RESOURCE BASED VIEW AND SUSTAINABLE COMPETITIVE ADVANTAGE: AN INVESTIGATION AMONG CELLULAR MOBILE OPERATORS

Thesis

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DOCTOR OF PHILOSOPHY

by

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D E C L A R A T I O N

I hereby declare that the Research Thesis entitled, **'Resource Based View and Sustainable Competitive Advantage: An Investigation Among Cellular Mobile Operators' which is being submitted to the National Institute of Technology Karnataka, Surathkal** in partial fulfillment of the requirements for the award of the Degree of **Doctor of Philosophy** in **Humanities, Social Sciences and Management** is a **bonafide report of the research work carried out by me.** The material contained in this Research Thesis has not been submitted to any University or Institution for the award of any degree.

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CERTIFICATE

This is to certify that the Research Thesis entitled, **'Resource Based View and Sustainable Competitive Advantage: An Investigation Among Cellular Mobile Operators'** submitted by **C. Somashekar** (Register Number: **100686 HM10F01**) as the record of the research work carried out by him, is accepted as the Research Thesis submission in partial fulfillment of the requirements for the award of the degree of **Doctor of Philosophy.**

Dr. K.B. Kiran
Research Guide

Chairman - DRPC

(Signature with Date and Seal)

DEDICATION

To

His Holiness Karnataka Ratna Dr. Sree Sree Sivakumara Swamiji

A Great Saint, Renowned Scholar-Philosopher and A Great

Humanitarian

And

The Revered President,

Sree Siddaganga Education Society,

Sree Siddaganga Math.

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ABSTRACT

Over the past two decades, the Resource Based View (RBV) of the firm has emerged as one of the leading paradigms in the field of strategic management. However, the theory has been subjected to a number of criticisms, particularly because the vast majority of contributions within the RBV have been of a conceptual rather than an empirical nature. Empirical research on strategic resources and their impacts on firm performance are scarce. Despite extensive discussion grounded in RBV theory, its fundamental tenets still remain to be validated in the field. In order to examine the relationship between strategic resources and superior performance empirically, Cellular Mobile Operator (CMO) industry was chosen with empirical research method. In order to achieve the objective of the study, the strategic resources which contribute significantly in creating distinctive customer value and superior performance are studied in Indian CMO organizations.

The research design used both deductive and inductive approaches. Deductive approach uses RBV and Sustainable Competitive Advantage (SCA) framework developed in general to provide framework to achieve sustainable competitive advantage and superior performance for CMO firms. Inductive approach explores industry specific strategic resources, attributes of cellular mobile services and customer value dimensions for cellular mobile services. This research used data triangulation which includes questionnaire for customers, questionnaire for executives, archival records and documentation.

Competitive dynamics in Indian cellular mobile operator industry is so intense that every participant is striving to gain an advantageous market position. The need of the hour is to identify those resources that cater to customer needs and wants and translate them into services that generate value to the subscribers. The research identified six strategic resources from the literature review for cellular mobile operators. Strategic resources that contribute to attain sustainable competitive advantage for CMO firms are human capital, customer capital, location capital, reputational capital, process capital and innovation capital.

Sustainable competitive advantage is a function of attribute differentiation that drives distinguished customer value. It was discovered from the literature review that usefulness, ease of use, network size, compatibility and complementary service variety are attributes of cellular mobile services that drive customer value. Customers prefer services from that service provider who creates and delivers them better value in the market. The customer value dimensions for cellular mobile services that subscribers consider while assessing the value of services are functional value, social value, emotional value, conditional value, epistemic value and monetary value.

The findings revealed that: (1) there is a significant positive relationship between strategic resources and superior performance, (2) among the attributes of services, complimentary service variety has the highest influence on customer value, and (3) among the customer value dimensions, monetary value has the strongest effect on superior performance in cellular mobile services. Thus the results of the study can be used as a guiding tool by managers to identify, develop, protect and deploy strategic resources for CMO firms to achieve superior performance. Further, from the managerial perspective, this thesis highlights the importance of strategic resources to achieve superior performance, creation of new value added services and their contribution in creating and delivering customer value in CMO firms. The results of the study give guidelines for managers about which attributes need to be emphasized in cellular mobile services to create better customer value.

Finally, the study integrated strategic resources, attributes of services and customer value dimensions and developed a holistic RBV and sustainable competitive advantage framework for cellular mobile operator firms to achieve superior performance.

Keywords:

Resource Based View, Sustainable Competitive Advantage, Strategic Resources, Cellular Mobile Services, Superior Performance, Attributes of Services and Customer Value.

CONTENTS

APPENDICES

ANNEXURES

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

AHP	Analytic Hierarchy Process
ARPU	Average Revenue Per User
BSNL	Bharath Sanchar Nigam Limited
CC	Customer Capital
CEO	Chief Executive Officer
CFA	Confirmatory Factor Analysis
CMIE	Centre for Monitoring Indian Economy
CMO	Cellular Mobile Operator
COAI	Cellular Operators Association of India
COO	Chief Operating Officer
EFA	Exploratory Factory Analysis
EPS	Earnings per Share
FP	Financial Performance
FR	Financial Resource
HC	Human Capital
IC	Innovation Capital
IT	Information Technology
LC	Location Capital
MMS	Multimedia Message Services
MOU	Minutes of Usage
OP	Operational Performance
OR	Organizational Resource
PC	Process Capital
PR	Physical Resource
R&D	Research and Development
RBV	Resource Based View
RC	Reputation Capital

ROE	Return on Equity
ROI	Return on Investment
ROS	Return on Sales
SCA	Sustainable Competitive Advantage
SD	Standard Deviation
SMS	Short Message Services
SP	Strategic Performance
SPSS	Statistical Package for the Social Sciences
TR	Technological Resource
TRAI	Telecom Regulatory Authority of India
VAS	Value Added Services
VRIN	Valuable Rare Inimitable and Non Substitutable

CHAPTER ONE

INTRODUCTION

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INTRODUCTION

1.1 Chapter Overview

This chapter provides an introduction to the scope of this thesis. It is divided into eight sections. The following section 1.2 presents the issue related to the research background. Section 1.3 explains the statement of the problem. Section 1.4 provides the research questions identified. Section 1.5 specifies the research objectives. Section 1.6 describes the significance of the study. Section 1.7 briefly discusses the methodology used in the study. Finally, the overall structure of the thesis is outlined in section 1.8.

1.2 Background to the Research

Strategic management has seen creation of many new theories of the firm over the past few decades. Among these theories the Resource Based View (RBV) stands distinctly. To understand why some firms outperform others, RBV theory clearly explains that those firms possess unique resources and exploit them to yield the desired end result of Sustainable Competitive Advantage (SCA) and superior performance.

Resource based view considers each organization as a pool of resources that act as a foundation for crafting and executing strategy to attain SCA (Chamberlin, 1935). The rationale of strategy is that it produces above average performance through leveraging organizational resources. The RBV theory emphasizes that the source of a company's competitive advantage comes from the bundle of key resources that the company possesses. Firms obtain sustainable competitive advantage by implementing strategies that exploit their internal strengths, through responding to environmental opportunities, while neutralizing external threats and avoiding internal weaknesses (Barney, 1991). Firms seeking a competitive advantage must demonstrate the ability to alter and control resources in such a way that their full potential is realized (Newbert, 2007). External factors, (Industry and Market structure) may contribute to a firm's profitability, superior returns are being pursued through the internal factors (strategic choices) by which firm positions itself distinct within industry (Porter, 1998). When a firm implements a value

creating strategy due to which customers prefer their products or services and their competitors are unable to copy it or find it too costly to imitate, it creates sustainable competitive advantage (Hitt et al., 2006).

According to resource based view theory, the firm's management tasks are to identify, develop and deploy the key resources which are: valuable, rare, inimitable and non substitutable to create SCA and hence superior performance (Barney, 1991). Resource based view theory identifies key resources as those which essentially drive and determine organizational performance (Penrose, 1959; Wernerfelt, 1984; Prahlad & Hamel, 1990; Barney, 1991; Teece et al., 1997 & Lopez, 2007). The RBV theory was embraced by scholars in view of the fact that it deals directly with internal assets and capabilities of the firm which contribute to attain SCA. Hall (1992) defines 'resource' as that, which is owned or possessed, and a 'capacity' or 'skill' as something that must be realised.

The RBV theory asserts that accumulation of unique and valuable resources act as a competitive weapon to attain SCA and superior performance (Wernerfelt, 1984; Grant, 1991). A firm, to have an edge over others in the market, needs to attain competitive advantage by focusing on external as well as internal factors. Fahy (2000) developed a resource based model of sustainable competitive advantage and identified tangible assets, intangible assets and capabilities as strategic resources (also called key resources). These key resources have characteristics of valuable, difficult to duplicate and appropriability and hence contribute in the creation of distinct value to customer and thus lead to superior performance. Barney (1991) argues that the key resources which satisfy the conditions of being valuable, rare, inimitable and non substitutable are source of SCA. Clulow et al. (2003) prove that tangible assets do have value that may be appropriated by the firm, but are not key resources because they are causally explicit and hence easily duplicated. The authors revise the resource based model of sustainable competitive advantage. The authors explain that a firm with key resources which are valuable, barrier to duplication and appropriable will create consistently high performing value to its

customers leading to SCA and superior performance relative to competitors. Customers prefer services from that firm which delivers them better value in the market that leads to superior performance for the firm.

Table 1.1
Models of RBV and SCA

Author	Model
(Barney, 1991)	A model of 'Firm resources and sustained competitive advantage'
(Lado, 1992),	A Competency – Based model of Sustainable Competitive Advantage
(Hall, 1993),	A framework linking Intangible resources and capabilities to SCA
(Bharadwaj et al., 1993).	Sustainable competitive advantage in service Industries: A Conceptual model and research propositions
(Kettinger et al., 1994),	Model of sustainability
(Mazzarol et al., 1999),	SCA for educational institutions: a suggested model
(Fahy, 2000)	A resource based model of SCA: Capabilities driven perspectives
(Verona and Prandelli, 2002)	A dynamic model of customer loyalty
(Clulow et al., 2003)	A resource based view of customer value and its relationship to SCA
(Javalagi et al. 2005)	A framework to SCA and performance of internet firms
(Heywood and Kenley, 2008)	SCA model for corporate real estate

Source: Literature Review

1.2.1 Indian Telecommunication Market

The Indian Telecommunication market has witnessed tremendous growth over the past decade. It has been one of the fastest growing telecom markets in the world. Indian

Telecommunication market is the second largest market in the world[1]. Cellular mobile penetration is expected to go up to nearly 100 per cent by 2015[2]. Revenue from cellular mobile value added services are expected to grow to approximately Rs. 48,000 crores by 2015[3]. It is estimated that in 2025 consumer spending on communication will be 6 per cent from 2.7 per cent in 2007[4]. The estimated projection of future subscribers in India indicates that, still there is a lot of potential in the market. Hence the eyes of the world are now on India a very alluring market attracting global players.

The Country is divided into 23 Service Areas consisting of 19 Telecom Circle Service Areas and 4 Metro Service Areas for providing Cellular Mobile Telephone Service. The circles were classified as Metros, A, B or C depending upon the revenue potential for the circle with Metros & A circles expected to have the highest potential. As on 31st of March 2010, all over India there were 14 players, some in pipe line to enter the market, and at least 6 players in each circle and it is expected shortly to have approximately 12 operators in each circle. Average numbers of service providers in other countries of the world are three, to five whereas in India it is ten service providers[5]. The dominant players are Airtel, Reliance, Vodafone, BSNL, Idea and Tata tele services.

As global players are entering aggressively, intensity of competition is getting fierce in cellular mobile operator industry, and actors and forces of environment are continuously changing and challenging the service provider to survive in the market. Competition from new entrants with wide experience, global footprint, economies of scale and where present technology was old for them (2G and 3G in developed countries) is forcing operators to slash the call charges $0.01 lowest rate in the world, leading to

[1] Ernst & Young and Confederation of Indian Industry (2008), "India 2012: Telecom Growth Continues", India.
[2]Telecom Regulatory Authority of India, (2010), "The Indian Telecom Services Performance Indicators", India.
[3] ASSOCHAM Financial Pulse Study, (2010) – Emerging Landscape in Mobile VAS Industry, India.
[4] Ernst & Young and Confederation of Indian Industry (2008), "India 2012: Telecom Growth Continues", India.
[5]COAI - PwC Analysis, (2011), "Indian Mobile Services Sector-Struggling to Maintain Sustainable Growth", India.

reduce ARPU (Average Revenue Per User) (second lowest in the world)[6], with increasing Minutes Of Usage (MOU) forcing to search for an alternative way to increase revenue by Value Added Services (VAS) and by expanding the business to unrepresented area to stay in business. The new entrants are coming with alluring schemes and benefits, new services which appeal to customers to leave existing service provider and join them as well as new subscribers to build their market share.

In this scenario the existing service providers are struggling to attract new customers and retain the existing customers. In urban areas the Teledensity (number of people who own mobile for every hundred people) is nearing to 100 per cent, new entrants have to grab the market share of the existing players. Customers have the bargaining power as they can change the service provider depending on their choice considering the different dimensions like quality of service, brand, network coverage, price, value added services they offer. Rapid and drastic changes in business environmental factors are posing challenges to the Cellular Mobile Operators (CMO) in India to survive in the market. As intensity of competition is getting fierce in cellular mobile operator industry, with increase in cost and reduced margin, the service provider who wants to stay in business has to gain SCA, in turn superior performance. A service provider achieves SCA, when an attractive number of customers prefer its services over the offerings of competitors and when the basis for this preference is durable (Thompson Jr., Strickland III, & Gamble, 2005). A CMO which achieves SCA attains superior financial, strategic and operational performance over a prolonged period. Superior performance means above average performance: performance of a firm is greater than the industry average (Bharadwaj et al., 1993; Barney & Hesterly, 2008).

