICT firms in India. For four of the five items, the mean values are between 5.3 and 5.7. The respondents agreed that their firms meet their customers formally to find out their future requirements (MR3: \bar{x} = 5.69). This is not surprising as the products and services offered by the ICT firms are designed based on the requirements of the individual customers. The means of the other three items show that these firm collect relevant industry information through informal networks (MR5: \bar{x} = 5.49); use marketing research databases that are published online by large firms (MR4: \bar{x} = 5.43) and do a lot of in-house marketing research (MR1: \bar{x} = 5.37). MR2 has the least mean value of \bar{x} = 5.03. Even though it has the lowest mean value it still indicated that respondents agreed that the ICT firms in India use external contractors to do market research for them.

Table 4.3
Market Research practices: frequencies and percentages

Items	Disagree		Agree	
	N*	%**	N*	%**
We gather data regarding the customer acceptance of our products and services (MR7).	6	3.21	167	89.30
We gather data to understand the market perception of our new products and services (MR6).	7	3.74	167	89.30
We meet our customers formally to find out their future requirements (MR3)	12	6.42	153	81.82
We collect relevant industry information through informal networks (MR5).	14	7.49	150	80.21
We use the marketing research database that is published online by large firms (MR4).	13	6.95	142	75.94
We do a lot of in-house marketing research (MR1).	19	10.16	146	78.07
We use external contractors to do market research for us (MR2).	28	14.97	126	67.38

Note. N* Number of responses, %** Percentage of responses

The frequencies and the percentages of the responses for all the seven items that measure the Market Research practices of the ICT firms in India are tabulated in Table 4.3. As can be seen a large percentage of the respondents (89.3%) agreed to MR7 and MR6. These two items have the highest percentage of responses among the items. The respondents agreed that their firms use market research to gather data regarding the

customer acceptance of their products and services (MR7); and gather data to understand the market perception of their new products and services (MR6). This is also confirmed by the high mean score of $\bar{x} = 5.96$ and $\bar{x} = 5.90$ respectively. The remaining five items measured how market research information was obtained by the ICT firms in India. The percentages of those who agreed with these items range between 67% and 82%. About 80% of the web survey respondents agreed that these firms meet customers formally to find out their future requirements (MR3 - 81.8%) and collect relevant industry information through informal networks (MR5 - 80.21%).

Further, 78% of the respondents agreed that their firms do a lot of in-house marketing research (MR1) and 76% agreed that they use a marketing research database that is published online by large firms in this sector (MR4). Close to 67.5% agreed that they use external contractors to do market research which is also supported by the mean value of $\bar{x} = 5.03$ for this item. The mean values and percentages for all the seven items that investigated this construct support the use of these Market Research practices by the ICT firms in India.

Segmentation practices

The various items that were used to measure the ICT firms' Segmentation practices include:

- a) We segment the market based on long term customer profitability (SG1).
- b) We segment the market based on short term customer profitability (SG2).
- c) We segment the market based on customers who need specialised solutions (SG3).
- d) We segment the market based on customers who need customised solutions (SG4).
- e) We segment the market based on customers who need value solutions (SG5)
- f) We segment the market based on customers who need packaged solutions (SG6).
- g) We segment the market with unexploited niche segments (SG7).
- h) We segment the market with unexploited market opportunities (SG8).

The means for the items are presented in Figure 4.4. It is interesting to note that SG1 and SG2 have the highest and the lowest mean values respectively. A mean score of $\bar{x} = 5.80$ for SG1 indicates that the respondents agreed that the ICT firms segment the

market based on long term customer profitability. SG2 has the lowest mean value of \bar{x} = 4.24. Respondents seem to neither disagree nor agree to the statement that their firms segment the market based on short term customer profitability. It appears that the ICT firms in India clearly focus on long term customer profitability, while segmenting their market.

Four of the eight items assessed segmentation practices based on the type of solutions that these ICT firms offered to their customers. These four items are SG3 to SG6. Their mean values range from 5.4 to 5.7. These mean values indicate that the respondents agreed that their firms segment their market based on the type of solutions they provide for their customers. The ICT firms segment the market based on: customers who need specialised solutions (SG3: \bar{x} = 5.67), customers who need customised solutions (SG4: \bar{x} = 5.66), customers who need value solutions (SG5: \bar{x} = 5.70) and customers who need packaged solutions (SG6: \bar{x} = 5.45).

Segmentation of the markets based on unexploited niche segments (SG7) and based on unexploited market opportunities (SG8) are the two items with the mean scores of \bar{x} = 5.17 and \bar{x} = 5.34 respectively. These values reveal that the ICT firm in India tend to tap unexploited niche segments and unexploited market opportunities.

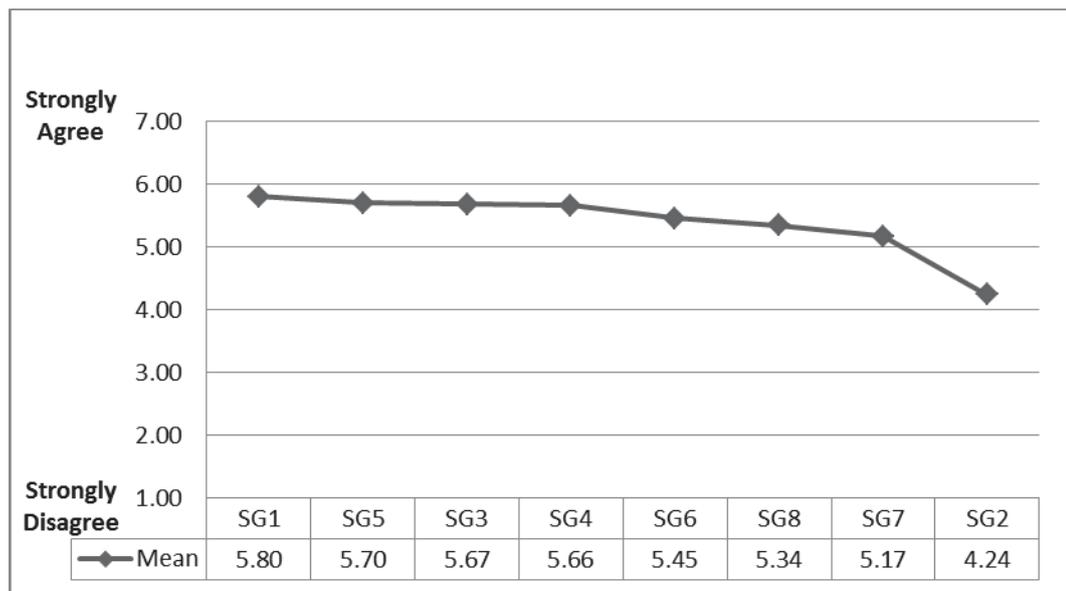


Figure 4.4. Segmentation practices

Table 4.4 presents the frequencies and percentage of responses for the eight items used to identify the segmentation practices of the ICT firms. As can be seen, a large

proportion of the respondents (86%) agreed that their firm segment their market based on long term customer profitability (SG1). Similarly between 83% and 86% agreed that in their firm segmentation is based on customers who need value solutions (SG5), who need specialized solutions (SG3) and who need customized solutions (SG4). A lesser number of respondents (76.47%) agreed that their firms segment the market based on customers who need packaged solutions (SG6).

A sizable proportion of the respondents also agreed that their firms segment their market with unexploited market opportunities (SG8 - 73.80%) and with unexploited niche segments (SG7 - 67.38%). The firms in this sector do not appear to segment the market based on short-term customer profitability (SG2), as only 47.06% of the respondents agreed to this statement and which is also consistent with the mean value of 4.24 for this item (Figure 4.4).

Table 4.4
Segmentation practices: frequencies and percentages

Items	Disagree		Agree	
	N*	%**	N*	%**
We segment the market based on long term customer profitability (SG1).	16	8.56	161	86.10
We segment the market based on customers who need value solutions (SG5).	10	5.35	160	85.56
We segment the market based on customers who need specialised solutions (SG3).	10	5.35	157	83.96
We segment the market based on customers who need customised solutions (SG4).	5	2.67	158	84.49
We segment the market based on customers who need packaged solutions (SG6).	13	6.95	143	76.47
We segment the market with unexploited market opportunities (SG8)	22	11.76	138	73.80
We segment the market with unexploited niche segments (SG7).	26	13.90	126	67.38
We segment the market based on short term customer profitability (SG2).	60	32.09	88	47.06

Note. N* Number of responses, %** Percentage of responses

Targeting practices

Figure 4.5 presents the mean scale ratings of the five items (TGT1 to TGT5) that were used to assess the Targeting practices adopted by the ICT firms in India. The five items are

- a) We target those customers who are constantly looking to leverage their products and services (TGT1).
- b) We target those customers with a clear need to adopt new technologies (TGT2).
- c) We target those customers with whom we can have long term relationship (TGT3).
- d) We target those customers with the potential of giving us long term or downstream profit (TGT4).
- e) We target those potential customers whose needs we are aware of (TGT5).

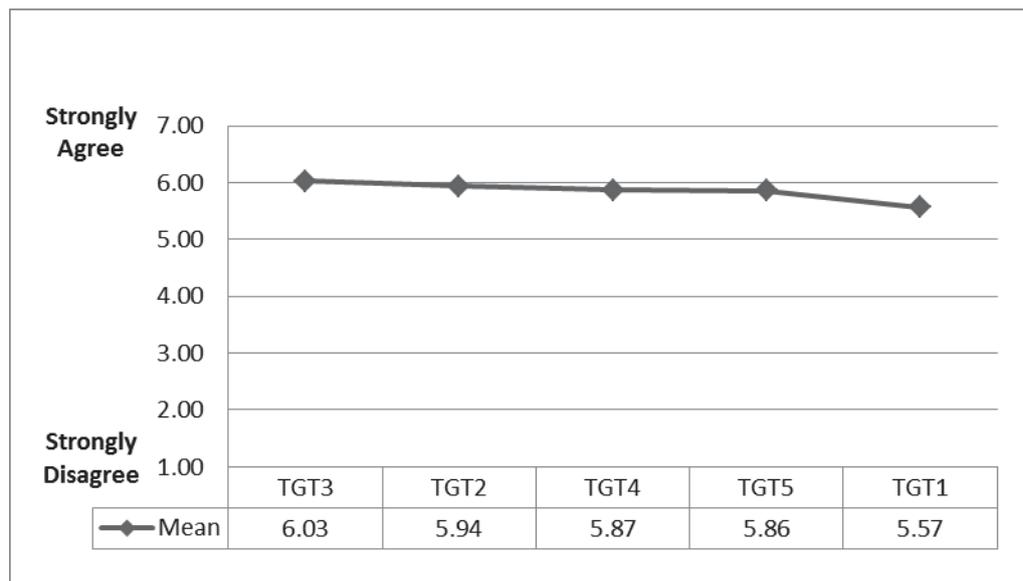


Figure 4.5. Targeting practices

It is clearly evident from Figure 4.5 that TGT3 has the highest mean value of $\bar{x} = 6.03$. The respondents agreed that their firms target those customers with whom they can have long term relationships. Three items - TGT2, TGT4 and TGT5 show very close means and respondents agreed that their firms target those customers with a clear need to adopt new technologies (TGT2: $\bar{x} = 5.94$); target those customers with the potential of giving them long term or downstream profit (TGT4: $\bar{x} = 5.87$) and target those potential customers whose needs they are aware of (TGT5: $\bar{x} = 5.86$). The survey respondents

also indicated that these firms target those customers who are constantly looking to leverage their products and services (TGT1: \bar{x} = 5.57).

The frequencies and the percentage of responses for the five variables that assessed the Targeting practices of the ICT firms are presented in Table 4.5.

Table 4.5
Targeting practices: frequencies and percentages

Items	Disagree		Agree	
	N*	%**	N*	%**
We target those customers with whom we can have long term relationship (TGT3).	8	4.28	162	86.63
We target those customers with a clear need to adopt new technologies (TGT2).	9	4.81	160	85.56
We target those customers with the potential of giving us long term or downstream profit (TGT4).	7	3.74	162	86.63
We target those potential customers whose needs we are aware of (TGT5).	10	5.35	160	85.56
We target those customers who are constantly looking to leverage their products and services (TGT1).	14	7.49	152	81.28

Note. N* Number of responses, %** Percentage of responses

A close examination of the frequencies reported in the table reveals that more than 80% of the respondents agreed with all the five items used to measure this construct. Close to 87% of the respondents agreed that their firm targets customers with whom they can have long-term customer relationships (TGT3) and 85.56% agree that their firm targets customers with the potential of giving them long-term or downstream profit (TGT4). These high percentages of responses for TGT3 and TGT4 are also supported by their high mean values of 6.03 and 5.87 respectively. These items are followed by a close 85.56% of the respondents agreeing to item TGT2 - targeting customers with a clear need to adopt new technologies and TGT5 - targeting potential customers whose needs the firm is aware of. Around 81% of the respondents agreed that their firm also targets those customers who are constantly looking to leverage their products and services (TGT1).

Differentiation Practices

The Differentiation practices of the ICT firms were measured using five items (DF1 to DF5). These are

- a) Our firm offers products and services which are higher in quality than those offered by competitors (DF1).
- b) Our products and services are clearly superior to competing products in terms of reliability (DF2).
- c) Our products and services are clearly superior to competing products in terms of price (DF3).
- d) Our products offer unique features to customers as compared to competitor's products (DF4).
- e) Our brand name is a strong source of differentiation from our competitors (DF5)

Figure 4.6 presents the mean score ratings for all the six items that explored the differentiation practices of the ICT firms in India.

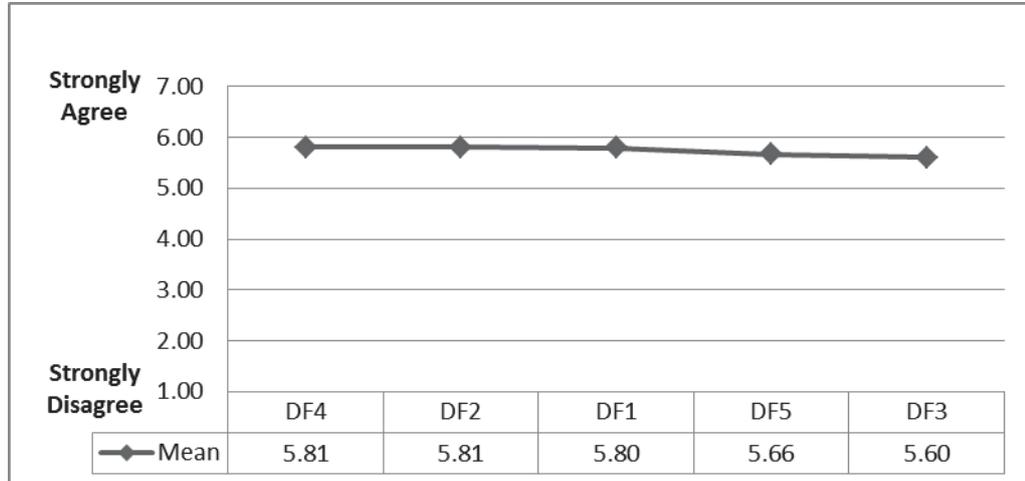


Figure 4.6. Differentiation practices

As seen in figure 4.6 all five items used to assess the Differentiation practices exhibit very close mean values which range from 5.60 to 5.81. These indicate that respondents agreed to all the statements used to assess this construct. A higher mean value of 5.81 for DF4 and DF2 indicate that the respondents agreed that their products offer unique features to customers as compared to competitor's products (DF4) and their products and services are clearly superior to competing products in terms of reliability (DF2). A close mean value of 5.80 for DF1 also indicates that the respondents agreed with the

statement that their firms differentiate their offerings from that of the competitors' by providing products and services which are higher in quality than those offered by their competitors. The mean values of the other two items are: our brand name is a strong source of differentiation from our competitors (DF5: $\bar{x} = 5.66$) and our products and services are clearly superior to competing products in terms of price (DF3: $\bar{x} = 5.60$)

Table 4.6 shows the frequencies and percentages of all the items used to measure the Differentiation practices of the ICT firms under study.

Table 4.6
Differentiation practices: frequencies and percentages

Items	Disagree		Agree	
	N*	%**	N*	%**
Our products offer unique features to customers as compared to competitor's products (DF4).	7	3.74	162	86.63
Our products and services are clearly superior to competing products in terms of reliability (DF2).	11	5.88	162	86.63
Our firm offers products and services which are higher in quality than those offered by competitors (DF1).	12	6.42	163	87.17
Our brand name is a strong source of differentiation from our competitors (DF5)	13	6.95	156	83.42
Our products and services are clearly superior to competing products in terms of price (DF3).	13	6.95	156	83.42

Note. N* Number of responses, %** Percentage of responses

Table 4.6 shows that more than 83% of the respondents agreed to all the five items used to measure this construct. Around 87% of the respondents agreed that their firm differentiates their products and services in terms of offering higher quality than those offered by their competitors (DF1). This is followed by 86.63% of the respondents agreeing that their firms differentiate products and services by offering unique features to customers compared to their competitors (DF4) and by offering products that are superior to competing products in terms of reliability (DF2). The mean values for DF1, DF2 and DF4 (See Figure 4.6) also reflect this consensus among the survey participants for these three items.

A large percentage of the respondents - 83.42% indicated their agreement for DF5 and DF3. The respective items are: our brand name is a strong source of differentiation from our competitors and our products and services are clearly superior to competing products in terms of price. The high mean values in Figure 4.6 and percentages in table

4.6 give us insight into the various Differentiation practices that are adopted by the ICT firms in India.

Positioning practices

Positioning refers to the act of designing firms' products, services and image to occupy a distinctive place in the minds of the customers. Three items were adapted from literature to assess how the firms' customers are likely to perceive their firm as being different from competitors. The items are

We are seen by customers as a firm which:

- a) provides extensive after sales support (POS1)
- b) has a reputation within the industry (POS2)
- c) has the winner image in the market (POS3)

Figure 4.7 displays the mean scores for all the three statements (POS1 to POS3) that were used to measure this construct.

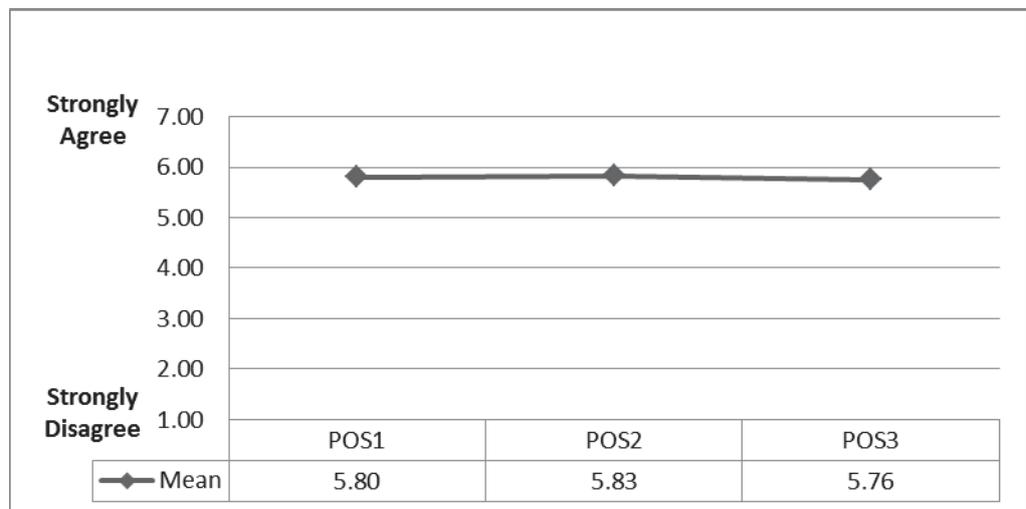


Figure 4.7. Positioning practices

A close examination of the means reveals that all the three items measuring this construct have very close mean values, ranging from 5.76 to 5.86. This indicates agreement of the respondents for these items. According to the respondents the ICT firms were seen by the respondents as: having a reputation within the industry (PG2: \bar{x} = 5.83); providing extensive after sales support (PG1: \bar{x} = 5.80) and having a winner image in the market (PG3: \bar{x} = 5.76).

The frequencies and the percentages of the items that assessed the Positioning practices of the ICT firms in India are presented in Table 4.7.

Table 4.7
Positioning practices: frequencies and percentages

Items	Disagree		Agree	
	N*	%**	N*	%**
Our firm provides extensive after sales support (PG1)	9	4.81	164	87.70
Our firm has a reputation within the industry (PG2)	9	4.81	159	85.03
Our firm has the winner image in the market (PG3)	9	4.81	158	84.49

Note. N* Number of responses, %** Percentage of responses

Table 4.7 reveals that between 84% and 88% of the respondents agreed to all the statements that measured the Positioning practices of the ICT firms. This is supported by the high mean values for all the three items as well (Figure 4.7). Close to 88% of the respondents agreed that their firm is seen by customers as one that provides extensive after sales support (PG1). A percentage of 85.03% of the participants agreed that their firm is perceived by customers as one that has reputation within the industry (PG2). ICT firms are also perceived as having a winner image in the market (PG3) as indicated by 84.5% of the respondents agreeing to this statement. The mean values and the percentage of responses suggest that these positioning practices are being adopted by the ICT firms in India.

Product practices

Eleven items (PT1 to PT11) were used to investigate the product strategies adopted by the ICT firms. The various items are

- a) We develop a common product platform, which is then adapted to customer requirements (PT1).
- b) We understand the customer requirements and develop a conceptual design, which is then presented to the customer for feedback (PT2).
- c) We typically co-design our products with our customers (PT3).
- d) We always try to put working prototypes in the user's hands as early as possible (PT4).

- e) We co-design products with partner firms to develop and present a "complete product" for our customers (PT5).
- f) We emphasize owning the intellectual property rights (eg. Patenting) for our products and services (PT6).
- g) We provide exclusive products and services, by being a specialist shop (PT7)
- h) We provide a pool of highly trained personnel expertise (PT8)
- i) We provide niche based technological superiority (PT9)
- j) We provide extensive customer support from product conceptualization to product delivery (PT10)
- k) Our firm is always ahead of competitors with respect to product innovation (PT11).

Figure 4.8 presents the mean values for all the items assessing the Product practices of the ICT firms in India. Mean values of $\bar{x} \geq 5.49$ for all items indicate agreement for all the eleven measures assessing the Product practices of the ICT firms in India. Item PT2 has the highest mean value of 5.87, closely followed by PT10 with a mean value of 5.86. The respondents agreed that their firms understand the customer requirements and develop a conceptual design, which is then presented to the customer for feedback (PT2) and their firms provide extensive customer support from product conceptualization to product delivery (PT10). This clearly suggests that firms in the ICT sector work together with their customers from product conceptualisation to product delivery.

Items PT8 and PT6 have mean values of 5.81 and 5.73 respectively. The respondents clearly indicated that the firms in this sector provide a pool of highly trained personnel expertise (PT8) and emphasize owning the intellectual property rights (eg. Patenting) for our products and services (PT6). As can be seen in the graph, the next five items have very close and high mean values as well. The survey respondents agreed that their firms: provide niche based technological superiority (PT9: $\bar{x} = 5.68$); try to put working prototypes in the user's hands as early as possible (PT4: $\bar{x} = 5.65$); provide exclusive products and services, by being a specialist shop (PT7: $\bar{x} = 5.63$) co-design products with partner firms to develop and present a "complete product" for their customers

(PT5: $\bar{x} = 5.59$) and their firms are always ahead of competitors with respect to product innovation (PT11: $\bar{x} = 5.54$).

A high mean score of $\bar{x} = 5.49$ for PT3 and PT1 also indicate the general agreement among the respondents for these two statements: we typically co-design products with our customers (PT3: $\bar{x} = 5.49$) and our firm develops a common product platform which is then adapted to customer requirements (PT1: $\bar{x} = 5.49$).

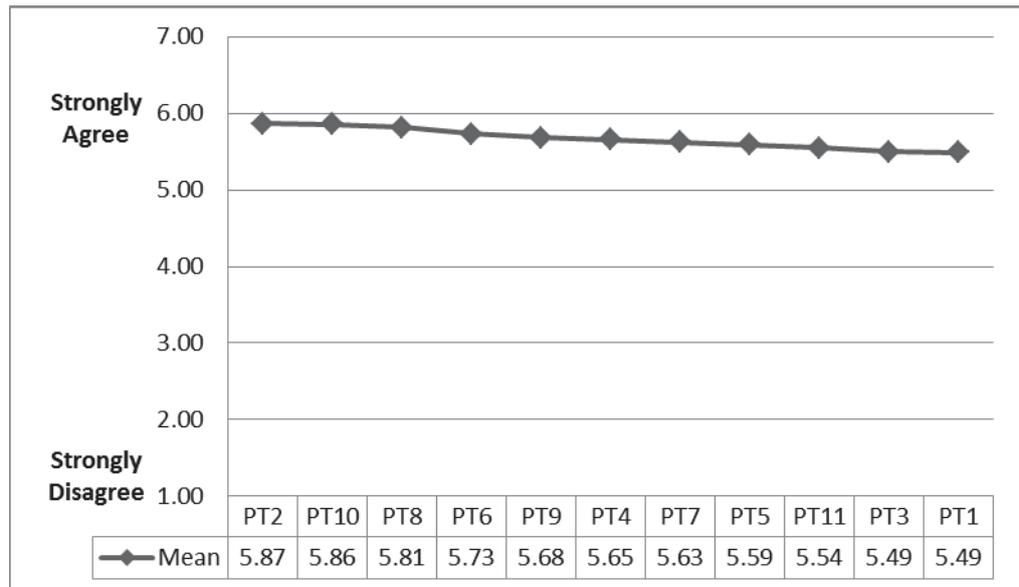


Figure 4.8. Product practices

The frequencies and percentages for all the items that were used to measure the Product practices of the ICT firms in India are presented in Table 4.8. As seen in table 4.8 a large proportion of the respondents (85.03%) agreed with PT2, PT8 and PT10. According to them, their firm understands customer requirements and develops conceptual designs, which are then presented to their customers for feedback (PT2); their firm provides a pool of highly trained personnel expertise (PT8) and their firm provides extensive customer support from product conceptualization to product delivery (PT10).

More than 80% of the respondents indicated their agreement with the next five items as well. The items and their percentages of responses are: our firm provides niche based technological superiority (PT9: 83.42%); we emphasize owning the intellectual property rights (eg. Patenting) for our products and services (PT6: 82.89%); we always try to put working prototypes in the user's hands as early as possible (PT4: 82.82%); our firm provides exclusive products and services, by being a specialist shop (PT7: 81.28%) and

we co-design products with partner firms to develop and present a "complete product" for our customers (PT5: 80.75%).

It is also evident from table 4.8 that items PT3, PT1 and PT11 have similar level of agreement among the respondents. Close to 80% of the respondents clearly indicated that in their firm, they typically co-design products with their customers (PT3). Almost 79.2% agreed that in their firm they develop a common product platform, which is then adapted to customer requirements (PT1) and their firm is always ahead of competitors with respect to product innovation (PT11).

Table 4.8
Product practices: frequencies and percentages

Items	Disagree		Agree	
	N*	%**	N*	%**
We understand the customer requirements and develop a conceptual design, which is then presented to the customer for feedback (PT2).	10	5.35	159	85.03
Our firm provides a pool of highly trained personnel expertise (PT8)	8	4.28	159	85.03
Our firm provides extensive customer support from product conceptualization to product delivery (PT10)	8	4.28	159	85.03
Our firm provides niche based technological superiority (PT9)	12	6.42	156	83.42
We emphasize owning the intellectual property rights (eg. Patenting) for our products and services (PT6).	9	4.81	155	82.89
We always try to put working prototypes in the user's hands as early as possible (PT4).	9	4.81	153	81.82
Our firm provides exclusive products and services, by being a specialist shop (PT7)	14	7.49	152	81.28
We co-design products with partner firms to develop and present a "complete product" for our customers (PT5).	12	6.42	151	80.75
We typically co-design our products with our customers (PT3).	17	9.09	149	79.68
We develop a common product platform, which is then adapted to customer requirements (PT1).	15	8.02	148	79.14
Our firm is always ahead of competitors with respect to product innovation (PT11).	14	7.49	148	79.14

Note. N* Number of responses, %** Percentage of responses

These descriptive measures, including the mean score ratings and the percentages of responses for this construct point out the various Product practices that are effectively adopted by the ICT firms in India.

Pricing practices

Six items were used to determine the Pricing practices of the ICT firms in India. These revolve around the factors that influence the pricing decisions of these firms. The items used to deduce the pricing practices of ICT firms are:

- a) The cost incurred (PRI1)
- b) Profit objectives of the company (PRI2)
- c) Uniqueness of the products and services (PRI3)
- d) Competitor pricing for similar products and services (PRI4)
- e) The benefits provided along with the product/service offering (like brand, delivery, innovation, training, after sales support, on-going support) (PRI5)
- f) Customer value in terms of the potential long term downstream profit (PRI6)

The means of all the items used to measure this construct are shown in figure 4.9, which reveals that for all the six items the mean values are ≥ 5.49 . This shows that the survey respondents agreed to all the items that were used to assess the pricing practices of these firms. Item PRI6: Customer value in terms of the potential long term downstream profit has the highest mean score of $\bar{x} = 5.89$.

Items PRI5, PRI3 and PRI2 also have close mean values and they reflect pricing based on: the benefits offered along with the product (PRI5: $\bar{x} = 5.84$); the uniqueness of the products and services (PRI3: $\bar{x} = 5.81$) and the profit objectives of the company (PRI2: $\bar{x} = 5.73$). These high mean values indicate that the respondents agreed that their firms' pricing strategies are influenced by the factors that are described by these items. Competitor pricing for similar products and services (PRI4) and pricing based on cost incurred (PRI1) with mean values of $\bar{x} = 5.58$ and $\bar{x} = 5.49$ respectively, are other factors that influenced the firms' pricing decisions.

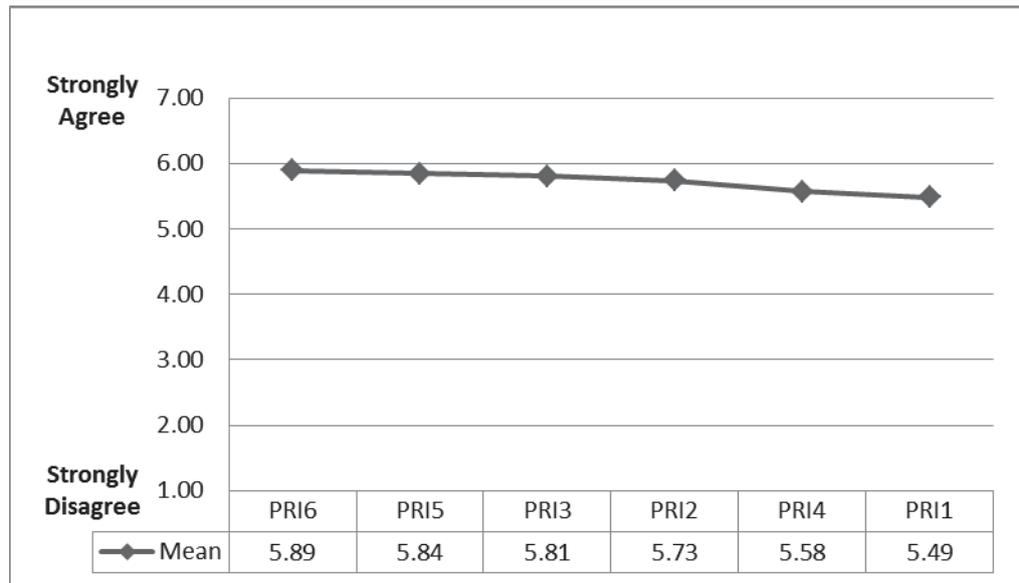


Figure 4.9. Pricing practices

The frequencies and the percentages of responses for all six items used to assess the pricing practices of the ICT firms in India are displayed in Table 4.9.

Table 4.9
Pricing: frequencies and percentages

Items	Disagree		Agree	
	N*	%**	N*	%**
Customer value in terms of the potential long term downstream profit (PRI6)	8	4.28	167	89.30
The benefits provided along with the product/service offering (PRI5)	7	3.74	165	88.24
Uniqueness of the products and services (PRI3)	14	7.49	151	80.75
Profit objectives of the company (PRI2)	11	5.88	158	84.49
Competitor pricing for similar products and services (PRI4)	11	5.88	146	78.07
The cost incurred (PRI1)	14	7.49	152	81.28

Note. N* Number of responses, %** Percentage of responses

It is clearly evident from Table 4.9, that five of the six items assessing this construct have more than 80% of respondents indicating agreement for these statements. Items PRI6 and PRI5 have the highest percentage of 89.3% and 88.24% respectively. The participants agreed that their firms pricing decisions are influenced by the customer value in terms of the potential long term downstream profit (PRI6) and the benefits provided along with the product/service offering (PRI5). Around 84.5% of the

respondents indicated that the profit objectives of the company influence the pricing decisions (PRI2); 81% agreed that the cost incurred (PRI1 - 81.28%) and the uniqueness of the products and services (PRI3 - 80.75%) influences their firms' pricing decisions and 78.07% indicated that competitor pricing for similar products and services (PRI4) play a role in pricing decisions.

High mean values ranging between $\bar{x} = 5.49$ and $\bar{x} = 5.89$ for all the six items and the high percentage of respondents (> 78%) who agreed to these measures suggests that these different factors influence the Pricing practices of the ICT firms in India.

Distribution Practices

The distribution practices of the ICT firms were measured using the following six items:

- a) Our firm always prefers direct distribution of our products and services (DT1)
- b) We engage certified resellers to distribute our products and services (DT2)
- c) Our firm forms tactical alliances with smaller firms to help put a "complete product" for our customers (DT3).
- d) Our firm gained distribution rights through joint ventures, as a result of the collaborative development of a new technology (DT4)
- e) We are the exclusive distributors of our products and services (DT5).
- f) Our firm relies on distributors to deliver pre-packaged solutions (DT6)

The mean score ratings for all the six items used to assess the distribution practices of the ICT firms in this research are shown in Figure 4.10. The mean values range from 5.21 to 5.58 revealing agreement for these items among the survey respondents. High mean values of $\bar{x} = 5.58$ and $\bar{x} = 5.42$ for DT1 and DT5 indicate that the respondents agreed that their firms prefer direct distribution of their products and services and that they are the exclusive distributors of the firms' products and services.

Examination of the mean values of the other four items measuring this construct also shows the respondents' agreement for these items. It is evident that the ICT firms: engage certified resellers to distribute their products and services (DT2: $\bar{x} = 5.30$); form tactical alliances with smaller firms to put a "complete product" for customers (DT3: $\bar{x} = 5.28$); gain distribution rights through joint ventures, as a result of the collaborative

development of a new technology (DT4: \bar{x} = 5.26) and rely on distributors to deliver pre-packaged solutions (DT6: \bar{x} = 5.21).

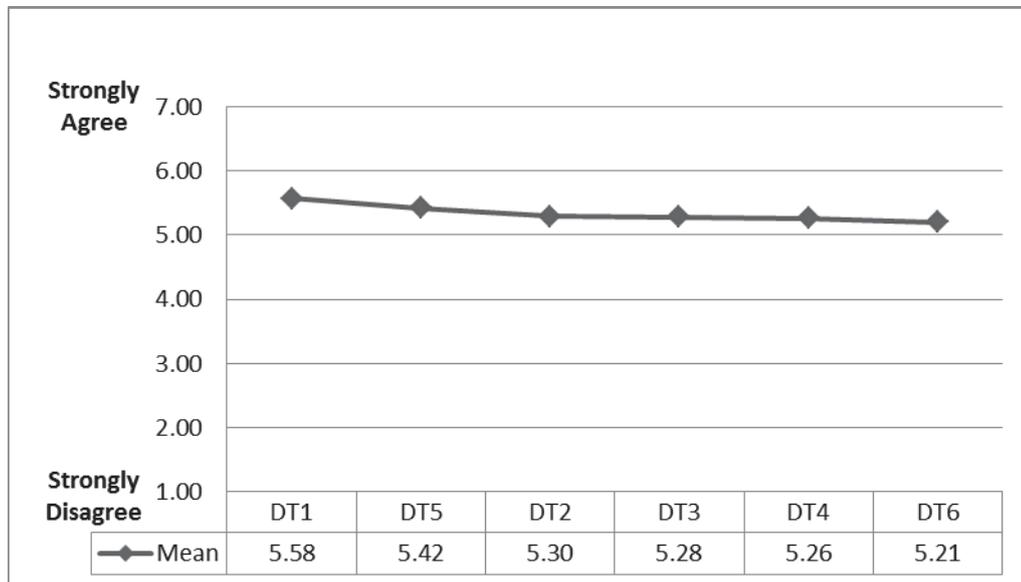


Figure 4.10. Distribution practices

The frequencies and percentages of responses for the six items used to assess the Distribution strategies are exhibited in Table 4.10.

Table 4.10
Distribution practices: frequencies and percentages

Items	Disagree		Agree	
	N*	%**	N*	%**
Our firm always prefers direct distribution of our products and services (DT1)	15	8.02	142	75.94
We are the exclusive distributors of our products and services (DT5).	18	9.63	142	75.94
We engage certified resellers to distribute our products and services (DT2)	27	14.44	134	71.66
Our firm forms tactical alliances with smaller firms to help put a "complete product" for our customers (DT3).	19	10.16	140	74.87
Our firm gained distribution rights through joint ventures, as a result of the collaborative development of a new technology (DT4)	23	12.30	137	73.26
Our firm relies on distributors to deliver pre-packaged solutions (DT6)	29	15.51	133	71.12

Note. N* Number of responses; %** Percentage of responses

The percentages of the responses which indicate agreement for all six items fall between 71% and 76%, with the highest being 75.94% and the lowest 71.12%. Two items DT1 and DT5 have the highest percentage of 75.94% which indicates that the firms in this sector prefer direct distribution of their products and services; and are the exclusive distributors of their products and services. This is also reflected in their high mean values of 5.58 and 5.42 respectively.

The respondents agreed that their firms form tactical alliances with smaller firms to help put a “complete product” for their customers (DT3 - 74.87%). They also indicated agreement for the items: firms engage certified resellers to distribute their products and services (DT2 - 71.66%); firms gain distribution rights through joint ventures, as a result of the collaborative development of new technology (DT4 - 73.26%) and firms rely on distributors to deliver pre-packaged solutions (DT4 - 71.12%). These high percentages and the corresponding mean values provide evidence for the adoption of these Distribution practices by the ICT firms in India.