Competitive dynamics in CMO industry is so intense that every participant is striving to gain an advantageous market position. Where new entrants try to gain market share, the existing players lose and some of them find it difficult to survive. To stay, and grow in business and to have an edge over their rivals it is necessary to develop strategic

[6] COAI, (2008), "Annual Report - 2008", India.

competitiveness. Strategic competitiveness of an organization is defined as its ability to understand changing customer needs and wants, design and develop services that create value to them resulting in superior performance and sustainable growth rate relative to competitors (Gatignon & Xureb, 1997; Hamel & Prahalad 1994; Han et al., 1998; Heywood & Kenley, 2008). In India today every service provider is concentrating on core business of basic voice, leading to decreasing traffic and Average Revenue Per User (ARPU). The best way to ensure further profit is to increase traffic by offering widest possible range of VAS. The intense competition in the CMO industry has made VAS offered by service provider a key service differentiator. Service provider has to innovate, and develop those services that add value to the user so that traffic increases and hence revenue.

Cellular mobile operator firms lack resources needed to compete effectively in the market place due to discontinuity in technological environment and fast changing business environment (Dodourova, 2003). The need of the hour is to identify those resources that try to understand customer needs and wants and translate them into services that generate value to the subscribers. As (Porter, 1998) explains external factors may contribute to a firm's profitability, but superior returns are being pursued through the internal factors i.e. key resources, which make the firm position itself distinct within the industry. A CMO needs to understand and make use of the internal factors which are within their control to attain superior performance.

The Resource based view theory asserts that accumulation of unique and valuable resources is a competitive weapon to attain superior performance (Wernerfelt, 1984; Grant, 1991). The RBV is about identification, development and deployment of key resources continuously to make a CMO firm distinct from its competitors and to attain sustainable competitive advantage. As business environmental factors change and customer value proposition also changes, a CMO firm with the strategic resources is competent enough to design and deliver what is value for cellular mobile subscribers. RBV of the firm emphasizes that if a firm persistently earns above average returns, they should have access to highly firm specific and distinct resources as opposed to

undifferentiated inputs, which create barriers to imitation (Dierickx & Cool, 1989). Unique characteristics of key resources make them causal ambiguity which is difficult for competitors to imitate and hence a potential source of SCA. A cellular mobile operator firm which generates SCA leads to superior financial, strategic and operational performance for a prolonged period. Superior performance means above average performance i.e. performance of a firm is greater than the industry average (Bharadwaj et. al., 1993; Barney & Hesterly, 2008). Competitiveness can be characterized as inside out where an organization's internal environment, resources and capabilities are used to account for its competitive position (Rumelt, 1984; Teece, 1984). Resource based view theory explains an organization which continuously develops and creates new resources and capabilities, can respond quickly to changing market conditions to yield SCA (Foon, 2009).

Despite the enthusiasm with which the RBV theory has been embraced, it has increasingly been subjected to various criticisms. Mc Williams & Smart (1995) argue that RBV is very much a developing paradigm that requires further work to establish itself as a practical and useful theory of the firm. Recent RBV study has acknowledged that RBV research has tended to focus on the macro phenomena averaged over broad industry samples (Rouse & Daellenbach, 1999). While much of the RBV literature makes reference to the value of some resources, there has been little effort to establish empirically what, how and why these resources influence firm competitiveness (Miller & Shamsie, 1996). Researchers suggest that the RBV be augmented by a consideration of the business processes through which resources become valuable (Foss, 1998; Ray, Barney, & Muhanna, 2004). Hitt, Gimeno, & Hoskisson (1998); Rouse & Daellenbach (1999) assert that large scale multiple industry samples using generic resource sets will do little to tease out the unique and hard to copy resources that are sources of SCA. Amit & Schoemaker (1993) suggest the importance of using single industry studies in RBV research because the strategic value of resources can be industry specific.

Till this date, the vast majority of contributions within the RBV have been conceptual rather than empirical in nature, with the result that many of its fundamental

tenets still remain to be validated in the field (Fahy, 2000; Clulow et al., 2003; Clulow et al., 2007). Ang & Wight (2009) advocate that empirical research on key resources and their impacts on firm performance are scarce despite extensive discussion grounded in RBV. There is a need of using the model of resource based view of customer value and its relationship to sustainable competitive advantage for cellular mobile service provider firm. To fill the gap current thesis uses a single industry setting with empirical metodology to theoretically develop the resource based view and identify the set of key resources that act as a source for sustainable competitive advantage.

1.3 Statement of the Problem

Fast changes in environmental factors, competitive environment, increasing operating costs and initiatives of the Indian Government like issuing new licenses for new entrants, mobile number portability, have led to intensified competition in cellular mobile services market. A service provider which wants to continue and grow in business has to develop competitiveness so that it can survive. A cellular mobile operator firm which wants to develop competitiveness so that it can respond to the market changes and competitor actions has to develop key resources (Foon, 2009). A CMO firm can achieve competitiveness from a defensible market position and sustainable competitive advantages (Hamel & Prahalad 1994). The Resource based view theory is about identification, development and deployment of key resources continuously to make a CMO firm distinct from its competitors and to attain sustainable competitive advantage (Barney, 1991). This research identifies the key resources that a service provider needs to develop and protect continuously which contribute in creation of distinct value to their customer and attain sustainable competitive advantage.

The research empirically tests the theory and superior performance relationship with key resources for cellular mobile operator firm. These key resources which contribute significantly in creating distinctive customer value and superior performance are studied in Indian CMO organizations. There is no published empirical evidence to prove the relationship of key resources and superior performance of a firm with a single

industry of cellular mobile service providers. This study also uses the empirical evidence to show the influence of key resources in creating distinctive value to the customers.

The key drivers of customer value in cellular mobile services stem from different sources. Creation and delivery of superior customer value to customers is a key element for success of any firm (Higgins, 1998; Woodruff 1997; Porter, 1996). Sustainable competitive advantage is a function of attribute differentiation (Coyne, 1986) that drives distinguished customer value. The role and effects of networked service attributes have received little attention in the context of consumer markets (Thorbjornsen et al., 2009). This research identifies attributes of cellular mobile services and empirically tests among them which are the attributes that contribute more in creation and delivery of distinctive customer value.

Thus it is important to examine attributes of mobile services that create value to customers and its impact on superior performance. This study analyses empirically in Indian context, five attributes of cellular mobile services. It also explores how much each attribute contributes in creating customer value as well as identifies which attribute is more important for customers in cellular mobile services. Customers prefer services from that service provider who creates and delivers them better value in the market because they are satisfied with the services due to the value they get. Hence exploring and understanding customer value is important for cellular mobile service providers (Alkemade, 2003). The knowledge of customer value in cellular mobile services is limited (Yang & Jolly, 2006), thus it is important to examine customer value associated with current cellular mobile services in India.

This study analyses empirically the six dimensions of customer value that influence superior performance and how much each dimension influences the superior performance. The research identifies empirically which value is more important for customers in cellular mobile services. To understand why some firms outperform others, RBV theory clearly explains that those firms possess unique resources and exploit them to yield SCA. Sustainable competitive advantage will produce value to customers, with superior performance. Superior performance means above average performance:

performance of a firm is greater than the industry average (Bharadwaj et al., 1993), (Barney & Hesterly, 2008). A Cellular mobile operator firm which attains superior strategic, operational and financial performance over a prolonged period will achieve SCA. This research empirically tests strategic performance, financial performance and operational performance of CMO firms selected for the study. The research also tests among the firms which firms have attained superior performance. The suitable conceptual framework will be developed to attain SCA and superior performance. There is a need to look at the problem as to which are the sources of SCA and superior performance, and their interrelationships in the context of CMO organization.

There is a need to provide a comprehensive view of attributes of services that drive distinct customer value, and understand which attributes customers perceive as important in cellular mobile services. There is a challenge to understand among six dimensions of customer value which dimensions subscribers consider while assessing value of cellular mobile services that drive superior performance. There is a need to strengthen the concepts which contribute to the superior performance in Indian CMO organizations. The problem can be stated as, *A Study of Resource Based View and Sustainable Competitive Advantage for superior performance in Cellular Mobile Operator Organisations.*

Based on the issues identified in the preceding sections, the following questions set out the problem of this research.

1.4 Research Questions

1. Which are the strategic resources that contribute to sustainable competitive advantage and hence superior performance for cellular mobile operators?
2. What is the relationship between strategic resources and superior performance?
3. Which are the attributes that drive customer value in cellular mobile services?
4. What is value to subscribers in cellular mobile services?

1.5 Research Objectives

1. To identify the strategic resources those contribute to sustainable competitive advantage and hence superior performance for cellular mobile operators.
2. To assess the relationship between strategic resources and superior performance.
3. To determine the attributes of services that drive customer value in cellular mobile services.
4. To explore the customer value dimensions in cellular mobile services that lead to superior performance.
5. To suggest a framework for superior performance for Indian cellular mobile operators.

1.6 Significance of the Study

This research makes a contribution to both cellular mobile operator firm and academic knowledge. From the literature review it is clear that there is a need to fill the gap by studying empirically the concept which adds to the existing body of knowledge on resource based view and sustainable competitive advantage in particular and to strategic management in general. From the literature review there is evidence that strategic resources contribute significantly to superior performance for cellular mobile operators. The research identifies the strategic resources for cellular mobile operators which contribute significantly in creating and delivering better customer value. The research fills the gap by validating the conceptual framework of resource based view and sustainable competitive advantage in the field empirically for cellular mobile operators industry. There is scope for presenting a framework which is capable of effectively evaluating performance of cellular mobile service provider firm, as well in relation to service industry. From the practical point of view this study is a guiding tool for achieving superior performance in terms of strategic, operational and financial performance for cellular mobile operators. This study significantly contributes by identifying what makes a cellular mobile operator firm achieve sustainable competitive

advantage in the Indian context. This study will provide guidelines for an organization to gain competitiveness and to create distinctive value to its customers to achieve sustainable competitive advantage and superior performance.

1.7 Methodology

The exploratory nature of the current study called for an approach capable of discovering an understanding of the basic empirical concepts in a new context. Empirical research design deeply involves data collection through qualitative and quantitative methods. Many RBV scholars have acknowledged the benefits of combining qualitative and quantitative methodologies in strategy research as they can be valuable for both theory generation and theory testing (Hitt, Gimeno, & Hoskison, 1998; Barney et al., 2001).

The research design has used both inductive and deductive approaches. Inductive approach explores industry specific (key) strategic resources, attributes of cellular mobile services and customer value dimensions for cellular mobile services. Deductive approach uses RBV and SCA framework developed generally to provide framework to achieve sustainable competitive advantage and superior performance for CMO organizations. To examine the theory of resource based view and sustainable competitive advantage, and to conclude superior performance in cellular mobile service provider organizations, deductive approach method was used to draw conclusion from facts. Inductive analysis allows us to explore strategic resources, attributes of services and value dimensions and deductive approach assessed the strategic resources and superior performance in CMO organization. The research design in this research uses data triangulation which includes questionnaire for customers, questionnaire for executives, archival records and documentation. The research design is focused on the study of resource based view and sustainable competitive advantage in CMO organisations through integrative perspective. In order to achieve the objective of the study, all the CMO organizations in India were considered as the population for this study. The population consisted of 14 service providers and the sample survey was derived from the Annual report of Telecom

Regulatory Authority of India-March 2010. A total of six service providers that constitute 92 per cent of the market share, were purposively selected based on the inclusion and exclusion criteria for the study. Inclusion criteria: All CMO firms who are operating in India from the year 2005, since we need to evaluate long term performance. Exclusion criteria: It was found that around 92 per cent of the market share was controlled by these six service providers. Based on market share as on 31st of March 2010[7], those CMO firms market share is less than 10 per cent were excluded from the study. There are six service providers namely BSNL, Reliance Communications, Vodafone Essar Limited, Bharti Airtel Ltd., Tata Teleservices Ltd., and Idea Cellular Limited. To collect data from Chief Executive Officers of the six organisations regarding key resources, a structured questionnaire survey was conducted. For cellular mobile users the researcher used purposive sampling technique taking into consideration the respondents' availability, willingness to share the information, location of the subscriber where already third generation (3G) technology was launched, and use of value added services which is a very important criterion for selection of respondents to the study. As on March 2010, the country had 584 million mobile subscribers, which is the population for the research.

Based on sample size calculation formula at confidence level of 95 per cent and confidence interval of '3' the sample size needed is 1067. To collect data from cellular mobile users, self administered questionnaire survey was conducted in Bombay, Chennai, Hyderabad and Bangalore, the cosmopolitan cities that are sources of major revenue. Of these, Bombay and Chennai belong to Metro circle and Bangalore and Hyderabad belong to circle A. For the present study, data was collected from 300 respondents from each city totaling up to 1200 cellular mobile users. Descriptive and inferential statistics were applied using SPSS (Statistical Package for the Social Sciences). To rank the CMO firms based on the key resources they possess, analytic hierarchical process was used. Analytic hierarchy process is a powerful tool that may be used to make decisions when multiple

[7] Telecom Regulatory Authority of India, (2010), "The Indian Telecom Services Performance Indicators", India.

and conflicting objectives/criteria are present, and both qualitative and quantitative aspects of a decision need to be considered (Saaty, 1980). Kruskal Wallis test is used to assess whether a dependent variables is the same across all levels of a factor in the independent variables. To test hypotheses that reflect the relationships between these theoretical constructs, the model fit was determined through regression analysis and significance by Pearson's correlation.

The model of RBV and SCA is developed and a framework suggested for SCA and superior performance as an outcome of deductive and inductive analysis for CMO organization.

1.8 Structure of Thesis

This section provides a brief review of the structure of the thesis. *Chapter One* introduces the issues related to the topic under investigation, with a statement of problem, research questions, research objectives, and a brief discussion about the methodology used. *Chapter Two* provides a review of the related literature that forms the theoretical framework and develops the literature map. The review identifies key resources such as human capital, reputational capital, customer capital, location capital and process capital and innovation capital.

The literature also identifies attributes of cellular mobile services: usefulness, ease of use, network size, compatibility, and complementary service variety, customer value dimensions; functional value, social value, emotional value, conditional value, epistemic value, and monetary value and superior performance; strategic performance, operational performance and financial performance. Based on the gaps identified, further, it develops the conceptual framework for the research and research hypotheses to be tested. *Chapter Three* deals with the research design to empirically examine the proposed model as outlined in Chapter Two. The methodology comprises an overview of the empirical research design and the use of quantitative method, the scale items used to measure the underlying constructs, population and sampling, reliability, and validity, instruments used

to collect the data, and discusses the pre test and final survey. *Chapter Four* presents the analysis and interpretation of data and testing of hypotheses stated in the research. The final *Chapter Five* draws major findings and conclusions and aims to answer the five research questions of Chapter One. Theoretical and managerial implications drawn from the results are reported. Limitations of this thesis and avenues for further research are also discussed.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

CHAPTER TWO

REVIEW OF RELATED LITERATURE

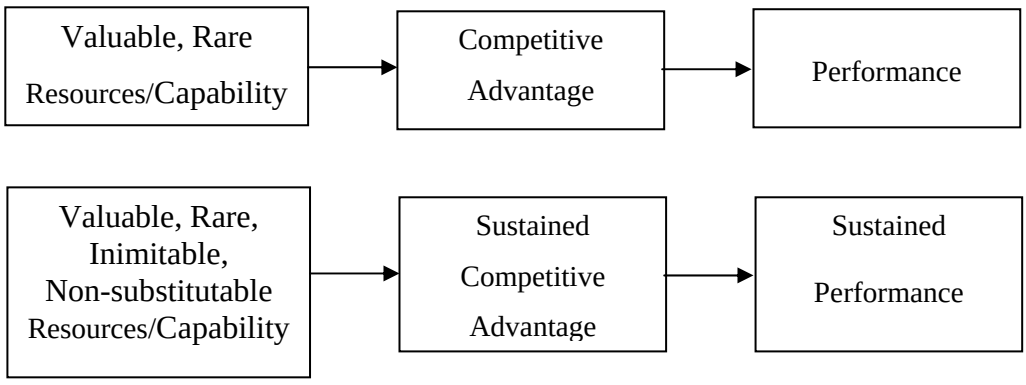
2.1 Chapter Overview

This chapter reviews the literature related to RBV and SCA highlighting key resources for CMO organizations; Section 2.2 and Section 2.3 review respectively the development of resource based view theory and sustainable competitive advantage from its inception to present status. Section 2.4 presents measurement of superior performance proposed by key researchers. Section 2.5 and section 2.6 review RBV and SCA and their linkages in depth. Section 2.7 and its subsections present the conceptual framework of RBV and SCA. Section 2.7.1 discusses resources, and Section 2.7.2 reviews the intangible resources and also reviews the intangible resources identified. Section 2.7.3 discusses basic and value added services of cellular mobile services. Section 2.7.4 discusses five attributes of cellular mobile services. Section 2.7.5 discusses the concept of SCA in cellular mobile services. Section 2.7.6 discusses customer value and its dimensions for cellular mobile services. Section 2.7.7 discusses the concept of superior performance and its measures in strategic, operational and financial performance. Section 2.8 discusses concept of behavioural intention. Section 2.9 highlights the related literature review and identifies research gaps. Section 2.10 develops the research framework and proposes research hypotheses. Finally, Section 2.11 summarises the chapter.

2.2 Development of Resource Based View

The resource based view theory encompasses principles from several major research streams including the organizational economics paradigm, main stream strategy research, and industrial organizational thought (Mahoney & Pandian, 1992). Edith Penrose was one of the first scholars to recognize the importance of resources, argued that a firm consists of ‘a collection of productive resources’ and these resources may only contribute to a firm’s competitive position to the extent that they are exploited (Penrose, 1959). Rubin (1973) argued that instead of merely possessing resources ‘firms must process raw resources to make them useful’ and conceptualized firms resources as bundles. The resource based view theory has become a major

theory in strategy research since 1980's. Wernerfelt (1984) suggested that firms may earn above normal returns by identifying and acquiring resources that are critical to the development of demanded products and proposed a balanced perspective between resources and products (or markets). Hitt & Ireland (1985) assert that distinctive competencies are firm attributes that allow it to compete more effectively and successfully than other firms. Dierickx & Cool (1989) argued that to sustain above normal returns over time, its resources must be inimitable and non substitutable. Barney (1991) developed a model of 'Firm resources and sustained competitive advantage' and argued that the resources acquired by firms that possessed resources that were valuable and rare would attain a competitive advantage and achieve improved performance for short time. Barney (1991) also contended that in order for a firm to sustain competitive advantage and achieve sustained performance over time its resources must be valuable, rare, inimitable and non substitutable. Conceptual model developed by Barney (1991) is depicted in Figure 2.1.



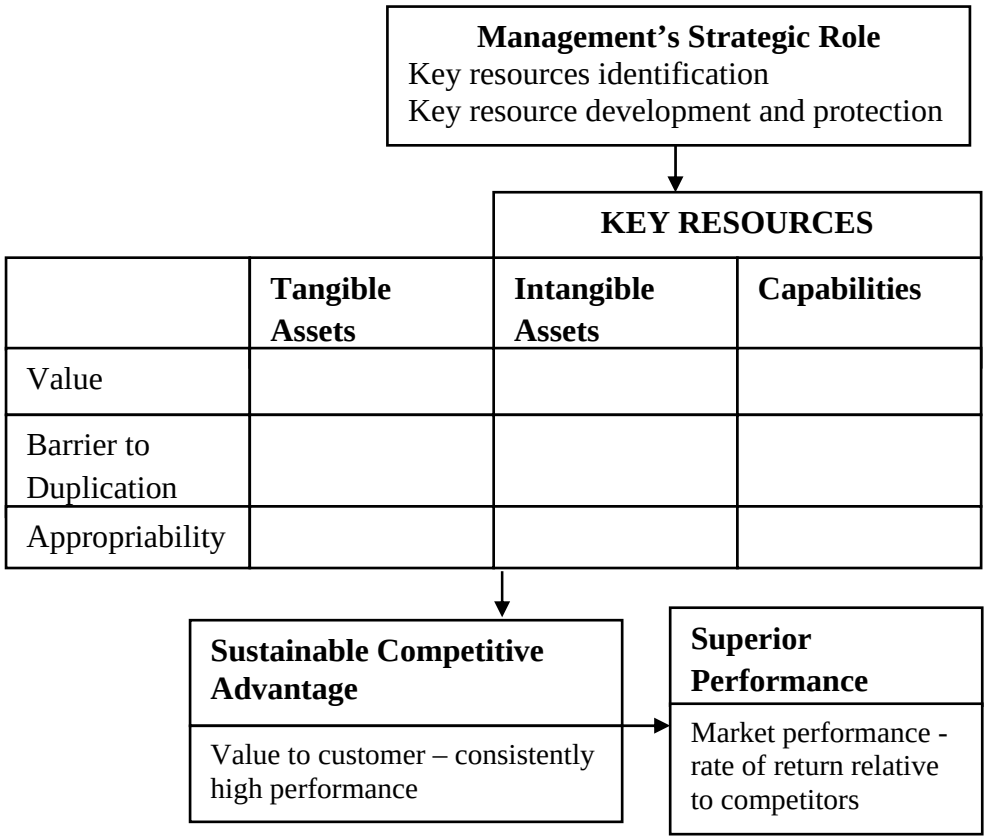
Source: (Newbert, 2007)

Figure 2.1
Conceptual Model of Firm Resources and SCA

Mahoney & Pandain (1992) argued that 'a firm achieves rents not because it has better resources, but rather the firm's distinctive competence involves making better use of its resources'. Mahoney & Pandain (1992); Peteraf, (1993) suggested that firms have to accumulate valuable, rare, inimitable and non substitutable resources and those resources must be properly exploited to maximize their

productivity and financial yield. Kay (1993) contends that a resource becomes a competitive advantage when it is applied to an industry or brought to a market. Williams (1992) describes the managerial role is converting resources into something of value to customers. Amit & Schoemaker (1993) contend resources as 'stocks of available factors that are owned or controlled by the firm' and capabilities as 'firm's capacity to deploy resources' and stress the strategic role of management in identifying, protecting and deploying the firm's resource. Fahy (2000) argues that resources in themselves do not confer a sustainable competitive advantage and explains the role of strategic choices by managers and suggests 'a resource based model of sustainable competitive advantage'.

In the model Fahy (2000) classified the resources into tangible assets, intangible assets and capabilities, if they satisfy the conditions of being valuable, barrier to duplication and appropriability are called key resources. Fahy (2000) contended that in a firm if these resources are identified, developed/protected and deployed properly through the management's strategic choices, they will create value to customers and achieve SCA and hence superior performance for the firm. Fahy (2000) suggested for future empirical research to meet the challenges involved in identifying and measuring resources and role played by management in the process by which resources are converted into positions of advantage. Clulow et al. (2003) showed that tangible assets do have value that may be appropriated by the firm but are not key resources because they are causally explicit and hence easily duplicated. Further Clulow et al. (2003) argued that tangible assets do not satisfy the criteria for SCA and intangible assets and capabilities are key resources which satisfy the criteria of providing the firm with SCA. Clulow et al. (2003) revised and improved 'a resource based model of sustainable competitive advantage' and suggested "a resource-based view of customer value and its relationship to sustainable competitive advantage" as shown in Figure 2.2. Empirical tests using resource based view theory have been conducted across a diverse assortment of academic literatures (Barney & Arikan, 2001). The present research used this as the base model to study resource based view and sustainable competitive advantage for cellular mobile operator firms. The major research works on RBV and their contributions are presented in Table 2.1.



Source: (Clulow et al., 2007)

Figure 2.2

Model of RBV of Customer Value and its Relationship to SCA

2.3 Development of Sustainable Competitive Advantage

In competitive advantage, advantage is a relative concept (Hu, 1995; Kay, 1993) only meaningful when compared to another entity or set of entities. A competitive advantage is then an advantage one firm has over a competitor or group of competitors in a given market, a strategic group or industry (Kay, 1993). A firm can achieve competitive advantage over its competitor by differentiation or low cost (Porter, 1985). The terms used sustained advantage (Barney, 1991) and sustainable advantage (Grant, 1991) meaning that it is difficult to attain and competitive moves are not rapidly imitated (Bhide, 1986). A firm may have many advantages over other firms but the important advantages are those in which customers place some level of value (Coyne, 1986).

Table 2.1: The Study of Resource Based View

Author	Contribution
(Penrose, 1959).	Firm consists of 'a collection of productive resources'
(Rubin, 1973)	Firms must process raw resources to make them useful
(Wernerfelt, 1984)	Firms must acquire resources that are critical to the development of demanded products
(Hitt & Ireland, 1985)	Distinctive competencies are firm attributes that allow to compete more effectively and successfully
(Dierickx & Cool, 1989)	Resources must be inimitable and non substitutable to sustain above normal returns over time
(Barney, 1991)	Resources must be valuable, rare, inimitable and non substitutable to achieve SCA and sustained performance
(Mahoney & Pandain, 1992)	Distinctive competence involves making better use of its resources
(Mahoney & Pandain, 1992; Peteraf, 1993)	Resources must be properly exploited to maximize their productivity and financial yield.
(Kay, 1993)	Resources become competitive advantage brought to a market.
(Williams, 1992)	Management role is converting resources into something of value to customers.
(Amit & Schoemaker, 1993)	Strategic role of management in identifying, protecting and deploying the firm's resource.
(Fahy, 2000)	Key resources - valuable, barrier to duplication and appropriability - tangible assets, intangible assets and capabilities
(Clulow et al., 2003)	Intangible assets and capabilities - key resources and are sources of SCA.
(Crook et al., 2008)	Strategic resources are positively related to performance.

Source: Literature Review

Bharadwaj et al. (1993) explained that the attainment of sustainable competitive advantage can be expected to lead to superior performance measured in conventional terms such as market share and profitability. Lado et al. (1992) developed a competency–based model of sustainable competitive advantage through which he contended that achieving and sustaining competitive advantage position require that managers focus on developing and nurturing their firm's idiosyncratic competencies that inhibit imitability. Lado et al. (1992), argued that firms should continually invest in skills and capabilities that are causally ambiguous and are not easily tradable in the market for strategic factors, or when acquired from such a

market, have potential to generate above normal returns. Hall (1993) identified reputation, employee know how, culture, networks and data bases as intangible resources and developed a framework based on empirical study to link intangible resources and capabilities to SCA. The study of SCA within particular service industries was proposed initially by (Bharadwaj et al., 1993) and they proposed a conceptual model which attempted to integrate SCA issues from the fields of marketing, strategic management and industrial organization economics. Bharadwaj et al. (1993) explored "…the implications of the distinctive characteristics of service industries and firms for achieving SCA". Kettinger et al. (1994) through their empirical work showed that attainment of sustained IT-based competitive advantage may be more of a process of building organizational infrastructure in order to enable innovative action strategies. Mazzarol, et al. (1999) developed a model of sustainable competitive advantage for education service enterprises in international markets wherein they suggested that market success for education service enterprises is the outcome of delivering a successful combination of distinctive competencies. Fahy (2000) developed a model of RBV and SCA wherein he explained some stumbling blocks on the road to understanding SCA and contended that desired outcome of managerial effort within the firm is a SCA. Fahy (2000) argued that the resources of a firm must meet the conditions of value, barrier to duplication, and appropriability as well and they must enable the creation of value to customers to achieve SCA which allows the firm to earn economic rents or above average returns. Verona & Prandelli (2002) developed a dynamic model of customer loyalty and through empirical study of internet firms, they emphasize that to achieve SCA, the strategy should be based on both affiliation and lock-in of customers. Clulow (2003) showed empirically that a high performing firm in the financial services industry, identifies, develops, deploys and protects its key intangible assets and capabilities in sustaining competitive advantage.