Promotion practices

Eleven statements were used in the questionnaire to assess the Promotional practices used by the ICT firms in India to promote their products and services. These include:

- a) Participating in technical seminars and presentations (PM1)
- b) Organizing industry conferences (PM2)
- c) Inviting customers to leadership forums (PM3)
- d) Print advertising (PM4)
- e) Online advertising (PM5)
- f) Using customer references in our advertisements (PM6)
- g) Promoting through word-of-mouth (PM7)
- h) Submitting white papers online (PM8)
- i) Actively engaging in press relations (PM9)
- j) Sponsoring events (PM10)
- k) Using social media such as LinkedIn/Facebook/twitter (PM11)

Fig 4.11 displays the mean score values of the various items used to assess the Promotional practices adopted by the ICT firms in India. The mean values range from 5.23 to 5.98. This suggests that the respondents agreed that the firms use all these

different promotional methods. Online advertising (PM5) has the highest mean value of 5.98. This is followed by eight items which have close mean values. These are: participating in technical seminars and presentations (PM1: $\bar{x} = 5.79$); using customer references in advertisements (PM6: $\bar{x} = 5.74$); using social media such as LinkedIn/Facebook/twitter (PM11: $\bar{x} = 5.72$); inviting customers to leadership forums (PM3: $\bar{x} = 5.68$); print advertising (PM4: $\bar{x} = 5.65$); promoting through word-of-mouth (PM7: $\bar{x} = 5.63$); organising industry conferences (PM2: $\bar{x} = 5.61$) and actively engaging in press relations (PM9: $\bar{x} = 5.60$). PM10 (Sponsoring events) and PM8 (Submitting white papers online) also have mean scores of 5.48 and 5.23 respectively. The high mean values for all the eleven items measuring this construct clearly indicate that a variety of promotional practices are adopted by the ICT firms in India.

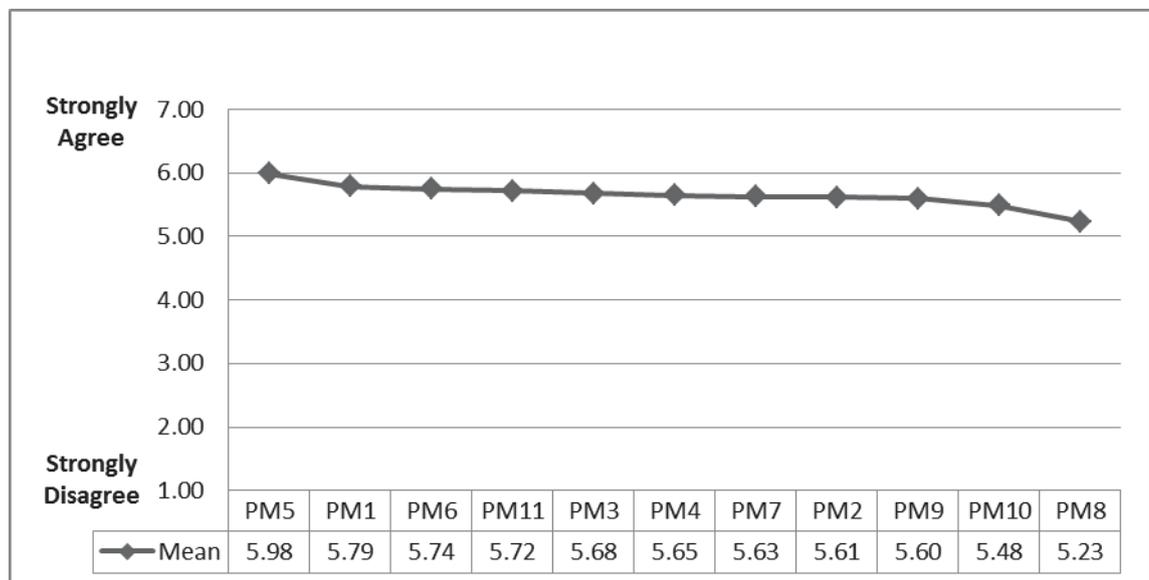


Figure 4.11. Promotion practices

Table 4.11 presents the frequencies and percentages of the responses for all the eleven items that identify the range of promotional tools that are used by the ICT firms in India. For seven out of the eleven items used to assess this construct, the percentages of the respondents who agreed are greater than 80%. A high percentage of the respondents (almost 89%) agreed that their firm use online advertising (PM5). Approximately 85.5% of the survey participants agreed that these firms use social media such as Linked In/Facebook/twitter to promote their products and services (PM11) and 84.5% agreed that their firm uses customer references in their advertisements (PM6).

Between 80% and 83% showed their agreement for four items and they are: actively engaging in press relations (PM9 - 82.4%); participating in technical seminars and presentations (PM1 - 82.4%); print advertising (PM4 - 80.8%) and inviting customers to leadership forums (PM3 - 80.2%). Approximately 77% of the respondents also indicated that their firm uses promotional tools like organising industry conferences (PM2), word-of-mouth (PM7) and sponsor events (PM10). Finally 72.19% indicated that their firms promote their products and services by submitting white papers online (PM8).

Table 4.11
Promotion practices: frequencies and percentages

Items	Disagree		Agree	
	N*	%**	N*	%**
Online advertising (PM5)	8	4.28	166	88.77
Participating in technical seminars and presentations (PM1)	14	7.49	154	82.35
Using customer references in our advertisements (PM6)	11	5.88	158	84.49
Using social media such as LinkedIn/Facebook/twitter (PM11)	8	4.28	160	85.56
Inviting customers to leadership forums (PM3)	12	6.42	150	80.21
Print advertising (PM4)	16	8.56	151	80.75
Promoting through word-of-mouth (PM7)	12	6.42	144	77.01
organizing industry conferences (PM2)	18	9.63	145	77.54
Actively engaging in press relations (PM9)	12	6.42	154	82.35
Sponsoring events (PM10)	15	8.02	144	77.01
Submitting white papers online (PM8)	23	12.30	135	72.19

Note. N* Number of responses; %** Percentage of responses

Customer satisfaction

Nine items were used to measure this construct in the research. These items assess Customer Satisfaction from the ICT firms' perspective. The items are

- a) We get more clients/business through positive word of mouth from our existing customers (CS1)
- b) Our customers frequently return for additional business to our firm (CS2)

- c) All departments are responsive to, and are integrated in serving customers (CS3)
- d) We deliver the offering in the time frame that the customer desires or needs (CS4)
- e) We respond to customer complaints and suggestions without delay (CS5)
- f) We have a system of conflict resolution that is fair to the customer and to us (CS6)
- g) Our firm responds quickly to changing customer requirements (CS7)
- h) Our firm obtains feedback from our customers through formal review meetings (CS8)
- i) We often rely on informal networks to assess the satisfaction of our customers with our products and services (CS9)

Figure 4.12 presents the mean values for the items used to measure Customer Satisfaction in the ICT firms.

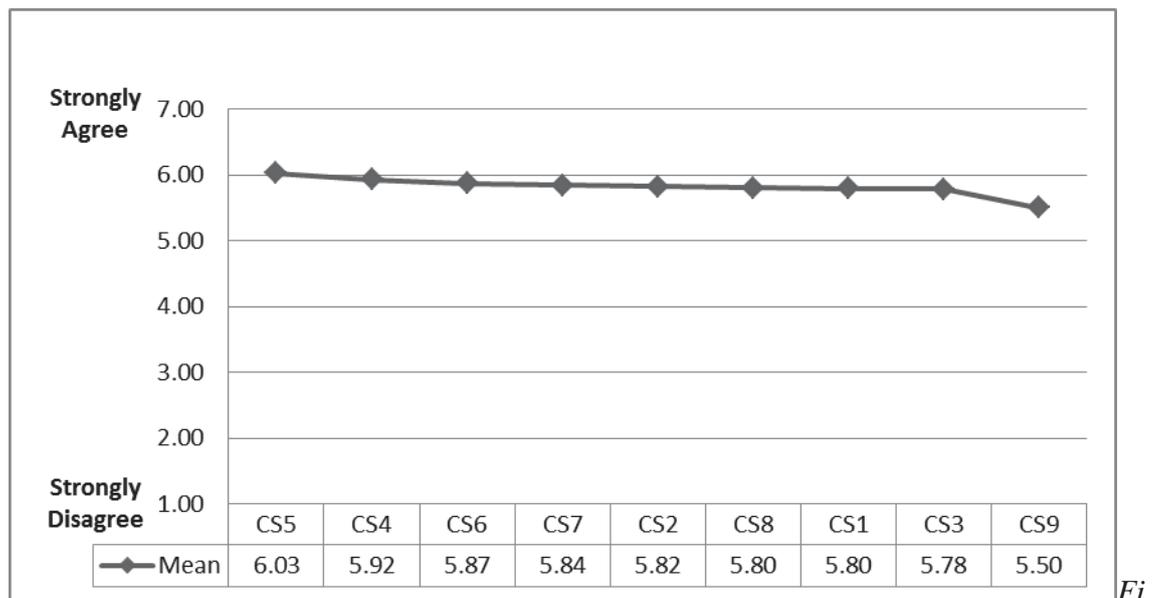


Figure 4.12. Customer Satisfaction

A close examination of Figure 4.12 show that all mean scores are ≥ 5.50 which reflects the agreement among the respondents with all these measures. Item CS5 has the highest mean value of 6.03. The survey respondents agreed that their firms respond to customer complaints and suggestions without delay. Seven of the nine items have very close means ranging from 5.78 to 5.92 showing strong agreement for these items. The items and their mean values are: we deliver the offering in the time frame that the customer

desires or needs (CS4: \bar{x} = 5.92); we have a system of conflict resolution that is fair to the customer and to us (CS6: \bar{x} = 5.87); our firm responds quickly to changing customer requirements (CS7: \bar{x} = 5.84) and all departments are responsive to, and are integrated in serving customers (CS3: \bar{x} = 5.78). It is evident that the ICT firms intentionally engage in these activities that result in better customer satisfaction.

The means for the items CS2: \bar{x} = 5.82 and CS1: \bar{x} = 5.80 show that the firms' customers frequently return for additional business (CS2) and they get more clients/business through positive word of mouth from existing customers (CS1). Further, respondents agreed that their firms tend to obtain feedback from customers through formal review meetings with customers (CS8: \bar{x} = 5.80) and rely on informal networks to assess the satisfaction of their customers with their products and services (CS9: \bar{x} = 5.50).

Table 4.12 shows the frequencies and the percentages of all the nine measures used to assess Customer Satisfaction in the ICT firms in India. Table 4.12 shows that more than 80% of the respondents agreed to all nine statements. This high level of agreement reveals the variety of Customer Satisfaction practices adopted by these firms to ensure that their customers are satisfied. A huge proportion, close to 90% of the respondents agreed that their firm delivers the offering in the time frame that the customer desires or needs (CS4) and has a system of conflict resolution that is fair to the customer and to them (CS6). Around 89% agreed that their firm responds to customer complaints and suggestions without delay (CS5) and 86.6% agreed that their customers frequently return for additional businesses to their firms (CS2).

The respondents suggested that their firm responds quickly to changing customer requirements (CS7 - 85.03%) and they obtain feedback from their customers through formal review meetings (CS8 - 85.56%). Nearly 83% of the respondents indicated that all the departments in their firms are responsive to, and are integrated in serving customers (CS3) and they get more that clients/business through positive word of mouth from our existing customers (CS1). Roughly 81% indicated that their firm relies on informal networks to assess the satisfaction of our customers with our products and services (CS9).

Table 4.12
Customer Satisfaction: frequencies and percentages

Items	Disagree		Agree	
	N*	%**	N*	%**
We respond to customer complaints and suggestions without delay (CS5)	4	2.14	166	88.77
We deliver the offering in the time frame that the customer desires or needs (CS4)	4	2.14	167	89.30
We have a system of conflict resolution that is fair to the customer and to us (CS6)	6	3.21	167	89.30
Our firm responds quickly to changing customer requirements (CS7)	11	5.88	159	85.03
Our customers frequently return for additional business to our firm (CS2)	10	5.35	162	86.63
Our firm obtains feedback from our customers through formal review meetings (CS8)	8	4.28	160	85.56
We get more clients/business through positive word of mouth from our existing customers (CS1)	13	6.95	155	82.89
All departments are responsive to, and are integrated in serving customers (CS3)	9	4.81	155	82.89
We often rely on informal networks to assess the satisfaction of our customers with our products and services (CS9)	13	6.95	152	81.28

Note. N* Number of responses, %** Percentage of responses

These descriptive statistics show a high level of Customer Satisfaction across a wide range of measures.

Firm Performance

Perceptual data was used to measure the firm performance construct. Respondents were asked to indicate whether their firms met their expectations with respect to the following eight items:

- a) Profitability (FP1)
- b) Return on Investments (FP2)
- c) Growth in sales revenue (FP3)
- d) Market share relative to competition (FP4)
- e) Productivity (FP5)
- f) Acquiring new customers (FP6)

- g) Increasing sales to current customers (FP7)
- h) Exports (FP8).

The mean scores for the items used to measure the performance of the ICT firms in India are shown in figure 4.13.

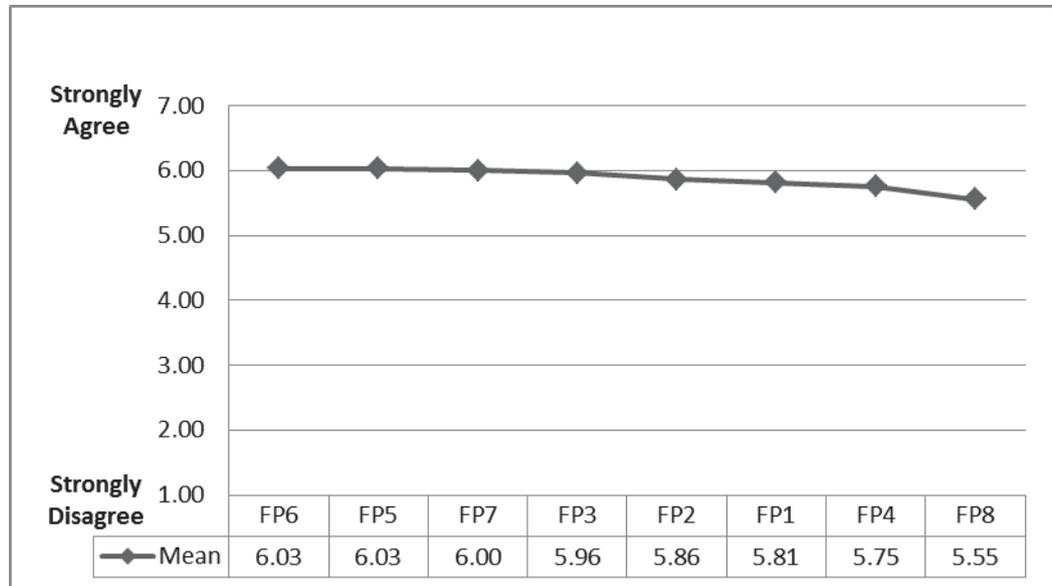


Figure 4.13. Firm Performance

From the means of the individual variables (Figure 4.13) it is evident that most of the survey respondents agreed to all the items used in assessing firm performance. Three of the eight items have mean values ≥ 6.00 . There is a very high consensus among the respondents, as they agreed that their firm’s performance met their expectations in regards to acquiring new customers (FP6: $\bar{x}= 6.03$), productivity (FP5: $\bar{x}= 6.03$) and increasing sales to current customers (FP7: $\bar{x}= 6.00$). All the other items have mean values ≥ 5.55 , which shows that the respondents agreed that firm performance met their expectations in regards to: growth in sales revenue (FP3: $\bar{x}= 5.96$), return on investments (FP2: $\bar{x}= 5.86$); profitability (FP1: $\bar{x}= 5.81$); market share relative to competition (FP4: $\bar{x}= 5.75$) and exports (FP8: $\bar{x}= 5.55$).

The frequencies and percentages of responses for the eight items used to assess Firm Performance are exhibited in Table 4.13. As can be seen, the frequencies and percentages presented in Table 4.13 indicate similar results to the means shown in figure 4.13. Acquiring new customers (FP6), productivity (FP5) and increasing sales to current customers (FP7) are still the top three measures for which the respondents agreed that their firms’ performance met their expectations. The respondents indicated that their firm’s performance met their expectations in: increasing sales to current

customers (FP7 - 90.9%); productivity (FP5 - 90.37%) and acquiring new customers (FP6 - 88.24%). Four of the eight measures used to assess firm performance have high levels of agreement ranging between 83% and 88%. These four measures are: growth in sales revenue FP3 - 87.7%; return on investments FP2 - 86.63%; profitability FP1 - 86.1% and market share relative to competition FP4 - 83.96%. Approximately 80% of the respondents indicated that their firm' performance met their expectations concerning Exports (FP8).

Table 4.13
Firm Performance: frequencies and percentages

Items	Disagree		Agree	
	N*	%**	N*	%**
Acquiring new customers (FP6)	3	1.60	165	88.24
Productivity (FP5)	2	1.07	169	90.37
Increasing sales to current customers (FP7)	3	1.60	170	90.91
Growth in sales revenue (FP3)	11	5.88	164	87.70
Return on Investments (FP2)	12	6.42	162	86.63
Profitability (FP1)	12	6.42	161	86.10
Market share relative to competition (FP4)	8	4.28	157	83.96
Exports (FP8).	12	6.42	149	79.68

Note. N* Number of responses, %** Percentage of responses

In the next section, the frequency distribution of the general information obtained through the survey about the respondents and their firms are presented.

General Information

Tables 4.14 to 4.17 presents the statistics pertaining to the respondents' position in the organisation, their length of service in the ICT sector, their length of service in the current organisation and the highest level of formal education of the respondents. Further, the ownership nature of the organisation as indicated by the respondents is also tabulated.

Respondents' position in the organisation. As can be seen from Table 4.14, 26.74% of the respondents are General Managers in these ICT firms. 25.67% are

Marketing Managers; 13.37% are Chief Executives officers; 11.76% are Sales Managers and 6.42% are Owner Managers. Thus, 84% of the respondents who participated in the survey are clearly senior managers. A review of the completed responses showed that the other 16.04% of the respondents included Chief Technology Officers (CTO), IT/ICT team leaders, Project Managers, Administrators and Senior Software Consultants.

Table 4.14
Respondents' Position in the organisation

	N*	%**
General Manager	50	26.74
Marketing Manager	48	25.67
Chief Executive Officer	25	13.37
Sales Manager	22	11.76
Owner Manager	12	6.42
Others	30	16.04

Note. N* Number of responses; %** Percentage of responses; N=187

Respondents' Length of Service in the ICT sector. Table 4.15 shows the length of service of the respondents in the ICT sector. 7.82% of the respondents have worked in the ICT sector for more than 10 years; 31.28% have worked between 6 and 10 years and 46.37% have worked in this sector between 2 to 5 years. Only 14.53% of the total respondents had been in the ICT sector in India for less than 2 years.

Table 4.15
Respondents' Length of Service in the ICT sector

	N*	%**
Less than 2 years	26	14.53
2 to 5 years	83	46.37
6 to 10 years	56	31.28
More than 10 years	14	7.82

Note. N* Number of responses; %**Percentage of responses; N=179.

Respondents' length of service in the current organisation. An examination of Table 4.16 reveals that 84.95% of the respondents have been working with their respective organisations for more than two years. Only 15.05% of the respondents have been working with the firm for less than two years. 55.38% have been with the organisation for a period of 2 to 5 years; 25.81% have been with the firm for a period of 6 to 10 years and 3.76% have been with the organisation for more than 10 years.

Table 4.16
Respondents' Length of Service in the current organisation

	N*	%**
Less than 2 years	28	15.05
2 to 5 years	103	55.38
6 to 10 years	48	25.81
More than 10 years	7	3.76

Note. N* Number of responses; %**Percentage of responses; N= 186.

Highest level of formal education of the respondents. The data pertaining to education levels of respondents are given in Table 4.17. Most of the respondents are highly qualified with 63.24% of them having a Master degree or a postgraduate qualification. Close to 34% of the respondents hold a Bachelor degree.

Table 4.17
Highest level of formal education of the respondents

	N*	%**
Diploma	3	1.62
Bachelor Degree	63	34.05
Master degree or Post Graduate qualification	117	63.24
Other (Specify)	2	1.08

Note. N* Number of responses; %**Percentage of responses; N=185.

Ownership nature of the organisation. Table 4.16 shows the ownership nature of the firms as indicated by the survey participants. It can be seen that 45.65% of the

respondents were from registered incorporated private companies; 33.15% were from partnership firms; 14.13% were from firms owned by sole proprietors and 7.07% were from public listed companies.

Table 4.18
Ownership nature of the organisation

	N*	%**
Sole proprietor (owned by only one individual)	26	14.13
Partnership	61	33.15
Registered Incorporated private company	84	45.65
Public listed company	13	7.07

Note. N* Number of responses; %**Percentage of responses; N= 184

Conclusion

In this chapter, the analysis and the results of the descriptive statistics were presented. This included the discussion of the means, the frequencies and the percentages of responses of all the items for the various constructs. The means for all the variables were greater than 5 ($\bar{x} > 5$), except for two items: item 8 in Social Media (SM8: There is a reduction in online customer support because of the information we provide through our online discussion forums; $\bar{x} = 4.27$) and item 2 in Segmentation (SG2: We segment the market based on short term customer profitability; $\bar{x} = 4.24$). The respondents have agreed to all the other statements. The general information obtained from the respondents including their position in the organisation, length of service in the ICT sector and in the current organisation, the education level of the respondents and the ownership nature of the firms were also examined. Following on, the multivariate analysis of the data is presented in the next chapter.

CHAPTER FIVE: DATA ANALYSIS AND DISCUSSION OF RESULTS

In this chapter, the results of the data analysis are presented with each section preceded by an explanation and rationale for the chosen analysis techniques. The chapter begins with a brief introduction on multivariate data analysis which is followed by a note on the multivariate techniques that were used to analyse the dataset to achieve the research objectives. Then follow discussion of the steps taken in analysing the data. This includes factor analysis, reliability and validity, multiple regression analysis and mediation analysis. Thereafter the results obtained from the data analysis are also elaborately discussed. This chapter ends with a summary of the results of the analysis and the presentation of the revised framework of the Strategic Marketing Practices of the ICT firms and their influence on Firm Performance.

Multivariate Data Analysis

Multivariate analysis refers to the use of advanced statistical techniques to examine and understand relationships among multiple variables in a dataset simultaneously (Hair et al., 2010). This type of statistical analysis is used “when there are many independent variables and/or many dependent variables, all correlated with one another to varying degrees” (Tabachnick & Fidel, 2013, p.1). The concurrent analysis of multiple independent variables and dependent variables reveal and explain possible interrelationships among them and helps to determine their statistical inferences.

The choice of adopting and employing the suitable multivariate statistical method or methods for data analysis depends on the research question and the objectives of the study (Tabachnick & Fidel, 2013). The aim of this research is to answer the question: How do the Strategic Marketing Practices adopted by the ICT firms in India contribute to Firm Performance? In order to answer this research question, a conceptual framework (See Figure 2.1) was developed through an extant review of literature. Measurement items for the identified constructs in the framework were adapted from literature and were pilot tested as explained in Chapter three. Data was collected through web survey from the desired sample population.

The objectives of this research were to identify and determine the Strategic Marketing Practices that are adopted by the ICT firms in India; to test the conceptual framework by

establishing the degree of relationships among variables that were proposed for this research and to establish the best set of marketing practices for the ICT firms in India.

The above stated research question and the objectives required the use of two multivariate techniques for data analysis. First, in order to find the underlying structure of relationships among the variables in the data set the interdependence technique, factor analysis was used. Using this technique all the observed variables were analysed simultaneously to discover the structure of the relationships among the variables (Hair et al., 2010). Secondly, the research objectives involved a single dependent variable which is presumed to be explained by more than two independent variables. Hence the dependence technique, multiple regression analysis was employed to understand the influence of the independent variables on the single dependent variable (Hair, Bush & Ortinau, 2009). Regression analysis also helped the researcher to determine the best set of independent variables that significantly influenced the dependent variable that was proposed in the study.

Initially all the variables in the dataset were simultaneously analysed to examine the interrelationships and the common underlying dimensions among the independent variables. For this purpose, exploratory factor analysis was used in this research. This multivariate technique enabled the researcher to summarise the dataset and to extract reliable and interpretable factors (Hair et al., 2010; Ho, 2006). The parsimonious set of variables obtained through factor analysis provided an estimate of the structure of the variables. The resulting factors identified a smaller set of salient variables from a larger set of items that measured the Strategic Marketing Practices that are adopted by the ICT firms in India. Composite measures were created for each of these factors and were then used for further analysis.

Another objective of this study was to determine the influence of the identified Strategic Marketing Practices of the ICT firms in India on Firm Performance by testing the conceptual framework that was developed for this research. The aim was to determine the extent of relationship that existed between the independent variables and dependent variables and to assess the contribution of each independent variable to the relationship. Tabachnick & Fidel (2013) suggested the use of regression analysis as the preferred multivariate statistical technique for such research questions. Hence, regression analysis was used to predict and explain the relationships between the variables that were proposed in the model.

As discussed above, exploratory factor analysis and multiple regression analysis were the multivariate data analysis techniques that were employed to achieve the research objectives of this study. The following section discusses the data cleaning procedures that were used to prepare the dataset for multivariate data analysis.

Cleaning the Data

Prior to subjecting the dataset for any multivariate statistical analysis, it is necessary to prepare the dataset by thoroughly checking and cleaning the data. This includes identifying the patterns of missing data and applying remedies, and detecting and handling univariate outliers. The data cleaning steps that were used in the analysis are presented below.

Identifying and handling missing data. Missing data are the valid and definitive values of one or more variables in the data set that are not available for any further analysis (Darlington, 1990). The pattern of the missing data is more important than the amount of missing data in the data set (Hair et al., 2010). Primarily there are three major patterns of missing data. They are - missing completely at random, missing at random and missing not at random or non-ignorable missing values. In multivariate analysis, if the missing data is characterised as missing not at random it causes bias and influences the statistical results.

The dataset used in this research was initially examined to check whether the valid values of one or more variables in the dataset are missing completely at random. Little's missing completely at random (MCAR) test was used in this study to test the characteristics of the missing data in the dataset (Little, 1988). The test is a Chi-square test in which a significant value indicates that the data are not MCAR. In this test, a comparison is made between the actual patterns of the missing data with what would be the expected pattern if the missing data were completely randomly distributed. A non-significant statistical result will indicate that the observed pattern does not differ from the random pattern and hence the characteristic of the missing data will be missing completely at random.

SPSS was used to perform Little's MCAR test on the data set. The test yielded a Chi-square value of 4944.397 with $p = 0.279$. This non-significant ($p > .05$) statistical result allowed the researcher to consider the pattern of the missing data as missing completely

at random. This also indicated that no potential bias existed in the patterns of the missing data in the data set.

A review of the results of the descriptive analysis of the dataset indicated that the missing values were less than 1.5 percent for the variables included in this research. The quality of the data was found to be very good. Because the data are missing solely at random and the missing values are much less than the recommended limit of 5 percent, listwise deletion of missing data was employed in the statistical analysis, as recommended by Darlington (1990). In this research study 185 cases were included for analysis in both the EFA and the reported multiple regression results.

Identifying and handling outliers. According to Barnett and Lewis (1994) an outlier is an observation in a sample that appears to diverge markedly from other observations. They are those cases with extreme values in the dataset that can distort statistical results. Outliers are found in almost all the variables (independent variables and dependent variables) in the dataset and exist in both univariate and multivariate situations.

Univariate outliers are those cases with observations that fall at the outer ranges of the distribution in each variable in the data set. To identify univariate outliers, standardised scores called z scores were calculated for all the variables in the data set. Cases with z scores more than ± 3.29 were labelled as potential outliers as suggested by Tabachnick and Fidel (2013). An examination of the z scores for all the variables revealed the presence of few univariate outliers in the data set. The researcher decided to retain the cases and winsorize the values on the variables to pull them closer to the centre of the distribution thus reducing their impact on the results of the analysis.

Winsorization is one of the methods of handling univariate outliers, wherein the value(s) of the data points that are identified as outliers are replaced with the value of the next data point not considered to be an outlier (Reifman & Keyton, 2010). In the data set that was used in this research, those data points with z scores over ± 3.29 for each variable were identified and altered from both extremes of the distribution to the next data point that lies within the z score range of ± 3.29 . This alteration of the data points of the univariate outliers in the data set was done manually by the researcher.

Hair et al. (2010) describes multivariate outliers as those observations which are distinctively different from other observations. The recommended diagnostic method to

assess and identify multivariate outliers is with the Mahalanobis D^2 measure. It is a descriptive statistic that provides a multidimensional measure of a data point's distance from a centroid which is created at the intersection of the means of all the variables (Tabachnick & Fidel, 2013). Cases with the highest Mahalanobis D-square values represent observations that are further removed from the general distribution of observations in the multidimensional space. A close examination of the Mahalanobis D^2 indicated that there were no multivariate outliers in the measures of the constructs used in the conceptual framework.

Normality. Normality of all the metric variables was assessed both at the individual level and the construct level. Normal distributions take the form of a bell shape. As recommended by Hair et al. (2010) the statistical tests and graphical plots were used to examine the normality of the distributions. Statistical tests involving the distribution's shape characteristics of the measures were examined. Skewness and Kurtosis values were scrutinised.

Skewness refers to the tilt or the lack of tilt in a distribution and Kurtosis is the peakedness of a distribution (Garson, 2012). The Skewness and Kurtosis values are obtained from descriptive statistics. To test for normality, these values are divided by the corresponding standard errors. For the normality assumption to be satisfied these values must be within the threshold limit of ± 1.96 (Hair et al., 2010). Statistical tests including the Shapiro-Wilk and the Kolmogorov-Smirnov tests revealed that the p-values corresponding to the Lilliefors statistic were less than .05 for some of the variables. All these statistical tests showed that the distribution of the data was non normal. It was decided to retain this data in the analysis as data transformation did not yield better results.

Thus the data was cleaned for missing values and outliers. Normality of the data set was also dealt with. In the following section the application of factor analysis for this research is presented. The discussions include an introduction of factor analysis, key terms and statistics that are associated with factor analysis, assumptions in factor analysis and the steps involved in conducting factor analysis. The results of factor analysis are also tabulated, together with the factor loadings, communalities and the reliability statistics for all the factors. Thereafter the results of the EFA are elaborately discussed. Following on, the computation of the composite measures of the variables, for subsequent use in further analysis is presented. This section ends with a discussion

on the reliability and the validity of the measures that were obtained from factor analysis.

Factor Analysis

Factor analysis is a multivariate statistical technique used for data reduction and for obtaining a more parsimonious set of the measured variables that account for the patterns of observed correlations in a data set (Fabrigar, Wegener, MacCallum & Strahan, 1999). According to Hair et al. (2010) factor analysis is an interdependence technique in which the interdependent relationships among the complete set of variables are examined. The variables are not classified as either dependent or Independent.

The aim of conducting factor analysis in this research study was threefold. The first goal was to reduce the large set of variables into a more manageable set. Factor analysis facilitated data reduction by identifying representative variables from the large set of data, while retaining the nature and the characteristics of the original variables (Hayton, Allen & Scarpello, 2004).

The second goal was to determine the underlying structure among the variables with the intention of identifying the latent constructs (Conway & Huffcutt, 2003). Factor analysis helped to identify the definitive basic constructs by providing insight into the interrelationships among variables and the underlying structure of the data. The third goal was to use the multiple items that load onto different factors to compute composite measures that can be used in further analysis (Conway & Huffcutt, 2003). Factor analysis gives distinct understanding of those variables that may have impact in the analysis and can reveal constructs that were previously unknown (Kline, 1994). The key terms and statistics associated with factor analysis are explained below.

Key Terms and Statistics Associated with Factor Analysis

Discussed below are the key terms and statistics that are associated with factor analysis.

Variance. Variance is “the average of the square of the *deviations from the mean* for all the values” (Malhotra, 2012. p. 445), wherein the *deviation from the mean* is the difference between the mean and the observed values. Hence, variance is the mean squared deviation from the mean. Variance (s^2) is calculated as

$$\text{Variance } (S^2) = \frac{\sum(x_i - \bar{x})^2}{N-1}$$

Where \bar{x} and x_i indicates the mean value and the observed values respectively; N represents the total number of observations. The total variance of a variable comprises of the common variance (the variance it shares with other variables), the unique variance (variance that is specific to the variable) and error variance (variance that are not explained by the correlations with all the other variables).

Correlation. It is a statistical measure that indicates the size and direction of the linear relationships between two or more variables (Tabachnick & Fidell, 2013). Correlations can vary from +1 to -1. Values close to +1 indicate a high degree of positive correlation and values close to -1 indicate a high degree of negative correlation between the variables.

Correlation matrix. Correlations matrix is a matrix in which the inter-correlations between the analysed variables are presented. According to Malhotra, Birks and Wills (2012), it is the lower triangular matrix that shows the simple correlations between all possible pairs of variables that are included in the analysis. Variables that correlate highly with other groups of variables could measure one underlying variable, called a ‘factor’.

Factor loadings. These are the simple measures of correlations between the original variables and the factors. Factor loadings exhibit the variable’s role and contribution in ascertaining the factor structure (Malhotra, 2012). A factor loading of $\pm.32$ is suggested as a good rule of thumb for the minimum loading of an item (Hair et al., 2010; Costello & Osborne, 2005). This translates to approximately 10% overlapping variance with the other items in a factor. Hence all those variables that rendered factor loadings greater than $\pm.32$ were considered as significant contributors for the factor structure. Loadings $\pm.50$ or greater are considered practically significant. For statistical significance, Hair et al. (2010) suggested that the factor loadings must range from .40 to .45 if the sample size is between 150 and 200. Higher factor loadings suggest that the loading is important in interpreting the factor structure.

Communality. Communalities are estimated between each variable (as independent variables) and the factors (as dependent variables). “It is the squared multiple correlations of the variable as predicted from the factors” (Tabachnick & Fidel,

2013, p.626). The size of the communalities shows the amount of the variance in a variable that is accounted for by the extracted factors (Fabrigar & Wegener, 2012). Higher values for communality indicate that a large proportion of variance in the variable has been extracted by the factor solution. Statistical guidelines for communality values indicate .50 as the lower level of communalities in factor analysis (Hair et al., 2010).

Cronbach’s alpha. Cronbach’s alpha is used in this study to assess the internal consistency between the multiple measurements of a variable extracted as individual factors. Cronbach’s alpha is also referred to as the coefficient of reliability. It describes how closely related the items are as a group in defining the construct (Cronbach, 1951). Thus, Cronbach’s alpha (α) values indicates the internal consistency of the set of items measuring a construct. The Alpha value provides a measure of internal consistency of a scale, which is expressed as a number between 0 and 1. Nunnally (1978) has indicated 0.7 to be an acceptable lower limit for this reliability coefficient. Following on, the factor analysis model is presented as discussed by Malhotra (2012).

Factor Analysis Model.

In the mathematical model of factor analysis, “each variable is expressed as a linear combination of underlying factors” (Malhotra et al., 2012, p.775). The correlated variation is explained in terms of a smaller number of common factors together with a unique factor for each variable. If the variables are standardised, the factor analysis model is represented as

$$X_i = A_{i1}F_1 + A_{i2}F_2 + A_{i3}F_3 + \dots + A_{im}F_m + V_iU_i$$

Where

X_i is the i th standardised variable

A_{ij} is the standardised multiple regression coefficient of variable i on common factor j

F is the common factor

V_i is the standardised regression coefficient of variable i on unique factor i

U_i is the unique factor for variable i

m is the number of common factors

The unique factors are uncorrelated with each other and with the common factors. These common factors can also be expressed as linear combinations of the observed variables as

$$F_i = W_{i1}X_{i1} + W_{i2}X_{i2} + W_{i3}X_{i3} + \dots + W_{ik}X_{ik}$$

Where

F_i is the estimate of i th factor

W_i is the weight or factor score coefficient

K is the number of variables.

Assumptions in Factor Analysis

The assumptions in factor analysis can be characterised as both conceptual and statistical. The inherent *conceptual assumption* is that, there are some underlying structures in the set of selected variables. Hence, Hair et al. (2010) posits that there must be a strong conceptual foundation to explain the existence of underlying structures in the set of variables that are selected for factor analysis. In chapter two, the researcher had elaborately explained the theoretical foundations from which the conceptual framework was drawn.

The *statistical assumption* to substantiate the application of factor analysis to the data set requires that the variables are sufficiently correlated to produce representative factors. There are various measures to find the extent of interrelatedness between the variables which results in generating representative factors. One of the methods is the visual examination of the correlation matrix to ensure that sufficient correlations exist among the variables. A visual examination of the correlation matrix obtained for the dataset revealed sufficient correlations (>.30) between variables which substantiated the application of factor analysis to produce representative factors (Hair et al, 2010).

The next method is the examination of the Bartlett's test of sphericity. This test examines the entire correlation matrix in a given data set in order to determine the appropriateness of conducting factor analysis. This test statistic examines the hypothesis that the variables are uncorrelated in the population (Malhotra et al., 2012). Statistical significance less than .05 ($p < .05$) indicates that sufficient correlations exist among the variables and hence the data is suitable for factor analysis. In this research, the results of the Bartlett's test of sphericity (Table 5.1) showed a chi-square value of 5135.122

significant at $p = .000$ which rendered the data as statistically suitable for factor analysis.

The Measure of Sampling Adequacy is another measure that quantifies the degree of intercorrelations among the variables and thus confirms the appropriateness of the use of factor analysis for the research. Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was employed in this study. This measure is an index which ranges from 0 to 1 and is evaluated based on the correlations among the variables (Cerny & Kaiser 1977). A value close to 1 indicates that the patterns of correlations are relatively close and hence factor analysis will yield distinct and reliable factors.

Kaiser (1974) posited that a KMO index value greater than .5 indicates that the data supports the use of factor analysis. However for a good factor analysis values of .6 and more are required (Tabachnick & Fidel, 2013). In this research, the test for the KMO measure of sampling adequacy yielded a score of .904 indicating that the sample size was adequate and supports the use of factor analysis. The results of the KMO and the Bartlett's test of sphericity are presented in table 5.1.

Table 5.1
KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.904
	Approx. Chi-Square	5135.122
Bartlett's Test of Sphericity	df	1035
	Sig.	.000

Thus, the conceptual and the statistical assumptions discussed above backed the use of factor analysis in this research. The ensuing sub-section presents the steps that were involved in factor analysis.

Steps in Factor Analysis

The flow diagram that was proposed by Malhotra, Birks and Wills, (2012) was adapted in this research study. The flow diagram (Figure 5.1) offers an overview of the steps that were employed in factor analysis.