Javalagi, et al. (2005) developed an integrative framework of the internet and SCA and they identified three key components that are critical to sustaining a competitive advantage and gaining superior performance. The three components are the consumer decision making process on the web, customer relationship

management, and firm performance. Ramirez & Hachiya (2008), proved empirically that strategic resources or industry structural conditions help firms build up a SCA.

Heywood & Kenley (2008) developed a model of sustainable competitive advantage for corporate real estate and contended that cost, innovation and differentiation are the sources of SCA. The principal contribution of the RBV of the firm to date has been the theory of SCA. The present study focuses on RBV theory of identifying key resources and its relationship in delivering superior value to its customers and achieving SCA and superior performance for firm. The major research works on SCA and their contributions are presented in Table 2.2.

Table 2.2: The Study of Sustainable Competitive Advantage

Author	Contribution
(Hu, 1995; Kay, 1993)	Competitive advantage -A relative concept
(Kay, 1993)	An advantage over competitors
(Coyne, 1986)	Advantages are those - customers place some level of value.
(Porter, 1985)	Sources of competitive advantage -differentiation and low cost
(Barney, 1991; Grant, 1991)	Sustained advantage and sustainable advantage - difficult to attain and imitate competitive moves
(Bharadwaj et al., 1993)	SCA leads to superior performance- market share and profitability
(Lado et al., 1992)	Nurture idiosyncratic competencies, invest in skills and capabilities - causally ambiguous -generate SCA
(Hall, 1993)	Intangible resources and capabilities to SCA
(Bharadwaj et al., 1993)	Distinctive characteristics of service industries for SCA.
(Kettinger et al., 1994)	A process of building organizational infrastructure for SCA
(Mazzarol, et al., 1999)	SCA is an outcome of delivering a successful combination of distinctive competencies.
(Fahy, 2000)	Value, barrier to duplication, and appropriability enable the creation of value to achieve SCA.
(Verona & Prandelli, 2002)	SCA based on both affiliation and lock-in of customers
(Clulow, 2003)	Identify, develop, deploy and protect key intangible assets and capabilities for SCA
(Javalagi, et al., 2005)	Consumer decision making process, CRM, and performance are critical to SCA
(Ramirez & Hachiya, 2008)	Strategic resources or industry structural conditions - build up a SCA.
(Heywood & Kenley, 2008)	For corporate real estate cost, innovation and differentiation are the sources of SCA

Source: Literature Review

The empirical studies on resource based view and sustainable competitive advantages are presented in Table 2.3.

Table 2.3: Empirical studies on RBV and SCA

Author	Contribution
(Pfeffer, 2005)	Producing SCA through : effective management of people
(Thompson & Coe, 1997)	Gaining SCA through Strategic pricing
(Mata et al. , 1995)	Information technology, and SCA; A resource based analysis
(Colgate, 1998)	Creating SCA through : MIS technology
(Lewis, 2000)	Lean production and SCA
(Burden & Proctor 2000)	Creating SCA through training
(Carmeli & Cohen, 2001)	Organizational reputation as a source of SCA and above normal performance
(Johnson, & Sirikit 2002)	Service quality in Thai telecommunication industry: a tool for achieving SCA
(Clulow et al., 2003)	The RBV and SCA: the case of a financial services firm
(Sharkie, 2003)	Knowledge creation and its place in the development of SCA
(Vorhies & Morgan, 2005)	Benchmarking marketing capabilities
(Khandekar & Sharma, 2005)	Managing Human resource capabilities for SCA
(Yap, 2006),	Corporate Branding as a source of SCA
(Clulow et al., 2007)	The RBV and value: the customer based view of the firm
(Newbert, 2008)	A conceptual level empirical investigation of the RBV of the firm
(Smith D. Alan, 2008)	RBV of the firm: Measures of reputation among health service sector Businesses
(Kazlauskaite & Buciuniene, 2008)	The role of HR and their management in the establishment of SCA
(Zhu, 2009)	Value of information systems to electrical construction companies: RBV
(Sun & Tse, 2009)	The RBV of competitive advantage in two sided markets

Source: Literature Review

2.4 Superior Performance

It is difficult to measure competitive advantages (Ketchen, Hult, and Slater, 2007). Many researchers have sought to empirically link strategic resources and performance (Barney and Arikan, 2001). The assumption is that if strategic resources are related, then a competitive advantage must exist. In many studies the term

competitive advantage is almost synonymous with performance (Crook et al., 2008). Competitive advantage is generally used to describe the relative performance of rivals in a given market environment (Peteraf and Barney, 2003). Superior performance means above average performance i.e. performance of a firm is greater than the industry average (Bharadwaj et. al., 1993; Barney and Hesterly, 2008). A review of past empirical studies on performance indicates that there are variations in measuring performance in organizations (Monge et al., 2006). Different variables used for measuring superior performance have been identified from the literature and is presented in Table 2.4.

Table 2.4: Superior Performance Measures Proposed by Key Researchers

Variables	Measures	Key Researcher
Market performance, Financial performance	Long term Performance	(Bharadwaj et al., 1993)
Market share, Market effectiveness, Sales growth, ROI, ROA, ROS.	Market Performance, Sales performance, Financial Performance	(Fahy, 2000)
ROA, ROI, sales growth, profit margin	Financial performance	(Carmeli & Cohen, 2001) (Srinivasan, 2008)
ROI	Market performance	(Clulow et al., 2003)
ROI	Superior performance,	(Tuominen et al., 2005)
Customer satisfaction, Market effectiveness, Profitability.	Overall firm performance,	(Vorhies & Morgan 2005)
Trust, satisfaction, loalty, Brand equity, Customer lifetime value	Strategic performance, Financial performance	(Javalgi et al., 2005)
Product quality, Customer satisfaction, new product development, attraction and retain of employment.	Organizational performance	(Khandekar & Sharma, 2005)
ROI	Market performance	(Clulow et al., 2007)
Innovation and learning, Process improvement, customer satisfaction, financial based.	Organizational performance	(Rhodes et al., 2009)
ROA	Financial performance	(Cater & Cater, 2009)
ROA	Financial performance	(Ang & Wight, 2009)

Source: Literature Review

2.5 Resource Based View

In strategic management, RBV considers each organization as a pool of resources that act as foundation for crafting and executing strategy. The rationale of strategy is that it produces above average performance through leveraging organizational resources. The RBV emphasizes that the source of a company's competitive advantage comes from the bundle of key resources that the company possesses (Chamberlin, 1935). RBV explains that a firm's competitive advantage is the result of its ability to identify, develop, assemble and exploit an appropriate combination of resources. An organization is defined with RBV as what it can do (Grant, 1991). RBV contends that every firm is unique, dynamic, idiosyncratic, immobile, and inimitable and hence it has to focus internally to earn above average returns. RBV theory identifies intangible resources as those which essentially drive and determine organizational performance (Penrose, 1959; Wernerfelt, 1984; Prahalad & Hamel, 1990; Barney, 1991; Teece et al., 1997 and Lopez, 2007). Barney (1991), Srinivasan (2008) advocate that in the RBV the firm's management tasks are to identify, develop and deploy the key resources (strategic resources) which are: valuable, rare, inimitable and non substitutable to create superior performance. SCA can be obtained when management of the firm identifies, develops and deploys strategic resources and exploits them at the right opportunity (Fahy, 2000). Mere possession of resources itself will not yield superior performance for a long time, it needs to be bundled in right combination and exploited as opportunity arises in market place to attain sustainable competitive advantage. Firms seeking a competitive advantage must demonstrate the ability to alter and control resources in such a way that their full potential is realized (Newbert, 2007). Resources are inputs into a firm's production process, such as capital equipment, the skill of individual employees, patents, finances, and talented managers (Hitt et al., 2006; Aaker, 1989). 'Resource' is that, which is owned or possessed, and a 'capacity' or 'skill' is something that must be realized (Hall, 1992). Resources within the RBV are generally broken down into two fundamental categories: 1) Tangible resources and 2) Intangible resources (Hall, 1992; Hitt et al., 2006). Tangible resources are assets that can be seen and quantified to include those factors containing an accounting value as

recorded in the firm's balance sheet. Hall (1992) identifies two tangible resources: a) financial assets and b) physical assets. Tangible resources are necessary in achieving above average returns but they can be openly exchanged in the market. Since tangible resources are easily imitable, they fail to satisfy the condition of valuable, rare, inimitable and non substitutable (VRIN) requirement of strategic resources to gain sustainable competitive advantage. Tangible assets whilst having value for the firm were determined not to fit the construct of "key resources" or "strategic resources", because they were found to be causally explicit and hence imitable because, they did not satisfy the criteria of fundamental to the achievement of SCA (Clulow et al., 2007). Intangible resources are called strategic resources that contribute significantly in value generating activity. Intangible resources include assets and capabilities that are typically rooted deeply in the firm's history and have accumulated over time. 'Imitation of these resources by other firms becomes next to impossible' (Dierickx & Cool, 1989) resulting in causal ambiguity. Intangible resources are embedded in unique patterns of routines, it takes a period of time to develop and accumulate, hence it is relatively difficult to analyze and imitate (Hitt et al., 2006).

2.5.1 Strategic Resources

Intangible resources are called 'key resources' or 'strategic resources' which are sources of SCA because they satisfy the unique characteristics valuable, rare, inimitable and non-substitutable (Clulow et al., 2007). Strategic resources are classified as assets and capabilities (Hall, 1992). If the intangible resource is something that the firm "has", it is an asset. If the intangible resource is something that the firm "does", it is a capability. Intangible resources that are assets include organization culture, brand name, customer relationship, reputation and networks (Coyne, 1986). Capabilities are the firm's capacity to deploy resources that have been purposely integrated to achieve a desired end state. Firm specific capabilities have been regarded as rather unobservable, path-dependent resources because their accumulation process is characterized by high levels of tacitness and causal ambiguity (Lippman & Rumelt, 1982; Reed & DeFillippi, 1990). RBV literature emphasizes that capabilities are interaction based, they are even more difficult to duplicate due to

causal ambiguity and a source of SCA (Collis, 1994). Intangible resources that are skills include organization tacit knowledge or employee know-how (Coyne, 1986). Hall (1993); Itami & Roehl (1987); Michalisin et al. (1997); Clulow et al. (2007) classify resources like client trust, reputation, networks, and intellectual property as intangible assets and knowledge, organizational culture, skills, management processes, organizational networks and experience as capabilities. Fahy (2000) identifies intellectual property, client trust, reputation, network/communication systems, databases as assets, and capabilities are team embodied knowledge, know how, organizational culture, organizational history, learning by doing, managerial skill. The glue binding an organization together capabilities emerge over time through complex interactions among tangible and intangible resources (Hitt et al., 2006). Gerpott, et al. (2008) identify seven categories of intangible resources in telecommunication industry like human capital, customer capital, supplier capital, location capital and investor capital which are assets and process capital, and innovation capital are capabilities.

2.6 Sustainable Competitive Advantage

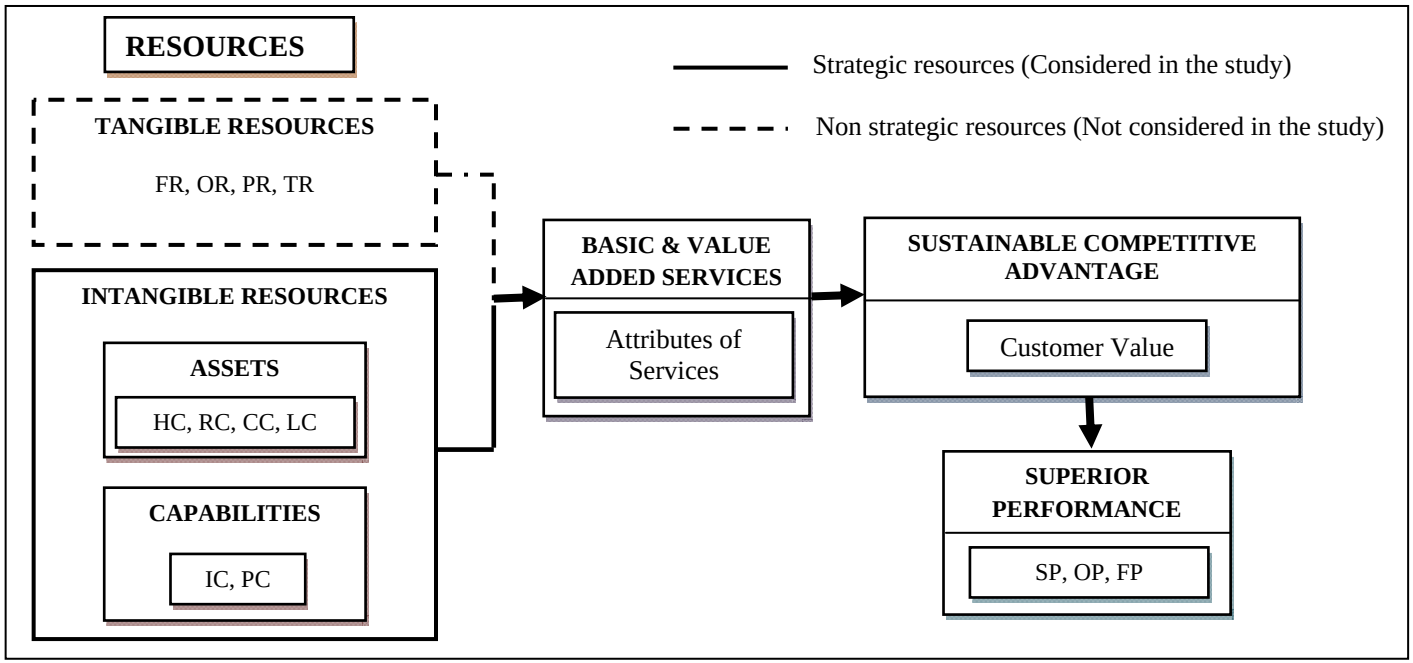
Strategy aims at developing competitive capabilities to forge a series of moves, both in the market place and internally, that makes the company distinct and which rivals can't quite match. This tilts the playing field in the company's favor by giving buyers reason to prefer its products or services and hence create and sustain superior performance. The fundamental basis of above average performance is SCA (Porter, 1985). Sustainable competitive advantage is attained when a firm implements a strategy with strategic resources; it creates and delivers consistently higher value to customers than its competitors hence customers prefer the services of the firm, resulting in above average performance, and last for longer duration. Firm's abnormal profitability can be defined as the difference between the total profitability of a firm and its competitive or industry-wide profitability (Jacobson, 1988; Peteraf, 1993). A firm's above normal profitability can either be that of the level of profits earned by a firm, which is above or below the average or break-even for a particular industry.

Sustainable competitive advantage is a function of attribute differentiation, the capability gap, and the most important condition is that existing and potential competitors cannot or will not take actions to close the gap (Coyne, 1986). A competitive advantage is sustained only if it continues to exist after efforts to duplicate that advantage have ceased. The essential requirements for a resource / skill to be a source of SCA are valuable, rare, inimitable, and non substitutable (Barney, 1991). Sustainability is a condition where a firm's competitive advantage resists erosion by competitor behavior, this requires that a firm possesses some barriers that make imitation of the strategy difficult (Porter, 1985). SCA is the product of enjoying both competitive advantage and strategic advantage and it represents a process that meets the competitive needs of the present without compromising the ability of the organization to meet future competitive needs and currently derives the ability to add more value than its competitors. Strategic advantage is used to describe an organization's dynamic and unique resources that determine its competitive renewal (Chaharbaghi & Lynch 1999). A CMO achieves SCA, the objective of business strategy when an attractive number of buyers prefer its products or services over the offerings of competitors and when the basis for this preference is durable (Thompson et al., 2005). SCA will produce value to customers, with superior performance in market performance, sales performance, and financial performance which is favorably abnormal (Fahy, 2000). Sustainable competitive advantage is a key to ensure a sustained, superior long-term performance (Bharadwaj et al., 1993; Lado & Wilson, 1994).

2.7 Conceptual Framework

A conceptual framework for CMO firms, based on theories of RBV and SCA to achieve above average performance is presented in Figure 2.3. The framework explains that intangible resources are strategic in nature which satisfy the condition of VRIN, hence make them causal ambiguity contribute to develop unique value to customers and create gap between the firm and competitors. Unique characteristics of intangible resources make them causal ambiguity which is difficult for competitors to imitate and hence a potential source of SCA. A CMO firm which possesses strategic

resources exploits them as opportunity arises and can understand attributes of services and customer value dimensions that are required to stand apart in the market, design basic and VAS for which most of the customers prefer their services compared to competitors leading to superior performance. Customers prefer the services of that service provider who understands their needs and wants and delivers better value to them than their competitors which leads to SCA and superior strategic, operational, and financial performance.



Tangible Resources:
Financial Resource (FR)
Organizational Resource (OR)
Physical Resource (PR)
Technological Resource (TR)

Intangible Resources:

Assets:
Human Capital (HC)
Reputation Capital (RC)
Customer Capital (CC)
Location Capital (LC)

Capabilities:
Innovation Capital (IC)
Process Capital (PC)

Superior Performance:
Strategic Performance (SP)
Operational Performance (OP)
Financial Performance (FP)

Figure 2.3

Conceptual Framework of Resource Based View and Sustainable Competitive Advantage for CMO firms

2.7.1 Resources

Resources are inputs to a firm, 'stocks of available factors that are owned or controlled by the firm' (Amit & Schoemaker, 1993) through which it performs its operations or carries out activities (Amit & Schoemaker, 1993; Black & Boal, 1994; Grant, 1998). Resources within the RBV are generally broken down into two fundamental categories viz. tangible resources and intangible resources. (Hitt et.al, 2006) has classified tangible resources into four types - Financial Resources (FR), Organizational Resources (OR), Physical Resources (PR), and Technological Resources (TR) which are necessary in attaining superior performance but fail to satisfy qualities of strategic resources.

2.7.2 Intangible Resources

Intangible resources are the feedstock of capabilities differentials, which result in SCA and superior firm performance (Hall, 1992; 1993). Intangible resources are divided into assets and capabilities (Hall, 1992). Intangible resources include assets that are non-physical, typically rooted deeply in the firm's history and accumulated over time (Hitt et al., 2006). Assets - are something which a CMO owns like Human Capital (HC), Customer Capital (CC), Location Capital (LC), and Reputational Capital (RC) (Gerpott et al., 2008) which are internal and within the control of service provider, which contribute significantly for the performance. (Day, 1994), explains capabilities are "complex bundles of skills and accumulated knowledge, exercised through organizational processes, which enable firms to coordinate activities and make use of their assets". A firm may achieve rents not because it has better resources, but because of the firm's distinctive capabilities (competence) like innovation and process capabilities which make better use of its resources (Mahoney & Pandain, 1992). Innovation Capital (IC) and Process Capital (PC) (Gerpott et al., 2008) are the capabilities of a CMO firm that signifies 'its ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments' (Teece et al., 1997). A firm which makes use of its internal intangible resources which are within their control attains SCA and superior performance because of causal ambiguity (Porter, 1998). The choice of intangible internal

resources was carefully made because they are owned and within the control of a CMO which enables to respond to competitors' action and changing environment by strategy through altering, developing and deploying resources.

2.7.2.1 Assets

If the intangible resource is something that the firm "has", it is an asset (Hall, 1992). Internal intangible assets that contribute for CMO to attain SCA are Human Capital (HC), Customer Capital (CC), Location Capital (LC), and Reputational Capital (RC) (Coyne, 1986; Hall, 1993; Itami & Roehl, 1987; Michalisin et al., 1997; Clulow et al., 2007; Gerpott et al., 2008). A service provider, who develops, protects, deploys, and exploits these assets continuously as opportunity arises, creates and delivers distinct value to subscribers and attains SCA.

2.7.2.2 Human Capital

Human element in CMO is one of the most important intangible assets that contribute significantly in each and every stage. Human capital of a firm refers to inherent employee based knowledge, skills, attitude, experience, motivation, loyalty, decision making capacity, risk taking propensity, wisdom of people and abilities that employees possess and use in their work, firm's culture, working climate and associated with a firm, built up over a period of time, which drive value and hence achieve SCA (Schultz, 1961; Hall, 1992; Barney, 1995; Grant 1998; Kamoche, 1999; Marr et al., 2004; Swart, 2006; Gerpott et al., 2008; Cater & Cater, 2009). Gerpott et al. (2008) identifies operational human capital indicators as company and job tenure structures of a firm's employees, employee turnover rates, and job satisfaction levels, special knowledge and skills required to innovate, to design new services and operate complex networks.

2.7.2.3 Reputational Capital

Reputation is based on perception by stakeholders about an organization developed over a period of time. Dowling (2001); Michalisin et al. (2000) have proved that reputation is a strategic resource and thereby reputed firms outperform

their competitors. Reputation can be exploited for better firm performance; it creates value for stakeholders leading to better performance (Fombrun, 1996). Reputation is feeling good and secure with the firm, and a great deal of respect, credibility, trustworthiness that creates better value which contributes for the firm to earn superior performance. Reputation helps in acquiring new customers, retaining existing ones, charging premium prices, attracting and retaining human resource, access to capital markets, and attracting investors which contribute to the firm to earn above average return through increased market share and profitability (Smith, 2008).

2.7.2.4 Customer Capital

Customer capital of a firm is "the knowledge embedded in the marketing channels and customer relationships that an organization develops through the course of conducting business" (Ordonez, 2005). Customer capital is customer-related knowledge part of a broader "client and network capital" (Swart, 2006). Sun & Tse (2009) prove that customers of a service who participate in the network as resources contribute significantly to SCA. Customer capital can be created by "committing the customers to the company's activities" (Hussi, 2004). According to Katz & Shapiro (1986), 'there are many products for which utility that a user derives from consumption of goods increases with number of other agents consuming the good'. Customer capital consists of market-related variables such as a firm's current customer base, market share, customer satisfaction or brand strength, long-term relationships to contractually or emotionally bonded customers (Gerpott et al., 2008).

2.7.2.5 Location Capital

A firm that locates its facilities in a place where over a period of time it turns out to be a valuable prime location, then that firm possesses a resource which leads to geographical coverage and connects customers to network, always (Hirshliefer, 1980; Ricardo, 1966; Barney, 1991) leading to add and create value to its customer. Selection of location to provide cellular mobile services is critical, it requires signal coverage within the building, every where in the city, geographical location national highways wherever customer goes, prime locations like colleges, airports, and centre

of the city. If a firm's subscriber gets connected to the network anytime and everywhere this distinguishes the firm from their competitors and acts as a value to customers. Positional differential is a consequence of past actions which have produced a certain advantageous location of facilities which contribute not only to competitive advantage but also to defensible position for which it needs long time for competitor to match (Hall, 1992). According to Gerpott et al. (2008) location capital is advantages associated with the spatial prime location of the company. Location advantages often arise from the possibility of exclusively offering telecommunication services in economically highly attractive places.

2.7.2.6 Capabilities

Capabilities are created by bundling of resources, something that a firm "does", it is a capability. Important functional capabilities differentials are innovative capabilities, tacit knowledge, skills, experience of employees, suppliers, distributors, and other specific capabilities in a company (Foon, 2009). Capability is an ability to innovate or to respond to changing customer needs, which can make all the difference, when it comes to market value (Ulrich & Small wood, 2004). A CMO firm which possesses Process Capital (PC) and Innovation Capital (IC) (Mahoney & Pandain, 1992; Gerpott et al., 2008) which are distinct capabilities would be able to perform individual functions more effectively to create and deliver distinct customer value compared to its competitors to achieve superior performance.

2.7.2.7 Process Capital

Processes are seen as firm's ability to integrate and change resource bases to address changing environments. Process innovation is a critical step in making the services more productive in the market. Process capital can be seen as resources that are acquired, integrated, transformed or reconfigured to reduce cost and generate activities that create value to customers (Eisenhardt & Martin, 2000; Teece et al., 1997). Process capital resources are knowledge, skills, disposition, and commitment to communication, leadership and the team (Barney, 1991; Habbershon & Williams, 1999). The most important source of value is to be derived from intellectual-based

assets and capabilities including “process-based capabilities” and skills embedded in individuals/teams with know-how (Clulow et al., 2007). This intangible asset category focuses on the level of sophistication of a firm’s internal work sequences such as its quality management. Pertinent indicators include information on a firm’s sales network, planning and maintenance, or complaint management processes (Gerpott et al., 2008). If the operator can provide a cost effective solution to benefit the user, call center traffic will reduce and hence the operational cost. A cellular mobile operator firm with process capital will gain low operational costs advantage and hence sustainable competitive advantage in the market with process innovation through improvement in process, routines, information systems, and know how.

2.7.2.8 Innovation Capital

Innovation is the development and implementation of new ideas by people who over time engage in transactions with others within an institutional order (VanDenVen, 1986). Innovation Capital is defined as the comprehensive set of characteristics of an organization that facilitate and support innovation strategies (Burgelman et al., 1996). Innovation capital is a complementary and interdependent resource clusters created with interaction of resources accumulated over time, and built gradually to create value to customers hence SCA. By implementing innovations, firms establish a flow of resources that leads to the creation of stocks of specific assets that other companies will be unable to rapidly replicate (Dierickx & Cool, 1989). The outcome of innovation is the generation of new combinations of assets, of high value, specifically related to that firm (McGrath et al., 1996). In cellular mobile services, innovation in content and process excites employees, delights customers, and builds confidence among investors (Ulrich & Small Wood, 2004). Innovation capital deals with a company’s R&D capitalization as reflected in a firm’s number and quality of patents or other intellectual property rights (Gerpott et al., 2008).

A cellular mobile operator firm with the tangible and the intangible resources designs the cellular mobile network in such a way that subscribers get connectivity to the network anywhere at anytime. A CMO firm with better resources understands

tastes and preferences, needs and wants of cellular mobile subscribers. Lane & Lubatkin (1998) find that tacit knowledge has a higher probability of creating value for the firm via absorptive capacity, such a firm innovates and develops new value added services faster than competitors, for which the subscribers prefer and use more and more services from that service provider. A CMO with strong intangible resources is capable to develop innovative value added services that deliver distinct customer value, hence customers prefer to use services from such a service provider.