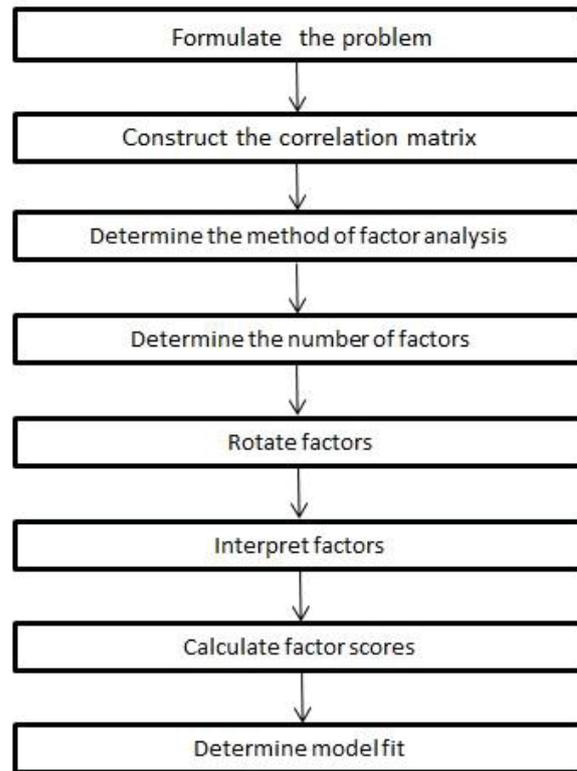


Figure.5.1. Steps in conducting factor analysis. Adapted from Malhotra, Birks and Wills, 2012.

Formulate the problem. The first step in factor analysis is to identify the objectives of factor analysis (Malhotra et al., 2012). As discussed earlier in this chapter, the objective of factor analysis in this research was to explore the underlying structure among the variables with the intention of identifying the latent constructs. The multiple items that load onto different factors were then used to compute composite measures that can be used in further analysis.

According to Hair et al., (2010) the variables used in factor analysis must be founded on strong conceptual underpinnings and the appropriateness of the variables for factor analysis in the research study. The variables must be based on past quantitative or qualitative research, theory and the judgement of the researcher (Malhotra et al., 2012). The variables should be measured on interval scales. In this research, the variables that were chosen for factor analysis were founded on theoretical and conceptual underpinnings and were based on past research. The variables were measures using interval scales.

Sample size influences the reliability of the variables in factor analysis (Field, 2013; Moore & McCabe, 2002). A minimum of five times as many observations as the

number of variables must be included in the analysis. A sample size of 10 observations as the number of variables (10:1 ratio) is recommended as an acceptable sample size for factor analysis (Hair et al., 2010). In this research the number of observations was 187 and the number of variables included in the factor analysis is 11. The number of observations to variables ratio was close to 18:1 which is more than the recommended sample size ratio of 10:1.

Construct the correlation matrix. As discussed earlier correlation matrix is created by calculating the correlations between each pair of variables that were included in the analysis. For factor analysis to be meaningful, the variables must be correlated at least with one variable in the correlation matrix (Malhotra et al., 2012). Bartlett's test of sphericity is a statistical measure that examines the null hypothesis that the original correlation matrix is an identity matrix. A significant statistical result ($p < .05$) indicates that sufficient correlations exist among the variables and hence the data is suitable for factor analysis.

Application of Bartlett's test of sphericity on the research data yielded a chi-square value of 5135.122 significant at $p = .000$, thereby suggesting that sufficient correlations existed between the variables to conduct factor analysis. The correlations between the variables must not be too high ($> .80$) as it suggests that multicollinearity exists between the variables and hence it will be difficult to determine the unique contribution of the variables to the factor (Field, 2013). The correlation matrix was also visually examined to check for recommended levels of correlations between the variables.

Determine the method of factor analysis. This step includes the decision regarding the factor extraction method that should be used for the analysis. There are two unique methods for extracting factors (Fabrigar & Wegener, 2012; Ho, 2006). They are Principal Component Analysis (PCA) and common Factor Analysis. Common Factor analysis is also known as Exploratory Factor Analysis (EFA). The choice of the suitable method for factor extraction in any research depends on the objective of the research.

PCA is used if the primary concern of the researcher is data reduction. By using PCA the data is reduced, so that a minimum number of factors that represents the original set of the data will be obtained. These factors account for the maximum proportion of the total variance in the original set of variables (DiStefano, Zhu & Mîndrilă, 2009; Ho,

2006). Also in PCA the initial communalities of the variables are assumed to be 1 indicating that the total variance of the variables can be accounted for by the means of its components and therefore there is no error variance (Field, 2013). The diagonal of the correlation matrix obtained in PCA contains 1, as the initial communalities of the variables are assumed to be 1.

The purpose of EFA is to uncover the latent dimensions underlying a data set, together with data reduction. In EFA the initial communalities are not assumed to be 1 and hence the variables do not account for 100% of the variance. The communalities are estimated by taking the squared multiple correlations of the variables with other variables (Reitveld & Van Hout, 1993).

Among the various models of EFA, Principal Axis factoring (PAF) with estimated communalities is widely used and is the preferred method for factor extraction (Conway & Huffcutt, 2003; Costello & Osborne, 2005). In this research the purpose is to reduce the variables in the data set and to determine the underlying structure of the unobserved variables that account for the relationships from among measured variables. Hence the PAF method of factor extraction was used in this research.

Determine the number of factors. Another important decision in factor analysis is to determine the number of factors that are to be retained for rotation. The various options include Eigenvalue rule, the scree test, parallel analysis, a priori theory and retaining the number of factors that gives the most interpretable solution (Conway & Huffcutt, 2003). Among these options the researcher applied the most commonly used technique called the Eigenvalue greater than 1 criterion (Kaiser, 1956) and the scree plot. The principle behind Eigenvalue greater than 1 criterion is that a factor will be retained for interpretation if the individual factor will account for a variance of at least a single variable. Thus, those factors with Eigen values greater than 1 are considered and are retained in the analysis. All other factors, whose Eigen values are less than 1, are disregarded in this analysis.

Scree plot was also used to determine the number of factors that will be retained for further analysis. In a scree plot the Eigenvalues are plotted against the number of factors in the order of extraction (Malhotra, 2012). The point at which the gradual trailing off (Scree) of the steep slope, denotes the true number of factors. The number of factors to be retained can also be determined based on the percentage of variance explained by the

factor model. According to Malhotra et al. (2012) the factors extracted should account for at least 60% of the variance.

Rotate factors. Factor rotation is the most important element in factor analysis to interpret the factors, which was done in this study. Even though the initial unrotated factor matrix shows the relationships between the factors and the individual variables, the factors cannot be effectively interpreted as they are correlated with many other variables. Through factor rotation, the factors are repositioned to a more interpretable configuration by a set of mathematically unique and specific transformations, resulting in factors with significant loadings for some of the variables. Thus the reference axes of the factors are tuned about the origin to some other position, wherein a simpler and a theoretically more meaningful factor pattern is obtained. Factor rotation neither affects the communalities of the variables nor the percentage of the total variance explained by the factors (Malhotra et al., 2012).

The choice of the appropriate factor rotation method is important to identify theoretically meaningful factor patterns which improve the interpretability and the scientific utility of the solution. It helps to achieve a simpler but a theoretically more meaningful factor pattern in factor analysis (Fabrigar et al., 1999). There are two main types of factor rotation: orthogonal and oblique. In orthogonal rotation, the axes of rotation are maintained at right angles and the rotated factors are assumed to be uncorrelated and independent of one another. In oblique rotation the axes of rotation are not maintained at right angles allowing for correlations among the factors. It permits for correlated factors instead of assuming independence between the rotated factors.

In choosing between orthogonal and oblique rotation, Ho (2006) contended that if the goal of the research is data reduction and if the factors are assumed to be uncorrelated, then orthogonal rotation could be used. But, if the objective of the research is to extract theoretically meaningful factors that are also correlated, then oblique rotation is appropriate. In this research, the researcher aimed not only for data reduction, but also desired to extract theoretically meaningful factors and hence oblique rotation was used to extract the relevant factors.

The use of oblique rotation results in pattern matrix, structure matrix and a component correlation matrix. The pattern matrix presents the factor loadings and is used to interpret the factors; the structure matrix presents the correlations between the variables

and the factors and the component correlations matrix presents the correlation between the extracted factors.

Interpret factors. Factors can be interpreted by “identifying the variables that have large factor loadings on the same factor” (Malhotra et al., 2012). As explained earlier, factor loadings are the simple correlations that exist between the original variables and the factors. Higher factor loadings suggest that the variable is important in interpreting the factor structure. A factor loading of $\pm.32$ is posited as a good rule of thumb for the minimum loading of an item (Hair et al., 2010; Costello & Osborne, 2005). Hence in this research all those variables with factor loadings greater than $\pm.32$ in the pattern matrix of loadings were considered as significant contributors for the factor structure. The results of the factor analysis constituting the interpreted factors are presented in the next sub-section.

Calculate factor scores or summated scores. The results obtained from EFA can be used in subsequent multivariate analysis by computing either factor scores for each participant or summated scores for each construct (Hair et al., 2010). Factor scores are composite measures that are calculated for individual participants on each of the derived factors (Malhotra et al., 2012). Computation of exact factor scores is possible only when principal component analysis is used. Summated scores are calculated by combining several variables that measure the same construct into a single variable. Summated scales are used when the unidimensionality of the measures are established using EFA. Also the reliability scores measured by Cronbach’s alpha should exceed the threshold value of .70 (Hair et al., 2010). In this research, summated scores were calculated as EFA was used to extract the factors and the Cronbach’s alpha values for all the factors exceeded the threshold value of .70, as required.

Determine the model fit. Malhotra et al. (2012) suggested examining the residuals contained in the upper right triangle of the reproduced correlation matrix to determine the model fit in factor analysis. The differences between the observed correlations and the reproduced correlations are the residuals. A substantial residual indicates that the factor model does not fit the data well and therefore implies a poor fit. An examination of the reproduced correlation matrix obtained through the EFA revealed only five residuals that were larger than 0.05, indicating an acceptable model fit.

The next sub-section presents the results of the EFA. The factor loadings, communalities of the variables and the reliability statistics are tabulated for all the factors extracted through EFA.

Results of the Exploratory Factor Analysis

As discussed in the preceding sub-sections, PAF was used as the factor extraction method in the EFA. Eigen value criterion was adopted to determine the number of factors to be retained for interpretation. Oblique rotation (promax) was employed as the factor rotation technique to attain theoretically meaningful factor patterns. The assumptions for factor analysis were not violated and the data set was statistically tested for appropriateness and the suitability of using EFA as the multivariate technique to identify the theoretically meaningful structures underlying the dataset.

EFA was conducted with all 83 items that were used to assess the Strategic Marketing Practices of the ICT firms in India. An iterative sequence of factor analysis was used resulting in ten distinct factors comprising 44 items. These ten factors explained 72.36% of the variance which is regarded as sufficient to represent the data (Pett, Lackey & Sullivan, 2003). It is also higher than the 60% threshold recommended by Malhotra et al. (2012).

The results of the factor analysis are presented below. As can be seen in table 5.2, ten factors with Eigen values greater than 1, were extracted using principal axis factoring and oblique rotation. The table presents the Eigen values corresponding to the individual factors and the percentage of variance explained by the extracted factor structure

Table 5.2
Summary of the extracted factors

Factor	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	18.085	39.314	39.314
2	3.109	6.758	46.072
3	2.078	4.518	50.590
4	1.832	3.983	54.573
5	1.703	3.702	58.275
6	1.538	3.343	61.618
7	1.454	3.162	64.779
8	1.266	2.752	67.531
9	1.161	2.524	70.055
10	1.061	2.306	72.361

The individual factors with their factor loadings together with the Cronbach's alpha and the item communalities are tabulated and discussed below.

Factor 1

It can be seen in table 5.3 that the items that loaded on to the first factor pertain to the relationship marketing practices that were adopted by the ICT firms in India. Hence this factor was assigned the name "Relationship Marketing Practices". This factor explained 39% of the total variance and consisted of 10 items with factor loadings ranging from .513 to .821. Cronbach's alpha value of .920 indicates a high degree of internal consistency between these items. Communalities for the items loaded in this factor range from .638 to .764. The high factor loadings (>.5) and high communality values (>.5) implies that these items are reliable measures to assess this factor. It also indicates the importance of this variable in the factor structure.

It is interesting to note that some of the items that were used to assess the Social Media practices of the ICT firms have loaded on to this construct (table 5.3). These items are marked in bold in table 5.3. The high factor loadings for all these items (all >. 60) indicate that these items contribute significantly to the factor structure, labelled as Relationship Marketing practices. It appears that social media is effectively used by the ICT firms in India to improve customer relations by constant interaction with customers through online networks (SM7), by encouraging customers to participate in live and interactive discussion forums (SM5) and by increasing efficiency in developing products due to online customer interaction at various stages of product development

(SM6). The results reiterate the fact that social media practices are prevalent in the ICT firms in India and are efficiently used by these firms to build relationships with customers through effective communication.

Table 5.3
Relationship Marketing practices, Factor Loadings and Communalities

Items	Factor loadings	SMC*
RM10: We are committed to establish long term relationship with our customers	.821	.764
RM2: In our organization, customer relationships are considered to be a valuable asset	.750	.779
RM8: We fulfill all obligations and promises we make with customers.	.692	.689
SM7: Our constant interaction with customers through online networks has improved our customer relations.	.666	.635
SM5: We encourage our customers to participate in live and interactive discussion forums in our website.	.656	.642
RM5: We can rely on our firm to keep the promises that it makes to the customers	.646	.692
RM3: Our senior management emphasizes the importance of customer relationships	.633	.609
SM6: Our firm has increased efficiency in developing products due to online customer interaction at various stages of product development.	.602	.610
RM6: In our relationship with customers, our firm can be trusted at all times	.587	.685
RM9: We make significant investments (in terms of time and resources) in building relationship with our customers	.513	.638

*Squared Multiple Correlations/ Communalities
Cronbach's alpha (α): .920

The other seven items constituting this factor explain the three dimensions of relationship marketing viz, the customer relationship orientation of the firms, the trust between the exchange partners and the commitment towards maintaining relationships with customers. The customer relationship orientation of the ICT firms is captured by

two items: Customer relationships are considered as a valuable asset (RM2) and the customer relationships are emphasised by the senior management in these ICT firms (RM3). The trust element of relationship marketing is identified by two items, RM5: We can rely on our firms to keep the promises that it makes to the customers; and RM6: In our relationship with customers, our firm can be trusted at all times. The relevant items that describe the commitment element of relationship marketing are: we fulfill all obligations and promises we make with customers (RM8), we make significant investments (in terms of time and resources) in building relationship with our customers (RM9) and we are committed to establish long term relationship with our customers (RM10).

Factor 2

The second factor was assigned the name “Product practices”, as all the items that loaded in this factor (See table 5.4) describe those practices relevant to the product strategies adopted by the ICT firms in India. This factor explained 7% of the total variance and contains seven items with factor loadings ranging from .511 to .825. The higher factor loadings (>.5) indicate the statistical significance of these measures. Table 5.4 presents those items that loaded on to this factor, their factor loadings and their communalities.

As can be seen from table 5.4, all the seven items describe the product related practices of the ICT firms in India. The Product practices indicate that: the ICT firms develop a common product platform, which is then adapted to customer requirements (PT1) and the firms initially understand customer requirements and develop a conceptual design, which is then presented to the customer for feedback (PT2). Firms in the ICT sector are found to deliver unique products and services in which they specialize in (PT7). This also indicates that these ICT firms in India tend to specialise in the products and services they provide for the customers. These firms develop technologically superior products to cater to the niche markets they focus on (PT9).

Personnel expertise is a major component of the ICT firms’ product strategy. The item - our firm provides a pool of highly trained personnel expertise (PT8) has loaded on to this factor. ICT firms also provide extensive customer support from product conceptualization to product delivery (PT10). Product innovation is identified as one of the product strategies (PT11) of the ICT firms, as these firms try always to be ahead of

competition. The factor loadings on these factors are well over the guiding threshold of $\pm.32$ and are statistically significant. Communalities greater than .5 (ranging from .580 to .745) indicates that the variables are adequately explained by the factor solution. The Cronbach's alpha indicating the internal consistency of these seven items is .91.

Table 5.4
Product practices, Factor Loadings and Communalities

Items	Factor loadings	SMC*
PT1: We develop a common product platform, which is then adapted to customer requirements	.825	.580
PT7: Our firm provides exclusive products and services, by being a specialist shop	.809	.634
PT9: Our firm provides niche based technological superiority	.739	.745
PT8: Our firm provides a pool of highly trained personnel expertise	.723	.668
PT2: We understand the customer requirements and develop a conceptual design, which is then presented to the customer for feedback	.587	.640
PT10: Our firm provides extensive customer support from product conceptualization to product delivery	.568	.693
PT11: Our firm is always ahead of competitors with respect to product innovation	.511	.604

*Squared Multiple Correlations/ Communalities
Cronbach's alpha (α): .910

Factor 3

Factor 3 was aptly assigned the name 'Distribution practices' as the items that loaded on to this factor explained the distribution practices that are adopted by the ICT firms in India (See table 5.5). This factor comprised of four items, each measuring the different distribution practices relevant to the ICT sector. This factor accounts for 5% of the total variance with factor loadings ranging from .567 to .821. Table 5.5 displays the factor loadings for the variables and the communalities.

The distribution practices indicate that the ICT firms gain distribution rights through joint ventures, as a result of collaborative development of a new technology (DT4); engage certified resellers to distribute their products and services (DT2); rely on

distributors to deliver pre-packaged solutions (DT6); and they form tactical alliances with smaller firms to help put a "complete product" for their customers (DT3). As can be seen from table 5.5, the communalities for all the items were well over .5, describing the proportion of the variance in the variables accounted for by the extracted factor for each variable. The Cronbach's alpha value of internal consistency of the measures for this factor was .847.

Table 5.5
Distribution practices, Factor Loadings and Communalities

Items	Factor loadings	SMC*
DT4: Our firm gained distribution rights through joint ventures, as a result of the collaborative development of a new technology	.821	.773
DT2: We engage certified resellers to distribute our products and services	.794	.730
DT6: Our firm relies on distributors to deliver pre-packaged solutions	.687	.707
DT3: Our firm forms tactical alliances with smaller firms to help put a "complete product" for our customers	.567	.509

*Squared Multiple Correlations/ Communalities
Cronbach's alpha (α): .847

Factor 4

Table 5.6 presents those items that loaded on to this factor, the factor loadings and their communalities. This factor is labelled as 'Promotional practices' as the variables that have loaded on to this factor describes the promotional practices of the ICT firms. Five items contribute to this factor and account for 4% of the total variance. The factor loadings range from .456 to .760, much higher than the threshold value of $\pm .32$.

Firms in the ICT sector in India are found to engage in print advertising (PM4) and online advertising (PM5). They also organise industry conferences (PM2), invite customers to leadership forums (PM3) and use customer references in advertisements (PM6). The communalities are all higher than the threshold value of 0.5 which indicates that the variables are sufficiently explained by the factor solution. The high internal consistency of these measures was indicated by the Cronbach's alpha value of .840.

Table 5.6
Promotional strategy practices, Factor Loadings and Communalities

Items	Factor loadings	SMC*
PM6: Using customer references in our advertisements	.760	.655
PM3: Inviting customers to leadership forums	.699	.709
PM4: Print advertising	.690	.490
PM5: Online advertising	.612	.623
PM2: Organizing industry conferences	.456	.605

*Squared Multiple Correlations/ Communalities
 Cronbach's alpha (α): .840

Factor 5

This factor was assigned the name 'Market Research practices', as the four items that loaded on to this factor describe the market research practices adopted by the ICT firms in India. The factor loadings on this factor range from .387 to .793 and the communalities range from .515 to .662. The Cronbach's alpha value of .806 shows the high internal consistency of the variables measuring this factor. The following table (Table 5.7) present the items, their factor loadings and their communalities.

Table 5.7
Market Research practices, Factor Loadings and Communalities

Items	Factor loadings	SMC*
SM3: Our firm constantly monitors social network sites for reviews of our products and services.	.793	.662
SM2: Our firm actively searches for market opportunities in user generated blogs in online communities.	.644	.656
MR2: Use external contractors to do market research for us	.513	.515
SM4: In our firm, we constantly check online networks to know about competitor's products and services.	.387	.545

*Squared Multiple Correlations/ Communalities
 Cronbach's alpha (α): .806

Looking at the items that loaded under this factor (See Table 5.7), it is interesting to note that three items that were used to measure Social Media has loaded on to this factor. These items are marked in bold in table 5.7. The items clearly indicate the use of social media for market research purposes by the ICT firms in India. Along with using external contractors for market research (MR2), firms are found to use social media: to know about the reviews of their firm’s products and services (SM3); to know about competitor’s products and services (SM4) and to actively search for market opportunities in user generated blogs in online communities (SM2). Hence this factor is assigned the name “market research practices”.

Factor 6

The three items that loaded on to this factor are presented in table 5.8 together with their factor loadings and their communalities. This factor is labelled as ‘Social Media practices’. Three items that explain the purposes for which these ICT firms use social media have loaded on to this factor. The factor loadings are .813, .666 and .566 for items SM10, SM9 and SM11 respectively. The communalities are .728, .629 and .660, much higher than the threshold value of 0.5.

Table 5.8
Social Media practices, Factor Loadings and Communalities

Items	Factor loadings	SMC*
SM10: We use our online networks to facilitate endorsement of our products/services by customers	.813	.728
SM9: We use our online networks to explain our products/services to customers.	.666	.629
SM11: Our engagement in the online social networks helps build our firm's reputation.	.566	.660

*Squared Multiple Correlations/ Communalities
Cronbach’s alpha (α): .825

The three items in Table 5.8 represent the firms’ use of online networks to: facilitate endorsement of their products/services by their customers (SM10); to explain their products and services to their customers (SM9) and their engagement in online

networks to build the firm's reputation (SM11). Cronbach's alpha, specifying the internal consistency of the items measuring this factor is .825.

Factor 7

Factor 7 was assigned the name 'Segmentation practices' (Table 5.9) as the items that loaded on to this factor relate to the segmentation practices of the ICT firms in India. The factor loadings range from .501 to .611. The value of the coefficient of reliability is .765. The squared multiple correlations or the communalities indicate the significant total amount of variance the individual variable shares with all the other variables included in the analysis. As can be seen the communalities for the items are .510, .611 and .520 respectively and are all $>.5$. It is evident from the items in table 5.9 that the segmentation practices of these firms are based on the needs of the customers. The firms segment their customers based on those who need packaged solutions (SG6), value solutions (SG5) and those who need customised solutions (SG4).

Table 5.9
Segmentation practices, Factor Loadings and Communalities

Items	Factor loadings	SMC*
SG6: Based on customers who need packaged solutions	.611	.510
SG5: Based on customers who need value solutions	.610	.611
SG4: Based on customers who need customised solutions	.511	.520

*Squared Multiple Correlations/ Communalities
Cronbach's alpha (α): .765

Factor 8.

Factor 8 was labelled 'Targeting practices' and is comprised of two items pertaining to the targeting practices of the ICT firms (Table 5.10). The factor loadings are .561 and .727 and the Cronbach's alpha value is .752. ICT firms target customers whose needs they are aware of (TGT5) and customers with the potential of giving them long term or downstream profit (TGT4). Table 5.10 displays the items, factor loadings and the communalities for factor 8.

Table 5.10
Targeting practices, Factor Loadings and Communalities

Items	Factor loadings	SMC*
TGT5: Potential customers whose needs we are aware of	.727	.691
TGT4: Customers with the potential of giving us long term or downstream profit	.561	.617

*Squared Multiple Correlations/ Communalities
Cronbach's alpha (α): .752

Factor 9.

Table 5.11 displays the three items that loaded as the ninth factor that was extracted through factor analysis. All three items relate to the pricing strategies of ICT firms and hence this factor was assigned the name "Pricing practices".

Table 5.11.
Pricing practices, Factor Loadings and Communalities

Items	Factor loadings	SMC*
PRI1: The cost incurred	.587	.732
PRI3: Uniqueness of the products and services	.552	.651
PRI2: Profit objectives of the company	.539	.713

*Squared Multiple Correlations/ Communalities
Cronbach's alpha (α): .853

These items that have loaded on to the pricing practices of the ICT firms indicate the influence of these items on the pricing decisions made by the ICT firms. The pricing decisions are primarily influenced by the cost incurred (PRI1), the uniqueness of the products and services (PRI3) and the profit objectives of the company (PRI2). The factor loadings range from .539 to .587. Communalities are higher than .650 which indicates a high proportion of variance is accounted for by this factor for each variable. The cronbach's alpha value of .853 for this factor confirms the internal consistency of the measures that assess the pricing practices of the ICT firms in India.

Factor 10

Factor 10, labelled ‘Positioning practices’ consists of three items as seen in table 5.12. These items point to the positioning practices adopted by the ICT firms. As can be seen, the factor loadings of the three items range from .506 to .631. The communalities of these items are also high ranging from .617 to .784. Table 5.12 presents the items, factor loadings and their communalities.

The positioning practices of the ICT firms include: having a reputation within the industry (PG6); having the winner image in the market (PG7) and providing extensive after sales support (PG5). The Cronbach’s alpha value of .871 suggests a strong internal consistency among the items that have loaded on to this factor.

Table 5.12.
Positioning practices, Factor Loadings and Communalities

Items	Factor loadings	SMC*
PG2: Our firm has a reputation within the industry	.631	.784
PG3: Our firm has the winner image in the market	.536	.650
PG1: Our firm provides extensive after sales support	.506	.617

*Squared Multiple Correlations/ Communalities
Cronbach’s alpha (α): .871

In the above sub-section the ten distinct factors comprising 44 items that emerged from the EFA are presented. The results obtained from the EFA are elaborately discussed in the next sub-section.

Discussion of the EFA Results

EFA conducted on the dataset using PAF with promax rotation, not only resulted in data reduction but also helped the researcher to identify ten factors comprising of a set of parsimonious variables which explain the underlying constructs and the interrelationships among the variables. The statistically significant factor loadings for all the variables ($>.32$) and communalities ($>.5$) suggested that the individual items were reliable measures of the extracted factors. High Cronbach’s alpha values ($>.75$) also indicated that the items that loaded on to the factors are internally consistent.

The ten discrete factors explained a total variance of 72% in the data. The factors were named after examining the nature of the items that loaded on to the individual factors. The identified factors were: Relationship Marketing practices, Product practices, Distribution practices, Promotion practices, Market Research practices, Social Media practices, Segmentation practices, Targeting practices, Pricing practices and Positioning practices. These ten factors defined the independent variables (Strategic Marketing Practices) in the conceptual framework.

Key findings from the results of the EFA.

In this sub-section the key findings from the results of the factor analysis are presented.

Social Media in Relationship Marketing practices. Eleven scale items were used to assess the Social Media practices (See chapter three) of the ICT firms in India. Three of these items loaded on to the first distinct factor (named Relationship Marketing practices) that resulted from extraction through factor analysis. The items were:

SM7: Our constant interaction with customers through online networks has improved our customer relations

SM5: We encourage our customers to participate in live and interactive discussion forums in our website

SM6: Our firm has increased efficiency in developing products due to online customer interaction at various stages of product development

The results of the descriptive analysis showed that the survey respondents agreed that their firms engage in such Social Media practices. The mean scores of SM7, SM5 and SM6 were 5.66, 5.55 and 5.52 respectively. Interestingly all these three items described the ICT firms' interaction and communication with its customers. In relationship marketing literature, information exchange through communication and interaction is posited as one of the crucial elements for building successful exchange relationships (Sin, Tse, Yau, Chow & Lee, 2005).

The movement of scale items describing communication and interaction between exchange partners from Social Media to Relationship Marketing suggests that there has been a shift in the way that the ICT firms in India communicate and interact with their customers in the current internet era. The very nature of the items reveals that Social

Media is used by these firms for information exchange through communication and interaction with their customers. The result is in line with findings from earlier studies that found Social Media attracts, develops and enhances firms' relationships with customers (Järvinen et al., 2012; Schultz et al., 2012; Trainor, 2012; Fisher, 2009; Smith, 2009; Deans et al., 2003).

The two items (SM5 & SM7) indicates that customers participate in live and interactive discussion forums in the firms' website and the firms' constant interaction with customers through online networks has improved their customer relations. Interacting and constantly communicating with customers helps to build commitment and trust in a relationship (Morgan & Hunt, 1994; Anderson & Narus, 1990). Item SM6 shows that the firms in this sector use Social Media to build relationships with their customers by empowering them to play an active role in co-creating products and services. Trainor (2012) and Moen et al. (2008) contended that Social media tools have facilitated firms and their customers to co-create their experiences, that is, to plan and develop (co-design) projects with customers, which further strengthens the relationships between them. Hence it is appropriate that these three items contribute to the Relationship Marketing practices of the ICT firms.

Social Media in Market Research practices. Another key finding in this research is the use of Social Media for Market Research by the ICT firms in India. From the eleven items used to assess Social Media practices of the ICT firms, three items loaded on to a factor labelled as "Market Research practices" of the ICT firms. The items include:

SM3: Our firm constantly monitors social network sites for reviews of our products and services

SM2: Our firm actively searches for market opportunities in user generated blogs in online communities

SM4: In our firm, we constantly check online networks to know about competitor's products and services

The high percentages of responses (>74%) and the high mean values ($\bar{x} > 5.2$) revealed that the respondents agreed that these practices are adopted by the ICT firms in India.

The nature of these three items affirms that Social Media is used for Market Research purposes by the firms in the ICT sector.

These items indicate that the ICT firms in India monitor social network sites for reviews of their products and services; use online networks to know about the competitors' products and services. These ICT firms also search actively for market opportunities in user generated blogs in online communities. Loading of these items on to Market Research practices together with the nature of these three items indicate the effective use of Social Media for Market Research purposes by these ICT firms. In literature, Social Media is advocated as an important tool for market research (Fisher, 2009; Smith, 2009; Moen et al., 2008). In B2B markets creating and sharing of information social Media will bring customers closer to the firms (Trainor, 2012) which allow marketers to discover customer needs and to identify market opportunities (Moen et al., 2008).

Social Media practices. The following three items loaded as a separate factor in the factor analysis:

SM9: We use our online networks to explain our products/services to customers

SM10: We use our online networks to facilitate endorsement of our products/services by customers

SM11: Our engagement in the online social networks helps build our firm's reputation

This factor is a new construct that was introduced in this research. These items explained how Social Media is used by the ICT firms for purposes other than Relationship Marketing and Market Research. Confirming the insights provided by Shultz et al. (2012) and Moen et al. (2003) on the use of online networks by firms, Social Media tools are effectively used by the ICT firms in India to build the firm's reputation and to explain its products/services to customers. Pfeiffer and Zinnbauer (2010) also indicated that these online networks facilitate customers in providing endorsements for the product/services thus acting as a platform for word-of-mouth advertisements for the firms.

The high mean values ($\bar{x} > 5.4$) and percentage of responses (>75%) show that these practices exist in the ICT firms under study. The value of the Cronbach's Alpha (α) is

.825 which indicated the degree of internal consistency between the multi-item measures of Social Media, a new construct that was introduced in this research. Assessment of the discriminant validity of this construct using bootstrap method (See Table 5.14) showed that this construct is distinct and different from all the other constructs as the correlations between this construct and the other constructs ranged from .160 and .598.

Unique Product practices. Seven items loaded on to the factor -Product practices of ICT firms in the factor analysis. The Cronbach's alpha (α) value for the internal consistency of these measures is .910. The items are:

PT1: We develop a common product platform, which is then adapted to customer requirements

PT7: Our firm provides exclusive products and services, by being a specialist shop

PT9: Our firm provides niche based technological superiority

PT8: Our firm provides a pool of highly trained personnel expertise

PT2: We understand the customer requirements and develop a conceptual design, which is then presented to the customer for feedback

PT10: Provides extensive customer support from product conceptualization to product delivery

PT11: Our firm is always ahead of competitors with respect to product innovation

It is interesting to note that providing a pool of highly trained personnel expertise is one of the product strategies of ICT firms. This explains the fact that the ICT firms recruit technical experts, also called "subject matter experts" for developing and delivering products and services as per the customer requirements. The ICT firms' product strategy also includes providing a niche based technological superiority; providing exclusive products and services by being a specialist shop; providing extensive customer support from product conceptualization to product delivery and being ahead of competition in product innovation.

High technology literature evidences the significance of developing competitive product platforms that can be used to efficiently develop and introduce wider range of products in the market (Gabrielsson et al., 2006; Robertson & Ulrich, 1998; Sawhney, 1998). Firms in this sector also develop a conceptual design to suit customer requirements which is usually presented to the customer for feedback. Using the feedback, further product improvements are made. This cycle will be repeated in these high technology firms until the customer is satisfied with the solution that is provided (Gabrielsson & Gabrielsson, 2004; Easingwood et al., 2006). The current research supports the presence of such Product practices in the ICT firms in India.

Items PT1 and PT2 clearly evidence the adoption of these Product practices which include the development of a common product platform, which is then adapted to customer requirements. Also the ICT firms in India develop a conceptual design after understanding the customer requirements and then present the design for feedback. Based on the obtained feedback the products and services are further refined. The descriptive analysis results evidenced the adoption of these product practices in firms. The mean values for these items were > 5.4 and the percentage of responses ranged from 79% to 85%.

Table 5.13 presents the summary of the factors used in the subsequent analysis. The table includes the number of factors, the number of items that loaded on to factors and the Cronbach's alpha value. It also includes the number of items and the Cronbach's alpha value for Customer Satisfaction, the mediating variable and Firm Performance, the dependent variable

Table 5.13

Summary of the Factors used in the subsequent analysis

	Factors	Number of Items	Cronbach's Alpha
1	Relationship Marketing practices	10	.920
2	Product practices	7	.910
3	Distribution practices	4	.847
4	Promotional practices	5	.840
5	Market Research practices	4	.806
6	Social Media practices	3	.825
7	Segmentation practices	3	.765
8	Targeting practices	2	.752
9	Pricing practices	3	.853
10	Positioning practices	3	.871
11	Customer Satisfaction	9	.907
12	Firm Performance	8	.898

Thus through EFA the various Strategic Marketing Practices of the ICT firms were identified and explored. In the ensuing sub-section, discussion pertaining to the calculation of the composite measures for all these constructs is presented.

Average summated scores

The EFA provided the empirical assessment of the interrelationships among the variables in this research study. Once the unidimensionality of the measures were assessed, the composite variables or the summated scales were created. As discussed, summated scores represent complex concepts in a single measure (Hair et al., 2010). The most common method to create these composite measures is to take the average of all the items measuring a concept or a construct used in the research. In the SPSS the same process was completed for all the factors that were included in the conceptual framework. These composite measures were calculated using the variables that loaded on to the factors as presented from table 5.3 to table 5.12.

The calculation of the average summated scores resulted in ten composite measures that will be used in further analysis. They are the composite measures for Relationship Marketing practices, Product practices, Distribution practices, Promotion practices, Market Research practices, Social Media practices, Segmentation practices, Targeting practices, Pricing practices and Positioning practices.

The summated scores for the Customer Satisfaction measures and the Firm Performance measures were also obtained. The Cronbach's alpha (α) value for these two constructs were .907 and .898 respectively, indicating that the measures assessing these variables were internally consistent. The squared multiple correlations were well over the threshold value of .5. The composite measures thus obtained were used in the following multiple regression analysis. The reliability and the validity of these measures are discussed below.

Reliability and Validity

In the preceding discussions, the results of the EFA are presented. The items used to measure the constructs have been operationally defined. The next step is to ensure that the operationalized measurements are both reliable and valid. In this section the analysis of the reliability and the validity of the measures are discussed.

Reliability

Reliability is a measure of the degree of internal consistency among the items that measure a variable (Sekaran & Bougie, 2010). When multi-item scales are used to measure a construct, it must be ensured that each scale is measuring the same construct and the items that constitute the construct are internally consistent. The two measures that were used in this research to ensure the internal consistency among the items are discussed below.

The most common way of evaluating the reliability of the measures is the use of the reliability coefficient, also called the Cronbach's alpha (Spicer, 2005). Cronbach's alpha (α) values indicate how closely related a set of items measuring a construct are. It provides a measure of internal consistency of a scale, which is expressed as a number between 0 and 1 (Cronbach (1951). Nunnally (1978) has indicated 0.7 to be an acceptable lower limit for this reliability coefficient. As can be seen from the Table

5.12, the Cronbach's alpha (α) value has exceeded .70 for all the factors extracted through EFA, indicating the internal consistency of the developed measures.

The other measure that can be used to assess reliability relate to the individual items. This includes verifying the item-to-total correlations, which is the correlation of the individual item to the summated scale score, and the inter-item correlations. The guiding rule for this correlation suggests that the item-to-total correlation must exceed .50 and the inter-item correlation must exceed .30 (Robinson, Shaver & Wrightsman, 1991). A visual examination of the item-to-total correlations and the inter-item correlations for all the measures obtained revealed that they were well over the threshold value of .50 and .30 respectively.

Validity

Validity of a construct indicates the extent to which the set of items used accurately represents the construct (Hair et al., 2010). Malhotra et al. (2012) describe validity as the extent to which the measures explain the characteristics that are inherent in the concept of interest. To examine whether the developed scale items measure the concepts accurately content validity and the construct validity of the measures were analysed.

Content validity is a subjective measure of how well the contents of a scale represent the concept of interest (Malhotra et al., 2012; Bryman & Cramer, 2011). The measures were assessed as to whether they reflect the content of the concept that is studied. Content validity of the scale items in this research was validated through pilot surveys and discussions with practitioners and academicians. This process enabled the researcher to ensure that the scale items adequately covered the different aspects of the constructs that were measured.

Construct validity is the degree to which a set of measures truly emulates the theoretical latent constructs they are designed to measure (Bryman & Cramer, 2011). This accuracy of measurement is evidenced in this research through convergent validity and the discriminant validity, which are discussed below.

Convergent validity measures "the extent to which the scale correlates positively with other measurements of the same construct" (Malhotra et al., 2012, p.436). Campbell and Fiske (1959) and Hair et al. (2010) contend that convergent validity can be established

through EFA when all the items measuring a construct load on to the factor measuring the construct with significant factor loadings in factor analysis.

Discriminant validity refers to the extent to which a construct is distinct and different from all the other constructs (Churchill, 1979). It assesses the degree to which the measures do not correlate with the other measures (Malhotra et al., 2012). Thus discriminant validity can be evidenced by the lack of correlation among the different constructs. In table 5.14 A1 ... A12 indicate the composite measures of Relationship Marketing practices (A1), Product practices (A2), Distribution practices (A3), Promotional practices (A4), Market Research practices (A5), Social Media practices (A6), Segmentation practices (A7), Targeting practices (A8), Pricing practices (A9), Positioning practices (A10), Customer Satisfaction (A11) and Firm Performance (A12) respectively. A visual examination of the correlation matrix for the constructs (See Table 5.14) shows that the correlation values are neither an absolute value of 0 nor a value of 1 (ranges from .235 and .811). According to Garson (2012) researchers use a correlation value of .85 as the rule-of-thumb cut-off when assessing discriminant validity.

In order to evidence discriminant validity among the constructs the researcher adopted the bootstrap method, as suggested by Torkzadeh, Koufteros and Pflughoeft (2003). Bootstrap results based on 1000 bootstrap samples were obtained with the confidence interval of 95% (significant at $p < .05$). The paired correlations among the latent variables and the confidence intervals of the paired correlations among the latent variables were examined. If the confidence intervals do not contain the value of 1 then discriminant validity is evidenced (Torkzadeh et al., 2003; Netemeyer, Johnston & Burton, 1990; Anderson & Gerbing, 1988). As seen in table 5.14 the correlations between the constructs were significantly less than 1 and an examination of the confidence intervals obtained through bootstrap method did not contain a value of 1, which indicated discriminant validity between the constructs.

Table 5.14
Correlations (using bootstrap method)

	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12
A1	1	.693**	.237**	.565**	.625**	.598**	.600**	.594**	.623**	.709**	.754**	.736**
A2	.693**	1	.395**	.643**	.604**	.546**	.549**	.558**	.749**	.657**	.741**	.790**
A3	.237**	.395**	1	.377**	.380**	.160*	.286**	.235**	.253**	.279**	.255**	.338**
A4	.565**	.643**	.377**	1	.565**	.448**	.455**	.458**	.607**	.548**	.607**	.633**
A5	.625**	.604**	.380**	.565**	1	.514**	.510**	.412**	.566**	.524**	.594**	.623**
A6	.598**	.546**	.160*	.448**	.514**	1	.373**	.417**	.493**	.502**	.593**	.536**
A7	.600**	.549**	.286**	.455**	.510**	.373**	1	.517**	.509**	.556**	.551**	.550**
A9	.623**	.749**	.253**	.607**	.566**	.493**	.509**	1	.420**	.488**	.643**	.667**
A10	.709**	.657**	.279**	.548**	.524**	.502**	.556**	.542**	1	.488**	.684**	.687**
A11	.754**	.741**	.255**	.607**	.594**	.593**	.551**	.650**	.643**	1	.684**	.811**
A12	.736**	.790**	.338**	.633**	.623**	.536**	.550**	.534**	.667**	.687**	.811**	1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

As discussed above, once the factors were extracted, the reliability and the validity of the measures were assessed. Then the composite measure for the variables were created using SPSS. The following section presents the results of the multiple regression analysis that was used by the researcher to test the proposed conceptual framework.

Multiple Regression Analysis

This section begins with a note on multiple regression analysis and the regression model. Then the key terms and statistics relevant to regression analysis are described. The statistical assumptions for regression analysis, the selection of the variables (independent variables, dependent variable and the mediating variable) and other practical considerations for regression analysis are discussed. The key terms and statistics relevant to regression analysis are described. Finally, the results of the regression analysis conducted to test the proposed conceptual framework are presented. Multiple regression analysis is one of the most widely used multivariate statistical techniques which explores and analyses linear relationships between a single dependent variable and two or more independent variables (Hair et al., 2010). This technique is a dependence technique in which a variable is identified as a dependent variable to be predicted and explained by two or more independent variables. According to Malhotra (2010) regression analysis can be used to determine whether a relationship exists between the independent and the dependent variables, to determine the strength of the relationship (if relationship exists), to determine the structure of the relationship, to determine the values of the outcome variable and to evaluate the contribution of a specific variable or a set of variables to the dependent variable after controlling for other independent variables.

In the current research multiple regression analysis was used to investigate the linear relationship between the Strategic Marketing Practices (Independent variables) adopted by the ICT firms in India and the Firm Performance (dependent variable) in these firms. The influence of Customer Satisfaction in the relationship was also assessed using this technique. Thus this multivariate tool was employed to measure the contribution of the set of predictors in explaining the variation in the outcome variable thereby estimating the strength of the relationships between the variables (Ho, 2006). The effects of the independent variables (IVs) on the dependent variable (DV) were also examined by assessing the changes in the dependent variable in response to the changes in the independent variables.

Multiple Regression Model

According to Tabachnick and Fidel (2013) the regression equation that represents the best prediction of a dependent variable (Y') from several continuous independent variables ($X_1 \dots X_n$) takes the following form

$$Y' = \alpha + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + e$$

Where

Y' Is the predicted value on DV

α Is the Y intercept (value of Y when all the X values are zero)

$X_1 \dots X_n$ Represents the IVs of which there are n numbers

$\beta_1 \dots \beta_n$ Represents the regression coefficients

e Is the error term unexplained by the regression equation

The best fitting regression coefficients ($\beta_1 \dots \beta_n$) helps to achieve a prediction equation for which the squared differences between the observed value and the predicted value (Y') of the dependent variable are at a minimum.

Multiple regression analysis was employed in this study to examine the extent of the relationship that exists between the variables in the conceptual framework that was developed for this research (See Chapter two, fig 2.1). The independent variables (IVs) used in the regression analysis were the composite measures of Relationship Marketing practices, Product practices, Distribution practices, Promotion practices, Market Research practices, Social Media practices, Segmentation practices, Targeting practices,

Pricing practices and Positioning practices. The dependent variable (DV) in the framework was Firm Performance. Customer Satisfaction was posited as the mediating variable (MV) in the relationship between the identified IVs and the DV. The next section describes the key terms and statistics associated with regression analysis.

Key Terms and Statistics in Multiple Regression Analysis

In this sub-section, the key terms and statistics associated with multiple regression analysis are presented.

Predictor variables. In multiple regression analysis predictor variables are those variables that are used to try to predict the values of the outcome variable. They are also known as the Independent variables.

Outcome variable. Also called as the dependent variable, an outcome variable is one that is proposed to change as a function of changes in the predictor variables.

Residuals. A residual is the difference between the observed value of the outcome variable and the value predicted by the regression equation (Malhotra et al., 2012). Scatter plots of residuals (plotting the residuals against the predicted values or predictor variables) helps to examine the appropriateness of the underlying assumptions in regression analysis.

Standard error. The standard deviation of the non-standardised regression coefficient (B) is called the standard error (SE_B). It is the expected variation of the estimated coefficients due to sampling error (Hair et al., 2010).

Coefficient of determination (R^2) and adjusted R^2 . Coefficient of determination (R^2) is the strength of the association between the independent and the dependent variables (Malhotra, 2012). It is also called as the total variation explained as it signifies the proportion of the total variation in the DV that is accounted for the variation in the IVs. R is the correlation coefficient, a number between +1 and -1, which represents the linear interdependence of two variables of sets of data. R^2 is the variation in the IVs that explains the percentage of variance in the DV and ranges from 1.0 (perfect prediction) to 0.0 (no prediction). The coefficient of determination is represented as the ratio of the explained variation to the total variation.

$$R^2 = \frac{\text{Explained variation}}{\text{Total variation}}$$

The R^2 value closer to 1 indicates that the regression model fits the data perfectly and implies that most of the variation in the DV can be explained by the IVs proposed in the regression model. Thus it provides the goodness of fit of the regression model (Sekaran & Bougie, 2010) as it statistically measures how close the data are to the fitted regression line.

The value of R^2 is based on the sample. As more IVs are added in the regression model, R^2 will always increase, even if the additional variables seldom explain the variance in the outcome variable (Hair et al., 2010). Hence adjusted R^2 (\tilde{R}^2) is used, which adapts for the addition of variables to the model by adjusting for the number of IVs in the model and the sample size (Tabachnick & Fidel, 2013). The value of the resulting \tilde{R}^2 goes up and down depending on whether the addition of another variable adds or does not add to the explanatory power of the model. The formula for calculating \tilde{R}^2 is given below

$$R_{adj}^2 = 1 - \left[\frac{(1-R^2)(n-1)}{n-k-1} \right]$$

Where, R^2 is the coefficient of determination, n is the sample size and K , the number of independent variables. \tilde{R}^2 (adjusted R^2) will always be lower than R^2 and is interpreted in the same manner as R^2 . \tilde{R}^2 is used in regression analysis to measure the overall predictive accuracy of the model and is useful in comparing the explanatory power of regression models that contain different number of IVs (Hair et al., 2010).

Regression coefficient. The regression coefficients (B) are indicators of the relative influence and the importance of the IVs in the relationship with the DV. It assesses the relative contribution of each predictor variable on the outcome variable, by controlling the effects of the other predictor variables in the prediction equation (Ho, 2006). These coefficients indicate the type of relationships (positive or negative) between the IVs and the DV and the strength of the relationship between them (Hair et al., 2010).

The type of relationship between the IVs and the DV is denoted by the sign of the B coefficient (+ve or -ve). The value of the coefficients indicates the change in the outcome variable, each time the predictor variable changes by one unit. However, the

size of the regression coefficient is influenced by the variations in scales and variabilities across the variables. Hence a modified regression coefficient called the Beta coefficient was used in the analysis.

Beta (β) coefficients are also called as *standardized regression coefficients*. Each of the IVs used in the analysis were standardized before the estimation of the regression equation in the analysis. Through the process of Standardization the variables are transformed into new variables that have a mean of 0 and a standard deviation of 1 thus facilitating the use of a common unit of measurement (Malhotra et al., 2012). Hence the beta coefficient represents an objective measure of the relative importance of the individual IVs in predicting the DV.

F-statistic. According to Hair et al. (2010) *F*-ratio is the ratio of the mean sum of squares for regression (MS_M) to the mean sum of squares for the residuals (MS_R). This test assesses whether the regression model is a good fit for the data by measuring how much the model has improved the prediction of the outcome compared to the inaccuracy of the model (Field, 2013). A good model will have a large F ratio as it indicates that the difference between the model and the observed data is small.

The F-test determines whether the proposed correlation between the outcome variable and the set of predictor variables is statistically reliable (Hair et al., 2010). It is used in regression analysis to test the null hypothesis that the coefficient of determination (R^2) in the population is zero (Malhotra et al., 2012). Thus it follows the null hypothesis: $H_0: \beta_1 = \beta_2 = \dots = \beta_k = 0$. The overall test for F statistic can be calculated using the formula

$$F = \frac{R^2/k}{(1-R^2)/(n-k-1)}$$

The alternative hypothesis is that at least one of the coefficients is non zero thus providing the option to estimate the regression model. A significant F-test indicates that the observed R-squared is reliable for the given data set. Statistical software like SPSS directly reports the p-value (i.e. level of significance) of the F statistic. In most analyses, a p-value of 0.05 or less is considered sufficient to reject the hypothesis that the coefficients are zero (Field, 2013).

t-statistic. In regression, the t statistic is the regression coefficient (B) of a given independent variable divided by its standard error (SE_B). A large t-statistic for any variable indicates that the regression coefficient for that variable was estimated more accurately and hence has a high influence on the outcome variable. The statistic tests the null hypothesis that the value of the regression coefficient (B) is 0. A significant t statistic for a predictor variable confirms the hypothesis that its B value is significantly different from 0 and it contributes significantly in predicting the estimated values for the outcome variable (Field, 2013).

In the next sub-section, the assumptions pertaining to multiple regression analysis and other practical considerations including sample size and multicollinearity are discussed.

Assumptions in Multiple Regression Analysis

In this section, the assumptions that underpin the use of multiple regression analysis are discussed. The four primary assumptions are linearity of the phenomenon, constant variance of the error term (homoscedasticity), independence of the error terms and normality of the error term distribution.

Hair et al. (2010) contended that in multiple regression analysis it is necessary to assess the assumptions not only for individual variables but also for the variates (linear combinations of variables formed in the regression analysis) as a whole because they act collectively in predicting the DV. Therefore the variates and their relationship with the DV must be examined for meeting the assumptions in multiple regression. Hence the testing of these assumptions was performed only after the regression model has been estimated.

The analysis of the residuals (the difference between the observed and predicted values for the DV) produced by the regression programs offer a simultaneous assessment of the assumptions of normality, linearity and homoscedasticity (Tabachnick & Fidel, 2013). The standardised residuals were plotted against the predicted values or the predictor variables. The residual scatterplots provided useful insights in examining and investigating the assumption violations for the overall relationship between the variables (Malhotra, 2010; Field, 2013). The assumptions and how they were tested for violations are discussed below.

Linearity of the phenomenon. The relationship between the IVs and the DV can be accurately estimated through multiple regression analysis only if the relationship is linear in nature. The linearity of the relationship between the two variables was explained by the degree to which the change in the DV is associated with the IV (Hair et al., 2010; Osbourne & Waters, 2002). In order to detect the linear relationship between variables the residual scatter plots were examined. If non-linearity was present the shape of the scatter plot would be curved (curvilinear pattern) instead of being rectangular, which indicates the non-linearity of the relationship between the IVs and the DV. An examination of the scatterplots showed that there exists an approximate linear relationship between the chosen the IVs, the MV and the DV, which is consistent with the assumptions of linearity of the phenomenon.

The above mentioned residual plots depicted the combined effects of all IVs chosen for the particular regression analysis. In order to assess the effects of the Individual variables on the chosen outcome variable partial regression plots were examined as suggested by Hair et al. (2010). Partial regression plots exhibited the relationship of a single IV to the chosen DV while the effects of all the other IVs were controlled. The relationships between the individual IVs and the DV for all the partial regression plots were examined. There were no curvilinear patterns observed. The line running through the centre of the points in these plots indicated that linear relationships exist among the variables.

Constant variance of the error term (homoscedasticity). Homoscedasticity is the assumption of equal variances that the DV exhibits across the range of predictor variables (Ho, 2006; Garson, 2012). Violation of this assumption was detected by examining the residual plots. The relationship between the variables is said to be heteroscedastic if the dispersion of the points in the residual scatter plot are unequal across the values of the predictor variable. If the data shows very obvious and significant departures from homogeneity, then heteroscedasticity will have significant adverse effects on the results (Kleinbaum, Kupper, Muller & Nizam, 1998). An examination of the residual plots showed that the residuals were spread over the predicted values of the dependent variable with very mild departures.

Independence of the error terms. The next assumption to be verified in regression analysis is that the predicted value is not correlated and sequenced by any

other variable, that is, the residual terms should be uncorrelated for any two observations (Field, 2013). It is assumed that each predicted value is independent (Ho, 2006). Violation of this assumption can be statistically detected using the Durbin-Watson Statistic (Durbin & Watson, 1950). This measure tests for the presence of serial correlations (correlations between adjacent residuals) among residuals. The value of the Durbin-Watson statistic ranges from 0 to 4. If the value is approximately 2, it indicates that the residuals are uncorrelated (Field, 2013). A value close to 0 indicates strong positive correlation, while a value of 4 indicates strong negative correlation. For all the regressions performed to test the framework, the value of the Durbin-Watson statistic was significantly closer to 2, indicating the independence of error terms.

Normality of the error term distribution. Two common methods were used to check for the assumption of normality of the residuals: a histogram with superimposed normal curve and a normal P-P Plot of the regression standardised residual (Cohen, Cohen, West & Aiken, 2003). The histogram that the standardized residuals produced with a super imposed normal curve appeared to be approximately normally distributed. In the normal P-P plot, if the residuals are normally distributed then the points will be aligned along the diagonal line. In reality, the points of the residuals will never be perfectly aligned along the 45 degree line. An examination of the normal probability plots of the standard residuals obtained from SPSS revealed that the residuals were reasonably close to the 45 degree line. Regression analysis is fairly robust to deviations from normality and hence the residuals need to be approximately normally distributed (Kleinbaum et al., 1998) for this assumption to hold in regression analysis.

Other Practical Considerations

According to Tabachnick and Fidell (2013), for regression analysis the ratio of cases to IVs and multicollinearity must be addressed apart from assessing for the violations of assumptions. These practical issues are discussed below.

Ratio of cases to IVs. Sample size is one of the most influential elements in designing multiple regression analysis. The cases-to-IV's ratio has to be substantial to use multiple regressions for analysis. The rule of thumb for the required sample size is $N \geq 50 + 8m$ (where m is the number of IVs) when the overall regression model fit is tested and $N \geq 104 + 4m$ when the individual predictors in the model are tested (Green, 1991). For this study both the overall regression model fit and the individual predictors

in the framework were tested. Hence both N values were calculated with an m value of 10 (number of predictors). The N values were 130 ($N \geq 50 + 8*10$) and 144 ($N \geq 104 + 40$) respectively. The size of the sample used in this research is 187, which is over and above the required minimum of 144. Hence the sample size is suitable for analysing multiple correlations among the variables and for testing individual predictors in the framework.

Hair et al. (2010) posited that sample size influences the generalizability of the results by the ratio of the observations to IVs. The desired level of the ratio between the observations and the IVs is between 15 to 20 observations per IV. There are 187 observations and 10 IVs in this research. Hence the ratio between the observations and the IVs is approximately 18:1 for this study, thereby meeting the requirement of sample size.

Multicollinearity. Multicollinearity exists when there are strong high intercorrelations among the IVs used in the regression model (Malhotra, 2012; Field, 2013). Hair et al., (2010) suggests that the presence of high correlations ($\geq .90$ and higher) between the variables is the primary indication of substantial collinearity. When the IVs are highly correlated, they overlap and share the predictive power thereby failing to provide a meaningful impact in predicting the DV.

A thorough scan of the correlation matrix of all predictor variables helps to identify multicollinearity. Multicollinearity exists if the correlations between the predictors are above .80 or .90 (Field, 2013; Hair et al., 2010). Multicollinearity among the IVs is directly measured through tolerance and VIF values. Tolerance is described by Hair et al. (2010) as the extent of the variability in an IV that is not explained by the other predictor variables. Values more than the threshold tolerance value of .10 indicate the absence of multicollinearity.

The other measure of multicollinearity is the Variance Inflation Factor (VIF). It indicates whether an independent variable has a strong linear relationship with the other independent variables (Field, 2013). VIF is computed as the inverse of tolerance or “1/tolerance”. Thus the threshold tolerance value of .10 corresponds to a VIF value of 10. A review of the collinearity diagnostics obtained from regression analysis (See tables 5.14, 5.15 and 5.16) indicated that all the tolerance values are $>.10$ and the VIF

values are within the cut-off value 10. Hence multicollinearity does not exist among the IVs used in the analysis.

The discussion below presents the criteria and the significance of choosing appropriate variables (IVs, DV and MV) for the regression analysis.

Choice of the IVs, DV and the MV for regression analysis. The choice of appropriate variables contributes to the success of any multivariate technique, including multiple regression analysis. Hair et al. (2010) suggested that strong theory, measurement error and specification error should always be considered while choosing the variables for the analysis. According to them, the selection of the suitable variables is influenced by strong conceptual or theoretical foundations. In this research, the fundamental decisions relating to the choice of all the variables in the conceptual framework were firmly based on theoretical premises, which were discussed in the chapter on literature review (Chapter Two).

Measurement error refers to the degree to which the observed scores or values are different from the true values of the variables being measured (Malhotra et al., 2012). Some degree of measurement error is assumed to be present in the variables used in any multivariate technique. However this error can be reduced by using multiple variables to measure a construct rather than depending on a single variable as a sole representation of the individual concepts (Hair et al., 2010). The summated scores of these measures were used to form composite variables that represent the constructs in the multivariate analysis. These scores portray complex constructs by assessing the different aspects of the measured concept. As suggested in literature, multiple measures were used to assess all the variables used in the analysis. The composite measures for the multiple variables underlying the constructs were obtained after assessing the unidimensionality of the measures through EFA.

In regression analysis specification error occurs when relevant variables are excluded from the set of IVs and irrelevant variables are included while estimating the model (Hair et al., 2010). Care was taken by the researcher to minimise this error. All the variables were deemed relevant based on strong theoretical background and hence were used in the analysis.

The above discussion presented the importance of choice of variables that were used in the applied multiple regression analysis. The estimation technique that was employed to specify the regression model is discussed below. Then, the regression analyses that were used to test the proposed conceptual framework are discussed and the results are presented

Estimating the Regression Model

The estimation technique that was employed in this research to estimate the regression model was stepwise regression. By using stepwise regression a small subset of variables that explains most of the variation in the dependent variable was obtained from a large number of predictor variables (Field, 2013). Thus it limits the number of predictors to a few that will make the most important contribution in explaining the variance in the DV.

In a stepwise regression the IVs are entered into the regression equation one at a time based on statistical criteria. The IV that has the highest absolute correlation with the DV and contributes the most to the DV in terms of increasing the multiple correlation coefficient is entered first in the analysis (Brown, 1974). In the next step, the variable entered will be the one with the next highest partial correlation (correlation between two variables when effects of other variables are removed) after accounting for the previously entered variable. This process is continued until the additional variables do not add anything statistically to the regression equation. The analysis stops when no additional predictor contributes to the regression equation. In SPSS, the stepwise method was selected to specify that the approach was used to estimate the regression model.

Testing the Conceptual Framework Using Stepwise Regression Analysis

As discussed earlier stepwise regression analysis was employed in this study to examine the relationships between the IVs and the DV. A hypothesised causal chain was also proposed and presented in the framework. Accordingly, based on the review of literature Customer Satisfaction (MV) was proposed as the mediating variable. It was hypothesised that Customer Satisfaction mediates the relationship between the IVs and DV (Firm Performance). The IVs included in the analysis are the composite measures of Relationship Marketing practices, Product practices, Distribution practices, Promotional practices, Market Research practices, Social Media practices,

Segmentation practices, Targeting practices and Positioning practices. Customer satisfaction is the MV and Firm Performance has been posited as the DV.

Four regression analyses were performed to test the conceptual framework (See fig 2.1) and the significance of the framework was examined after each analysis. First, the IVs were regressed against the DV; second, the IVs were regressed against the MV; third, the IVs and the MV was regressed against the DV and finally the MV was regressed against the DV. The analyses conducted are tabulated in table 5.14. Following on the results of the stepwise regression analysis are presented and discussed

Table 5.15
Multiple Regression Analysis

No	Analysis	Visual depiction
1	Conduct a regression analysis with the IVs predicting DV $X' = \alpha_1 + \beta_{i1}X_1 + \beta_{i2}X_2 + \dots + \beta_{in}X_n + e_1$	IVs \longrightarrow DV
2	Conduct a regression analysis with IVs predicting MV $Z' = \alpha_3 + \beta_{k1}X_1 + \beta_{k2}X_2 + \dots + \beta_{kn}X_n + e_3$	IVs \longrightarrow MV
3	Conduct a regression analysis with the IVs and MV predicting DV $Y' = \alpha_2 + \beta_{j1}X_1 + \beta_{j2}X_2 + \dots + \beta_{jn}X_n + e_2$	IVs & MV \Rightarrow DV
4	Conduct a simple regression analysis with MV predicting DV (MV is the IV in this step) $Y'' = \alpha_4 + \beta_{i1}X_1 + e_4$	MV \longrightarrow DV

Where

$\alpha_1, \alpha_2, \alpha_3$ & α_4 are the intercepts

X', Y', Z' & Y'' are the predicted values on the dependent variable

$X_1 \dots X_n$ represents the IVs of which there are n numbers

$\beta_{i1} \dots \beta_{in}, \beta_{j1} \dots \beta_{jn}, \beta_{k1} \dots \beta_{kn}$ and β_{i1} represents the regression coefficients

e_1, e_2, e_3 & e_4 are the error terms unexplained by the regression equation.

In the next section, the results of the regression analyses are presented and discussed. The tables (Table 5.15, 5.16, 5.17 and 5.18) present the unstandardized regression coefficients (B) and the intercept, the standardised regression coefficients (β), the t and the p (sig) values, and the collinearity statistics (Tolerance and VIF) from the results of the analysis.

Results of the Regression Analysis

In this section the results of the four regressions that were conducted to test the conceptual model is presented and the results are discussed.

Regression 1: A multiple regression analysis was conducted with the IVs predicting the DV

A regression analysis was performed between all the IVs and the DV. The IVs included in the analysis were: Relationship Marketing practices, Product practices, Distribution practices, Promotional practices, Market Research practices, Social Media practices, Segmentation practices, Targeting practices, Pricing practices and Positioning practices. Firm Performance was the DV.

The proposed framework with the DV (firm performance) regressed against all the IVs was statistically significant at $R^2 = .715$; adjusted $R^2 = .708$; $F(4,180) = 112.758$, $p < .001$. Almost 71% of the variance in Firm performance was explained by the IVs proposed in the framework. The results of the analysis are presented in table 5.14. As can be seen in the table, Product Practices, Relationship Marketing Practices, Positioning Practices and Promotional practices that are adopted by the ICT firms in India significantly influence Firm Performance in these firms.

Table 5.16

Regression 1: Coefficients^a, t and p values, tolerance and VIF

Model	B	Std. Err	β	t	Sig	Tolerance	VIF
(Constant)	.777	.251		3.093	.002		
Product practices	.396	.058	.430	6.824	.000*	.400	2.500
Relationship Marketing practices	.248	.060	.260	4.122	.000*	.400	2.503
Positioning practices	.132	.053	.150	2.494	.014**	.437	2.290
Promotion practices	.117	.049	.128	2.381	.018**	.549	1.822

a: Dependent variable: Firm Performance

*, **: significant at $p < .001$ and $p < .05$ respectively $R^2 = .715$; adjusted $R^2 = .708$

As can be seen, the values of β ranges from .128 to .430 indicating that a unit change in the respective IVs have a significant effect on the DV. Product practices has the highest t-value of 6.824; β value of .430 and is also highly significant at $p = .000$. Relationship Marketing has a t-value of 4.122; β value of .260 and is also highly significant at $p = .000$. Positioning practices (significant at $p < .05$) and Promotion practices (significant at $p < .05$) are also significant predictors of Firm performance with t-values of 2.494 and 2.381 and β values of .150 and .128 respectively. These IVs with high t-values are clearly the significant predictors of Firm performance.

The tolerance values of more than .1 and the VIF values less than 4 for all the variables indicate that multicollinearity does not exist between the IVs used in the analysis. The other IVs - Distribution practices, Market Research practices, Social Media practices, Segmentation practices, Targeting practices, Pricing practices and Positioning practices were not significant predictors of Firm Performance and hence were excluded from the stepwise regression analysis.

Regression 2: A multiple regression analysis was conducted with the IVs predicting the MV

In this regression, the MV- Customer Satisfaction was regressed against all the predictor variables using the Stepwise approach for estimating the regression model. The IVs included Relationship Marketing practices, Product practices, Distribution practices, Promotional practices, Market Research practices, Social Media practices,

Segmentation practices, Targeting practices, Pricing practices and Positioning practices. Customer Satisfaction was the DV. The results of this analysis are presented in Table 5.16.

The analysis yielded a statistically significant result at $p < .001$ ($F(6, 179) = 75.520$). R was significantly different from zero at the end of each step in the six step regression results. The adjusted value of $R^2 = .708$ indicates that approximately 71% of the variability in Customer Satisfaction in the ICT firms is influenced by six of the eight IVs chosen for this analysis.

Table 5.17

Regression 2: Coefficients^a, t and p values, tolerance and VIF

Model	B	Std. Err	β	t	Sig.	Tolerance	VIF
(Constant)	.560	.252		2.217	.028		
Relationship Marketing practices	.219	.066	.229	3.316	.001*	.333	3.005
Product practices	.190	.067	.206	2.833	.005*	.299	3.343
Targeting practices	.188	.045	.218	4.204	.000*	.591	1.692
Social Media practices	.089	.039	.117	2.280	.024**	.601	1.665
Positioning practices	.131	.054	.149	2.442	.016**	.427	2.340
Pricing practices	.102	.051	.124	1.993	.048**	.407	2.457

a: Dependent variable: Customer Satisfaction

*, **: significant at $p \leq .005$ and $p < .05$ respectively

$R^2 = .718$; adjusted $R^2 = .708$

A closer examination of the p values indicate that Relationship Marketing practices, Product practices, Targeting practices, Social Media practices, Positioning practices and Pricing practices significantly influence Customer Satisfaction. All six constructs have high β values ranging from .124 to .229. With a t-value of 4.204 and a β value of .218, Targeting practices are found to significantly influence customer satisfaction ($p = .000$). Relationship marketing has the next highest t-value of 3.316 and a β value of .229 indicating that it has a strong positive influence ($p = .001$) on Customer Satisfaction. A t-value of 2.833; β value of .206 and a p value of .005, indicate that Product practices of these ICT firms also significantly influence Customer satisfaction.

Interestingly, Social Media, which was introduced as a new construct in this research significantly influences customer Satisfaction. The t and the β values for this construct are 2.280 and .117 significant at $p < .05$. Positioning and Pricing are the other two constructs that significantly influence customer satisfaction at $p < .05$. Their t-values are 2.442 and 1.993; β values are .149 and .124 respectively. The collinearity statistics provided in the table (Table 5.17) indicate that multicollinearity does not exist between the variables. All tolerance values are greater than 0.1 and the VIF values are less than 4.

Regression 3: A multiple regression analysis was conducted with the IVs and the MV predicting the DV

A regression analysis was conducted to predict Firm Performance using all the IVs and the MV. Thus Relationship Marketing practices, Product practices, Distribution practices, Promotional practices, Market Research practices, Social Media practices, Segmentation practices, Targeting practices, Pricing practices, Positioning practices and Customer Satisfaction were included as the IVs in the analysis. The result of the stepwise regression is presented in table 5.18.

Table 5.18
Regression 3: Coefficients^a, t and p values, tolerance and VIF

Model	B	Std. Err	β	t	Sig	Tolerance	VIF
(Constant)	.632	.232		2.723	.007		
Customer Satisfaction	.407	.064	.407	6.379	.000*	.340	2.942
Product practices	.339	.054	.368	6.326	.000*	.409	2.446
Relationship Marketing practices	.166	.057	.174	2.924	.004**	.392	2.554

a: Dependent variable: Firm Performance
*, **: significant at $p < .001$ and $p < .005$ respectively
 $R^2 = .749$; adjusted $R^2 = .745$

The multiple regression model produced an R^2 value of .749; $F(3,181) = 180.347$ at $p < .001$ indicating that the model was statistically significant. Close to 75% (adjusted $R^2 = .745$) of the variance in Firm Performance was explained by the IVs and the MV that were included in the analysis. Three variables emerged as significant predictors of Firm Performance. With a t- value of 6.379 and a p value of .000, Customer Satisfaction was

the dominant influencer of Firm Performance in the ICT firms in India. Product practices adopted by these firms also significantly influence Firm performance with a higher t-value of 6.326 and a p value of .000). A t-value of 2.924, significant at $p < .005$ also indicated that Relationship Marketing practices strongly influences Firm Performance as well.

As can be seen, when Customer Satisfaction was introduced into the model, only three out of the eleven IVs predicted the regression model. All other IVs (including Distribution practices, Promotional practices, Market Research practices, Social Media practices, Segmentation practices, Targeting practices, Pricing practices and Positioning practices) were not significant predictors of Firm Performance and hence were excluded from the analysis. It can also be seen that there has been an increase in R^2 when Customer Satisfaction was introduced in the model. The value of R^2 with Customer Satisfaction was .749 (Table 5.18) and without Customer Satisfaction was .715 (Table 5.16). The Significance of R^2 changes when Customer Satisfaction is included in the model is presented below.

Significance of R^2 changes when Customer Satisfaction is included in the model. R^2 change or the increments in R^2 refers to the amount of R^2 increases when a variable is added to the model (Garson, 2012). To test R^2 increments, two regressions are run simultaneously, one with all the IVs (full model) and the other with the full model plus the additional variable. In this study, the first regression was run with the IVs and the second regression was run with the IVs and Customer Satisfaction (MV) also used as an IV. Firm Performance was regressed against both set of IVs. R^2 increments are tested by the F-incremental test using the formula,

$$F\text{-incremental} = \left\{ \frac{[(R^2_{with} - R^2_{without})/m]}{(1-R^2)/df} \right\}$$

Where,

m is the number of IVs in the new block with the added variable

$df = N-K-1$; N is the sample size; K is the number of IVs

The value for R^2 from the regression model without Customer Satisfaction was .715 as can be seen in Table 5.15 ($R^2_{without} = .715$). A regression conducted with the added variable Customer Satisfaction yielded a statistically significant model ($p=.000$) with an R^2 value of .749 ($R^2_{with} = .745$). The number of IVs, K is 10 and the m , the number of

IVs in the new block is 11. The sample size (N) is 187. Applying these values in the F – incremental equation

$$F\text{-incremental} = \left\{ \frac{[(.749 - .715)/11]}{(1 - .749)/(187 - 10 - 1)} \right\}$$

$$F\text{-incremental} = .0000699681$$

This significant F-incremental value indicates that there is a significant change in R² when Customer Satisfaction is added together with the IVs in predicting firm performance. The variable added significantly improved the prediction of the dependent variable and establishes Customer Satisfaction as the mediating variable in the framework (Garson, 2012).

Regression 4: A simple regression analysis with MV predicting DV

The final regression examined the influence of Customer Satisfaction (MV) on Firm Performance (FP). In this analysis Firm Performance was regressed against Customer Satisfaction. The overall model is significant at $p < .001$, $F(1, 185) = 353.741$ with a R² value of .657 and an adjusted R² value of .655. Table 5.18 presents the results of this bivariate regression analysis. Customer Satisfaction significantly predicts ($p < .001$) Firm performance. The β and the t values are the highest at .810 and 18.808 respectively.

Table 5.19
Regression 4: Coefficient^a, t and p values

Model	B	Std. Err	β	t	Sig.
(Constant)	1.175	.255		4.604	.000
Customer satisfaction	.810	.043	.810	18.808	.000

a: Dependent variable: Customer Satisfaction

*: significant at $p = .000$

R² = .657; adjusted R² = .655

The results of all these regressions indicate that the IVs significantly influence the DV; the IVs significantly influence the MV and the MV significantly influence the DV, as proposed in the conceptual model. In the next section mediation analysis is presented.

Mediation Analysis

In the proposed conceptual model Customer Satisfaction is posited as the mediating variable (See Figure 2.1). To assess the significance of the indirect effects of Customer Satisfaction in the mediation model, bootstrap method was adapted in this research. The following discussion explains mediators, a simple mediation model and presents the results of the mediation analysis investigated using the bootstrap method.

Mediation analysis explores the processes that underlie an observed relationship between a predictor variable and an outcome variable and examines how a third intervening variable, the mediator, exerts influence on the relationship (Valeri & VanderWeele, 2013). Mediators are variables that influence the association between the IVs and the DV and are considered as an indirect effect that specifies how the association occurs between the two variables (Tabachnick & Fidel, 2013; Bennett, 2000; MacKinnon et al., 2007). The inclusion of the mediating variable in a conceptual framework helps to understand the change in the outcome variable of interest by acknowledging the influence of the independent variable on the outcome variable through the intervening variable (MacKinnon et al., 2007).

Mediators are usually investigated when there is a statistically significant relationship between the IVs and the DV (Bennett, 2000). In this research, the results of the multiple regression analysis evidenced the significant relationship that exists between the identified Strategic Marketing practices (IVs) and Firm performance (DV) in the ICT firms in India. Customer Satisfaction was posited as the mediating variable. In order to explain the relationship between the predictor variables and the outcome variable through Customer Satisfaction mediation analysis was employed in this research. A simple mediation model is explained below.

Mediation Model

As discussed, mediation is a hypothesized causal chain, in which, one variable (Predictor variable or IV) affects a second variable, which in turn, influences a third variable (outcome variable or DV). Mediating variables intervenes in the association between the IVs and the DV. The occurrence of a simple mediation between three variables is shown in the mediation model that is presented in Figure 5.2 (a & b).

Figure: 5.2a

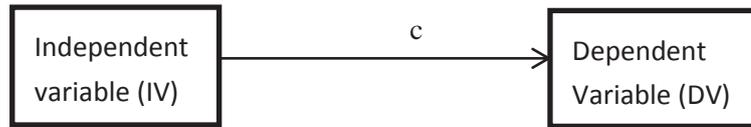


Figure: 5.2b

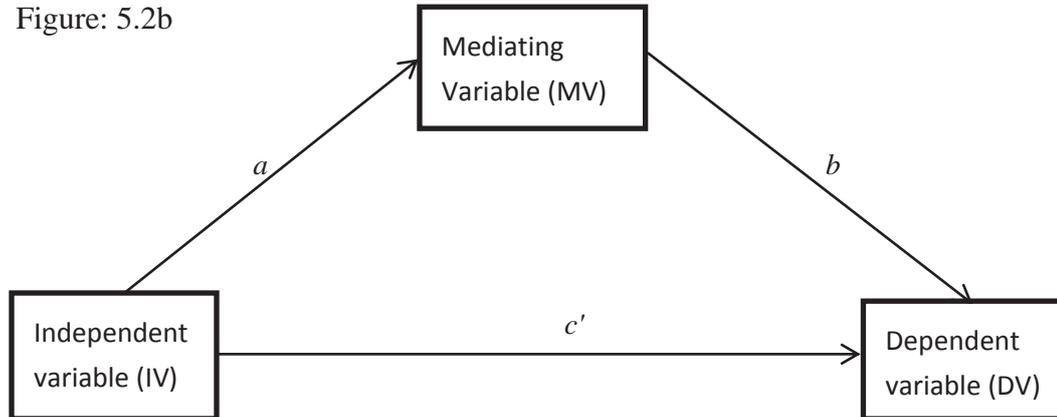


Figure: 5.2a. Illustration of the direct effect. IV affects DV;

Figure: 5.2b. Illustration of a mediation effect. IV affects DV through MV

In the above figure the hypothesized relations among the variables are depicted using path diagrams. Path c in figure: 5.2a is the total effect of the IV on the DV, without the mediator. Figure: 5.2b shows the indirect effect (path c') of the IV on the DV when the MV is introduced in the model.

Path a and path b in figure: 5.2b are the direct effects of the IV on the MV and the MV on the DV respectively. Direct effect indicates how a unit change in the IV will affect the DV. The mediational effect, c' (Figure 5.2b) in which the IV leads to the DV through M is called the indirect effect. The indirect effect represents the portion of the relationship that is mediated by the MV. The sum of the variable's direct effect and its indirect effect is the total effect on the outcome variable. An examination of the direct, indirect and the total effects will enhance the understanding of both the IVs and the MV on the outcome variable in the model.

In this research, the predictor variables are the composite measures of the Strategic Marketing practices that are adopted by the ICT firms in India. They are Relationship Marketing practices, Product practices, Distribution practices, Promotional practices, Market Research practices, Social Media practices, Segmentation practices, Targeting

practices, Pricing practices and Positioning practices. Customer Satisfaction is the MV and Firm Performance, the DV.