2.7.3 Basic and Value Added Services

A CMO that can exploit its resource combinations to effectively attain a differentiation based service development should be able to understand market changes and preferences and respond by quickly developing new value added services with enhanced connectivity compared to their competitors. The demand for cellular mobile services is indirectly affected by the increased supply of variety, different and complementary services (Gupta et al., 1999). A service provider with strategic resources can understand the market and attributes that drive customer value, can be utilized to develop new distinct VAS (Hall, 1992) which will maintain, and win market share by creating unique value for subscribers, hence SCA for the firm. As Hitt et al. (2001) explains, expert knowledge enhances a firm's ability to offer new products or services or expand into new customer markets. Sustainable competitive advantage is a function of attribute differentiation (Coyne, 1986). In cellular mobile services, the value of these services is in part determined by attributes not associated with the service itself and these service attributes are essential in the creation of customer value.

2.7.4 Attributes of Cellular Mobile Services

The key drivers of customer value in networked services such as cellular mobile services stem from different sources. Network service attributes emerge from fundamentally two different sources namely intrinsic and extrinsic attributes. Customer perceived value of mobile services which are inherent attributes of the service itself, are referred to as intrinsic attributes. Intrinsic attributes are

attributes designed into the service itself, as well as experiences derived from the augmented product. Customer perceived value is in part determined by attributes not associated with services itself and they are called extrinsic attributes.

Attributes of mobile services were classified into three broad categories based on the types of attributes that drive customer value (Thorbjornsen et al., 2009). They are intrinsic value drivers, user network value drivers and complement network value drivers. Mobile services driven by intrinsic attributes are denoted by the fact that the inherent attributes of the services per se are most important for perceived value. Intrinsic attributes such as ease of use and usefulness are key drivers of value for mobile services (Thorbjornsen et al., 2009). Mobile services driven by user network attributes are defined as services where the perceived value increases as the installed base/network size and network strength increase. Network size is most salient and important attribute of the network that drives perceived customer value (Thorbjornsen et al., 2009). Mobile services driven by complement network attributes are defined as services where the perceived value increases with the perceived number and quality of complementary services. Complementary service variety and compatibility are the complement network attributes that drive perceived customer value in mobile services (Thorbjornsen et al., 2009). (Thorbjørnsen et al., 2009) identifies usefulness, ease of use, network size, compatibility, and complementary service variety as attributes of networked services which are the drivers of customer value for cellular mobile services.

Usefulness is functionality of content of the service characterized by accessibility at any time, time saving, money saving, improving efficiency and reliability. Pedersen & Nysveen (2003) suggest usefulness as a theoretical concept determined by accessibility as well as functionality of the content of the service that drive value to customers. Innovative value added services which benefit the customer because of which he or she gains advantageous position will add value to subscribers.

A cellular mobile operator firm which designs creatively new services which facilitate subscribers to transact easily, communicate, access the information, without confusion and avoid middlemen will deliver distinguished value to their

customers. A service developed with multimedia, and interactive voice response technology which is easy to operate, ease of use of mobile applications and is user friendly significantly affects customer value.

Compatibility is defined as “the degree to which an innovation is perceived as being consistent with the user’s existing values, needs, and past experiences” (Moore & Benbasat, 1991). Newly developed innovative services which are compatible to already existing services on a specific platform will lead to higher and faster adoption-rate and increase perceived value. Compatibility pertains to whether the service is believed to be compatible with other services and on other platforms, and whether the service is consistent with the user’s needs and his/her experience with similar services (Thorbjørnsen et al., 2009).

Network size is installed base, market share, and size of the user base, where the perceived value increases as the installed base/network size and network strength increases. As network size of a service provider increases, it can increase the number of subscribers and handle that capacity smoothly (Thorbjørnsen et al., 2009). A better network size enables increased speed, good clarity, continuous streaming and avoids call drop that add to perceived customer value.

Complementary service variety is where a service provider offers more number of services which are complementary to one another. Consumers value those services that offer a large number and variety of complementary services (Basu et al., 2003; Gupta et al., 1999; Stremersch et al., 2007). The demand for cellular mobile service is indirectly affected by the increased supply of complementary services (Gupta et al., 1999). A service provider, who can understand the market and attributes of services that drive customer value, can develop new distinct value added services which will maintain, and win market share by creating unique value for customers hence SCA for the firm.

2.7.5 Sustainable Competitive Advantage

A CMO firm, which develops, deploys, and exploits the strategic resources, designs basic and VAS which leverage to create better customer value and hence

more number of subscribers subscribe, leading to SCA. RBV of a firm is the possession of strategic resources to achieve superior performance through competitive advantage; it emphasizes strategic choice, charging the firm's management with important tasks of identifying, developing and protecting, and deploying the key resources to have competitive advantage (Fahy, 2000). RBV explains that a CMO which continuously develops existing resources and creates new resources and capabilities can respond quickly to changing market conditions to yield SCA (Foon, 2009). A service provider can attain SCA by continuously updating strategic resources which enable to understand changes and preferences of customers and design services that add better value to subscribers. A cellular mobile operator firm achieves sustainable competitive advantage when it creates and delivers consistently higher value to customers than its competitors and hence customers prefer the services of the firm, resulting in above average performance, that last for longer duration.

2.7.6 Customer Value

Customer value is relative to the perceived satisfaction obtained among alternative value offerings, it is considered an important factor for determining service attractiveness (Walters & Lancaster, 1999). "Customer value is a customer's perceived preference for and evaluation of those product attributes, attribute performances, and consequences arising from use that facilitate achieving the customer's goals and purposes in use situations" (Woodruff, 1997). Customer value is user's overall assessment of the utility of the services when using mobile services (Lee et al., 2002). Market driven CMO firms need to focus on creating and delivering superior customer value to retain existing and grow with new subscribers (Day, 1990; Narver & Slater, 1990; Khalifa, 2004). Customer value is the "consumer's overall assessment of the utility of a service based on perception of the utility of a product based on perception of what is received and what is given" (Zeithaml, 1988). (Gale, 1994; Khalifa, 2004) puts customer value as market perceived quality adjusted for relative price of your product. Treacy & Wiersima (1995); Khalifa (2004) define customer value as the sum of benefits received minus the costs incurred by customer in acquiring product or service.

Creating customer value and providing value added services should be based on a deep understanding of the mobile market and insight of potential mobile service consumers (Alkemade, 2003). Thus, for a CMO firm, strategic resources contribute significantly in exploring and understanding customer value in cellular mobile services in order to successfully commercialize mobile services (Alkemade, 2003). Sheth et. al. (1991) developed multiple value dimensions for customer value; functional value, conditional value, social value, emotional value, and epistemic value relate specifically to the perceived utility of a choice. Dodds et al. (1991) argue that buyer's perception of value represent a tradeoff between the quality or benefits they received in the product relating to the sacrifice they perceived by paying the price. Customers receive value when the benefits from a product service exceed what it costs to acquire and use it (Horovitz, 2000; Khalifa, 2004). When using cellular mobile services, subscribers are often perceived to save time and money, hence monetary value is also an important value dimension. Hence for the study we consider the following customer value dimensions: functional value, social value, emotional value, conditional value, epistemic value, and monetary value (Sheth et al., 1991; Sigala, 2006; Pihlstrom & Brush, 2008) which subscribers consider while assessing value of cellular mobile services.

The functional aspect of mobile service can lead consumers to adopt and utilize the mobile data services. Functional value can be defined as the practical or technical benefits that users can obtain by using a service. Functional value typically relates to factors such as utility, product appearance, durability and price and underlies the performance of the object in key areas including price, reliability and durability (Sweeney & Soutar, 2001). Functional value refers to value derived from effective task fulfillment, ability to do the task easily and instantly with efficiency and effectiveness (Sheth et al., 1991).

Emotional value refers to meeting the psychological needs of product or service users (Sweeney & Soutar, 2001). In cellular mobile services enjoyment and fun are strong motivators to use and adopt the services (Pura, 2005). Emotional value is the most important predictor of behavioral intention to use services in cellular services (Sweeney & Soutar, 2001). Emotional value represents the capacity of a

product/service to arouse feelings or affective states, and is measured using a set of feelings toward its object. Emotional value stresses feeling or emotional status, mobile services like SMS, MMS and VAS are capable of changing consumer feelings or emotional states that have emotional value (Sheth et al., 1991).

Social value is obtained when consumers feel they are connected to others by using a product or a service with social group like friends, colleagues, and family. (Sheth et al., 1991) proposed that products have social value if they can link consumers to social groups. Social value relates to social approval and the enhancement of self-image among other individuals (Sigala, 2006). Hence social value influences mobile services adoption and use of services. Regarding social value, consumers are concerned not only with real characteristics but also with their capacity of improving social status such as acceptance by others and positive impression.

Epistemic value of a product/service is that which provide novelty or knowledge, creates curiosity and stimulates subscribers to purchase and use it (Sheth et al., 1991; Duman & Mattila, 2005). Something ‘new’, ‘unusual’ or ‘fashionable’ is valued regardless of other factors, including functional or social value. Consumers buy technology not only for a specific goal or use, but also due to curiosity and novelty seeking. New generation, innovative and distinct cellular mobile value added service are novel, curious, complicated or unique, are the factors generally driven by the epistemic value (Schiffman & Kanuk, 1987; Chang, 2008) which influences the user assessment.

Conditional value is described as the set of situations, occasions or events (anniversaries, birth of a child, accident) faced by customers while using service affects assessment. Situational variables influence customer assessments of product/service utility (Sheth et al., 1991, Belk, 1974). Services of a CMO during particular circumstances create impression about the service, if impression is positive, the conditional value is increased (Sheth et al., 1991) and customers try to continue to use from that service provider.

Monetary value is defined as how much a service is satisfactory with regard to cost, time or effort spent in using a product or a service (Sweeney & Soutar, 2001; Bolton & Drew, 1991; Cravens et al., 1988; Yang & Jolly, 2006). If the monetary

value of a particular service provider is higher, customers prefer the services from that firm rather than competitors.

A CMO with intangible resources is capable of understanding connectivity and which attributes drive better customer value and achieve SCA. Hence more number of customers prefer that service provider compared to competitors resulting in superior performance in financial performance, strategic performance and operational performance which is favorably abnormal (Fahy, 2000).

2.7.7 Superior Performance

A successful strategy adapts to the CMO firm's external and internal situation leading to creation of better customer value and hence more number of customers prefer the service provider leading to sustainable competitive advantage and superior performance. A firm's superior performance depends on its ability to innovate, defend intangible assets, such as knowledge, and use those assets (Teece, 2000). The attainment of SCA can be expected to lead to superior performance measured in conventional terms such as market share and profitability (Bharadwaj et al., 1993). Resource based view theory explains the role of firm resources and capabilities in creating superior performance or persistent or sustainable abnormal profits. Abnormal profitability can be defined as the total profitability of a firm and its competitive or industry-wide profitability (Jacobson, 1988; Peteraf, 1993). Competence of a company's strategy implementation is indicated by its performance: strategic performance, operational performance, and financial performance and all the three performances were considered to evaluate superior performance of CMO firms. The sustainability of firm abnormal profit is defined as abnormal profitability that persists over a long period of time.

Strategic performance reflects leading indicators of future financial performance, operational performance and business prospects of a firm. Strategic performance indicates whether a company's competitiveness and market position are deteriorating, holding steady or improving. Strategic performance indicators like customer trust, customer satisfaction, customer loyalty and brand equity (Javalgi et al., 2005) show to the managers, the positioning of CMO firms in the mind of the

customers. These indicators are a sign of future performance of the service providers based on past and present services they offer. To attain superior strategic performance a firm has to craft its strategy and allocate its resources so that it delivers better value, and satisfies and creates loyal customers. Strategic performance signifies strength in market standing, competitive vitality and future business prospects of a firm.

Operational performance indicators are service quality, service innovation, market share, and market effectiveness which focus on key operational success factors of a CMO that lead to better financial performance (Venkatraman & Ramanujam, 1986).

Financial performance is a measure of how well a firm can use assets from its primary mode of business and generate revenues. Thus financial performance indicates financial strength and profitability that reflects the fulfillment of the economic goals which is essential for long term health and ultimate survival of the firm. Financial indicators are sales growth, profitability, ratios such as return on investment, return on sale, return on equity and earnings per share (Venkatraman & Ramanujam, 1986). Despite this shift in the theory and practice of performance measurement, several authors claim that financial measures still represent an integral part of measuring performance (Bible et al., 2006) and remain the most important group of performance indicators (Bourne, 2005; Henri 2006).

2.7.7.1 Customer Satisfaction

A firm which wants to continue in market for longer period has to have an objective of creating satisfied customers. Zeithaml & Bitner (2000) defined customer satisfaction as the "customers' evaluation of a product or service in terms of whether that product or service has met their needs and expectations". When a customer subscribes for cellular services, he/she has some needs and expectations. Satisfaction is therefore a consumer's post-purchase evaluation and affective response to the overall cellular mobile service experience. Customer satisfaction is an outcome of overall evaluation of cellular services by subscriber about the services and, responses during interaction with service provider (Srinivasan, 2008). Oliver (1980) defined that "customer satisfaction is a summary of psychological states when the emotions surrounding disconfirmed expectations are coupled with the consumers' prior feelings

about consumption experience". Parasuraman et al. (1994) suggested that the customer satisfaction is influenced by service quality, product quality and cost. Overall satisfaction refers to the customers rating on a particular event based on all dimensions and experiences (Johnson and Fornell, 1991). Rust & Oliver (1994) defined satisfaction as the "customer's fulfillment response" which is an evaluation as well as an emotion-based response to a service. Once the customers are satisfied with the services of their CMO, it leads to confidence building and obviously they trust their service provider.