The first step in mediation analysis is to check for evidence of mediation between the IVs and the DV in the proposed conceptual model (See Figure 2.1). Mackinnon et al. (2007) recommend a statistical method to assess the presence of mediation in these relationships. First, the statistical significance of the relationship between the IVs and MV must be assessed. Then, the statistical significance of the relationship between the MV and the DV must be assessed. If both of these relationships are statistically significant, then there is evidence of mediation in the proposed model.

The regression analysis results presented in the previous sub-section evidenced the statistically significant relationships that exists between the IVs and the MV, and, the MV and the DV in the proposed conceptual model. In the relationship between the IVs and the DV, the model was significant at $F(6, 179) = 75.520, p < .001$. In the relationship between the MV and the DV, the model was significant at $F(1, 185) = 353.741, p < .001$. Both of these relationships were significant and hence it is concluded that there is a mediator effect in the proposed model. This also suggested that Customer Satisfaction (DV) mediates the relationship between the IVs and Firm Performance (DV) in the ICT firms in India.

There are various methods that are proposed in literature to assess whether a mediated effect is large enough to be considered as significant. Among the various methods used to assess the statistical significance of the indirect effects in the proposed model, the researcher used the resampling procedure called the bootstrap method. The use of the bootstrapping procedure to assess the significance of indirect effects is highly recommended over all the other methods (Preacher & Hayes, 2008; Mackinnon et al., 2007).

Bootstrapping for indirect effects has been discussed since the 1900s (Lockwood & Mackinnon, 1997; Bollen & Stine, 1990). This method is considered as a more valid and a powerful method for testing intervening variable effects in causal models (Hayes, 2009; Williams & MacKinnon, 2008). According to MacKinnon, Lockwood & Williams (2004), the bootstrap method offers a way to test the significance of the indirect effects and constructs confidence intervals in a wide variety of situations. This method is more accurate than other traditional methods as it does not impose any

assumptions as other tests. It is also found to have a higher power, while maintaining adequate control over Type I error rate (rejecting the null hypothesis when it is true) in the analysis.

In this research, the test of the mediation hypothesis was conducted using the online scripts and macros for SPSS that was provided by Preacher and Hayes (2008). The indirect, direct and total effects of the IVs on Firm Performance (DV) were calculated by running the scripts in SPSS. An indirect effect was considered to be significant if its 95% confidence intervals from 1000 bootstrap samples does not include zero. There are ten IVs in the conceptual model that was developed for this research. As suggested by Preacher and Hayes (2008) the macro was run ten times, each time with one of the IVs as the IV, Firm Performance as the DV, Customer Satisfaction as the MV and the other IVs as the covariates. The results of the analysis are presented and discussed below.

Results of the Mediation Analysis

As discussed, the bootstrap macro for SPSS was used in this research to estimate the direct, indirect and the total effects in the model. The results obtained are tabulated below. Those variables that have significant indirect effects on Firm Performance (DV) through Customer Satisfaction are highlighted in the table (Table 5.20).

Table 5.20
Results of the mediation analysis

	Total Effect	Direct Effect	Indirect Effect		
	Effect Size	Effect Size	Effect Size	LLCI ¹	ULCI ²
Relationship Marketing practices	0.201	0.122	0.079	0.018	0.186
Product practices	0.335	0.260	0.075	0.008	0.172
Positioning practices	0.137	0.089	0.048	-0.015	0.170
Targeting practices	0.005	-0.070	0.074	0.024	0.163
Social Media practices	0.005	-0.026	0.031	0.002	0.101
Pricing practices	0.060	0.030	0.031	-0.011	0.087
Distribution practices	0.009	0.023	-0.014	-0.041	0.000
Segmentation practices	0.007	0.010	-0.002	-0.047	0.044
Promotion practices	0.082	0.056	0.026	-0.027	0.099
Market research practices	0.073	0.054	0.020	-0.017	0.098

1: Lower Limit Confidence Interval; 2: Upper Limit Confidence Interval

A closer examination of Table 5.20 reveals those variables (IVs) that have a significant indirect effect on Firm Performance (DV). Customer Satisfaction (MV) influences the relationship between four predictor variables (Relationship Marketing practices, Product practices, Targeting practices and Social Media practices) and Firm performance. Even though Positioning practices, Pricing practices, Distribution practices, Segmentation practices, Promotion practices and Market Research practices exert an indirect effect of .048, .031, .014, .002, .026 and .020 respectively on Firm Performance, these effects are not statistically significant. The results with respect to the four IVs that significantly influence Firm Performance through Customer Satisfaction in the ICT firms in India are discussed below.

Discussion of the Results of the Mediation Analysis

In this section the results of the mediation analysis are discussed.

Relationship Marketing practices. The regression analysis results (Table 5.15) showed that the Relationship Marketing practices that are adopted by the ICT firms significantly influence Firm performance in these firms ($\beta = .260$, $t = 4.122$, $p = .000$). Also table 5.16 clearly shows the significant influence of the Relationship Marketing practices on Customer Satisfaction ($\beta = .229$, $t = 3.316$, $p < .005$). The results obtained through the bootstrap approach for this variable are shown in Table 5.18. The indirect effect of Relationship Marketing practices through Customer Satisfaction on Firm Performance is significant and is estimated to be .079 with a 95% bootstrap confidence interval of .018 to .186. This implies that Relationship Marketing practices adopted by the ICT firms in India not only influence Firm performance in these firms, but also significantly contribute to Firm Performance through Customer Satisfaction. As can be seen in the table (Table 5.18), the total effect of this IV on Firm Performance is .201 and the direct effect is .122, which are also significant.

Product practices. The regression results affirmed that the product practices employed by the ICT firms in India significantly contribute to Firm performance (DV) in these firms ($\beta = .430$, $t = 6.824$, $p = .000$). They also strongly influence Customer Satisfaction (MV) in these firms ($\beta = .206$, $t = 2.833$, $p = .005$). Mediation analysis supports the mediating influence of Customer Satisfaction in the relationship between the Product practices (IV) adopted by the ICT firms and Firm Performance (DV). The indirect effect of the Product practices on Firm Performance is significant and is

estimated as .075 with a bootstrap confidence interval of .008 and .172. The total effect is estimated to be 0.335 and the direct effect, .260. Both the total effect and the direct effect are highly significant.

Targeting practices. Regression analysis revealed that the targeting practices adopted by these ICT firms significantly influence Customer Satisfaction ($\beta = .218$, $t = 4.204$, $p = .000$). However, the targeting practices do not have a significant direct effect on Firm Performance. The indirect effect of this construct on Firm Performance was determined to be .074 with a 95% bootstrap confidence interval of 0.024 and 0.163, indicating that the indirect effect is statistically significant. The indirect effect of the Targeting practices on Firm Performance of the ICT firms through Customer Satisfaction is similar to the indirect effects of Relationship Marketing practices and Product practices adopted by these firms.

Social Media practices. This measure emerged as a new construct in exploratory factor analysis and is one of the significant results of this research. The items constituting this composite measure assessed the purposes for which Social Media is used by the ICT firms including using online networks: to facilitate endorsement of the firms' products/services by their customers; to explain their products and services to their customers and to build their firms' reputation. Through multiple regression analysis it was evidenced that these practices significantly contribute to Customer Satisfaction in the ICT firms in India ($\beta = .117$, $t = 2.280$, $p \leq .05$). Even though they do not have a significant direct effect on Firm Performance, mediation analysis clearly indicates that the Social Media practices contribute significantly to Firm Performance through Customer Satisfaction in these firms. The indirect effect has been estimated as .031 with a confidence interval between .002 and .101. This significant result also affirms the importance of including Social Media practices as a Strategic Marketing Management practice in the preliminary conceptual model that was proposed for this research.

Summary of the Data Analysis

Exploratory factor analysis conducted on the data set using principal axis factoring with promax rotation yielded ten distinct factors defining the IVs in the conceptual model. The factors are: Relationship Marketing practices, Product practices, Distribution practices, Promotion practices, Market Research practices, Social Media practices, Segmentation practices, Targeting practices, Pricing practices and Positioning

practices. The statistically significant factor loadings for all the variables ($>.32$) and communalities ($>.5$) suggested that the individual items were reliable measures of the extracted factors. High Cronbach's alpha values ($>.7$) also indicated that the items that loaded on to the factors are internally consistent. Analysis of the discriminant validity of these constructs also showed that these constructs are individually distinct and different from one another. The summated scores for these constructs were calculated and were used in further analysis.

In order to test the conceptual model that was proposed for this research, four regressions were performed. All regressions were statistically significant. Four out of the ten IVs were found to significantly influence Firm Performance in the ICT firms in India. They are Product practices ($t = 6.824$; $\beta = .430$; $p = .000$), Relationship Marketing practices ($t = 4.122$; $\beta = .260$; $p = .000$), Positioning practices ($t = 2.494$; $\beta = .150$; $p < .05$) and Promotion practices ($t = 2.381$; $\beta = .128$; $p < .05$). Six out of the ten IVs influenced Customer Satisfaction in these ICT firms. The IVs include Relationship marketing practices ($t = 3.316$; $\beta = .229$; $p < .005$), Product practices ($t = 2.833$; $\beta = .206$; $p = .005$), Targeting practices ($t = 4.204$; $\beta = .218$; $p = .000$), Social media practices ($t = 2.280$; $\beta = .117$; $p < .05$), Positioning practices ($t = 2.442$; $\beta = .149$; $p < .05$) and Pricing practices ($t = 1.993$; $\beta = .124$; $p < .05$). It is interesting to note that the new construct, Social Media (that was introduced in this research) emerged as a significant predictor of Customer Satisfaction in the ICT firms in India.

The results of the analysis also showed that Customer Satisfaction was the dominant influencer of Firm Performance in the ICT firms in India ($t = 6.379$; $\beta = .407$; $p = .000$) closely followed by Product practices ($t = 6.326$; $\beta = .368$; $p = .000$) and Relationship Marketing practices ($t = 2.924$; $\beta = .174$; $p < .005$). The significant F-incremental value indicated that there is a significant change in R^2 when Customer Satisfaction is added together with the IVs in predicting Firm Performance, suggesting the existence of the interaction effects in the proposed model. It was also established that Customer Satisfaction has a strong influence of on Firm Performance in the ICT firms in India ($t = 18.808$; $\beta = .810$; $p = .000$).

The highly recommended bootstrap method was employed in this research to assess the influence of the MV - Customer Satisfaction on the relationship between the Strategic Marketing practices adopted by the ICT firms in India and Firm Performance in these

firms. The results revealed that all ten practices have an indirect effect on Firm Performance through Customer Satisfaction in these firms. However the indirect effects of only four of the ten Strategic Marketing practices are statistically significant. The practices are Relationship Marketing practices, Product practices, Targeting practices and Social Media practices. The significant indirect effects of these practices are 0.079, 0.075, 0.074 and 0.031 respectively.

Revised Framework of the Strategic Marketing Practices of the ICT Firms in India

The revised framework that was developed based on the results that were obtained from regression analyses and mediation analysis is presented in figure 5.3. This includes those Strategic Marketing practices that had a significant direct and indirect influence on Firm Performance in the ICT firms in India. Thereafter the findings with respect to each of these various marketing practices are discussed.

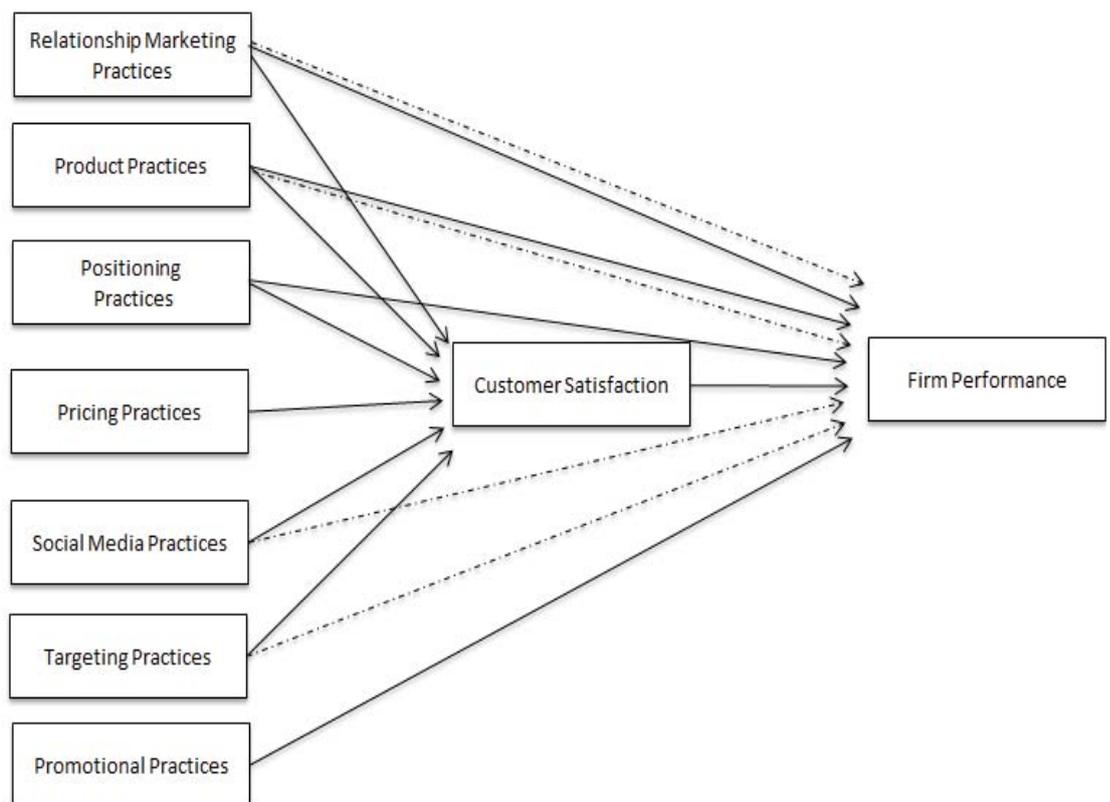


Figure.5.3. Revised framework of the Strategic Marketing Practices of the ICT firms and their influence on Firm Performance.

As can be seen in figure 5.3, Relationship Marketing practices, Product practices, Positioning practices and Promotional practices directly influence Firm Performance.

Relationship Marketing practices, Product practices, Positioning practices, Pricing practices, Social Media practices and Targeting practices directly influence Customer Satisfaction. The direct effect of these independent variables on Firm Performance and Customer satisfaction is shown by the solid lines between these constructs. The indirect effect of Relationship Marketing practices, Product practices, Social Media practices and Targeting practices on Firm Performance through Customer Satisfaction is shown by the dotted lines between these four practices and Firm Performance.

Relationship Marketing practices. Relationship Marketing practices adopted by the ICT firms in India were found to influence both Customer Satisfaction ($t= 3.316$; $p < .005$) and Firm Performance ($t= 4.122$; $p = .000$) as proposed in the conceptual framework. The composite measure of the Relationship Marketing practices included items assessing customer relationship orientation of the firms together with the three major dimensions of relationship marketing, *viz*, trust, commitment and communication (facilitated through Social Media). The results of the descriptive analysis also revealed that more than 70% of the respondents agreed to all the variables that were used to measure the Relationship Marketing practices adopted by these firms. The mean values (\bar{x}) for all the ten items ranged from 5.52 to 6.01.

Analysis for the mediating effects of Customer Satisfaction revealed that the MV influences the relationship between Relationship Marketing practices adopted by the ICT firms and Firm Performance. The indirect effect of Relationship Marketing practices through Customer Satisfaction on Firm Performance was significant and was estimated to be .079 with a 95% bootstrap confidence interval of .018 to .186. This implies that Relationship Marketing practices adopted by the ICT firms in India not only has a direct influence on Firm performance in these firms, but also has a significant indirect influence on Firm Performance through Customer Satisfaction.

Product practices. The seven items that loaded on to the construct “Product practices”. These product practices were found to significantly influence both Customer Satisfaction ($t = 2.833$; $p \leq .005$) and Firm Performance ($t = 6.824$; $p = .000$). The respondents showed high levels of agreement for all the seven items. The mean values (\bar{x}) for all the seven items ranged from 5.54 to 5.87.

The ICT firms in India adopt a unique set of Product practices which undoubtedly has a significant influence on Customer satisfaction and Firm performance. Mediation analysis using the bootstrap method evidenced the influence of Customer Satisfaction in the relationship between the Product practices (IV) adopted by the ICT firms and Firm Performance (DV). The indirect effect of the Product practices on Firm Performance was significant and was estimated as .075 with a bootstrap confidence interval of .008 and .172.

Positioning practices. The results of the regression analysis revealed that the Positioning practices adopted by the ICT firms in India significantly influence Customer Satisfaction ($t = 2.442$; $p \leq .05$) and Firm performance ($t = 2.494$; $p \leq .05$). More than 84% of the survey respondents agreed to the three items that assessed how the firms' customers are likely to perceive their firm as being different from competitors. The mean values (\bar{x}) for all the seven items ranged from 5.76 to 5.83. However, these practices do not have a significant indirect effect on Firm Performance through Customer Satisfaction.

Promotional practices. The promotional practices that are adopted by the ICT firms are found to influence Firm Performance of the firms ($t = 2.381$; $p \leq .05$). More than 75% of the survey respondents also showed their agreement for these items. The mean values (\bar{x}) for all the five items ranged from 5.61 to 5.98. The results of this study indicated that these promotional practices that are adopted by the Indian ICT firms do not significantly influence Customer Satisfaction in these firms. Also they do not exert a significant indirect effect on Firm Performance through Customer Satisfaction.

Targeting practices. Targeting practices adopted by the ICT firms are evidenced to influence Customer Satisfaction in these firms. The high t-value of 4.204, statistically significant at $p = .000$, indicated that the influence of targeting practices adopted by these firms on Customer Satisfaction is statistically significant. The mean values (\bar{x}) of 5.86 and 5.87 for the items also indicated that the respondents agreed that these practices are adopted by their firms.

The Targeting practices that are adopted by the ICT firms did not have a significant direct effect on Firm Performance. However, the indirect effect of this construct on Firm Performance was significant. The indirect effect on Firm Performance through

Customer Satisfaction was estimated to be .074 with a 95% bootstrap confidence interval of 0.024 and 0.163.

Social Media practices. The regression results revealed that the Social Media practices adopted by the ICT firms significantly influences Customer Satisfaction in these firms ($t = 2.280$; $p \leq .05$). A large proportion, more than 74% of respondents agreed to these items. The mean values (\bar{x}) ranging from 5.42 to 5.44 indicated that these Social Media practices are widely used by the ICT firms in India. Even though Social Media practices did not have a direct significant effect on Firm Performance, mediation analysis results clearly indicated that these practices contributed significantly to Firm Performance through Customer Satisfaction in the ICT firms. The bootstrap method estimated the indirect effect to be .031 with a confidence interval between .002 and .101.

Pricing practices. The pricing practices adopted by the ICT firms in India were found to influence Customer Satisfaction. The regression results yielded a statistically significant result ($t = 1.993$; $p \leq .05$). The mean values (\bar{x}) ranging from 5.49 to 5.81 indicated that the respondents agreed to the items influence the pricing decisions of the ICT firms in India. These Pricing practices neither have a direct significant influence on Firm Performance nor an indirect influence on Firm Performance through Customer Satisfaction.

The above discussion presented those Strategic Marketing Practices of the ICT firms that have significant influence on either Customer Satisfaction or Firm Performance in these firms. These Strategic Marketing Practices have been identified as the best practices in view of their significant influence on Customer Satisfaction (MV) and/or Firm Performance (DV).

Conclusion

This chapter presented the multivariate statistical techniques that were used to analyse the data. The data cleaning procedures, assumptions testing and the statistical techniques that were used to analyse the data were explained in this chapter. The results of the analyses were also elaborately discussed. Based on the results that were obtained from the regression analyses and mediation analysis, the revised framework of the Strategic Marketing Practices of the ICT firms and their influence on Firm Performance

was presented. In the next chapter, the contributions and the implications of this research study are presented and discussed.

CHAPTER SIX: CONTRIBUTIONS AND IMPLICATIONS OF THE RESEARCH

This final chapter begins with a brief overview of the research. Then the contributions and the implications of this research study are discussed. This chapter ends with the discussion of the limitations of this research and directions for future research.

Overview of the Research

The growth and diffusion of ICTs have been extensively recognised as key drivers for economic growth in most economies around the world. Over the last two decades the progress in ICTs has been astounding and the supply of digital computing and telecommunications has increased exponentially. In India, the ICT industry is one of the fastest growing industrial sectors. The development of the ICT sector in India particularly in the 21st century has placed the country as an emerging economy in the global arena. The new global technological infrastructure has increased the accessibility and the value of information and created economies of scale in this developing country.

Apart from the contribution of the ICT sector to the economic growth in India, this high technology sector has profoundly impacted the social, political, cultural, environmental, ethical and behavioural aspects of this nation. The ICT sector significantly influences productivity, employment generation, poverty reduction and foreign exchange earnings. Advancements in this high technology sector are identified as the core element for the development of a knowledge-based economy in this huge country.

Given the importance of these high technology firms to the economic development of the country it is surprising that there is limited literature on the marketing practices that are adopted by the ICT firms. The evident lack of research on ICT marketing paved the way for the study on the Strategic Marketing Practices of the ICT firms in India and its influence on Firm Performance. The aim of this research was to address this gap in the marketing literature by identifying the Strategic Marketing Practices of the ICT firms in India and to assess their influence on Firm Performance in these firms.

Thus the primary research question is:

How do the marketing practices adopted by the ICT firms in India contribute to firm performance?

The research objectives that were developed to answer this research question were:

1. To develop a conceptual framework of the Strategic Marketing Practices adopted by the ICT firms in India.
2. To identify the Strategic Marketing Practices of the ICT firms in India.
3. To assess the influence of these Strategic Marketing Practices on firm performance.
4. To establish a recommended best set of marketing practices for the ICT firms in India.

The current study was based on a survey of 187 ICT firms in India. All the respondents had access to the internet and hence the Web survey method of data collection was employed. A fixed alternative, structured questionnaire with multi-item Likert scales was used in the survey. A descriptive analysis of the collected data, including the means, frequencies and percentages was conducted and the results were discussed in Chapter Four. A conceptual framework for the study was developed based on the review of extant literature. The conceptual framework (figure 2.1) developed and proposed in chapter two was empirically tested using exploratory factor analysis, multiple regression analysis and mediation analysis. In the next section the summary of the results are presented.

In order to identify the Strategic Marketing Practices of the ICT firms in India, exploratory factor analysis was used in this study. Principal axis factoring with oblique rotation was employed to uncover the underlying structure among the measured variables in the analysis. The EFA yielded a factor solution of ten distinct factors comprising of 44 items. These ten discrete factors explained a total variance of 72% in the data. The factors were named after examining the nature of the items that loaded on to the individual factors. The identified factors were: Relationship Marketing practices, Product practices, Distribution practices, Promotion practices, Market Research practices, Social Media practices, Segmentation practices, Targeting practices, Pricing

practices and Positioning practices. The composite measures for all these constructs were calculated and were used in further analysis. The key findings of the EFA were elaborately discussed in chapter five.

In this research multiple regression analysis was used to assess the influence of the Strategic Marketing Practices on Firm Performance in the ICT firms in India. The multivariate statistical technique enabled the researcher to empirically test the conceptual framework that was proposed for this research. Also mediation analysis was used to assess the indirect effects of Customer Satisfaction in the framework.

The multiple regression analysis results showed that Relationship Marketing practices, Product practices, Positioning practices, Promotional practices and Customer Satisfaction have a significant direct influence Firm Performance in the ICT firms in India. Relationship Marketing practices, Product practices, Positioning practices, Pricing practices, Social Media practices and Targeting practices that are adopted by these firms directly influence Customer Satisfaction. Also Relationship Marketing practices, Product practices, Social Media practices and Targeting practices have a significant indirect effect on Firm Performance through Customer Satisfaction in the ICT firms.

The best set of Strategic Marketing Practices included those practices that have significant influence on Firm Performance of the firms in the ICT sector in India. The revised model based on the data analysis results is presented in figure 5.3 and is elaborated discussed in Chapter five. In the ensuing section, the contributions of this research study are presented.

Contributions of this Research

Understanding the marketing practices adopted by the ICT firms in India and their influence on firm performance is important for two major reasons. First, the ICT sector contributes significantly to the development of India, which is an emerging economy. Second, since 2001, there has been a revolutionary growth in the ICT sector in India. As per the International Data Corporation (IDC Report, 2013), the market size of the ICT sector in India is projected to reach US\$ 44.8 billion in 2014 as compared to US\$ 35.1 billion in 2012. Because the ICT sector plays a pivotal role in the development of the country, it is imperative that the strategic management practices that contribute to the success of these firms must be understood and developed.

As discussed in chapter two, the conceptual framework was developed from the review of extensive literature. The researcher sought to find if the proposed conceptual framework (See Figure 2.1) applies to the ICT firms in India. This research is unique as it examines the Strategic Marketing Practices of the ICT firms and its influence on Firm Performance in the Indian context. The contributions of this research are discussed below.

Contribution to Marketing Literature. This research offers significant advancement to the current literature both on marketing theory and practice. This study is among the first to empirically examine the Strategic Marketing Practices of the ICT firms in India and its influence on Firm Performance and thereby answers the call for more research into marketing practices of firms competing in diverse market and sector contexts (Palmer & Wilson, 2009; Brownlie, Saren, Wensley, & Whittington, 1999; Webster, 1992). This research fills this gap by profiling the Strategic Marketing Practices that were adopted by the ICT firms in India and developed an understanding of the influence of these practices on Firm Performance.

This result contributes to marketing literature in three major ways. First, the results support the theoretical perspective that was adopted for this research. It was proposed in chapter two that in order to understand the complete range of marketing practices that are adopted by the ICT firms, the theoretical framework must include the full spectrum of marketing types - both the Marketing Management perspective and the Relationship Marketing perspective (Fruchter & Sigue, 2005; Coviello et al., 2002; Pels, 1999). Therefore, an integrated approach was used to examine the transactional and relational practices that were adopted by the ICT firms in India. The findings of the factor analysis confirmed the use of both of these practices by the ICT firms. This result supports the theoretical arguments that both relational and transactional aspects of marketing must be considered to understand the dynamics of marketing practice in a given context.

Second is the inclusion of the Social Media construct in the conceptual framework as one of the strategic marketing practices. There is consensus in the marketing literature that the most successful firms in the current era will be those that effectively use information technology tools in their marketing strategy. Social Media is recognised as the latest information technology tool and very few studies have emerged which explore the intricate role of Social Media in marketing related activities (Rodriguez, Peterson &

Krishnan, 2012). The results of the research support the premise that Social Media practices form an integral part of the strategic marketing practices that were adopted by the firms in the ICT sector. Thus this study broadened the marketing scope in this digital age to include the technological advances to support marketing. The results identified the important dimensions pertaining to the use of Social Media as a Strategic Marketing Practice in the ICT firms in India.

Thirdly, this research addresses the gap in literature pertaining to the lack of empirical studies in the B2B market place in the Indian context in firms like ICT firms in particular (Singh & Seshadri, 2012; Sarin, 2012; Sharma, 2009). This study contributes to knowledge by exploring those Strategic Marketing Practices that are adopted by the ICT firms in India. Specifically, the study highlights those marketing practices that significantly influence Firm Performance in these firms. The results of this study also demonstrate marketing's influence on the overall business outcomes and returns so that the role of marketing in the high technology B2B firms in the ICT sector can be significantly strengthened.

Prior to 1991 the Indian market was highly regulated and in most cases demand for products exceeded the supply. Therefore the domestic suppliers largely operated in a sellers' market and were able to sell whatever they produced with little marketing effort (Neelamegham, 2008). It was the economic reforms introduced in 1991 that opened up the Indian economy to the global market and facilitated the entry of multinational firms in India. Competitive intensity increased in the Indian market forcing suppliers and producers to make radical changes both in respect of their production processes and in their approach to marketing. They were forced to move away from a production-led philosophy to adopting a more customer-oriented approach (Govindarajan, 2007).

Given this scenario, this research makes a significant contribution to the evolution of marketing in India. It took decades for the Marketing Management perspective to take shape and the Relationship Marketing Perspective to take root in the Western world. However this study validates the integration of these two approaches in the Indian market. Further, it is evident that marketers in the B2B market in India have been quick to adapt and implement these marketing practices in a relatively short span of time. In doing so the ICT firms have also done exceptionally well in the global market place.

Apart from the three contributions to marketing literature, the results of this research study also provided support for the conceptual framework that was proposed for this research. It is evident that the Strategic Marketing Practices that were adopted by the firms in the ICT sector in India influences Customer Satisfaction and Firm Performance. The value of the conceptual framework is in integrating the transactional and the relational approach, and inclusion of Social Media to Strategic Marketing Management literature. Thus a more comprehensive picture of the marketing practices have been identified and examined.

The present research also contributes to knowledge development by identifying measures for the marketing practices in ICT firms that researchers may use in future empirical research. The high Cronbach's alpha values for the measures confirmed their internal consistency. Reliability and validity of these measures have been established in this research.

Customer Satisfaction is a major outcome of marketing activities and the satisfaction of customer needs and wants positively influences Firm Performance. However, most of the empirical research supporting this proposition was conducted in the context of other countries and other industries. The current research extends the existing body of knowledge to include the ICT firms in the Indian context by providing incremental evidence in understanding how marketing practices enhances Customer Satisfaction which in turn influences Firm Performance.

In spite of the recognition that marketing is important for firms in the high technology sector and the marketing strategies adopted by the high technology firms are different, a review of literature revealed a gap in the understanding of the marketing practices adopted by these firms. According to Mohr and Shooshtari (2003, p.9) "the area of high-tech marketing continues to be an important, yet under-researched, area in the marketing discipline". The need for the relevant literature on marketing of high technology products and services is highlighted by researchers as there is a dearth of research in this area (Mohr et al., 2010; Uslay et al., 2004; Mohr & Shooshtari, 2003; Gardner et al., 2000; Boussouara & Deakins, 1999).

This research made a significant contribution to the body of knowledge in the field of high technology marketing literature as it identified the industry-specific marketing

practices of the ICT firms in India and their influence on Firm Performance. First, the research identified and examined the Strategic Marketing practices of a high technology industry. Second, firms in the ICT sector were found to adopt transactional, relational and Social Media marketing practices. Third, Social Media is effectively used by these firms as a marketing tool in itself and as a tool in supporting Relationship Marketing practices and Market Research practices in these firms. Fourth, the adopted marketing practices were found to significantly influence Customer Satisfaction and Firm Performance in these firms. Thus the research provided empirical evidence that enhances the understanding of marketing in high technology firms in general and ICT firms in particular.

Contribution to Social Media literature. Over the last decade, firms have increased access to a vast array of information through various new digital tools. As discussed in chapter two, Social Media has revolutionised the ways in which organisations relate to society and the market place. Social Media technologies have been accepted as part of the marketing strategy in many firms and were also recognised as an efficient marketing tool.

In spite of these claims there remains a gap in understanding the practical use of Social Media by business-to-business (B2B) firms (Jussila et al., 2011; Järvinen et al., 2012). The use of Social Media to reach their customers is a relatively new phenomenon and it is largely unexplored in literature (Schultz et al., 2012) as is literature that provides insight into the influence of Social Media on the Strategic Marketing Practices of firms in this sector.

The results of this research contributes towards addressing the gap in literature by providing an understanding of the actual use of Social Media for commercial purposes by the B2B firms in the ICT sector in India. It provides empirical evidence that Social Media is effectively utilised for marketing purposes in these firms. This research also makes a distinct contribution to the existing literature pertaining to Social Media. Social Media technologies have been found to empirically support other marketing practices including Relationship Marketing and Market Research. The Social Media practices that were adopted by these ICT firms significantly influenced Customer Satisfaction. The mediation analysis results revealed that these practices influence Firm Performance in these firms through Customer Satisfaction.

The importance of communicating and interacting with B2B customers to develop and maintain relationships through the use of Social Media is established in this research. Relationship Marketing literature posits communication as an integral element to enhance and maintain relationships with customers, especially in B2B firms. This research empirically establishes Social Media as an integral part of the firms' Relationship Marketing strategy. The information available through Social Media is also efficiently used by the ICT firms for market research purposes and is leveraged as part of their Market Research practices.

Thus this research is particularly relevant in terms of identifying the contribution of Social Media to marketing and ICT marketing literature. This empirical study is unique across high technology marketing discipline in the context of ICT firms to appraise the predictive relationships between Social Media, Customer Satisfaction and Firm Performance. Following on, the implications of this research are presented.

Implications of this Research

The empirical findings of the current research offer several implications for functional managers and marketers in the ICT firms, who strive to market their products and services to achieve their corporate objectives. This section presents the implications that are drawn from the research study. There are limited empirical studies that have examined the influence of these practices on Firm Performance in the high technology sector (O'Sullivan et al., 2009) and there is a strong drive for marketing accountability (Luo & Donthu, 2006; Rust et al., 2004) among the firms in the high technology sector.

The findings of this research indicate that the adoption of Strategic Marketing Practices in the ICT firms significantly influences Firm Performance and clearly demonstrates the effectiveness and the contribution of marketing practices to Firm Performance. Therefore marketing practitioners should focus on being more marketing-oriented than technologically-oriented and implement industry-specific Strategic Marketing Practices. Thus, this study provides diagnostic guidance for managers in the ICT sector who are exploring ways to enhance Customer Satisfaction and/or to improve Firm Performance.

Social Media practices. Practitioners need to encourage their firms to engage diligently in Social Media given the findings that it supports marketing practices in

firms. Firms in this sector should leverage Social Media to facilitate Relationship Marketing, Market Research and other Social Media practices.

Managers can efficiently use Social Media to build and maintain relationships through constant communication and interaction with customers. Social networking capabilities enable firms to generate market knowledge which facilitates firms to develop and deploy information (Heirati et al., 2013). Using Social Media is one of the cost effective means to reach a wider audience in the market. Further an online presence creates and enhances product and/or brand awareness and builds brand reputation. Thus, Social Media tools can be used strategically to complement the objectives of strategic marketing in these firms.

Social Media practices were found to significantly influence Customer Satisfaction in these firms thereby influencing Firm Performance. Therefore marketing practitioners should increasingly advocate the use of Social Media technologies to improve Firm Performance in their firms. In this digital era the unparalleled speed of information diffusion through Social Media undoubtedly improves and enhances the success of firms that take advantage of Social Media technologies. Hence it would be advisable for managers in ICT firms to prioritise and use various Social Media platforms along with other Strategic Marketing Practices to enhance Customer Satisfaction and increase Firm Performance.

Product practices. The importance of effective product strategies for the success of high technology firms cannot be overstated. The results of this research evidence the significant direct effect of the Product practices on Customer Satisfaction and Firm Performance and its significant indirect effect on Firm Performance through Customer Satisfaction.

High technology products are distinct and are an important element in marketing. Because of the unique nature of the ICT products/services and their importance it is imperative that practitioners adopt effective product strategies in their firms. Managers must develop competitive product platforms that can be customised to suit customer requirements. This also facilitates the development and introduction of a wider range of products that will cater to a wider range of customers. It is essential that they are open to

timely feedback from customers during the product development phase that will contribute to product improvements that, in turn, will lead to customer satisfaction.

Because of the rapid obsolescence of high technology products, practitioners in this sector must strive for continuous product innovation - either technological or design innovations. Since most of the products offered are unique to each customer the ICT firms must provide extensive customer support from product conceptualization to product delivery. Managers in these ICT firms need to recruit experts who are technically trained for developing and delivering products and services as per the customer requirements.

The ICT firms should also focus on providing niche based technological superiority. Focussing on a niche market will help them to understand their customers and their needs much better and give them the ability to stay engaged with the customers. The firms can establish themselves as the provider of technologically superior products to the narrowly segmented customers in these markets. ICT firms can also be a specialist shop by providing exclusive products/services to its customers. Adopting these Product practices will improve and enhance Firm Performance.

Relationship Marketing practices. Relationship marketing includes attracting, maintaining and enhancing customer relationships in firms. The results obtained in this research strongly demonstrate the importance of customer relationships in the ICT firms in India. The statistical results evidence the significant direct effect of Relationship Marketing practices on Customer Satisfaction and Firm Performance and its significant indirect effect on Firm Performance through Customer Satisfaction.

As discussed earlier, the three important elements of Relationship Marketing - trust, commitment and communication between the exchange partners were assessed in this research together with the customer relationship orientation in these firms. All four elements emerged as components of Relationship Marketing practices. Existing Relationship Marketing literature points out that retaining existing customer is more profitable, especially in the B2B sector. Hence managers and practitioners must put their efforts on being customer relationship orientated and to build trust and commitment with their customers through constant and consistent communication.

Promotional practices. This research empirically confirms that customers in the ICT sector respond to the promotional practices that are adopted by the ICT firms. The issue of getting more out of each promotional dollar is extremely important to marketing managers in ICT firms as these are usually considered as sunk costs in the high technology marketing environment. Promotional practices adopted by the firms have an enormous impact on sales (acquiring and retaining new customers) and brand loyalty. It is imperative that practitioners understand the effectiveness of the promotional practices and adopt them in their firms.

Targeting practices. Targeting the right customers is crucial for the planning and implementing successful marketing strategy. By targeting the right customers, firms will be able to match their capabilities with the needs of the customers, thereby increasing Customer Satisfaction (Easingwood & Koustelos, 2008). Firms in the ICT sector target those potential customers whose needs they are aware of and those customers with the potential of giving long term or downstream profit. It is obvious from these targeting practices that practitioners need to have a thorough knowledge about the needs of the targeted customers and focus on identifying and targeting customers who have the potential of giving the firm long term or downstream profit. These two targeting practices were found not only to significantly influence Customer Satisfaction, but also Firm Performance through Customer Satisfaction.

Positioning practices. The choice of the suitable positioning strategy in firms is central to the creation of a marketing strategy in firms (Blankson et al., 2008) as it dictates how a firm will compete in the market. The competitive position achieved by a firm is inimitable by competitors and thus becomes a source of sustainable competitive advantage, thereby influencing Firm Performance. The research clearly demonstrates the need and the importance of Positioning practices for the ICT firms. These practices were found to significantly influence Customer Satisfaction and Firm Performance.

This results suggests managers need to pursue the development and execution of effective Positioning strategies for the success of their firms. In this research, the ICT firms were found to position themselves as a firm which has a reputation within the industry, which has the winner image in the market and which provides extensive after sales support. In view of the volatile and challenging marketing environment of these high technology firms, managers should proactively emphasise positioning strategies,

persistently communicate them to the market and ensure that their efforts are consistent with the perceptions of the target market.