2.7.7.2 Customer Trust

Customer trust indicates whether the service provider has developed confidence with their subscribers. Moorman et al. (1992) defined trust as "a willingness to rely on an exchange partner in whom one has confidence". Trust is a psychological state that involves the approval of vulnerability formed from the positive expectations of the behaviors or intentions of another (Rousseau et al., 1998). It is a result of different interactions, incidences and situations of subscribers with their service provider over a period of time. Geyskens et al (1996); Rousseau et al (1998); Singh & Sirdeshmukh (2000); Urban et al. (2000) suggested that customer trust is an essential element in building and maintaining strong customer relationships and sustainable market share. Customer trust indicates his future actions, behavior and long term relationship of subscribers with their service provider. (Berry & Parasuraman, 1991) found that "customer-firm relationships require trust" and the degree of trust is described as a "fundamental relationship building block". Trust also can be defined as "the belief in the integrity, honesty and the reliability of another person" (Dwyer & Tanner, 2002). Trust is a key element for relationship success and tends to be related to a number of elements such as competitive advantage and satisfaction (Ratnasingam & Pavlou, 2003). Customer trust signifies future behavior of subscribers: whether to switch or to stay. Once customers trust a CMO firm, they tend to become loyal to them. (Chiou et al., 2002) found that perceived trust had direct and positive impacts on the overall satisfaction and loyalty of customers. It is now well-established that trust supports exchange and helps partners project their exchange relationships into the future.

2.7.7.3 Customer Loyalty

A loyal subscriber generally acts better than a satisfied one and prefers to repurchase services continuously and also recommends to others to an extent that his patronage is retained for a long period of time. Oliver (1999) defined customer loyalty as “a deeply held commitment to re-buy or re-patronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior”. Customer loyalty refers to strong favorable attitude towards a particular brand and also leads to repeat purchase of the same brand (Day, 1969). Customer loyalty is a relationship between relative attitude towards an entity and repeat patronage behavior (Dick & Basu, 1994). The operational measures in deterministic approach are preference, buying intention, and recommendation (Kim et al., 2004; Boulding et al., 1993; Gerpott et al., 2001). Customer loyalty is concerned with the likelihood of customer returning, making business referrals, providing strong word-of-mouth references and publicity (Bowen & Shoemaker, 1998). A loyal customer to a cellular service provider is thus, one who will stay with the same service provider, is likely to use new value added services with the service provider and is likely to recommend to others (Fisher, 2001).

2.7.7.4 Brand Equity

Brand equity is the value added to a product or service by its association with a brand name and/or symbol (Aaker 2004; Keller, 1993). Brand equity, which refers to the incremental utility or value added to a product by its brand name (Keller, 2003), which nurtures long-term buying behavior. Yoo & Donthu (2001) explains the positive effect of brand equity on a company’s future profits and long-term cash flow, a consumer’s willingness to pay premium prices, sustainable competitive advantage, and marketing success. Brands with high brand equity are those that have high levels of consumer awareness and strong, positive, and unique associations in consumers’ memory (Keller, 1993). The sources of brand equity are derived from a high level of brand awareness and a positive brand image, which then provide consumers with strong, favorable, and unique brand associations. Kotler (2003) defines brand equity as “the positive differential effect that knowing the brand name has on customer

response to the product or service". "The differential effect that brand knowledge has on consumer or customer response to the marketing of that brand" (Keller, 2002). This leads to customers showing preferences for a brand when products are basically identical, and are prepared to pay a price premium. Brand equity thus represents the extent to which the firm influences the customer's subjective evaluation of the firm's offerings. As such, the brand equity construct may be measured through brand awareness, attitude towards the brand and attitude towards the company. For firms, growing brand equity is a key objective achieved through gaining more favorable associations and feelings among target consumers (Falkenberg, 1996).

2.7.7.5 Service Innovation

Service innovations are defined as new services introduced to meet needs of customers. The service innovativeness embodied in a firm's innovation output can be used to assess the firm's ability to create new products. A firm's ability to generate a continuous stream of innovations is more important than ever in allowing a firm to develop or maintain competitive advantage because of the increasing levels of competition and decreasing product life cycles. A firm's ability to innovate new products/ services is a major innovation capability (Adler & Shenbar, 1990; Hoffman et al., 1998; Romijn & Albaladejo, 2002) and it provides the most obvious way to enhance performance (Chapman & Hyland, 2004; Johne, 1999). Rapid stream of multiple innovations over time may enable the firm to continue to generate high levels of profitability (Barczak, 1995; Roberts, 1999). The ability of firms to develop and exploit their innovative capabilities is widely recognized as a critical determinant of firm performance and competitive advantage (Bettis & Hitt, 1995; Helfat & Peteraf, 2003; Voss, 1994).

2.7.7.6 Service Quality

Service quality in the cellular mobile operator industry is an important indicator to assess a firm's performance. Service quality is viewed as an overall assessment of service (Parasuraman et al., 1988). Service quality can be defined as a consumer's overall impression of the relative efficiency of the organization and its services. Carman (1990) defined the service quality to be "consumers' judgment about the overall excellence or superiority of a service". Johnson & Ettlie (2001) describe perceived quality as the result of service performance and being free from defects, or how reliably the product meets customer requirements. Service quality has been described as a form of attitude, but not an equivalent to satisfaction that results from the comparison of expectations with performance (Parasuraman et al., 1988; and Bolton & Drew, 1991). Perceived quality has also been found to have a significant effect on perceived value (Dodds, Monroe & Grewal, 1991). Venetis & Ghauri (2000) viewed that the service quality is regarded as one of the few means for service differentiation and competitive advantage, that attracts new customers and contributes to the market share.

2.8 Behavioural Intention

The behavioural intention is customers' willingness to recommend and repurchase intention of service (Stauss et. al., 2001). Behavioral intention is predicted by the individual's attitude towards the behavior (Ajzen, 1991; Fishbein & Ajzen, 1975). In accordance with the behavioral intention theories, consumer value acts as an antecedent to predict switching intention (behavioral intention) to use cellular mobile services (Sweeney & Soutar, 2001; Parasuraman & Grewal, 2000; Zeithaml, 1988; Sheth, Newman, and Gross, 1991; Yang & Jolly, 2006). Customer switching refers to migration of customers from one service provider to another. Switching behavior characterized in terms of retreat and relationship ending, represents a decision of a customer not to buy products or services offered by a particular organization (Zikiene & Bakanauskas, 2009). The subscriber intention to stay with the service provider is based on the services offered. The distinguished attributes of services and better

customer value impress a customer so that he/she stays, recommends to others and repurchases more, leading to superior performance.

2. 9 Highlights of Related Literature Review and Research Gaps

Empirical studies of resource based view have indicated that there is a significant relationship between strategic resources and superior performance. The theoretical framework of RBV emphasizes the importance of firm specific resources and capabilities in conferring SCA which allows a firm to earn above average profits. Resource based view theory assumes explicitly and implicitly that every firm is heterogeneous. A cellular mobile operator firm which constantly identifies upgrades and deploys strategic resources will be able to design distinct cellular services which deliver better value to its customers and have an edge over its rivals for a period of time. The causes of competitive advantage are how differences between firms become amplified over time (Dierickx. & Cool, 1989). A cellular mobile operator firm with sustainable competitive advantage, distinguishes itself from its competitors, provides positive economic benefits for a longer period, and is not readily duplicated *(*Pfeffer, 2005). By studying which CMO firms consistently outperform their rivals in the marketplace and their resources, a clear understanding of specific resources that contribute to attain SCA is gained. A CMO firm achieves SCA when an attractive number of buyers prefer its services over the offerings of competitors and when the basis for this preference is durable, (Thompson et al., 2005). SCA is a function of attribute differentiation, the capability gap, and the most important condition is that existing and potential competitors cannot or will not take actions to close the gap (Coyne, 1986). A CMO firm can stay ahead of its competitors and achieve competitiveness from a defensible market position and SCA (Hamel & Prahalad 1994). If a cellular mobile operator firm adapts its strategic resources to respond to environmental changes, formulates and implements a strategy that creates value to customers and competitors are unable to duplicate and find it too costly to imitate, it will lead the firm to sustainable competitive advantage i.e. superior performance (Barney, 1991). A service provider which leverages its strategic resources will create and deliver better value, and achieve SCA, resulting in superior performance.

In cellular mobile services, majority of customers consider attributes of services and customer value dimensions as the key criteria for evaluating and buying services. This study facilitates CMO firms to deliberate on intangible resources, attributes of services, customer value dimensions and its impact on superior performance. Strategic resources contribute in designing cellular services with accessibility, connectivity, reachability, portability, localization, ubiquity and personalization which are characteristics of connectivity. The intangible resources contribute significantly to attain strategic competitiveness to a CMO firm by introducing new services and improve existing services with attributes such as usefulness, ease of use, compatibility, network size and complementary service variety. These attributes drive to create distinct value to the customers in terms of functional, social, emotional, conditional, epistemic and monetary value. Thus the CMO firm which delivers distinct customer value attains SCA i.e. superior strategic, operational and financial performance and stays ahead of its competitors for a prolonged period.

Customer value is relative to the perceived satisfaction obtained among alternative value offerings, it is considered an important factor for determining service attractiveness (Walters & Lancaster, 1999). "Customer value is a customer's perceived preference for and evaluation of those product attributes, attribute performances, and consequences arising from use that facilitate achieving the customer's goals and purposes in use situations" (Woodruff, 1997). Zeithaml (1988) defines customer value as the "consumer's overall assessment of the utility of a service based on perception of the utility of a product based on perception of what is received and what is given".

Creating customer value and providing value added services (VAS) should be based on a deep understanding of the mobile market and insight of potential mobile service consumers (Alkemade, 2003). Sheth Newman & Gross (1991) developed multiple value dimensions for customer value; functional value, conditional value, social value, emotional value, and epistemic value, relate specifically to the perceived utility of a choice. Dodds, Monroe, & Grewal (1991) argue that buyer's perception of value represent a tradeoff between the quality or benefits they received in the product

relating to the sacrifice they perceived by paying the price. Customers receive value when the benefits from a product or service exceed what it costs to acquire and use it (Horovitz, 2000; Khalifa, 2004). When using cellular mobile services, subscribers are often perceived to save time and money, hence monetary value is also an important value dimension. Hence for the study we consider the following customer value dimensions: functional value, social value, emotional value, conditional value, epistemic value, and monetary value (Sheth Newman & Gross, 1991; Sigala, 2006; Pihlstrom & Brush, 2008) which subscribers consider while assessing value of services.

Competence of company's strategy implementation is indicated by its performance: strategic performance, operational performance, and financial performance. RBV explains the role of firm resources and capabilities in creating superior performance or persistent or sustainable abnormal profits. Abnormal profitability can be defined as the total profitability of a firm and its competitive or industry-wide profitability (Jacobson, 1988; Peteraf, 1993). The sustainability of firm abnormal profit is defined as abnormal profitability that persists over a long period of time.

Resource based view theory contends that every firm is unique, dynamic, idiosyncratic, immobile, and inimitable and hence it has to focus internally to earn above average returns. Firms seeking a competitive advantage must demonstrate the ability to alter and control resources in such a way that their full potential is realized (Newbert, 2007). Researchers suggest that the RBV theory be augmented by a consideration of the business process through which resources become valuable (Foss, 1998; Ray et. al, 2004). While much of the RBV literature makes reference to the value of some resources, there has been little effort to establish empirically what, how, and why these resources influence firm competitiveness (Miller & Shamsie, 1996). Hitt et al. (1998); Rouse & Daellenbach (1999) argue that large scale, multi industry samples using generic resource sets will do little to tease out the unique and hard to copy resources that are at the heart of competitive advantage. Strategic value of resources is industry specific. Amit & Schoemaker (1993) suggest the importance of using single industry studies in RBV research. There is a research gap suggesting

the need for identifying strategic resources for a single industry. Dodourova (2003) contends that CMO firms lack resources needed to compete effectively in the market place due to discontinuity in technological environment and fast changing business environment. The falling profit margins and intensifying competition force CMO firms to seek value creating opportunities to increase traffic on network. This can be done only by offering subscribers widest possible range of value added services that add value to them. The demand for cellular mobile service is indirectly affected by the increased supply of complementary services (Gupta et al., 1999). A service provider with strategic resources can understand the market and attributes that drive customer value, can be utilized to develop new distinct added services (Hall, 1992) which will maintain, and win market share by creating unique value for subscribers and hence SCA for the firm. Specifically those resources that are complex, unobservable and difficult to measure are the ones that need improvement in quantitative investigation with case study work (Lockett et al., 2009). The gap is in the identification and measurement of industry specific strategic resources, which are complex and unobservable for CMO firms, which they need to develop, and deploy and protect to gain competitiveness to compete effectively in the market and achieve sustainable competitive advantage (Research Gap 1).

The RBV theory contends that strategic resources with unique characteristics enable the cellular service provider to implement strategies which add value to its customers so that the customers prefer services from that provider leading to superior performance for the service provider. A firm with intangible resources is able to enjoy lower contracting and monitoring costs, top employee talent, greater loyalty from consumers and employees, stable revenues, fewer risks of crisis and greater latitude to act by constituents (Fombrun, 1996). These benefits facilitate superior performance. There is a research gap in the analysis of the relationship between strategic resources and superior performance which has received only limited attention in the empirical literature. The RBV's acceptance appears to be grounded more on the basis of logic and intuition than on empirical evidence (Newbert, 2008). Till this date empirical research on intangible resources and their impact on organization performance are

scarce. Despite extensive grounded theory in the RBV many of its fundamental tenets still remain to be validated in the field (Barney, 1991; Fahy, 2000; Villalonga, 2004; Clulow et. al, 2007; Ang & Wight, 2009). The gap is in the empirical verification of the relationship between the strategic resources with SCA and superior performance (Research Gap 2).