Pricing practices. The results of this research show that the Pricing practices that are adopted by the ICT firms influences Customer Satisfaction in the ICT firms. These include pricing decisions based on the cost incurred, profit objectives of the company and the uniqueness of the products and services. The first two items indicate that the managerial influence on pricing decisions in the ICT firms is more of a cost-plus pricing, which focusses more on immediate profit objectives rather than long term cash flows. However, because of the nature of the high technology products and market conditions, managers must also focus on long-term value creation (Pasura & Ryals, 2005).

In order to retain customers and to achieve long term downstream profit, managers should focus more on pricing for the value the product offers and/or the benefits that are provided along with the product/service offering (like brand, delivery, innovation, training, after sales support, on-going support) and/or the customer value in terms of the potential long term downstream profit. These value-based pricing strategies will facilitate customer retention and provide sustainable competitive advantage, which will enhance Firm Performance in the long run.

In the following sections the limitations of this research and the direction for future research are presented.

Limitations of this Research

This study provided relevant and interesting insights into the Strategic Marketing Practices adopted by the ICT firms in India and their influence on Firm Performance. However, it is important to note its limitations. The first limitation is regarding the study's geographical context. The data for this research were obtained from the ICT firms in India. The Strategic Marketing practices identified in this research are adopted by the ICT firms that exist in a marketing environment which is unique to India, where ICT contributes significantly to the economic development of the country. Therefore the results may not be generalisable to other country environments or other high technology industry segments.

In this research Customer Satisfaction was assessed from the firms' perspective as it was not practical to obtain information from all the customers of the firms who participated in the study. Also firms in the B2B sector seldom disclose information about their customers because of the confidentiality agreements. Even if data were obtained from customers, there are practical difficulties in marrying the two different sets of data obtained from the ICT firms and from their customers. In view of the complexities involved, Customer Satisfaction was measured from the firm's perspective.

In the current study, the measures for both the dependent and the independent exploratory variables were obtained from the same respondents. According to Chang, Witteloostuijn and Eden (2010), in any self-reported survey respondents have the inclination to provide consistent and rational responses to questions that are otherwise not related, resulting in biased correlations between variables. Thus these surveys were shown to be influenced by common method variance which either inflates or deflates the observed relationships between the constructs (Chang et al. 2010; Podsakoff & Organ, 1986).

The different constructs in this research were measured with similar scale formats (Likert scales) using identical seven-point scale anchors (1 = Strongly Disagree and 7 = Strongly Agree). In survey research literature, using identical scale formats and anchors were found to influence responses resulting in discrepancies between the measured and the true relationship between the variables, thus increasing the influence of common method variance (Tourangeau, Rips & Rasinski, 2000). Common method variance "is the variance that is attributable to the measurement method rather than to the constructs the measure represent" (Podsakoff, MacKenzie, Lee & Podsakoff, 2003, p.879).

Craighead, Ketchen, Dunn and Hult (2011) addressed the statistical remedies that can be applied in single source studies either to detect or to eliminate the presence of common method variance. The most commonly used test to control for common method variance is the Harman's single factor test (Harman, 1976). For this test all the variables are subjected to EFA. Substantial amount of common method variance is assumed to be present when either a single factor emerges from the EFA or one factor accounts for a majority of the variance explained (Podsakoff et al., 2003). In this research study, ten

factors emerged from the EFA and one factor did not account for the majority of the variance.

In order to reduce common method variance, the scale items were carefully constructed in this research as suggested by Tourangeau et al. (2000). By avoiding ambiguous items, keeping questions simple, specific and concise, and avoiding complicated syntax, the researcher made sure that the items can be easily comprehended and understood even in the stage of the response process. In addition, pilot study was conducted and the items were revised based on the feedback given by the respondents. These reasonable measures were taken in this research to deal with the common method bias. However it must also be acknowledged that time and budget constraints did not allow for a multi-method approach in the present study.

The other limitation pertains to the type of research design involved in collecting the information from the sample population. The data for this research were obtained from the sample only once and hence it is cross-sectional. A longitudinal approach is encouraged in future research endeavours. Longitudinal research designs will be particularly useful for capturing the causal relationship between the variables that are proposed in the model that was developed for this research.

Directions for Future Research

The current research provides a foundation for significant research endeavours to advance the field of study on the marketing practices of high technology products and services in general and ICT products and services in particular. Because this research study is the first of its kind the empirical results presented need to be understood as the initial findings of a study primarily aimed at modelling and conceptually validating the understanding of the Strategic Marketing Practices adopted by the firms in the ICT sector in India and its influence on Firm Performance.

The Strategic Marketing Practices identified in this research are adopted by the ICT firms that exist in a marketing environment which is unique to India, where ICT contributes significantly to the economic development of the country. Studies may also be conducted in other countries where the marketing environment, which is an intersection of the technological, competitive and market volatility, of the ICT firms

may significantly differ from that of India. The influence of these environmental factors on the strategic marketing practices adopted by these firms can also be examined.

Further research could investigate how this model may vary across other contexts, like other emerging economies and developed countries. Comparative studies between countries can also be conducted to understand the similarities and differences in the marketing practices adopted by the firms in the ICT sector. Studies may consider the impact of other variables including the size of the firms, the type of high technology products/services offered and the nature of the ownership, on the strategic marketing practices adopted by those firms.

In addition to the areas investigated in this research, the other components of the strategic marketing process including the environmental analysis, setting overall mission and specific objectives and strategic control and implementations procedures can be explored. Studies could also seek to examine the effect of these components of strategic marketing that were not covered in this study on the performance of these B2B firms.

Future research could also take a longitudinal approach to understand the influence of the marketing practices on Customer Satisfaction and Firm performance over time. Also, it would be useful to repeat this study across other industries such as life sciences, biotechnology and information technology hardware to test the wider validity of the theory across the entire high technology sector.

The findings of this research indicate that Social Media is being used as a marketing tool by itself and acts as a supporting tool to other marketing practices like Relationship Marketing and Market Research. It is also found to influence Customer Satisfaction and thereby Firm Performance in the ICT firms in India. Future research could attempt to examine individual social media approaches, for example, crowd sourcing and its contribution to the marketing practices in firms

Another avenue for future research is extending and confirming the results of this current research. Replication of this study in other contexts and in other high technology sectors is expected to yield a more comprehensive framework of the Strategic Marketing practices adopted by the firms in the high technology sector. Alternatively, a

qualitative and/or a mixed method study could provide deeper insights with the use of either interviews or focus groups.

Conclusion

The purpose of this research study was to understand the influence of the Strategic Marketing Practices adopted by the ICT firms in India on Firm Performance. The research findings supported the conceptual framework that was proposed for this research, thus providing empirical evidence to uphold the fact that the Strategic Marketing Practices adopted by the firms significantly influences Customer Satisfaction and Firm Performance. The model incorporated the full spectrum of marketing practices, which included the transactional and relational marketing activities. Social Media, the latest information technology tool was also incorporated into the model to understand the potential purposes for which Social Media tools are used by the ICT firms in India.

The empirical results provided useful theoretical and practical insights into the marketing practices adopted by these firms. The results also present many avenues to augment the development of marketing knowledge relevant to high technology products and services. With a more challenging and a complicated business environment, a greater number of national and international competitors and more knowledgeable business buyers, firms in the ICT sector need to leverage their Strategic Marketing Practices and capitalise on them in order to increase their Firms' performance.

REFERENCES

- Agariya, A. K., & Singh, D. (2011). What Really Defines Relationship Marketing? A Review of Definitions and General and Sector-Specific Defining Constructs. [Article]. *Journal of Relationship Marketing*, 10(4), 203-237. doi: 10.1080/15332667.2011.624905
- Agnihotri, R., Kothandaraman, P., Kashyap, R., & Singh, R. (2012). Bringing "Social" into Sales: The Impact of Salespeople's Social Media Use on Service Behaviors and Value Creation. [Article]. *Journal of Personal Selling & Sales Management*, 32(3), 333-348.
- Akar, E., & Topcu, B. (2011). An Examination of the Factors Influencing Consumers' Attitudes Toward Social Media Marketing. [Article]. *Journal of Internet Commerce*, 10(1), 35-67. doi: 10.1080/15332861.2011.558456
- Akgün, A. E., Lynn, G. S., & Byrne, J. C. (2004). Taking the guesswork out of new product development: how successful high-tech companies get that way. [Article]. *Journal of Business Strategy*, 25(4), 41-46. doi: 10.1108/02756660410547395
- American Marketing Association. (1985) AMA board approves new marketing definition. *Marketing news*, 19(5), 1
- Amonini, C., McColl-Kennedy, J. R., Soutar, G. N., & Sweeney, J. C. (2010). How professional service firms compete in the market: An exploratory study. [Article]. *Journal of Marketing Management*, 26(1/2), 28-55. doi: 10.1080/02672570903534662
- Analoui, F., & Karami, A. (2002). How chief executives' perception of the environment impacts on company performance. *Journal of Management Development*, March-April, 21(3-4), 290-306.
- Anderson, E. W. (1996). Customer Satisfaction and Price Tolerance. [Article]. *Marketing Letters*, 7(3), 265-274.

- Anderson, E. W., & Fornell, C. (2000). Foundations of the American Customer Satisfaction Index. [Article]. *Total Quality Management*, 11(7), 869-880.
- Anderson, E. W., Fornell, C., & Lehmann, D. R. (1994). Customer Satisfaction, Market Share, and Profitability: Findings From Sweden. [Article]. *Journal of Marketing*, 58(3), 53-66.
- Anderson, E. W., Fornell, C., & Mazvanchery, S. K. (2004). Customer Satisfaction and Shareholder Value. [research-article]. *The Journal of Marketing*, (4), 172-185. doi: 10.2307/30162024
- Anderson, E. W., Fornell, C., & Rust, R. T. (1997). Customer satisfaction, productivity, and profitability: Differences between goods and services. [Article]. *Marketing Science*, 16(2), 129-145.
- Anderson, J. C., & Gerbing, D. W. (1988). An updated paradigm for scale development incorporating unidimensionality and its assessment, *Journal of Marketing Research*, 25(2), 186 - 193.
- Anderson, E. W., & Sullivan, M. W. (1993). The Antecedents and Consequences of Customer Satisfaction for Firms. *Marketing Science*, 12(2), 125-143.
- Anderson, J. C., & Narus, J. A. (1990). A Model of Distributor Firm and Manufacturer Firm Working Partnerships. [Article]. *Journal of Marketing*, 54(1), 42-58.
- Andrews, D., Nonnecke, B., & Preece, J. (2003). Electronic survey methodology: A case study in reaching hard-to-involve Internet users. *International Journal of Human-Computer Interaction*, 16(2), 185-210. doi: 10.1207/s15327590ijhc1602_04
- Andzulis, J. M., Panagopoulos, N. G., & Rapp, A. (2012). A Review of Social Media and Implications for the Sales Process. [Article]. *Journal of Personal Selling & Sales Management*, 32(3), 305-316.
- Ansari, A., Mela, C. F., & Neslin, S. A. (2008). Customer Channel Migration. *Journal of Marketing Research*, 45(1), 60-76.

- Aral, S., Dellarocas, C., & Godes, D. (2013). Social media and business transformation: a framework for research. [Report]. *Information Systems Research*, 24(1), 3-14.
- Arndt, J. (1983). The Political Economy Paradigm: Foundation for Theory Building in Marketing. [Article]. *Journal of Marketing*, 47(4), 44-54.
- Arnett, D. B., & Badrinarayanan, V. (2005). Enhancing customer-needs--driven CRM strategies: Core selling teams, knowledge management competence, and relationship marketing competence. [Article]. *Journal of Personal Selling & Sales Management*, 25(4), 329-343.
- Arnott, D. C., & Bridgewater, S. (2002). Internet, interaction and implications for marketing. *Marketing Intelligence & Planning*, 20(2), 86-96.
- Arora, A., & Athreye, S. (2002). The software industry and India's economic development. [Article]. *Information Economics and Policy*, 14, 253-273. doi: 10.1016/s0167-6245(01)00069-5
- Ata, U. Z., & Toker, A. (2012). The effect of customer relationship management adoption in business-to-business markets. [Article]. *Journal of Business & Industrial Marketing*, 27(6), 497-507. doi: 10.1108/08858621211251497
- Australian Computer Society. (2013). Australian ICT Statistical Compendium. Retrieved from [https://www.acs.org.au/__data/assets/pdf_file/0004/28570/Australian - ICT-Statistical-Compendium-2013.pdf](https://www.acs.org.au/__data/assets/pdf_file/0004/28570/Australian-ICT-Statistical-Compendium-2013.pdf)
- Avlonitis, G. J., & Indounas, K. A. (2005). Pricing of Services: An Empirical Analysis from the Greek Service Sectors. [Article]. *Journal of Marketing Management*, 21(3/4), 339-362.
- Balasubramanian, S., Raghunathan, R., & Mahajan, V. (2005). Consumers in a multichannel environment: Product utility, process utility, and channel choice. [Article]. *Journal of Interactive Marketing (John Wiley & Sons)*, 19(2), 12-30. doi: 10.1002/dir.20032

- Barnett, V., & Lewis, T. (1994). *Outliers in statistical data / Vic Barnett and Toby Lewis*: Chichester; New York : Wiley & Sons, c1994. 3rd ed.
- Barry, J., & Weinstein, A. (2009). Business psychographics revisited: from segmentation theory to successful marketing practice. [Article]. *Journal of Marketing Management*, 25(3/4), 315-340.
- Bartels, R. (1951). Influences on the development of marketing thought, 1900-1923. [Article]. *Journal of Marketing*, 16(1), 1-17.
- Bayer, J. (2010). Customer Segmentation in the Telecommunications Industry. [Article]. *Journal of Database Marketing & Customer Strategy Management*, 17(3/4), 247-256. doi: 10.1057/dbm.2010.21
- Beard, C., & Easingwood, C. (1996). New product launch - Marketing action and launch tactics for high-technology products. *Industrial Marketing Management*, 25(2), 87-103. doi: 10.1016/0019-8501(95)00037-2
- Benkenstein, M., & Bloch, B. (1994). Strategic Marketing Management in Hi-tech Industries: A Stock-taking. *Marketing Intelligence & Planning*, 12(1), 15-21. doi: 10.1108/02634509410052603
- Berry, L. L. (1983). *Relationship Marketing*. Paper presented at the Emerging Perspectives on Services Marketing, Chicago, IL.
- Berry, M. M. J., & Taggart, J. H. (1998). Combining technology and corporate strategy in small high tech firms. [Article]. *Research Policy*, 26(7/8), 883-896.
- Berthon, P. R., Pitt, L. F., Plangger, K., & Shapiro, D. (2012). Marketing meets Web 2.0, social media, and creative consumers: Implications for international marketing strategy. [Article]. *Business Horizons*, 55, 261-271. doi: 10.1016/j.bushor.2012.01.007
- Bessom, R. M., & Jackson Jr, D. W. (1975). Service Retailing: A Strategic Marketing Approach. [Article]. *Journal of Retailing*, 51(2), 75-85.

- Bethlehem, J. (2010). Selection Bias in Web Surveys. *International Statistical Review*, 78(2), 161-188. doi: 10.1111/j.1751-5823.2010.00112.x
- Blankson, C., Cowan, K., Crawford, J., Kalafatis, S., Singh, J., & Coffie, S. (2013). A review of the relationships and impact of market orientation and market positioning on organisational performance. [Article]. *Journal of Strategic Marketing*, 21(6), 499-512. doi: 10.1080/0965254x.2013.804857
- Blankson, C., & Kalafatis, S. P. (2004). The Development and Validation of a Scale Measuring Consumer/ Customer-Derived Generic Typology of Positioning Strategies. [Article]. *Journal of Marketing Management*, 20(1/2), 5-43.
- Blankson, C., & Kalafatis, S. P. (2007). Positioning strategies of international and multicultural-oriented service brands. [Article]. *Journal of Services Marketing*, 21(6), 435-450. doi: 10.1108/08876040710818921
- Blankson, C., Kalafatis, S. P., Cheng, J. M.-S., & Hadjicharalambous, C. (2008). Impact of Positioning Strategies on Corporate Performance. [Article]. *Journal of Advertising Research*, 48(1), 106-122.
- Boehe, D. M., & Cruz, L. B. (2010). Corporate Social Responsibility, Product Differentiation Strategy and Export Performance. [research-article]. *Journal of Business Ethics*, 91, 325-346. doi: 10.2307/40929141
- Boles, J. (2000). Relationship selling behaviors: antecedents and relationship with performance. [Article]. *Journal of Business & Industrial Marketing*, 15(2/3), 141-154.
- Boles, J. S., Johnson, J. T., & Barksdale Jr, H. C. (2000). How Salespeople Build Quality Relationships: A Replication and Extension. [Article]. *Journal of Business Research*, 48(1), 75-81.
- Bonoma, T. V., & Shapiro, B. P. (1984). Evaluating Market Segmentation Approaches. [Article]. *Industrial Marketing Management*, 13(4), 257-268.
- Borden, N. H. (1964). The concept of the marketing mix. *Marketing management and administrative action*, 31-40.

- Boussouara, M., & Deakins, D. (1999). Market based learning, entrepreneurship and the high technology firm. *International Journal of Entrepreneurial Behaviour & Research*, 5(4), 204-223. doi: 10.1108/13552559910293173.
- Boyd, A. (2002). The goals, questions, indicators, measures (GQIM) approach to the measurement of customer satisfaction with e-commerce Web sites. *Aslib Proceedings*, 54(3), 177-187. doi: 10.1108/00012530210441728
- Brady, M., Saren, M., & Tzokas, N. (2002). Integrating information technology into marketing practice - the IT reality of contemporary marketing practice, 18(5-6), 555-577.
- Braunsberger, K., Wybenga, H., & Gates, R. (2007). A comparison of reliability between telephone and web-based surveys. *Journal of Business Research*, 60(7), 758-764. doi: 10.1016/j.jbusres.2007.02.015
- Brennan, R., & Croft, R. (2012). The use of social media in B2B marketing and branding: An exploratory study. [Article]. *Journal of Customer Behaviour*, 11(2), 101-115.
- Brooksbank, R. (1994). The anatomy of marketing positioning strategy. *Marketing Intelligence & Planning*, 4, 10-15.
- Brooksbank, R., & Taylor, D. (2002). The adoption of strategic marketing and its contribution to the competitive success of New Zealand companies. *Marketing Intelligence & Planning*, 20(7), 452-461.
- Brooksbank, R. W. (1991). Successful Marketing Practice: A Literature Review and Checklist for Marketing Practitioners. [Article]. *European Journal of Marketing*, 25(5), 20-30.
- Brouthers, L. E., & Xu, K. (2002). Product Stereotypes, Strategy and Performance Satisfaction: The Case of Chinese Exporters, *Journal of International Business Studies*, 33(4), 657-677.

- Bryman, A., & Cramer, D. (2011). *Quantitative data analysis with IBM SPSS 17, 18 and 19: a guide for social scientists / Alan Bryman and Duncan Cramer*: London: Routledge, 2011.
- Borghoff, T. (2011). The Role of ICT in the Globalization of Firms. *Journal of Modern Accounting and Auditing*, 7(10), 1128-1149.
- Cahill, D. J. (1997). Target marketing and segmentation: Valid and useful tools for marketing. [Article]. *Management Decision*, 35(1/2), 10-14.
- Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, 56(2), 81-105.
- Carpano, C., & Chrisman, J. J. (1995). Performance Implications of International Product Strategies and the Integration of Marketing Activities. [Article]. *Journal of International Marketing*, 3(1), 9-27.
- Cerny, C. A., & Kaiser, H.F. (1977). A study of a measure of sampling adequacy for factor-analytic correlation matrices. *Multivariate Behavioral Research*, 12(1), 43-47.
- Chaturvedi, A. (2005). Get customers involved in channel design. [Article]. *Marketing News*, 39(17), 45-45.
- Chang, S.-J., van Witteloostuijn, A., & Eden, L. (2010). From the Editors: Common Method Variance in International Business Research. *Journal of International Business Studies*, 41(2), 178-184.
- Chen, J.-s., Tsou, H. T., & Huang, A. Y.-h. (2009). Service delivery innovation: antecedents and impact on firm performance. *Journal of Service Research: JSR*, 12(1), 36-55.
- Chenet, P., Dagger, T. S., & O'Sullivan, D. (2010). Service quality, trust, commitment and service differentiation in business relationships. *The Journal of Services Marketing*, 24(5), 335-346.

- Cho, H.-J., & Pucik, V. (2005). Relationship between Innovativeness, Quality, Growth, Profitability, and Market Value. [research-article]. *Strategic Management Journal*, 26(6), 555-575. doi: 10.2307/20142249
- Churchill Jr, G. A. (1979). A Paradigm for Developing Better Measures of Marketing Constructs. [Article]. *Journal of Marketing Research (JMR)*, 16(1), 64-73.
- Churchill Jr, G. A., & Surprenant, C. (1982). An Investigation Into the Determinants of Customer Satisfaction. [Article]. *Journal of Marketing Research (JMR)*, 19(4), 491-504.
- Clark, B. H. (1999). Marketing Performance Measures: History and Interrelationships. [Article]. *Journal of Marketing Management*, 15(8), 711-732.
- Cobanoglu, C., Warde, B., & Moreo, P. J. (2001). A comparison of mail, fax and web-based survey methods. *International Journal of Market Research*, 43(4), 441-452.
- Cohen, J. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences / Jacob Cohen ... [et al.]*: Mahwah, N.J : L. Erlbaum Associates, 2003. 3rd ed.
- Cohen, C. (2011). Interconnections: Brand Reputation and Free Online Monitoring Tools. [Article]. *Franchising World*, 43(7), 18-19.
- Conant, J. S., Mokwa, M. P., & Varadarajan, P. R. (1990). Strategic Types, Distinctive Marketing Competencies and Organizational Performance: A Multiple Measures-Based Study. *Strategic Management Journal*, 11(5), 365-383.
- Conrad, F. G., & Schober, M. F. (2000). Clarifying Question Meaning in a Household Telephone Survey. [research-article]. *The Public Opinion Quarterly*, 64(1), 1-28. doi: 10.2307/3078838
- Constantinides, E. (2006). The Marketing Mix Revisited: Towards the 21st Century Marketing. [Article]. *Journal of Marketing Management*, 22(3/4), 407-438.

- Conway, J. M., & Huffcutt, A. I. (2003). A review and evaluation of exploratory factor analysis practices in organizational research. *Organizational Research Methods*, 6(2), 147-168.
- Copeland, M. T. (1923). Relation of consumers' buying habits to marketing methods. [Article]. *Harvard Business Review*, 1(3), 282-289.
- Costello, A. B., & Osborne, J. W. (2005). Best practices in exploratory factor analysis: four recommendations for getting the most from your analysis [computer file]. [Article]. *Practical Assessment, Research & Evaluation*, 10, 1-9.
- Couper, M. P. (2000). Review: Web Surveys: A Review of Issues and Approaches. [research-article]. *The Public Opinion Quarterly*, 64(4), 464-494. doi: 10.2307/3078739
- Coviello, N., Winklhofer, H., & Hamilton, K. (2006). Marketing Practices and Performance of Small Service Firms. [Article]. *Journal of Service Research*, 9(1), 38-58. doi: 10.1177/1094670506289533
- Coviello, N. E., & Brodie, R. J. (2001). Contemporary marketing practices of consumer and business-to-business firms: how different are they? [Article]. *Journal of Business & Industrial Marketing*, 16(5), 382-401.
- Coviello, N. E., Brodie, R. J., Danaher, P. J., & Johnston, W. J. (2002). How Firms Relate to Their Markets: An Empirical Examination of Contemporary Marketing Practices. [Article]. *Journal of Marketing*, 66(3), 33-46.
- Coviello, N. E., Brodie, R. J., & Munro, H. J. (2000). An investigation of marketing practice by firm size. *Journal of Business Venturing*, 15(5-6), 523-545. doi: [http://dx.doi.org/10.1016/S0883-9026\(98\)00035-4](http://dx.doi.org/10.1016/S0883-9026(98)00035-4).
- Cox, R., & Alderson, W. (1948). Towards a theory of marketing. [Article]. *Journal of Marketing*, 13(2), 137-152.
- Cravens, K., & Piercy, N. (2000). Assessing the Performance of Strategic Alliances: Matching Metrics to Strategies. [Article]. *European Management Journal*, 18(5), 529-542.

- Craighead, C. W., Ketchen Jr, D. J., Dunn, K. S., & Hult, G. T. M. (2011). Addressing Common Method Variance: Guidelines for Survey Research on Information Technology, Operations, and Supply Chain Management. [Article]. *IEEE Transactions on Engineering Management*, 58(3), 578-588. doi: 10.1109/tem.2011.2136437
- Creswell, J. W. (2009). *Research design: qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, California: Sage Publications.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16, 297-334.
- Cronin, J. J., Jr., Brady, M. K., & Hult, G. T. M. (2000). Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments. *Journal of Retailing*, 76(2), 193-218.
- Crook, T. R., Shook, C. L., Morris, M. L., & Madden, T. M. (2010). Are We There Yet? An Assessment of Research Design and Construct Measurement Practices in Entrepreneurship Research. [Article]. *Organizational Research Methods*, 13(1), 192-206. doi: 10.1177/1094428109334368
- Culliton, J. W. (1948). The management challenge of marketing costs. [Article]. *Harvard Business Review*, 26(1), 74-88.
- Dabholkar, P. A., Johnston, W. J., & Cathey, A. S. (1994). The Dynamics of Long-Term Business-to-Business Exchange Relationships. [Article]. *Journal of the Academy of Marketing Science*, 22(2), 130-145.
- Darlington, R. B. (1990). *Regression and linear models*. New York McGraw-Hill.
- Das, D. K., & Narayanan, K. (2005). Information and communication technology (ICT) and India's development: Achievements and challenges ahead. [Article]. *Journal of Services Research*, 93-108.
- David, W. C., Nigel, F. P., & Ashley, P. (2000). Developing market-driven product strategies. *Journal of Product & Brand Management*, 9(6), 369-388.

- Davies, W., & Brush, K. E. (1996). Managing product development in the high-tech industry. [Article]. *Industrial Management*, 38(1), 5-11.
- Davies, W., & Brush, K. E. (1997). High-Tech Industry Marketing: The Elements of a Sophisticated Global Strategy. [Article]. *Industrial Marketing Management*, 26(1), 1-13.
- Day, G. S. (2000). *Capabilities for forging customer relationships / George S. Day*: Cambridge, Mass: Marketing Science Institute, 2000.
- Day, G. S., & Montgomery, D. B. (1999). Charting New Directions for Marketing. *Journal of Marketing*, 63, 3-13.
- Day, G. S., & Wensley, R. (1983). Marketing Theory with Strategic Orientation. [Article]. *Journal of Marketing*, 47(4), 79-89.
- De Vaus, D. A. (2001). *Research design in social research*. London: Sage.
- Deans, K. R., Gray, B. J., Ibbotson, P., Osborne, P., & Knightbridge, K. (2003). Web Marketing Practices of Service Providers. [Article]. *Service Industries Journal*, 23(3), 82-102.
- Denscombe, M. (2009). Item non-response rates: a comparison of online and paper questionnaires. [Article]. *International Journal of Social Research Methodology*, 12(4), 281-291. doi: 10.1080/13645570802054706
- Dibb, S., & Simkin, L. (2008). *Market segmentation success : making it happen! / Sally Dibb, Lyndon Simkin*: New York : Haworth Press, c2008.
- Dibb, S., Stern, P., & Wensley, R. (2002). Marketing knowledge and the value of segmentation. *Marketing Intelligence & Planning*, 20(2), 113-120.
- Dickson, P. R., & Ginter, J. L. (1987). Market Segmentation, Product Differentiation, and Marketing Strategy. [Article]. *Journal of Marketing*, 51(2), 1-10.
- DiStefano, C., Zhu, M., & Mîndrilă, D. (2009). Understanding and Using Factor Scores: Considerations for the Applied Researcher. [Article]. *Practical Assessment, Research & Evaluation*, 14(20), 1-11.

- Dixit, A., Whipple, T. W., Zinkhan, G. M., & Gailey, E. (2008). A taxonomy of information technology-enhanced pricing strategies. [Article]. *Journal of Business Research*, 61(4), 275-283. doi: 10.1016/j.jbusres.2007.03.007
- Dixon, D. F. (2002). Emerging macromarketing concepts From Socrates to Alfred Marshall. [Article]. *Journal of Business Research*, 55(2), 87-95.
- Donaldson, S. I., & Grant-Vallone, E. J. (2002). Understanding Self-Report Bias in Organizational Behavior Research. [Author abstract]. *Journal of Business and Psychology*, 17(2), 245-261.
- Doyle, P., & Wong, V. (1998). Marketing and competitive performance: An empirical study. [Article]. *European Journal of Marketing*, 32(5/6), 397-535.
- Drucker, P. F. (1954). *The Practice of management*. New York: Harper and Row.
- Duffy, B., Smith, K., Terhanian, G., & Bremer, J. (2005). Comparing data from online and face-to-face surveys. *International Journal of Market Research*, 47(6), 615-639.
- Dunn, D., Hulak, J., & White, D. S. (1999). Segmenting high-tech markets: a value-added taxonomy. *Marketing Intelligence & Planning*, 17(4-5), 186-192.
- Durbin, J., & Watson, G. S. (1950). Testing for Serial Correlation in Least Squares Regression. *Biometrika*, 37(3-4), 409-428.
- Dutta, S., Narasimhan, O., & Rajiv, S. (1999). Success in High-Technology Markets: Is Marketing Capability Critical?. *Marketing Science*, 18(4), 547-568.
- Dwyer, F. R., Schurr, P. H., & Oh, S. (1987). Developing Buyer-Seller Relationships. [Article]. *Journal of Marketing*, 51(2), 11-27.
- Easingwood, C., & Koustelos, A. (2000). Marketing High Technology: Preparation, Targeting, Positioning, Execution. [Article]. *Business Horizons*, 43(3), 27-34.

- Easingwood, C., Moxey, S., & Capleton, H. (2006). Bringing high technology to market: Successful strategies employed in the worldwide software industry. *Journal of Product Innovation Management*, 23(6), 498-511. doi: 10.1111/j.1540-5885.2006.00220.x
- Easingwood, C. J., & Mahajan, V. (1989). Positioning of Financial Services for Competitive Advantage. *Journal of Product Innovation Management*, 6(3), 207-219.
- Egan, J. (2011). *Relationship Marketing: exploring relational strategies in marketing* (4th ed.). Harlow; New York: Financial Times, Prentice Hall.
- El-Ansary, A. I. (2006). Marketing strategy: taxonomy and frameworks. *European Business Review*, 18(4), 266-293.
- Evans, J. R., & Mathur, A. (2005). The value of online surveys. *Internet Research-Electronic Networking Applications and Policy*, 15(2), 195-219. doi: 10.1108/10662204510590360
- Fabrigar, L. R., & Wegener, D. T. (2012). *Exploratory factor analysis / Leandre R. Fabrigar and Duane T. Wegener*: Oxford ; New York : Oxford University Press, c2012.
- Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods*, 4(3), 272-299. doi: 10.1037/1082-989x.4.3.272
- Fernhaber, S. A., & Patel, P. C. (2012). How do young firms manage product portfolio complexity? The role of absorptive capacity and ambidexterity. *Strategic Management Journal*, 33(13), 1516-1539.
- Field, A. P. (2013). *Discovering statistics using IBM SPSS statistics : and sex and drugs and rock 'n' roll / Andy Field*: Los Angeles : Sage, c2013. 4th ed.
- Fisher, T. (2009). ROI in social media: A look at the arguments. [Article]. *Journal of Database Marketing & Customer Strategy Management*, 16(3), 189-195. doi: 10.1057/dbm.2009.16

- Fornell, C. (1992). A National Customer Satisfaction Barometer: The Swedish Experience. [Article]. *Journal of Marketing*, 56(1), 6-21.
- Fornell, C., Mithas, S., Morgeson, F. V., & Krishnan, M. S. (2006). Customer Satisfaction and Stock Prices: High Returns, Low Risk. [research-article]. *Journal of Marketing*, 70(1), 3-14. doi: 10.2307/30162069
- Fournier, S., & Mick, D. G. (1999). Rediscovering Satisfaction. [research article]. *Journal of Marketing*, 64(4), 5-23.
- Frambach, R. T., Prabhu, J., & Verhallen, T. M. M. (2003). The influence of business strategy on new product activity: The role of market orientation. [Article]. *International Journal of Research in Marketing*, 20, 377-397. doi: 10.1016/j.ijresmar.2003.03.003
- Freytag, P. V., & Clarke, A. H. (2001). Original article: Business to Business Market Segmentation. [Article]. *Industrial Marketing Management*, 30, 473-486. doi: 10.1016/s0019-8501(99)00103-0
- Fruchter, G. E., & Sigué, S. P. (2005). Transactions vs. Relationships: What Should the Company Emphasize? [Article]. *Journal of Service Research*, 8(1), 18-36. doi: 10.1177/1094670505276629
- Gabrielsson, P., & Gabrielsson, M. (2004). Globalizing internationals: Business portfolio and marketing strategies in the ICT field. [Article]. *International Business Review*, 13(6), 661-684. doi: 10.1016/j.ibusrev.2004.10.001
- Gabrielsson, P., Gabrielsson, M., Darling, J., & Luostarinen, R. (2006). Globalizing internationals: Product strategies of ICT manufacturers. [Article]. *International Marketing Review*, 23(6), 650-671. doi: 10.1108/02651330610712157
- Galbraith, C. S., Rodriguez, C. L., & DeNoble, A. F. (2008). SME Competitive Strategy and Location Behavior: An Exploratory Study of High-Technology Manufacturing. [Article]. *Journal of Small Business Management*, 46(2), 183-202. doi: 10.1111/j.1540-627X.2008.00239.x

- Galesic, M., Tourangeau, R., Couper, M. P., & Conrad, F. G. (2008). Eye-tracking data new insights on response order effects and other cognitive shortcuts in survey responding. *Public Opinion Quarterly*, 72(5), 892-913. doi: 10.1093/poq/nfn059
- Ganesan, S. (1994). Determinants of long-term orientation in buyer-seller relationships. [Article]. *Journal of Marketing*, 58(2), 1-19.
- Gardener, E., & Trivedi, M. (1998). A Communication Framework to Evaluate Sales Promotion Strategies. [Article]. *Journal of Advertising Research*, 38(3), 67-71.
- Garson, G. D. (2012). *Multiple Regression*. Asheboro, NC: Statistical Associates Publishers.
- Gartner. (2013). Retrieved from <http://www.gartner.com/technology/research/it-spending-forecast/>
- Garver, M. S. (2003). Best practices in identifying customer-driven improvement opportunities. [Article]. *Industrial Marketing Management*, 32(6), 455-467. doi: 10.1016/s0019-8501(02)00238-9
- Geho, P. R., & Dangelo, J. (2012). The evolution of social media as a marketing tool for entrepreneurs. [Article]. *Entrepreneurial Executive*, 17, 61-68.
- Gelfand, L. A., Mensinger, J. L., & Tenhave, T. (2009). Mediation analysis: a retrospective snapshot of practice and more recent directions. [Report]. *The Journal of General Psychology*, 136(2), 153-177.
- Gerhard, D., Brem, A., Baccarella, C., & Voigt, K.-I. (2011). Innovation Management and Marketing in the High-Tech Sector: A Content Analysis of Advertisements. [Article]. *International Journal of Management*, 28(1), 330-348.
- Germain, R., Dröge, C., & Daugherty, P. J. (1994). The Effect of Just-in-Time Selling on Organizational Structure: An Empirical Investigation. [Article]. *Journal of Marketing Research (JMR)*, 31(4), 471-483.

- Giarratana, M. S., & Fosfuri, A. (2007). Product strategies and survival in Schumpeterian environments: evidence from the US security software industry. *Organization Studies*, 28(6), 909-930.
- Gongming, Q., & Lee, L. (2003). Profitability of small- and medium-sized enterprises in high-tech industries: The case of the biotechnology industry. [Article]. *Strategic Management Journal*, 24(9), 881-887. doi: 10.1002/smj.344
- Gosling, S. D., & Johnson, J. A. (2010). *Advanced methods for conducting online behavioral research*. Washington, DC US: American Psychological Association.
- Govindarajan, V., & Trimble, C. (2012). Reverse innovation: a global growth strategy that could pre-empt disruption at home. *Strategy & Leadership*, 40(5), 5-11.
- Govindarajan, S. (2007). *Marketing Management: Concepts, Cases, Challenges and Trends* (2 Rev ed.): Prentice Hall of India.
- Griffith, D. A., & Rubera, G. (2014). A cross-cultural investigation of new product strategies for technological and design innovations. [Report]. *Journal of International Marketing*, 22(1), 5-20.
- Grønholdt, L., & Martensen, A. (2006). Key Marketing Performance Measures. [Article]. *Marketing Review*, 6(3), 243-252.
- Grönroos, C. (1990). Relationship Approach to Marketing in Service Contexts: The Marketing and Organizational Behavior Interface. [Article]. *Journal of Business Research*, 20(1), 3-11.
- Grönroos, C. (1994). Quo Vadis, Marketing? Toward a Relationship Marketing Paradigm. [Article]. *Journal of Marketing Management*, 10(5), 347-360.
- Grönroos, C. (1995). Relationship Marketing: The Strategy Continuum. [Article]. *Journal of the Academy of Marketing Science*, 23(4), 252-254.
- Grönroos, C. (1997). Value-driven Relational Marketing: from Products to Resources and Competencies. [Article]. *Journal of Marketing Management*, 13(5), 407-419.

- Gruca, T. S., & Rego, L. L. (2005). Customer Satisfaction, Cash Flow, and Shareholder Value. [Article]. *Journal of Marketing*, 69(3), 115-130.
- Grunenwald, J. P., & Vernon, T. T. (1988). Pricing decision making for hightechnology products and services. *Journal of Business & Industrial Marketing*, 3(1), 61-70.
- Grunow, D. (1995). The research design in organization studies - problems and prospects. [Article]. *Organization Science*, 6(1), 93-103. doi: 10.1287/orsc.6.1.93
- Gummesson, E. (1995). Services marketing and the interaction between quality, productivity and profitability. [Article]. *European Journal of Marketing*, 29(5), 77-79.
- Gummesson, E. (1997). Relationship marketing as a paradigm shift: Some conclusions from the 30R approach. [Article]. *Management Decision*, 35(3/4), 267-273.
- Gummesson, E. (2002). Practical value of adequate marketing management theory. [Article]. *European Journal of Marketing*, 36(3), 325-349.
- Gupta, S., & Zeithaml, V. (2006). Customer Metrics and Their Impact on Financial Performance. [Article]. *Marketing Science*, 25(6), 718-739.
- Hair, J. F. (2009). *Multivariate data analysis : a global perspective / Joseph F. Hair ... [et al.]*: Upper Saddle River, N.J. ; Harlow : Pearson Education, 2010. 7th ed.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Upper Saddle River, N.J.: Pearson Prentice Hall.
- Hair, J. F., Bush, R. P., & Ortinau, D. J. (2009). *Marketing research : in a digital information environment / Joseph F. Hair, Jr., Robert P. Bush, David J. Ortinau*: Boston : McGraw-Hill Irwin, c2009. 4th ed.
- Hair, J. F., Lukas, B. A., Miller, K. E., Bush, R. P., & Ortinau, D. J. (2008). *Marketing Research*. Australia: McGraw-Hill Irwin.
- Harker, M. J., & Egan, J. (2006). The Past, Present and Future of Relationship Marketing. [Article]. *Journal of Marketing Management*, 22(1/2), 215-242.

- Harman, H. H. (1976). *Modern factor analysis*: Chicago : University of Chicago Press, 1976, 3d ed., rev.
- Hart, S., & Diamantopoulos, A. (1993). Marketing Research Activity and Company Performance: Evidence from Manufacturing Industry. [Article]. *European Journal of Marketing*, 27(5), 54-72.
- Hayton, J. C., Allen, D. G., & Scarpello, V. (2004). Factor Retention Decisions in Exploratory Factor Analysis: A Tutorial on Parallel Analysis. *Organizational Research Methods*, 7(2), 191-205.
- Heirati, N., O'Cass, A., & Ngo, L. V. (2013). The contingent value of marketing and social networking capabilities in firm performance. *Journal of Strategic Marketing*, 21(1), 82-98.
- Herrmann, A., Lan, X., Monroe, K. B., & Huber, F. (2007). The influence of price fairness on customer satisfaction: an empirical test in the context of automobile purchases. [Article]. *Journal of Product & Brand Management*, 16(1), 49-48. doi: 10.1108/10610420710731151
- Hills, S. B., & Sarin, S. (2003). From market driven to market driving: An alternate paradigm for marketing in high technology industries. [Article]. *Journal of Marketing Theory & Practice*, 11(3), 13-24.
- Ho, R. (2006). *Handbook of univariate and multivariate data analysis and interpretation with SPSS*. Boca Raton Chapman & Hall/CRC.
- Homburg, C., & Fürst, A. (2005). How Organizational Complaint Handling Drives Customer Loyalty: An Analysis of the Mechanistic and the Organic Approach. [research-article]. *The Journal of Marketing*, 69(3), 95-114. doi: 10.2307/30162059
- Homburg, C., Kuester, S., Beutin, N., & Menon, A. (2005). Determinants of Customer Benefits in Business-to-Business Markets: A Cross-Cultural Comparison. [Article]. *Journal of International Marketing*, 13(3), 1-31.

- Hooley, G., Broderick, A., & Moller, K. (1998). Competitive positioning and the resource-based view of the firm. [Article]. *Journal of Strategic Marketing*, 6(2), 97-116.
- Hooley, G., & Greenley, G. (2005). The resource underpinnings of competitive positions. [Article]. *Journal of Strategic Marketing*, 13(2), 93-116. doi: 10.1080/09652540500082968
- Hooley, G., Greenley, G., Fahy, J., & Cadogan, J. (2001). Market-focused resources, competitive positioning and firm performance. *Journal of Marketing Management*, 17 (5/6), 503-520.
- Hooley, G. J., Greenley, G. E., Cadogan, J. W., & Fahy, J. (2005). The performance impact of marketing resources. *Journal of Business Research*, 58(1), 18-27. doi: 10.1016/s0148-2963(03)00109-7
- Hooley, G. J., Piercy, N., & Nicoulaud, B. (2012). *Marketing strategy & competitive positioning / Graham Hooley, Nigel F. Piercy, Brigitte Nicoulaud*: Harlow, England; New York : Pearson Financial Times/Prentice Hall, 2012. 5th ed.
- Hooley, G. J., Saunders, J. A., & Piercy, N. (2004). *Marketing strategy and competitive positioning / Graham J. Hooley, John A. Saunders, Nigel F. Piercy* (3rd ed.): Harlow, England ; New York : Prentice Hall Financial Times, 2004.
- Howard, P. E. N., Rainie, L., & Jones, S. (2001). Days and nights on the Internet - The impact of a diffusing technology. *American Behavioral Scientist*, 45(3), 383-404. doi: 10.1177/0002764201045003003
- Huber, F., Herrmann, A., & Wricke, M. (2001). Customer satisfaction as an antecedent of price acceptance: results of an empirical study. *Journal of Product & Brand Management*, 10(3), 160-168.
- Hui-Chih, W., & Her-Sen, D. (2010). Nine issues for Internet-based survey research in service industries. [Article]. *Service Industries Journal*, 30(14), 2387-2399. doi: 10.1080/02642060802644926

- Hutchings, C. (2012). Feature: Commercial use of Facebook and Twitter – risks and rewards. [Article]. *Computer Fraud & Security*, 2012, 19-20. doi: 10.1016/s1361-3723(12)70065-9
- Hung, H., & Wong, Y. H. (2007). Organisational Perception of Customer Satisfaction: Theories and Evidence. [Article]. *Service Industries Journal*, 27(4), 495-507. doi: 10.1080/02642060701346540
- Hunt, S. D. (1976). *Marketing theory : conceptual foundations of research in marketing / by Shelby D. Hunt*: Columbus, Ohio : Grid, c1976.
- Hunt, S. D. (1997). Competing Through Relationships: Grounding Relationship Marketing in Resource-Advantage Theory. [Article]. *Journal of Marketing Management*, 13(5), 431-445.
- Hunt, S. D., Arnett, D. B., & Madhavaram, S. (2006). The explanatory foundations of relationship marketing theory. *Journal of Business & Industrial Marketing*. 21(2), 72-87.
- Hunt, S. D., & Derozier, C. (2004). The normative imperatives of business and marketing strategy: grounding strategy in resource-advantage theory. *Journal of Business & Industrial Marketing*. 19(1), 5-22.
- Hunt, S. D., & Lambe, C. J. (2000). Marketing's contribution to business strategy: market orientation, relationship marketing and.... [Article]. *International Journal of Management Reviews*, 2(1), 17-44.
- Ilieva, J., Baron, S., & Healey, N. M. (2002). Online surveys in marketing research: pros and cons. *International Journal of Market Research*, 44(3), 361-376.
- Indounas, K. (2006). Making effective pricing decisions. [Article]. *Business Horizons*, 49(5), 415-424. doi: 10.1016/j.bushor.2006.02.003
- Intel. (2010). White Paper on The Economic Benefits of Strategic ICT spending. Retrieved from http://www.intel.com/Assets/PDF/whitepaper/Economic_Benefits_of_ICT_Spending.pdf

- Janek, R., & Michael, T. E. (2005). The Brand Capability Value of Integrated Marketing Communication (IMC), 25.
- Järvinen, J., Tollinen, A., Karjaluoto, H., & Jayawardhena, C. (2012). Digital and social media marketing usage in B2B industrial section. [Article]. *Marketing Management Journal*, 22(2), 102-117.
- Jaworski, B. J., & Kohli, A. K. (1993). Market Orientation - Antecedents and Consequences. *Journal of Marketing*, 57(3), 53-70. doi: 10.2307/1251854
- Jayachandran, S., Sharma, S., Kaufman, P., & Raman, P. (2005). The role of relational information processes and technology use in customer relationship management. *Journal of Marketing*, 69(4), 177-192. doi: 10.1509/jmkg.2005.69.4.177
- John, G., Weiss, A. M., & Dutta, S. (1999). Marketing in Technology-Intensive Markets: Toward a Conceptual Framework. [Article]. *Journal of Marketing*, 63(4), 78-91.
- Jonker, J., & Pennink, B. (2010). *The essence of research methodology : a concise guide for Master and PhD students in management science*. Berlin ; London: Springer.
- Kalwani, M. U., & Narayandas, N. (1995). Long-Term Manufacturer-Supplier Relationships: Do They Pay off for Supplier Firms? *Journal of Marketing*, 51(1), 1-16.
- Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. [Article]. *Business Horizons*, 53, 59-68. doi: 10.1016/j.bushor.2009.09.003
- Kaplan, S., & Sawhney, M. (2000). E-Hubs: The New B2B Marketplaces. (cover story). [Article]. *Harvard Business Review*, 78(3), 97-103.
- Kaplowitz, M. D., Hadlock, T. D., & Levine, R. (2004). A comparison of Web and mail survey response rates. *Public Opinion Quarterly*, 68(1), 94-101. doi: 10.1093/poq/nfh006

- Kaur, G., & Sharma, R. D. (2009). Voyage of marketing thought from a barter system to a customer centric one. *Marketing Intelligence & Planning*, 27(5), 567-614. doi: doi:10.1108/02634500910977845
- Kaynak, H., & Hartley, J. L. (2005). Exploring quality management practices and high tech firm performance. [Article]. *Journal of High Technology Management Research*, 16(2), 255-272. doi: 10.1016/j.hitech.2005.10.002
- Keiningham, T. L., Perkins-Munn, T., & Evans, H. (2003). The Impact of Customer Satisfaction on Share-of-Wallet in a Business-to-Business Environment. *Journal of Service Research*, 6(1), 37-50. doi: 10.1177/1094670503254275
- Khanna, V.K., Vrat, P., Shankar, R., Sahay, B.S. & Gautam, A. (2003), "TQM modeling of the automobile manufacturing sector: a system dynamics approach", *Work Study*, 52(2), 94-101.
- Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. [Article]. *Business Horizons*, 54, 241-251. doi: 10.1016/j.bushor.2011.01.005
- Keogh, W., & Evans, G. (1999). Strategies for growth and the barriers faced by new technology-based SMEs. *Journal of Small Business & Enterprise Development*, 5(4), 337-350.
- Kiernan, N., Kiernan, M., Oyler, M., & Gilles, C. (2005). Is a Web Survey as Effective as a Mail Survey? A Field Experiment Among Computer Users. *American Journal of Evaluation*, 26(2), 245-252.
- Kleinbaum, D. G., Kupper, L. L., Muller, K. E., & Nizam, A. (1998). *Applied regression analysis and other multivariable methods (3rd ed.)*. Belmont, CA, US: Thomson Brooks/Cole Publishing Co.
- Kline, P. (1994). *An easy guide to factor analysis / Paul Kline*: London ; New York : Routledge, 1994.

- Knight, G. (2000). Entrepreneurship and Marketing Strategy: The SME Under Globalization. [Article]. *Journal of International Marketing*, 8(2), 12-32.
- Knight, G. A., & Cavusgil, S. T. (2004). Innovation organizational capabilities and the born-global firm. [Article]. *Journal of International Business Studies*, 35(2), 124-141.
- Kohli, A. K., & Jaworski, B. J. (1990). Market orientation - The construct, research propositions, and managerial implications. *Journal of Marketing*, 54(2), 1-18. doi: 10.2307/1251866
- Kotler, P. (1967). *Marketing Management: Analysis, Planning, Implementation, and Control*. Englewood Cliffs, NJ: Prentice-Hall.
- Kotler, P. (1972). A Generic Concept of Marketing. [Article]. *Journal of Marketing*, 36(2), 46-54.
- Kotler, P. (2007). *Marketing / Philip Kotler ... [et al.]* (7th ed.): Frenchs Forest, NSW : Pearson/Prentice Hall, c2007
- Kotler, P., Armstrong, G., Saunders, J., & Wong, V. (2000). *Principles of Marketing*. 2nd Russian Ed: Moscow: Williams Publishing House.
- Kotler, P., & Keller, K. L. (2012). *Marketing management / Philip Kotler, Kevin Lane Keller* (14th ed.): Upper Saddle River, N.J. : Prentice Hall, c2012
- Kramer, W. J., Jenkins, B., & Katz, R. S. (2007). *The Role of Information and Communication Technology Sector in Expanding Economic Opportunity*. (No. 22). Cambridge, MA: Kennedy School of Government, Harvard University.
- Kuratko, D. F., Goodale, J. C., & Hornsby, J. S. (2001). Quality Practices for a Competitive Advantage in Smaller Firms. [Technical]. *Journal of Small Business Management*, 39(4), 293-311.
- Kuriyan, R., Ray, I., & Toyama, K. (2008). Information and Communication Technologies for Development: The Bottom of the Pyramid Model in Practice. [Article]. *Information Society*, 24(2), 93-104. doi: 10.1080/01972240701883948

- Lancioni, R. (2005). Pricing issues in industrial marketing. [Article]. *Industrial Marketing Management*, 34(2), 111-114. doi: 10.1016/j.indmarman.2004.07.009
- Langerak, F., Hultink, E. J., & Robben, H. S. J. (2004). The impact of market orientation, product advantage, and launch proficiency on new product performance and organizational performance. *Journal of Product Innovation Management*, 21(2), 79-94.
- Lawson-Body, A., Willoughby, L., & Logossah, K. (2010). Developing an instrument for measuring e-commerce dimensions. *Journal of Computer Information Systems*, 51(2), 2-13.
- Lee, S., Yoon, S. J., Kim, S., & Kang, J. W. (2006). The integrated effects of market-oriented culture and marketing strategy on firm performance. [Article]. *Journal of Strategic Marketing*, 14(3), 245-261. doi: 10.1080/09652540600825548
- Lehtinen, U. (2011). Combining mix and relationship marketing. [Article]. *Marketing Review*, 11(2), 117-136. doi: 10.1362/146934711x589363
- Levitt, T. (1960). Marketing Myopia. [Article]. *Harvard Business Review*, 38(4), 45-56.
- Levitt, T. (1986). *The Marketing Imagination*. New York: The Free Press.
- Lewin, J. E., & Johnston, W. J. (1997). Relationship Marketing Theory in Practice: A Case Study. [Article]. *Journal of Business Research*, 39(1), 23-31.
- Li, C. B., & Li, J. J. (2008). Achieving Superior Financial Performance in China: Differentiation, Cost Leadership, or Both? [Article]. *Journal of International Marketing*, 16(3), 1-22. doi: 10.1509/jimk.16.3.1
- Linton, I. (2012). *Taking technology to the market: A guide to the critical success factors in marketing technology / Ian Linton*: Burlington, VT: Gower, c2012.
- Little, R. J. A. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association*, 83(404), 1198-1202.

- Liu, X., & Wu, X. (2011). Technology embeddedness, innovation differentiation strategies and firm performance: Evidence from Chinese manufacturing firms. [Article]. *Innovation: Management, Policy & Practice*, 13(1), 20-35. doi: 10.5172/impp.2011.13.1.20
- Locke, S. (2004). ICT Adoption and SME Growth in New Zealand. [Article]. *Journal of American Academy of Business, Cambridge*, 4(1/2), 93-102.
- Luo, X., & Bhattacharya, C. B. (2006). Corporate Social Responsibility, Customer Satisfaction, and Market Value. [research-article]. *The Journal of Marketing*, 70(4), 1-18. doi: 10.2307/30162111
- Luo, X., & Homburg, C. (2007). Neglected Outcomes of Customer Satisfaction. [Article]. *Journal of Marketing*, 71(2), 133-149. doi: 10.1509/jmkg.71.2.133
- MacKinnon, D. P., & Fairchild, A. J. (2009). Current Directions in Mediation Analysis. [Article]. *Current Directions in Psychological Science (Wiley-Blackwell)*, 18(1), 16-20. doi: 10.1111/j.1467-8721.2009.01598.x
- MacKinnon, D. P., Fairchild, A. J., & Fritz, M. S. (2007). Mediation analysis. *Annual Review of Psychology*, 58, 593-614.
- MacKinnon, D. P., Lockwood, C. M., & Williams, J. (2004). Confidence Limits for the Indirect Effect: Distribution of the Product and Resampling Methods. *Multivariate Behavioral Research*, 39(1), 99-128.
- Makarem, S. C., Mudambi, S. M., & Podoshen, J. S. (2009). Satisfaction in technology-enabled service encounters. *Journal of Services Marketing*, 23(2-3), 134-143. doi: 10.1108/08876040910955143
- Malhotra, N. K. (2010). *Marketing research: an applied orientation* (6th ed.). Upper Saddle River, N.J.; London: Pearson Education.
- Malhotra, N. K. (2012). *Basic marketing research : integration of social media* (4th ed.). Boston: Pearson.

- Malhotra, N. K., Birks, D. F., & Wills, P. (2012). *Marketing research: an applied approach / Naresh K. Malhotra, David F. Birks, Peter Wills*: Harlow : Financial Times/Prentice Hall, 2012
- Malik, P., & Illavarasan, V. (2011). *Trends in Public and Private Investments in ICT R&D in India*. Luxembourg: European Union.
- Mangold, W. G., & Faulds, D. J. (2009). Social media: The new hybrid element of the promotion mix. [Article]. *Business Horizons*, 52(4), 357-365. doi: 10.1016/j.bushor.2009.03.002
- Marczyk, G., DeMatteo, D., & Festinger, D. (2005). *Essentials of research design and methodology*. Hoboken, NJ: John Wiley & Sons.
- Martin, W. S. (1973). The Effects of Scaling on the Correlation Coefficient: A Test of Validity. *Journal of Marketing Research (JMR)*, 10(3), 316-318.
- Martin-Consuegra, D., Molina, A., & Esteban, Á. (2007). An integrated model of price, satisfaction and loyalty: an empirical analysis in the service sector. [Article]. *Journal of Product & Brand Management*, 16(7), 459-468. doi: 10.1108/10610420710834913
- Matear, S., Gray, B. J., & Garrett, T. (2004). Market orientation, brand investment, new service development, market position and performance for service organisations. [Article]. *International Journal of Service Industry Management*, 15(3), 284-301. doi: 10.1108/09564230410540944
- Mazzarol, T., & Soutar, G. N. (1999). Sustainable competitive advantage for educational institutions: a suggested model. [Article]. *International Journal of Educational Management*, 13(6), 287-300. doi: 10.1108/09513549910294496
- McCarthy, E. J. (1960). *Basic Marketing: A Managerial Approach*. Homewood, IL: Irwin.
- McDaniel, C. D., & Gates, R. H. (2010). *Marketing Research Essentials (7th ed.)*. Hoboken, N.J: John Wiley & Sons.

- McDonald, M., & Dunbar, I. (1995). *Market segmentation : A step-by-step approach to creating profitable market segments / Malcolm McDonald and Ian Dunbar ; foreword by Sir Colin Marshall*: Basingstoke: Macmillan Business, 1995.
- McDonald, M., & Dunbar, I. (2013). *Market segmentation : How to do it and how to profit from it / Malcolm McDonald and Ian Dunbar* (Rev. 4th ed.): Chichester : John Wiley & Sons, c2013
- McDougall, G. H. G., & Levesque, T. (2000). Customer satisfaction with services: putting perceived value into the equation. *Journal of Services Marketing*, 14(4/5), 392.
- McGarry, E. D. (1953). Some new viewpoints in marketing, Editorial, *Journal of Marketing*, 33-40. Retrieved from <http://ezproxy.massey.ac.nz/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=6874693&site=eds-live&scope=site>
- McGrath, M. E. (1995). Product Strategy for High-technology Companies. [Article]. *Research Technology Management*, 38(4), 59-65.
- McKenna, R. (1985). Market Positioning in High Technology. *California Management Review*, 27(3), 82-108.
- Meldrum, M. J. (1995). Marketing high-tech products: the emerging themes. [Conceptual Paper]. *European Journal of Marketing*, 29(10), 45-48. doi: 10.1108/03090569510098492
- Meyers, L. S., Gamst, G., & Guarino, A. J. *Applied multivariate research: design and interpretation* (2nd ed.). Thousand Oaks, Calif. : SAGE Publications.
- Ministry of Business, Innovation and Employment. (2013). Annual Report 2012/13. Retrieved from <http://www.mbie.govt.nz/about-us/publications/Annual-report/annual-report-2013.pdf>
- Ministry of Statistics & Programme Implementation, India. (2011). Value Addition and Employment Generation in the ICT Sector in India. Retrieved from http://mospi.nic.in/mospi_new/upload/val_add_ict_21june11.pdf

- Mittal, V., Anderson, E. W., Sayrak, A., & Tadikamalla, P. (2005). Dual emphasis and the long-term financial impact of customer satisfaction. *Marketing Science*, 24(4), 544-555.
- Mittal, V., & Kamakura, W. A. (2001). Satisfaction, Repurchase Intent, and Repurchase Behavior: Investigating the Moderating Effect of Customer Characteristics. *Journal of Marketing Research*, 38(1), 131-142.
- Moen, O., Endresen, I., & Gavlen, M. (2003). Executive insights: Use of the Internet in international marketing: A case study of small computer software firms. *Journal of International Marketing*, 11(4), 129-149. doi: 10.1509/jimk.11.4.129.20146
- Moen, O., Madsen, T. K., & Aspelund, A. (2008). The importance of the internet in international business-to-business markets. *International Marketing Review*, 25(5), 487-503. doi: 10.1108/02651330810904053
- Mohr, J. (2000). The Marketing of High-Technology Products and Services: Implications for Curriculum Content and Design. [Article]. *Journal of Marketing Education*, 22(3), 246-260.
- Mohr, J. (2005). *Marketing of high-technology products and innovations*: Pearson Education.
- Mohr, J., Slater, S., & Sengupta, S. (2010). *Marketing of High-Technology products and innovations*. (3rd ed.). New Jersey: Upper Saddle River, Prentice Hall.
- Mohr, J. J., & Sarin, S. (2009). Drucker's insights on market orientation and innovation: implications for emerging areas in high-technology marketing. [Essay]. *Journal of the Academy of Marketing Science*, 37(1), 85-96.
- Mohr, J. J., & Shooshtari, N. H. (2003). Introduction to the special issue: Marketing of high-technology products and innovations. [Article]. *Journal of Marketing Theory & Practice*, 11(3), 1-12.
- Möller, K., & Halinen, A. (2000). Relationship Marketing Theory: Its Roots and Direction. [Article]. *Journal of Marketing Management*, 16(1-3), 29-54.

- Moncrief, W. C., & Cravens, D. W. (1999). Technology and the changing marketing world. *Marketing Intelligence & Planning*, 17(7), 329-332.
- Moore, D. S., & McCabe, G. P. (2002). *Introduction to the practice of statistics / David S. Moore, George P. McCabe* (4th ed.): New York: W.H. Freeman and Co., 2002
- Moore, G. C., & Benbasat, I. (1991). Development of an Instrument to Measure the Perceptions of Adopting an Information Technology Innovation. [Article]. *Information Systems Research*, 2(3), 192-222.
- Moorman, C. (1995). Organizational Market Information Processes: Cultural Antecedents and New Product Outcomes. [Article]. *Journal of Marketing Research (JMR)*, 32(3), 318-335.
- Moorman, C., Zaltman, G., & Deshpande, R. (1992). Relationships Between Providers and Users of Market Research: The Dynamics of Trust Within and Between Organizations. [Article]. *Journal of Marketing Research (JMR)*, 29(3), 314-328.
- Morash, E. A. (2001). Supply Chain Strategies, Capabilities, and Performance. [Article]. *Transportation Journal (American Society of Transportation & Logistics Inc)*, 41(1), 37-54.
- Morgan, N. A., Anderson, E. W., & Mittal, V. (2005). Understanding Firms' Customer Satisfaction Information Usage. [research-article]. *The Journal of Marketing*, 69(3), 131-151. doi: 10.2307/30162061
- Morgan, R. E., Strong, C. A., & McGuinness, T. (2003). Product-market positioning and prospector strategy: An analysis of strategic patterns from the resource-based perspective. [Article]. *European Journal of Marketing*, 37(10), 1409-1439. doi: 10.1108/03090560310487176
- Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58(3), 20-38. doi: 10.2307/1252308
- Moriarty, R. T., & Thomas, J. K. (1989). High-Tech Marketing: Concepts, Continuity, and Change. [Article]. *Sloan Management Review*, 30(4), 7-17.

- Myers, M. B., & Harvey, M. (2001). The Value of Pricing Control in Export Channels: A Governance Perspective. [Article]. *Journal of International Marketing*, 9(4), 1-29.
- Narus, J. A., & Anderson, J. C. (1996). Rethinking distribution: adaptive channels. *Harvard Business Review* (4), 112-121.
- National Association of Software and Services Companies, India. (2013). Indian IT-BPO Industry. Retrieved from <http://www.nasscom.in/impact-indias-growth>
- Naudé, P., & Holland, C. P. (2004). The role of information and communications technology in transforming marketing theory and practice. [Article]. *Journal of Business & Industrial Marketing*, 19(3), 165-166.
- Naylor, R. W., Lamberton, C. P., & West, P. M. (2012). Beyond the "Like" Button: The Impact of Mere Virtual Presence on Brand Evaluations and Purchase Intentions in Social Media Settings. [Article]. *Journal of Marketing*, 76(6), 105-120.
- Ndubisi, N., Malhotra, N. K., & Chan, K. W. (2009). Relationship Marketing, Customer Satisfaction and Loyalty: A Theoretical and Empirical Analysis From an Asian Perspective. [Article]. *Journal of International Consumer Marketing*, 21(1), 5-16. doi: 10.1080/08961530802125134
- Neal, W. D., & Wurst, J. (2001). Advances in Market Segmentation. [Article]. *Marketing Research*, 13(1), 14-18.
- Neelamegham, S. (2012). *Marketing in India, Cases and Readings* (Fourth ed.): Vikas Publishing House.
- Negi, R., & Ketema, E. (2010). Relationship marketing and customer loyalty: The Ethiopian mobile communications perspective. [Article]. *International Journal of Mobile Marketing*, 5(1), 113-124.
- Net!works. (2012). White Paper on Economic Impact of the ICT sector. Retrieved from http://www.networksetp.eu/fileadmin/user_upload/Publications/Position_White_Papers/Net_Works_White_Paper_on_economic_impact_final.pdf

- Nicovich, S. G., Dibrell, C. C., & Davis, P. S. (2007). Integration of Value Chain Position and Porter's (1980) Competitive Strategies into the Market Orientation Conversation: An Examination of Upstream and Downstream Activities. [Article]. *Journal of Business & Economic Studies*, 13(2), 91-106.
- Nunnally, J. C. (1978). *Psychometric theory / Jum C. Nunnally*: New York: McGraw-Hill, c1978
- O'Regan, N., & Sims, M. A. (2008). Identifying high technology small firms: A sectoral analysis. [Article]. *Technovation*, 28, 408-423. doi: 10.1016/j.technovation.2008.02.010
- Oakey, R. (1991). High Technology Small Firms: Their Potential for Rapid Industrial Growth. *International Small Business Journal*, 9(4), 30-42.
- Oliver, R. L. (1993). Cognitive, Affective, and Attribute Bases of the Satisfaction Response. [Article]. *Journal of Consumer Research*, 20(3), 418-430.
- Oliver, R. L. (1999). Whence Consumer Loyalty? [Article]. *Journal of Marketing*, 63(4), 33-44.
- Olsen, S. O. (2002). Comparative Evaluation and the Relationship Between Quality, Satisfaction, and Repurchase Loyalty. [Article]. *Journal of the Academy of Marketing Science*, 30(3), 240-249.
- Osbourne, J. W., & Waters, E. (2002). Four Assumptions of Multiple Regression That Researchers Should Always Test. *Practical Assessment, Research & Evaluation*, 8(2). Retrieved from <http://ericae.net/pare/getvn.asp?v=8 &n=2>.
- O'Sullivan, D., Abela, A. V., & Hutchinson, M. (2009). Marketing performance measurement and firm performance: Evidence from the European high-technology sector. [Article]. *European Journal of Marketing*, 43(5/6), 843-862. doi: 10.1108/03090560910947070
- Palmatier, R. W., Gopalakrishna, S., & Houston, M. B. (2006). Returns on business-to-business relationship marketing investments: Strategies for leveraging profits. *Marketing Science*, 25(5), 477-493. doi: 10.1287/mksc.1060.0209

- Palmer, A. (1997). Defining relationship marketing: An international perspective. [Article]. *Management Decision*, 35(3/4), 319-321.
- Pandya, A., & Dholakia, N. (1992). An Institutional Theory of Exchange in Marketing. [Article]. *European Journal of Marketing*, 26(12), 19-42.
- Pasura, A., & Ryals, L. (2005). Pricing for value in ICT. [Article]. *Journal of Targeting, Measurement & Analysis for Marketing*, 14(1), 47-61.
- Pavia, T. M. (1990). Product Growth Strategies in Young High-Technology Firms. *Journal of Product Innovation Management*, 7(4), 297-309.
- Pelham, A. M., & Wilson, D. T. (1996). A Longitudinal Study of the Impact of Market Structure, Firm Structure, Strategy, and Market Orientation Culture on Dimensions of Small-Firm Performance. [Article]. *Journal of the Academy of Marketing Science*, 24(1), 27-44.
- Pels, J. (1999). Exchange relationships in consumer markets? [Article]. *European Journal of Marketing*, 33(1/2), 4-37.
- Pels, J., Coviello, N. E., & Brodie, R. J. (2000). Integrating transactional and relational marketing exchange: a pluralistic perspective. [Article]. *Journal of Marketing Theory & Practice*, 8(3), 11-20.
- Pels, J., Möller, K., & Saren, M. (2009). Do we really understand business marketing? Getting beyond the RM and BM matrimony. [Article]. *Journal of Business & Industrial Marketing*, 24(5/6), 322-336. doi: 10.1108/08858620910966219
- Peppers, D., & Rogers, M. P. D. (2004). *Managing customer relationships : a strategic framework / Don Peppers, Martha Rogers*: Hoboken, New Jersey : John Wiley & Sons, c2004.
- Peter, J. P., & Donnelly, J. H. (2013). *A preface to marketing management / J. Paul Peter, James H. Donnelly*: New York: McGraw-Hill, c2013. 13th ed., Int ed.
- Peterson, P. G. (1962). Conventional Wisdom and the Sixties. [Article]. *Journal of Marketing*, 26(2), 63-67.

- Peterson, R. T. (1991). Small business usage of target marketing. [Article]. *Journal of Small Business Management*, 29(4), 79-85.
- Pett, M., Lackey, N., & Sullivan, J. (2003). Making sense of factor analysis: A practical guide to understanding factor analysis for instrument development in health care research: Thousand Oaks, CA: Sage Publication, Inc.
- Peytchev, A., Conrad, F. G., Couper, M. P., & Tourangeau, R. (2010). Increasing Respondents' Use of Definitions in Web Surveys. *Journal of Official Statistics*, 26(4), 633-650.
- Pfeiffer, M., & Zinnbauer, M. (2010). Can Old Media Enhance New Media? How Traditional Advertising Pays off for an Online Social Network. *Journal of Advertising Research*, 50(1), 42-49. doi: 10.2501/s0021849910091166
- Piercy, N. F., & Morgan, N. A. (1993). Strategic and operational market segmentation: A managerial analysis. [Article]. *Journal of Strategic Marketing*, 1(2), 123-141.
- Piercy, N. F., & Morgan, N. A. (1995). Customer Satisfaction Measurement: A Processual Analysis. [Article]. *Journal of Marketing Management*, 11(8), 817-834.
- Pitt, L. P. (1999). Changing Channels: The Impact of the Internet on Distribution Strategy. [Article]. *Business Horizons*, 42(2), 19-29.
- Plouffe, C. R., & Barclay, D. W. (2007). Salesperson navigation: The intraorganizational dimension of the sales role. [Article]. *Industrial Marketing Management*, 36, 528-539. doi: 10.1016/j.indmarman.2006.02.002
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. [Review]. *The Journal of applied psychology*, 88(5), 879-903. doi: 10.1037/0021-9010.88.5.879
- Podsakoff, P. M., & Organ, D. W. (1986). Self-Reports in Organizational Research: Problems and Prospects [Article]. *Journal of Management*, 12(4), 531-545.

- Porter, M. E. (1980). How competitive forces shape strategy. [Article]. *McKinsey Quarterly*(2), 34-50.
- Prajogo, D. I. (2007). The relationship between competitive strategies and product quality. *Industrial Management & Data Systems*, 107(1), 69-83. doi: 10.1108/02635570710719061
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments & Computers*, 36(4), 717-731.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879-891.
- Preece, C., & Male, S. (1997). Promotional literature for competitive advantage in UK construction firms. [Article]. *Construction Management & Economics*, 15(1), 59-69. doi: 10.1080/014461997373114
- Premkumar, G., Ramamurthy, K., & Saunders, C. S. (2005). Information Processing View of Organizations: An Exploratory Examination of Fit in the Context of Interorganizational Relationships. [research-article]. *Journal of Management Information Systems*, 22(1), 257-294. doi: 10.2307/40398764
- Price, L. L., Arnould, E. J., & Tierney, P. (1995). Going to extremes: Managing service encounters and assessing provider performance. *Journal of Marketing*, 59(2), 83-97.
- Pullin, P. (2010). Small talk, rapport, and international communicative competence. [Article]. *Journal of Business Communication*, 47(4), 455-476. doi: Doi: 10.1177/0021943610377307
- Quinn, L. (2009). Market segmentation in managerial practice: a qualitative examination. *Journal of Marketing Management*, 25(3/4), 253-272.

- Quinn, L., Hines, T., & Bennis, D. (2007). Making sense of market segmentation: a fashion retailing case. [Case study]. *European Journal of Marketing*, 41(5-6), 439-465
- Ramaswami, S. N., Srivastava, R. K., & Bhargava, M. (2008). Market-based capabilities and financial performance of firms: insights into marketing's contribution to firm value. *Journal of the Academy of Marketing Science*, 37(2), 97-116. doi: 10.1007/s11747-008-0120-2
- Rafiee, V. & Sarabdeen, J. 2013, 'Social media marketing: the unavoidable marketing management tool'. *21st International Business Information Management Association Conference (IBIMA)*, 933-942.
- Ranaweera, C., & Prabhu, J. (2003). On the relative importance of customer satisfaction and trust as determinants of customer retention and positive word of mouth. [Article]. *Journal of Targeting, Measurement & Analysis for Marketing*, 12(1), 82-90.
- Rao, P. M., & Klein, J. A. (2013). *Strategies for high-tech firms : marketing, economic, and legal issues / P.M. Rao, Joseph A. Klein*: Armonk, N.Y. : M.E. Sharpe, c2013.
- Ramaswamy, & Namakumari. (2013). *Marketing Management: Indian Context* (Fifth ed.): McGraw Hill Education (India) Private Limited.
- Rapp, A., & Panagopoulos, N. G. (2012). Perspectives on Personal Selling and Social Media: Introduction to the Special Issue. [Article]. *Journal of Personal Selling & Sales Management*, 32(3), 301-304.
- Rapp, A., Panagopoulos, N. G., & Andzulis, J. M. (2012). A Review of Social Media and Implications for the Sales Process. *Journal of Personal Selling and Sales Management*, 32(3), 305-316. doi: 10.2753/pss0885-3134320302
- Reichheld, F. F., & Sasser Jr, W. E. (1990). Zero defections: Quality comes to services. [Article]. *Harvard Business Review*, 68(5), 105-111.

- Reid, M., Luxton, S., & Mavondo, F. (2005). The relationship between integrated marketing communication, market orientation, and brand orientation. [Article]. *Journal of Advertising*, 34(4), 11-23.
- Reifman, A., & Keyton, K. (2010). Winsorize: Encyclopedia of Research Design (pp. 1636-1637): EBSCO Publishing.
- Reijonen, H., & Laukkanen, T. (2010). Customer relationship oriented marketing practices in SMEs. *Marketing Intelligence & Planning*, 28(2). 115-136.
- Richard, P. J., Devinney, T. M., Yip, G. S., & Johnson, G. (2009). Measuring organizational performance: Towards methodological best practice. *Journal of Management*, 35(3), 718-804.
- Ries, A., & Trout, J. (2001). *Positioning : the battle for your mind / Al Ries, Jack Trout*: New York ; London : McGraw-Hill, c2001
- Robertson, D., & Ulrich, K. (1998). Planning for product platforms. *Sloan Management Review*, 39(4), 19-32.
- Robertson, T. S., & Gatignon, H. (1986). Competitive Effects on Technology Diffusion. [Article]. *Journal of Marketing*, 50(3), 1-12.
- Robinson, J. P., Shaver, P. R., Wrightsman, L. S., & Andrews, F. M. (1991). *Measures of personality and social psychological attitudes / edited by John P. Robinson, Phillip R. Shaver, Lawrence S. Wrightsman ; contributors, Frank M. Andrews ... [et al.]*: San Diego : Academic Press, c1991.
- Rodriguez, M., Peterson, R. M., & Krishnan, V. (2012). Social Media's Influence on Business-To-Business Sales Performance. [Article]. *Journal of Personal Selling & Sales Management*, 32(3), 365-378.
- Rogers, E. M. (1986). *Communication technology : the new media in society / Everett M. Rogers*: New York : Free Press ; London : Collier Macmillan, c1986.
- Romano, C., & Ratnatunga, J. (1995). The role of marketing. [Article]. *European Journal of Marketing*, 29(7), 2-30.

- Romer, K., & van Doren, D. C. (1993). Implementing Marketing in a High-Tech Business. [Article]. *Industrial Marketing Management*, 22(3), 177-185.
- Rosen, D. E., Bondu, S., Curran, J. M., & Purinton, E. F. (1998). Relationship Marketing: Viewing the State-of-the-Art Across Perspectives. *Developments in Marketing Science*, 21, 496.
- Rossomme, J. (2003). Customer satisfaction measurement in a business-to-business context: a conceptual framework. *Journal of Business & Industrial Marketing*, 18(2), 179-196.
- Roster, C. A., Rogers, R. D., Albaum, G., & Klein, D. (2004). A comparison of response characteristics from web and telephone surveys. [Article]. *International Journal of Market Research*, 46(3), 359-373.
- Rubera, G., & Droge, C. (2013). Technology versus Design Innovation's Effects on Sales and Tobin's Q: The Moderating Role of Branding Strategy, *Journal of Product Innovation Management*, 13(3), 448-465.
- Rubera, G., & Kirca, A. H. (2012). Firm Innovativeness and Its Performance Outcomes: A Meta-Analytic Review and Theoretical Integration. [Article]. *Journal of Marketing*, 76(3), 130-147. doi: 10.1509/jm.10.0494
- Rust, R. T., Ambler, T., Carpenter, G. S., Kumar, V., & Srivastava, R. K. (2004). Measuring Marketing Productivity: Current Knowledge and Future Directions. [research- article]. *The Journal of Marketing*, 68(4), 76-89. doi: 10.2307/30162018
- Rust, R. T., Lemon, K. N., & Zeithaml, V. A. (2004). Return on Marketing: Using Customer Equity to Focus Marketing Strategy. [Article]. *Journal of Marketing*, 68(1), 109-127.
- Rust, R. T., Moorman, C., & Dickson, P. R. (2002). Getting Return on Quality: Revenue Expansion, Cost Reduction, or Both? [Article]. *Journal of Marketing*, 66(4), 7-24.

- Sarin, S. (2012). My years with B2B marketing in India: reflections and learnings from a journey of 40 years. *The Journal of Business & Industrial Marketing*, 27(3), 160-168.
- Sashi, C. M. (2012). Customer engagement, buyer-seller relationships, and social media. [Article]. *Management Decision*, 50(2), 253-272. doi: 10.1108/00251741211203551
- Saunders, M., Lewis, P., & Thornhill, A. (2012). *Research methods for business students / Mark Saunders, Philip Lewis, Adrian Thornhill*: Harlow, England ; New York : Pearson, 2012. 6th ed.
- Sausen, K., Tomczak, T., & Herrmann, A. (2005). Development of a taxonomy of strategic market segmentation: a framework for bridging the implementation gap between normative segmentation and business practice. [Article]. *Journal of Strategic Marketing*, 13(3), 151-173. doi: 10.1080/09652540500171340
- Sawhney, M. S. (1998). Leveraged high-variety strategies: From portfolio thinking to platform thinking. *Journal of the Academy of Marketing Science*, 26(1), 54-61.
- Sax, L. J., Gilmartin, S. K., & Bryant, A. N. (2003). Assessing response rates and nonresponse bias in web and paper surveys. *Research in Higher Education*, 44(4), 409-432. doi: 10.1023/a:1024232915870
- Schillewaert, N., & Meulemeester, P. (2005). Comparing response distributions of offline and online data collection methods. [Article]. *International Journal of Market Research*, 47(2), 163-178.
- Schober, M. F., Conrad, F. G., & Fricker, S. S. (2004). Misunderstanding standardized language in research interviews. *Applied Cognitive Psychology*, 18(2), 169-188. doi: 10.1002/acp.955
- Schultz, R. J., Schwepker, C. H., & Good, D. J. (2012). An exploratory study of social media in business-to-business selling: salesperson characteristics, activities and performance. [Article]. *Marketing Management Journal*, 22(2), 76-89.

- Schneckenberg, D. (2009). Web 2.0 and the shift in corporate governance from control to democracy. *Knowledge Management Research & Practice*, 7, 234-248.
- Sekaran, U., & Bougie, R. (2010). *Research methods for business: a skill-building approach / Uma Sekaran and Roger Bougie*: Chichester: Wiley, 2010. 5th ed.
- Shannon, J. R. (1996). The new promotions mix: A proposed paradigm, process, and application. [Article]. *Journal of Marketing Theory & Practice*, 4(1), 56-68.
- Sharma, N., & Patterson, P. G. (2000). Switching costs, alternative attractiveness and experience as moderators of relationship commitment in professional, consumer services. *International Journal of Service Industry Management*, 11, 470-490.
- Sharp, J. A., Peters, J., & Howard, K. (2002). *The Management of a Student Research Project*. Aldershot, Hants, England: Gower.
- Shaw, A. W. (1912). Some Problems in Market Distribution. [Article]. *Quarterly Journal of Economics*, 26(4), 703-765.
- Shaw, E. H. (2009). Reflections on The History of Marketing Thought. *Journal of Historical Research in Marketing*, 1(2), 330-345.
- Shaw, E. H., & Jones, D. G. B. (2005). A history of schools of marketing thought. *Marketing Theory*, 5(3), 239-281. doi: 10.1177/1470593105054898
- Sheth, J. N., & Parvatiyar, A. (1995). The Evolution of Relationship Marketing. [Article]. *International Business Review*, 4(4), 397-417.
- Sheth, J. N., & Parvatiyar, A. (2002). Evolving Relationship Marketing into a Discipline. [Article]. *Journal of Relationship Marketing*, 1(1), 3-17.
- Shostack, G. L. (1977). Breaking Free from Product Marketing. [Article]. *Journal of Marketing*, 41(2), 73-80.
- Shropshire, K. O., Hawdon, J. E., & Witte, J. C. (2009). Web Survey Design Balancing Measurement, Response, and Topical Interest. *Sociological Methods & Research*, 37(3), 344-370. doi: 10.1177/0049124108327130

- Sin, L. Y. M., Tse, A. C. B., Yau, O. H. M., Chow, R. P. M., Lee, J. S. Y., & Lau, L. B. Y. (2005). Relationship marketing orientation: Scale development and cross-cultural validation. *Journal of Business Research*, 58(2), 185-194. doi: 10.1016/s0148-2963(02)00493-9
- Singh, R., & Seshadri, D. V. R. (2012). Tiger, tiger, burning bright! Will India's tiger economy stimulate its business marketing space? *Journal of Business & Industrial Marketing*, 27(3).
- Slater, S. F., Hult, G. T. M., & Olson, E. M. (2007). On the importance of matching strategic behavior and target market selection to business strategy in high-tech markets. [Article]. *Journal of the Academy of Marketing Science*, 35(1), 5-17.
- Slater, S. F., & Olson, E. M. (2001). Marketing's Contribution to the Implementation of Business Strategy: An Empirical Analysis. *Strategic Management Journal*, 22(11), 1055-1068.
- Smith, J. B., & Barclay, D. W. (1997). The Effects of Organizational Differences and Trust on the Effectiveness of Selling Partner Relationships. *Journal of Marketing*. 61(1), p3-21.
- Smith, M. F., Sinha, I., Lancioni, R., & Forman, H. (1999). Role of market turbulence in shaping pricing strategy. *Industrial Marketing Management*, 28(6), 637-649.
- Smith, R. E., & Wright, W. F. (2004). Determinants of Customer Loyalty and Financial Performance. [Article]. *Journal of Management Accounting Research*, 16, 183-205.
- Smith, T. (2009). The social media revolution. [Article]. *International Journal of Market Research*, 51(4), 559-561.
- Smith, W. R. (1956). Product differentiation and market segmentation as alternative marketing strategies. *Journal of Marketing*, 21(1), 3-8.
- Song, X. M., & Parry, M. E. (1997). The Determinants of Japanese New Product Successes. [Article]. *Journal of Marketing Research (JMR)*, 34(1), 64-76.

- Spector, P. E. (2006). Method Variance in Organizational Research: Truth or Urban Legend? [Article]. *Organizational Research Methods*, 9(2), 221-232.
- Spicer, J. (2005). *Making Sense of Multivariate Data Analysis*. Thousand Oaks, Calif: Sage Publications.
- Sriram, V., & Sapienza, H. J. (1991). An empirical investigation of the role of marketing for small exporters. [Article]. *Journal of Small Business Management*, 29(4), 33-43.
- Srivastava, R. K., Shervani, T. A., & Fahey, L. (1999). Marketing, Business Processes, and Shareholder Value: An Organizationally Embedded View of Marketing Activities and the Discipline of Marketing. [Article]. *Journal of Marketing*, 63(4), 168-179.
- Stephen, A. T., & Galak, J. (2009). The Complementary Roles of Traditional and Social Media in Driving Marketing Performance. [Article]. *INSEAD Working Papers Collection*(52), 1-38.
- Storbacka, K. (1997). Segmentation Based on Customer Profitability--Retrospective Analysis of Retail Bank Customer Bases. [Article]. *Journal of Marketing Management*, 13(5), 479-492.
- Stratis, G., & Powers, T. L. (2001). The impact of multiple strategic marketing processes on financial performance. [Article]. *Journal of Strategic Marketing*, 9(3), 165-191. doi: 10.1080/096525401301420125
- Sui-Hua, Y. (2007). An Empirical Investigation on the Economic Consequences of Customer Satisfaction. [Article]. *Total Quality Management & Business Excellence*, 18(5), 555-569. doi: 10.1080/14783360701240493
- Sureshchander, G.S., Rajendran, C., Anantharaman, R.N. & Kamalanabhan, T.J. (2002), "Management's perception of total quality service in the banking sector of a developing economy: a critical analysis", *International Journal of Bank Marketing*, 20(4), 181-196

- Sweeney, J. C., Soutar, G. N., & McColl-Kennedy, J. R. (2011). The marketing practices-performance relationship in professional service firms. [Article]. *Journal of Service Management*, 22(3), 292-316. doi: 10.1108/09564231111136845
- Szymanski, D. M., & Henard, D. H. (2001). Customer satisfaction: A meta-analysis of the empirical evidence. *Journal of the Academy of Marketing Science*, 29(1), 16-35. doi: 10.1177/009207030102900102
- Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Boston: Pearson Education.
- Tamilia, R. D. (2011). Reflections on the history of marketing thought and theory development. [Article]. *Marketing Theory*, 11(4), 507-512. doi: 10.1177/1470593111418808
- Tariq, M., & Wahid, F. (2011). Assessing effectiveness of Social Media and Traditional marketing Approaches in terms of cost and target segment coverage. *Interdisciplinary Journal of Contemporary Research in Business*, 3(1), 1050-1075.
- The Global Information Technology Report*. (2013). Geneva: World Economic Forum. Retrieved from http://www3.weforum.org/docs/WEF_GITR_Report_2013.pdf
- Theoharakis, V., & Hooley, G. (2003). Organizational resources enabling service responsiveness: Evidence from Greece. [Article]. *Industrial Marketing Management*, 32, 695-702. doi: 10.1016/j.indmarman.2003.06.009
- Torkzadeh, G., Koufteros, X., & Pflughoeft, K. (2003). Confirmatory analysis of computer self-efficacy. *Structural Equation Modeling*, 10(2), 263-275. doi: 10.1207/s15328007sem1002_6
- Tourangeau, R., Rips, L. J., & Rasinski, K. A. (2000). *The psychology of survey response / Roger Tourangeau, Lance J. Rips, Kenneth Rasinski*: New York : Cambridge University Press, 2000.

- Trainor, K. J. (2012). Relating Social Media Technologies to Performance: A Capabilities-Based Perspective. [Article]. *Journal of Personal Selling & Sales Management*, 32(3), 317-331.
- Traynor, K., & Traynor, S. (2004). A comparison of marketing approaches used by high-tech firms: 1985 versus 2001. *Industrial Marketing Management*, 33(5), 457-461. doi: 10.1016/j.indmarman.2003.08.013
- Trivedi, M., & Morgan, M. S. (1996). Brand-specific heterogeneity and market-level brand switching. *Journal of Product and Brand Management*, 5(1), 29-39.
- Tynan, A. C., & Drayton, J. (1987). Market Segmentation. [Article]. *Journal of Marketing Management*, 2(3), 301-335.
- Uлага, W., & Eggert, A. (2006). Relationship value and relationship quality: Broadening the nomological network of business-to-business relationships. *European Journal of Marketing*, 40(3-4), 311-327.
- Uslay, C., Malhotra, N. K., & Citrin, A. V. (2004). Unique marketing challenges at the frontiers of technology: an integrated perspective. [Article]. *International Journal of Technology Management*, 28(1), 8-30.
- Vaidyanathan, R., & Aggarwal, P. (2003). Who is the fairest of them all? An attributional approach to price fairness perceptions. [Article]. *Journal of Business Research*, 56, 453-463. doi: 10.1016/s0148-2963(01)00231-4
- Van Selm, M., & Jankowski, N. W. (2006). Conducting Online Surveys. [Article]. *Quality & Quantity*, 40(3), 435-456. doi: 10.1007/s11135-005-8081-8
- van Zyl, A. S. (2009). The impact of Social Networking 2.0 on organisations. *Electronic Library*, 27(6), 906-918. doi: 10.1108/02640470911004020
- Varadarajan, R. (2010). Strategic Marketing and Marketing Strategy: Domain, Definition, Fundamental Issues and Foundational Premises. *Journal for the Academy of Marketing Science*, 38, 119-1430. doi: 10.1007/s11747-009-0176-7

- Vargo, S. L., & Lusch, R. F. (2004). Evolving to a New Dominant Logic for Marketing. [Article]. *Journal of Marketing*, 68(1), 1-17.
- Varini, K., & Sirsi, P. (2012). Social media and revenue management; where should the two meet? [Report]. *Journal of Technology Management for Growing Economies (JTMGE)*, 3(1), 33-47.
- Viardot, E. (2004). *Successful marketing strategy for high-tech firms*. Norwood: Artech House, Inc.
- Viswanathan, M. (2005). *Measurement Error and Research Design*. Thousand Oaks: Sage Publications.
- Vorhies, D. W., Harker, M., & Rao, C. P. (1999). The capabilities and performance advantages of market-driven firms. [Article]. *European Journal of Marketing*, 33(11/12), 1171-1202.
- Vorhies, D. W., Orr, L. M., & Bush, V. D. (2011). Improving customer-focused marketing capabilities and firm financial performance via marketing exploration and exploitation. [Report]. *Journal of the Academy of Marketing Science*, 39(5), 736-757.
- Vuori, M. (2012). Exploring uses of social media in a global corporation. *Journal of Systems and Information Technology*, 14(2), 155-170.
- Wall, T. D., Michie, J., Patterson, M., Wood, S. J., Sheehan, M., Clegg, C. W., & West, M. (2004). On the validity of subjective measures of company performance. *Personnel Psychology*, 57(1), 95-118.
- Walter, A., & Gemunden, H. G. (2000). Bridging the gap between suppliers and customers through relationship promoters: theoretical considerations and empirical results. *Journal of Business & Industrial Marketing*, 15(2-3), 86-106.
- Wangenheim, F., & Bayón, T. (2004). Satisfaction, loyalty and word of mouth within the customer base of a utility provider: Differences between stayers, switchers and referral switchers. [Article]. *Journal of Consumer Behaviour*, 3(3), 211-220.

- Ward, P. T., Bickford, D. J., & Leong, G. K. (1996). Articles: Configurations of manufacturing strategy, business strategy, environment and structure. [Article]. *Journal of Management*, 22, 597-626. doi: 10.1016/s0149-2063(96)90026-4
- Ward, S., Light, L., & Goldstine, J. (1999). What High-Tech Managers Need to Know About Brands. [Article]. *Harvard Business Review*, 77(4), 85-95.
- Weber, J. (1992). Scenarios in business ethics research: Review, critical assessment, and recommendations. [Article]. *Business Ethics Quarterly*, 2(2), 137-160.
- Webster, J. F. E. (1992). The changing role of marketing in the corporation. [Article]. *Journal of Marketing*, 56(4), 1-17.
- Weerawardena, J., & O'Cass, A. (2004). Exploring the characteristics of the market-driven firms and antecedents to sustained competitive advantage. [Article]. *Industrial Marketing Management*, 33(5), 419-428. doi: 10.1016/j.indmarman.2003.07.002
- Weinstein, A. (1994). Market definition in technology-based industry: A comparative study of small versus non-small companies. [Article]. *Journal of Small Business Management*, 32(4), 28-36.
- Weinstein, A., & Britt, M. M. (2007). Strategic Targeting: A Marketing Planning and Implementation Approach. [Article]. *Society for Marketing Advances Proceedings*, 198-201.
- Weld, L. D. H. (1917). Marketing agencies between manufacturer and jobber. [Article]. *Quarterly Journal of Economics*, 31(4), 571-599.
- Weld, L. D. H. (1917). Marketing functions and mercantile organization. [Article]. *American Economic Review*, 7(2), 306-318.
- Westbrook, R. A. (2000). Towards A Managerial Research Agenda For Customer Satisfaction. *Journal of Consumer Satisfaction Dissatisfaction and Complaining Behavior*, 13, 17-25.

- Wiklund, J., & Shepherd, D. (2003). Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses. [Article]. *Strategic Management Journal*, 24(13), 1307-1314.
- Wilkie, W. L., & Moore, E. S. (2003). Scholarly Research in Marketing: Exploring the "4 Eras" of Thought Development. [Article]. *Journal of Public Policy & Marketing*, 22(2), 116-146.
- Wind, Y. (1978). Issues and Advances in Segmentation Research. [Article]. *Journal of Marketing Research (JMR)*, 15(3), 317-337.
- World Bank. (2003). *World Development Report 2003: Sustainable Development in a Dynamic World--Transforming Institutions, Growth, and Quality of Life*. Retrieved from <https://openknowledge.worldbank.org/handle/10986/5985>
License: CC BY 3.0 IGO
- Wu, D., Ray, G., & Whinston, A. B. (2008). Manufacturers' Distribution Strategy in the Presence of the Electronic Channel. *Journal of Management Information Systems*, 25(1), 167-198.
- Wulf, K. D., & Odekerken-Schroder, G. (2001). A Critical Review of Theories Underlying Relationship Marketing in the Context of Explaining Customer Relationships. *Journal for the Theory of Social Behaviour*, 31(1), 73-101.
- Yadav, N., Swami, S., & Pal, P. (2006). High Technology Marketing: Conceptualization and Case Study. [Article]. *Vikalpa: The Journal for Decision Makers*, 31(2), 57-74.
- Yeung, M. C. H., & Ennew, C. T. (2000). From customer satisfaction to profitability. [Article]. *Journal of Strategic Marketing*, 8(4), 313-326. doi: 10.1080/09652540010003663
- Yeung, M. C. H., Lee Chew, G., & Ennew, C. T. (2002). Customer satisfaction and profitability: A reappraisal of the nature of the relationship. [Article]. *Journal of Targeting, Measurement & Analysis for Marketing*, 11(1), 24-34.

- Yi, Y., & Gong, T. (2009). An integrated model of customer social exchange relationship: the moderating role of customer experience. *The Service Industries Journal*, 29(11), 1513-1528. doi: 10.1080/02642060902793474
- Yonggui, W., Hing, P. L., & Yer, V. H. (2003). The antecedents of service quality and product quality and their influences on bank reputation: evidence from the banking industry in China. *Managing Service Quality*, 13(1), 72-83.
- Zeithaml, V. A. (1988). Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence. [Article]. *Journal of Marketing*, 52(3), 2-22.
- Zikmund, W. G., & Babin, B. J. (2012). *Marketing research* (10th ed.). Australia; [Mason, Ohio]: South-Western/Cengage Learning.
- Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2010). *Business Research Methods*. USA: South-Western Cengage Learning.
- Zimmerman, A. S., & Blythe, J. (2013). *Business to business marketing management : a global perspective / Alan Zimmerman and Jim Blythe*: New York : Routledge, 2013. 2nd ed.
- Zineldin, M., & Philipson, S. (2007). Kotler and Borden are not dead: myth of relationship marketing and truth of the 4Ps. [Article]. *Journal of Consumer Marketing*, 24(4), 229-241.

APPENDICES

APPENDIX A

WEB SURVEY INVITATION LETTER

Mrs. Thelma Solomon
Department of Communication,
Journalism and Marketing.
Massey University, Wellington.
New Zealand
Phone : +64 211660621
Email : thelma.moses@gmail.com

Dear Sir/Madam,

I am currently engaged in a research project which involves “EXPLORATORY ANALYSIS OF THE MARKETING PRACTICES IN INFORMATION AND COMMUNICATION TECHNOLOGY FIRMS IN INDIA”.

The importance and the role of Information and Communication Technology (ICT) firms in the global economy is obvious. However very little research have been undertaken on understanding the impact of marketing practices on the performance of these ICT firms. This study explores the marketing practices that are adopted by ICT firms in India, and will examine their influence on firm performance.

I invite you to participate in this research and request you to fill in an online questionnaire, which is accessible through (web address). The questionnaire is self-explanatory and kindly read the instruction carefully before you answer the questions.

Your co-operation in completing the online questionnaire will be greatly appreciated. The information you provide will be treated as strictly confidential. If at any stage you require any clarification, please contact me or my supervisor Dr Raja Peter at +64-4-8015799 Ext 62510. Your support in facilitating the study is greatly valued.

If your firm is interested in the summary of the findings of this study, I will be pleased to provide you with the same. Please let me know your contact details, so that I can send the summary to you.

This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University’s Human Ethics Committees. The Researcher named above is responsible for the ethical conduct of this research.

If you have any concerns about the conduct of this research that you wish to raise with someone other than the researcher, please contact Professor Sylvia Rumball, Assistant to the Vice-Chancellor (Research Ethics), telephone 06 3505249, e-mail humanethics@massey.ac.nz.

Thank you very much for your valuable time.

Yours Sincerely,

Thelma Solomon

PhD candidate

APPENDIX B

WEB SURVEY QUESTIONNAIRE

Screening questions:

How many people does your organisation employ?

- less than 6
- 6 - 49
- 50 - 99
- 100 - 499
- more than 500

Which of the following statement would best describe your role in making the marketing decisions in your organisation?

- I am solely responsible for all marketing related decisions in our firm
- I am part of the core team responsible for marketing related decisions in our firm
- I am not closely involved in making marketing decisions in our firm
- I am not at all involved in making marketing decisions in our firm

Please indicate the city in which your firm is located in India

- Bangalore (1)
- Chennai (2)
- Delhi / NCR / Greater Noida (3)
- Mumbai / Pune (4)
- Hyderabad / Secunderabad (5)
- Other (6)

Thank you for participating in this survey. This survey is undertaken for a doctoral study on the "Marketing Practices of ICT firms in India". If at any stage you require any clarification, please contact thelma.moses@gmail.com or Dr. Raja Peter at +64-4-8015799 Ext 62510. Your support in facilitating the study is greatly valued. This survey will take approximately 15 minutes to complete. Please read through the instructions before filling the questionnaire.

The information you provide will be treated as strictly confidential. The survey results will be aggregated and I would be pleased to email you a summary report if you are interested. Please email me at: thelma.moses@gmail.com if you wish to receive the summary. Thank you once again for your time. This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University's Human Ethics Committees. The Researcher named above is responsible for the ethical conduct of this research. If you have any concerns about the conduct of this

research that you wish to raise with someone other than the researcher, please contact Professor Sylvia Rumball, Assistant to the Vice-Chancellor (Research Ethics), telephone 06 3505249, e-mail humanethics@massey.ac.nz.

INSTRUCTIONS FOR FILLING THE QUESTIONNAIRE

- Please choose an appropriate response for each of the statements in questions Q1 to Q13. For example, if you Strongly Disagree with the second statement in Q1, please choose 1. On the other hand if you Strongly Agree with this statement, please choose 7. If you neither Agree nor Disagree with the statement then choose 4.
- For questions Q14 to Q23, please choose an appropriate answer and please fill in, wherever necessary.

Q1. SOCIAL MEDIA (This refers to all the web based technologies that enables individuals in your firm to interact and communicate with customers to share information and resources). Please indicate the extent to which you agree or disagree with the following statements that best represents your firm's social media activities

	Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree	VARIABLES
1. Managers in our firm actively participate in professional social networks (like Linked-In)	1		2	3	4	5	6	7		SM1
2. Our firm actively searches for market opportunities in user generated blogs in online communities.	1		2	3	4	5	6	7		SM2
3. Our firm constantly monitors social network sites for reviews of our products and services.	1		2	3	4	5	6	7		SM3
4. In our firm, we constantly check online networks to know about competitor's products and services.	1		2	3	4	5	6	7		SM4
5. We encourage our customers to participate in live and interactive discussion forums in our website.	1		2	3	4	5	6	7		SM5
6. Our firm has increased efficiency in developing products due to online customer interaction at various stages of product development.	1		2	3	4	5	6	7		SM6
7. Our constant interaction with customers through online networks has improved our customer relations.	1		2	3	4	5	6	7		SM7
8. There is a reduction in online customer support because of the information we provide through our online discussion forums.	1		2	3	4	5	6	7		SM8
9. We use our online networks to explain our products/services to customers.	1		2	3	4	5	6	7		SM9
10. We use our online networks to facilitate endorsement of our product/services by customers.	1		2	3	4	5	6	7		SM10
11. Our engagement in the online social networks helps build our firm's reputation.	1		2	3	4	5	6	7		SM11

Q2. RELATIONSHIP MARKETING (This refers to your firm's efforts to attract, maintain and enhance customer relationships). Please indicate the extent to which you agree or disagree with the following statements that best represents your firm's relationship marketing activities

	Strongly							Strongly		VARIABLES
	Disagree	Agree	1	2	3	4	5	6	7	
1. In our organisation, retaining customers is considered to be a top priority	1	7	1	2	3	4	5	6	7	RM1
2. In our organisation, customer relationships are considered to be a valuable asset	1	7	1	2	3	4	5	6	7	RM2
3. Our senior management emphasizes the importance of customer relationships	1	7	1	2	3	4	5	6	7	RM3
4. In our organisation, employees receive incentives based on customer satisfaction measures	1	7	1	2	3	4	5	6	7	RM4
5. We can rely on our firm to keep the promises that it makes to the customers	1	7	1	2	3	4	5	6	7	RM5
6. In our relationship with customers, our firm can be trusted at all times	1	7	1	2	3	4	5	6	7	RM6
7. Our firm rewards employees who do their very best to solve customer problems	1	7	1	2	3	4	5	6	7	RM7
8. We fulfill all obligations and promises we make with customers.	1	7	1	2	3	4	5	6	7	RM8
9. We make significant investments (in terms of time and resources) in building relationship with our customers	1	7	1	2	3	4	5	6	7	RM9
10. We are committed to establish long term relationship with our customers	1	7	1	2	3	4	5	6	7	RM10

Q3. MARKETING RESEARCH

Please indicate the extent to which you agree or disagree with the following statements that best represents your firm's marketing research activities.

In our firm, we

	Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree	VARIABLES
1. Do a lot of in-house marketing research		1	2	3	4	5	6	7		MR1
2. Use external contractors to do market research for us		1	2	3	4	5	6	7		MR2
3. Meet our customers formally to find out their future requirements		1	2	3	4	5	6	7		MR3
4. Use the marketing research database that is published online by large firms		1	2	3	4	5	6	7		MR4
5. Collect relevant industry information through informal networks		1	2	3	4	5	6	7		MR5
6. Gather data to understand the market perception of our new products and services		1	2	3	4	5	6	7		MR6
7. Gather data regarding the customer acceptance of our products and services		1	2	3	4	5	6	7		MR7

Q4. SEGMENTATION (This refers to your firm's efforts to identify and profile distinct groups of customers who differ in their needs and preferences). Please indicate the degree to which you agree or disagree with the following statements which relate to the market segmentation practices of your firm.

We seek to identify the market(s)

	Strongly Disagree					Strongly Agree	VARIABLES
1. Based on long term customer profitability	1	2	3	4	5	6	SG1
2. Based on short term customer profitability	1	2	3	4	5	6	SG2
3. Based on customers who need specialised solutions ^a	1	2	3	4	5	6	SG3
4. Based on customers who need customised solutions ^b	1	2	3	4	5	6	SG4
5. Based on customers who need value solutions ^c	1	2	3	4	5	6	SG5
6. Based on customers who need packaged solutions ^d	1	2	3	4	5	6	SG6
7. With unexploited niche segments	1	2	3	4	5	6	SG7
8. With unexploited market opportunities	1	2	3	4	5	6	SG8

Note: 3^a A specialised solution is developed to meet the unique needs of those who are keen to be the first buyers. Their motive is to gain competitive advantage by leapfrogging existing technology. It is purchased to achieve high-level intangibles such as faster time-to-market, creating sustainable value and leveraging existing resources.

4^b Customised solutions are developed for a whole set of targeted group of users. They seek to increase productivity and competitive advantage from technology but cannot afford a specialised solution.

5^c Value solutions are offered to customers who recognize the need for a solution and are shopping around to find it, or issuing requests for proposals (RFP) for vendors to respond to

6^d Packaged solutions appeals to the mass-market segments, where competition is based on product features-function-price and performance.

Q5. TARGETING (refers to your firm's decision to select the best customer segment, whose needs your firm can satisfy in a better way than your competitors). Please indicate the extent to which you agree or disagree with the following statements.

In our firm, we target

	Strongly Disagree					Strongly Agree	VARIABLES
1. Those customers who are constantly looking to leverage their products and services	1	2	3	4	5	6	TGT1
2. Those customers with a clear need to adopt new technologies	1	2	3	4	5	6	TGT2
3. Customers with whom we can have long term relationship	1	2	3	4	5	6	TGT3
4. Customers with the potential of giving us long term or downstream profit	1	2	3	4	5	6	TGT4
5. Potential customers whose needs we are aware of	1	2	3	4	5	6	TGT5

Q6. DIFFERENTIATION (refers to your firm's act of adding a set of meaningful and value-added differences to distinguish your firm's offering from competitor's offering).

Please indicate the degree to which you agree or disagree with the following statements which describes a firm's differentiation strategy

	Strongly Disagree					Strongly Agree					VARIABLES
	1	2	3	4	5	6	7	8	9	10	
1. Our firm offers products and services which are higher in quality than those offered by competitors	1	2	3	4	5	6	7				DF1
2. Our products and services are clearly superior to competing products in terms of reliability	1	2	3	4	5	6	7				DF2
3. Our products and services are clearly superior to competing products in terms of price	1	2	3	4	5	6	7				DF3
4. Our products offer unique features to customers as compared to competitor's products	1	2	3	4	5	6	7				DF4
5. Our brand name is a strong source of differentiation from our competitors	1	2	3	4	5	6	7				DF5

Q7. POSITIONING (refers to the act of designing your firm's products, services and image to occupy a distinctive place in the minds of the customers)

Customers are likely to perceive your firm as being different from competitors in regards to the following statements. Please indicate the extent to which you agree or disagree with these.

We are seen by customers as a firm which

	Strongly Disagree					Strongly Agree	VARIABLES
1. Provides extensive after sales support	1	2	3	4	5	6	PG1
2. Has a reputation within the industry	1	2	3	4	5	6	PG2
3. Has the winner image in the market	1	2	3	4	5	6	PG3

Q8. PRODUCT

In regards to your firm's products and services, please indicate the extent to which you agree or disagree with the following statements.

	Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree	VARIABLES
1. We develop a common product platform, which is then adapted to customer requirements	1		2	3	4	5	6	7		PT1
2. We understand the customer requirements and develop a conceptual design, which is then presented to the customer for feedback	1		2	3	4	5	6	7		PT2
3. We typically co-design our products with our customers	1		2	3	4	5	6	7		PT3
4. We always try to put working prototypes in the user's hands as early as possible	1		2	3	4	5	6	7		PT4
5. We co-design products with partner firms to develop and present a "complete product" for our customers	1		2	3	4	5	6	7		PT5
6. We emphasise owning the intellectual property rights (eg. Patenting) for our products and services	1		2	3	4	5	6	7		PT6
7. Provides exclusive products and services, by being a specialist shop	1		2	3	4	5	6	7		PT7
8. Provides a pool of highly trained personnel expertise	1		2	3	4	5	6	7		PT8
9. Provides niche based technological superiority	1		2	3	4	5	6	7		PT9
10. Provides extensive customer support from product conceptualization to product delivery	1		2	3	4	5	6	7		PT10
11. Our firm is always ahead of competitors with respect to product innovation	1		2	3	4	5	6	7		PT11

Q9. PRICING

Please indicate the extent to which you agree or disagree with the following factors that influence your firm's pricing decisions.

	Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree	VARIABLES
1. The cost incurred		1	2	3	4	5	6	7		PRI1
2. Profit objectives of the company		1	2	3	4	5	6	7		PRI2
3. Uniqueness of the products and services		1	2	3	4	5	6	7		PRI3
4. Competitor pricing for similar products and services		1	2	3	4	5	6	7		PRI4
5. The benefits provided along with the product/service offering (like brand, delivery, innovation, training, after sales support, ongoing support)		1	2	3	4	5	6	7		PRI5
6. Customer value in terms of the potential long term downstream profit		1	2	3	4	5	6	7		PRI6

Q10. DISTRIBUTION

Please indicate the degree to which you either agree or disagree with the following statements, regarding the distribution of your firm's products and services.

	Strongly Disagree	1	2	3	4	5	6	Strongly Agree	VARIABLES
1. Our firm always prefers direct distribution of our products and services		1	2	3	4	5	6	7	DT1
2. We engage certified resellers to distribute our products and services		1	2	3	4	5	6	7	DT2
3. Our firm forms tactical alliances with smaller firms to help put a "complete product" for our customers		1	2	3	4	5	6	7	DT3
4. Our firm gained distribution rights through joint ventures, as a result of the collaborative development of a new technology		1	2	3	4	5	6	7	DT4
5. We are the exclusive distributors of our products and services		1	2	3	4	5	6	7	DT5
6. Our firm relies on distributors to deliver pre-packaged solutions		1	2	3	4	5	6	7	DT6

Q11. PROMOTION

The following are the range of promotional tools that may be adopted by your firm. Please indicate the extent to which you agree or disagree with these

	Strongly Disagree					Strongly Agree	VARIABLES
1. Participating in technical seminars and presentations	1	2	3	4	5	6	PM1
2. Organizing industry conferences	1	2	3	4	5	6	PM2
3. Inviting customers to leadership forums	1	2	3	4	5	6	PM3
4. Print advertising	1	2	3	4	5	6	PM4
5. Online advertising	1	2	3	4	5	6	PM5
6. Using customer references in our advertisements	1	2	3	4	5	6	PM6
7. Promoting through word-of-mouth	1	2	3	4	5	6	PM7
8. Submitting white papers online	1	2	3	4	5	6	PM8
9. Actively engaging in press relations (product and corporate press releases)	1	2	3	4	5	6	PM9
10. Sponsoring events	1	2	3	4	5	6	PM10
11. Using social media such as linkedIn/facebook/twitter	1	2	3	4	5	6	PM11

Q12. CUSTOMER SATISFACTION

For each statement below, please indicate the extent to which you agree or disagree with the statement that best indicates that your customers are satisfied with your products and services.

	Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree	VARIABLES
1. We get more clients/business through positive word of mouth from our existing customers	1	1	2	3	4	5	6	7	7	CS1
2. Our customers frequently return for additional business to our firm	1	1	2	3	4	5	6	7	7	CS2
3. All departments are responsive to, and are integrated in serving customers	1	1	2	3	4	5	6	7	7	CS3
4. We deliver the offering in the time frame that the customer desires or needs	1	1	2	3	4	5	6	7	7	CS4
5. We respond to customer complaints and suggestions without delay	1	1	2	3	4	5	6	7	7	CS5
6. We have a system of conflict resolution that is fair to the customer and to us	1	1	2	3	4	5	6	7	7	CS6
7. Our firm responds quickly to changing customer requirements	1	1	2	3	4	5	6	7	7	CS7
8. Our firm obtains feedback from our customers through formal review meetings	1	1	2	3	4	5	6	7	7	CS8
9. We often rely on informal networks to assess the satisfaction of our customers with our products and services	1	1	2	3	4	5	6	7	7	CS9

Q13. FIRM PERFORMANCE

Please indicate the degree to which you disagree or agree that your firm's performance meets your expectations.

	Strongly Disagree	2	3	4	5	6	Strongly Agree	VARIABLES
1. Profitability	1	2	3	4	5	6	7	FP1
2. Return on Investments	1	2	3	4	5	6	7	FP2
3. Growth in sales revenue	1	2	3	4	5	6	7	FP3
4. Market share relative to competition	1	2	3	4	5	6	7	FP4
5. Productivity	1	2	3	4	5	6	7	FP5
6. Acquiring new customers	1	2	3	4	5	6	7	FP6
7. Increasing sales to current customers	1	2	3	4	5	6	7	FP7
8. Exports	1	2	3	4	5	6	7	FP8

GENERAL QUESTIONS:

Q14. What is your position in the organization?

- Chief Executive Officer
- Owner Manager
- General Manager
- Marketing manager
- Sales manager
- Others (Please specify) _____

Q15. How long have you worked for this organization?

- Less than 2 years
- 2 – 5 years
- 6 – 10 years
- More than 10 years

Q16. How long have you worked in the IT industry?

- Less than 2 years
- 2 – 5 years
- 6 – 10 years
- More than 10 years

Q17. What is the ownership nature of your organization?

- Sole proprietor (owned by only one individual)
- Partnership
- Registered Incorporated private company
- Public listed company

Q18. What is the total number of full-time equivalent employees, employed by your firm?

- less than 6
- 6-30
- 31-50
- 51-99
- more than 100

Q19. What is the highest level of formal education you have completed?

- Higher secondary school
- Diploma
- Bachelor Degree
- Master degree or Post Graduate qualification
- Other (please specify) _____

Q20. Please indicate your gender

- Male
- Female

Q2. What is the name of your Firm / Organisation ?

Q22. Using your best estimate, please indicate the level of your firm's initial investment

- Less than Rs 10 Lakhs
- Between Rs 10 Lakhs to Rs 30 Lakhs
- Between Rs 31 Lakhs to Rs 50 Lakhs
- Between Rs 51 Lakhs to Rs 70 Lakhs
- Between Rs 71 Lakhs to Rs 90 Lakhs
- More than Rs 90 Lakhs

Q23. Using your best estimate please indicate your firm's current turnover

- Less than Rs 10 Lakhs
- Between Rs 10 Lakhs to Rs 30 Lakhs
- Between Rs 31 Lakhs to Rs 50 Lakhs
- Between Rs 51 Lakhs to Rs 1 Crore
- Between Rs 1 Crore to Rs 5 Crores
- More than Rs 5 Crores

APPENDIX C

LIST OF PUBLICATIONS

Conference Proceedings:

Crump, B.J., Solomon, T.P., & Peter, R.M. (2014). An examination of the nexus between social media, relationship marketing and market research and their influence on customer satisfaction in the ICT sector in India. *The Proceedings of the European Conference on Social Media.: European Conference on Social Media.*

Solomon, T.P., Peter, R.M, & Crump, B.J. (2013). Measures of the strategic marketing practices of ICT firms in India. *Proceedings of the 10th Association of Indian Management Scholars International [AIMS] International Conference [AIMS-10]: Managing Services in Competitive Environment* (pp.1701 - 1715).

Solomon, T.P., Peter, R.M, Crump, B.J, & Coetzer, A. (2011). A conceptual model of the marketing practices in small and medium information and communication technology (ICT) companies. Presented at *12th International Conference of the Society for Global Business and Economic Development: Building Capabilities for Sustainable Global Business: Balancing Corporate Success and Social Good.* Singapore.

Seminar Papers:

Solomon, T.P. (2009, April). A Comparative Analysis of the Marketing Practices in Small and Medium Information and Communication Technology (ICT) Companies in New Zealand and India. Paper presented at the PhD confirmation seminar at Massey University, Wellington.

Solomon, T.P., Peter, R.M, & Crump, B.J. (2013, October). *Measures of the Strategic Marketing Practices of ICT firms in India.* Paper presented in the School of Communication, Journalism and Marketing Research Seminar Series Massey University, Wellington.