Customers prefer services from the service provider who creates and delivers them better value. Creation and delivery of superior customer value to customers is a key element for the success of any firm (Higgins 1998; Woodruff 1997; Porter 1996) that leads to customer satisfaction and loyalty (Reichheld, Markey, & Hopton 2000). If CMO firms create and deliver appropriate consumer value that can fulfill consumers' needs and wants, they will see a strong adoption of mobile data services among mobile phone subscribers (Alkemade, 2003). Customer value is "not what the producer puts in, but what the customer gets out" (Doyle 1989). Customer value is the sum of benefits received minus cost incurred by the customer in acquiring a product or service (Treacy & Wiersima 1995). Horovitz (2000) puts that customers receive value when the benefits from a product or service exceed the cost. Customers perceive different weights for different dimensions of customer value (Sweeney & Soutar 2001). The majority of existing empirical research on customer perceived value is based on traditional services, or on experiences of consumption of goods (Kerin et al., 1992; Babin et al., 1994; Caruana et al., 2000; Cronin et al., 2000; McDougall & Levesque, 2000; Pura, 2005). In cellular mobile services the importance of time and location for customers' value perceptions should be especially emphasized (Heinonen, 2004). Creating customer value and providing value added services should be based on a deep understanding of the mobile market and insight of potential mobile service consumers (Alkemade, 2003). Thus exploring and understanding customer value in using cellular mobile services is an important process for mobile operators in order to successfully commercialize mobile data services (Alkemade, 2003: Yang & Jolly, 2006). Moreover, knowledge of consumer value in using cellular mobile services is limited, thus it is important to examine consumer value associated with cellular mobile services (Yang & Jolly, 2006). In addition, it is critical to identify consumer

values that might be further developed for consumer-oriented cellular mobile services in the Indian market (Research Gap 3).

Competitive dynamics in CMO industry in India is so intense that every participant is striving to gain an advantageous market position. To stay, and grow in business and to have an edge over their rivals it is necessary to develop strategic competitiveness. A CMO, to stay ahead of its competitors for a prolonged period, has to gain SCA. RBV theory explains that an organization, which possesses strategic resources and exploits them, can attain SCA and deliver better value to their customers leading to above average performance (Barney, 1991). Sustainable competitive advantage is a function of attribute differentiation (Coyne, 1986) that drives distinguished customer value leading to superior performance. It is necessary to identify those resources that contribute significantly in creating better value to the subscribers and hence drive SCA and superior performance for CMO firms. Understanding customer value associated with cellular mobile services provides directions for development of cellular mobile value added services in accordance with customer value (Yang and Jolly, 2006). We are testing the dimensions of customer value as measures of the RBV model at CMO industry level where has not been done so far in the Indian context. Towards this end the literature map is drawn and it indicates that the need to strengthen the theory of RBV, identify industry specific strategic resources that contribute to delivering distinguished customer value to subscribers and hence achieve SCA for CMO firm (Figure 2.4).

2.10 The Research Framework

Measuring strategic resources has proved to be difficult because of the problems apparent in operationalising and measuring resources, particularly those that are “intangible” in nature (Godfrey and Hill, 1995; Hitt et al., 1998; Barney and Mackey, 2005). There is a scientific challenge to understand the relationship between strategic resources and sustainable competitive advantage, superior performance from the perspective of customers, employees, secondary sources and CMO firms and design of proper research framework.

2.10.1 Strategic Resources

The strategic resources include human capital which reflects the inherent knowledge and skills of the employees, firm's culture and working climate, job tenure structures of a firm's employees, employee turnover rates, and job satisfaction levels: reputation capital reveal about customers feeling good and secure, a great deal of respect, credibility, and trustworthiness; customer capital indicate a firm's current customer base, market share, customer satisfaction or brand strength, long-term relationships to contractually or emotionally bonded customers; location capital deals with spatial location of the company, valuable transport routes, geographical distance to universities, economically highly attractive places; process capital focuses firm's internal work sequences such as its quality management, information on a firm's sales network, planning and maintenance, or complaint management processes; innovation capital reflects number and quality of patents or other intellectual property rights, absolute and relative R&D expenditures, ratio of sales generated with new services. It is a challenging task to measure strategic resources of CMO firms. The operational definitions used to measure the level of resources in CMO firms are presented in Table 2.5.

Table 2.5

Operational Definition for Strategic Resources

	Variables	Operational Definitions
1	**Human Capital***	Inherent knowledge and skills of the employees, firm's culture and working climate, employees job tenure of a employee turnover rates, and job satisfaction levels, special knowledge and skills required to design and operate complex networks
2	**Reputation Capital****	Reputation is feeling good and secure with the firm, and a great deal of respect, credibility, trustworthiness that creates better value which contributes for the firm to earn superior performance.
3	**Customer Capital***	Customer capital current customer base, market share, customer satisfaction or brand strength, long-term relationships to contractually or emotionally bonded customers.
4	**Location Capital***	Valuable transport routes or a low geographical distance to universities with excellent graduates, and offering economically highly attractive places.
5	**Process Capital***	Internal work sequences such as its quality management. sales network, planning and maintenance, complaint management processes.
6	**Innovation Capital***	R&D capitalization as reflected in a firm's number and quality of patents or other intellectual property rights. R&D expenditures, patent portfolio structure variables, or the ratio of sales generated with new products.

Source:* (Gerpott, et al., 2008) **(Smith, 2008).

2.10.2 Attributes of Services

Attributes of cellular mobile services drive customer value. The attributes for networked services for cellular mobile services are usefulness, ease of use, network size, compatibility, and complementary service variety (Thorbjørnsen et al., 2009). The attributes of cellular mobile services indicate usefulness of service to customer, ease of use of service, availability of compatibility of service, size of the user base and more and variety of value added services offered by service provider were considered (Table 2.6).

Table 2.6

Operational Definition for Attributes of Services

Variables	Operational Definitions
Usefulness	Using services saves time, improves efficiency and are useful to customer.
Ease of use	Learning to use service is easy, easy to make use of service, clear and understandable, and easy to use service.
Compatibility	Service is compatible with other services and completely compatible across all mobile service providers.
Network size	Perceived size of the user base.
Complementary service variety	Availability of complementary services, a large amount of different complementary services, and great variety of "complementary services".

Source: (Thorbjørnsen et al., 2009)

2.10.3 Customer Value

Customer value is relative to the perceived satisfaction obtained among alternative value offerings, it is considered an important factor for determining service attractiveness (Walters & Lancaster, 1999). Creating distinctive customer value should be based on a deep understanding of the mobile market and insight of potential mobile service consumers (Alkemade, 2003). While assessing value of services customers use six dimensions of customer value: functional value, social value, emotional value, conditional value, epistemic value, and monetary value (Sheth et al. 1991; Sigala, 2006; Pihlstrom & Brush, 2008). Dimensions of customer value reflect ease and speed of achieving a task, and convenience; social approval and the enhancement of self-image among other individuals; feelings or affective states the service generates; in a specific situation, on a context; curiosity, novelty or gained knowledge; monetary benefit, value derived from task fulfillment (Table 2.7).

Table 2.7

Operational Definition for Customer Value Dimensions

Variables	Operational Definitions
Functional value	Ease and speed of achieving a task effectively and conveniently
Social value	Social approval and the enhancement of self-image among other individuals, "the utility derived from the product's ability to enhance social self-concept"
Emotional value	Product/service generates feelings or affective states
Conditional value	Depends on the context, exists only in a specific situation. Context includes "any information that characterizes a situation related to the interaction between humans, applications, and the surrounding environment"
Epistemic value	Experienced curiosity, novelty or gained knowledge
Monetary value	Value derived from task fulfillment, Monetary benefit or superiority, compared with the alternatives.

Source: (Pura, 2005)

2.10.4 Superior Performance

A firm's superior performance depends on its ability to innovate, defend intangible resources (Teece, 2000). RBV explains the role of firm resources and capabilities in creating superior performance. Superior performance can be defined as the total profitability of a firm and its competitive or industry-wide profitability (Jacobson, 1988; Peteraf, 1993). To evaluate superior performance of CMOs firms' strategic performance, operational performance, and financial performance are considered and integrated. Superior performance is measured as a result of strategic performance outcome of customer satisfaction, customer trust, customer loyalty, brand equity; operational performance, outcome of innovation, service quality, market share, growth in market share, market effectiveness; and financial performance outcome of sales growth, profitability, ROI, ROS, ROE, and EPS (Table 2.8).

Table 2.8

Operational Definition for Superior Performance

Variables	Operational Definitions	Source
Customer Satisfaction	Satisfied with my decision to choose the service provider, right thing in selecting this service provider, choice is a wise one, good experience with this service provider.	(Westbrook & Oliver's, 1991)
Customer Trust	Service provider meets expectations, never disappoints, is honest and sincere and customer can rely on the service provider.	(Delgado-Ballester et al., 2003; Tariq & Moussaoui, 2009)
Customer Loyalty	Customer wants to continue, recommend others about this service provider and proud to be a customer of this service provider.	(Kish, 2000; Bridgewater, 2001)
Brand Equity	Customer prefers the service provider even if competitor has same features, among brands of service providers prefers this service provider, if another service provider offers at same price as this customer still prefers to choose this service provider.	(Holehonnur et al., 2009)
Service Innovation	Rate of introducing new services, innovative value added services offered, services are attractive compared to competitors.	(Hee Shin Dong- & Kim Won-Yong, 2008)
Service Quality	Services are valuable, satisfying, response is satisfactory, quality of content and services are as per requirement of customer	(Hee Shin Dong- & Kim Won-Yong, 2008)

The hypotheses are developed based on the literature review, the pilot study and grounded theory. For some resources, characteristics such as social complexity, causal ambiguity and unique historical conditions under which they were accumulated make it difficult for competitors to replicate the same resources (Dierickx & Cool,1989; Lippman & Rumelt, 1982). Because of resource heterogeneity, some CMO firms possess strategic resources and exploit them to yield SCA and superior performance because strategic resources cannot be easily replicated and therefore resources based advantage can be sustained over time (Hoopes et al., 2003). Thus organizations with strategic resources should have SCA over competitors (Barney, 1991). It is difficult to measure SCA (Ketchen, Hult, & Slater, 2007), many

researchers have sought to empirically link strategic resources and performance (Barney & Arikan, 2001). The assumption is that if strategic resources and performance are related, then an SCA must exist. In many studies SCA is almost synonymous with performance in the sense that competitive advantage is 'generally used to describe the relative performance of rivals in a given market environment' (Peteraf & Barney, 2003). Hence organizations which possess strategic resources should relate positively to their performance. Thus we have the following hypotheses:

H1: The strategic resources will be positively related to superior performance of the firm.

H1a: The strategic resources will be positively related to strategic performance of the firm.

H1b: The strategic resources will be positively related to operational performance of the firm.

H1c: The strategic resources will be positively related to financial performance of the firm.

Wernerfelt (1984) suggested that firms may earn above normal returns by identifying and acquiring resources that are critical to the development of demanded products and proposed a balanced perspective between resources and products (or markets). A CMO firm which possesses strategic resources can understand and design attributes of services and customer value dimensions that are required to stand apart in the market. If the firm exploits the strategic resources as opportunity arises by designing distinctive services and delivering better customer value, most of the customers prefer their services compared to competitors leading to superior performance.

H2: The strategic resources have a positive influence on the attributes of services.

Based on previous research, sustainable competitive advantage is a function of attribute differentiation (Coyne, 1986) that drives distinguished customer value and hence superior performance for the firm. Differentiated attributes of cellular mobile services contribute significantly in creating superior performance for the firm. Thus the following hypotheses are postulated to explore the consequent effect of attributes of cellular mobile services on customer value and superior performance. They need to

innovate, and develop those services that add value to the user so that traffic increases and hence the revenue.

H3: The strategic resources positively influence customer value.

The key drivers of customer value in networked services such as cellular mobile services stem from different sources. Thorbjørnsen et al. (2009) identifies usefulness, ease of use, network size, compatibility, and complementary service variety as attributes of networked services which are the drivers of customer value for cellular mobile services. A service provider, who can understand the market and attributes of services that drive customer value, can develop new distinct value added services which will maintain, and win market share by creating unique value for customers and hence SCA for the firm.

H4: The attributes of services will influence the customer value positively.

Each of the five attributes of cellular mobile services plays an antecedent role towards creating customer value and consequently superior performance for the firm (Thorbjornsen et al., 2009). Each of the five attributes of cellular mobile services is hypothesized to affect customer value.

H4a: Usefulness of cellular mobile services will positively affect the customer value.

H4b: Ease of use of cellular mobile services will positively affect the customer value.

H4c: Compatibility of cellular mobile services will positively affect the customer value.

H4d: Network size of cellular mobile services will positively affect the customer value.

H4e: Complementary service variety of cellular mobile services will positively affect the customer value.

H5: The attributes of services will have a positive influence on the superior performance.

H5a: The attributes of services will influence the strategic performance positively.

H5b: The attributes of services will influence the operational performance positively.

H5c: The attributes of services will influence the financial performance positively.

Customers prefer the services of that service provider who understands their needs and wants and delivers better value to them than competitors, which leads to SCA and superior performance.

Creating customer value and providing value added services should be based on a deep understanding of the mobile market and insight of potential mobile service consumers (Alkemade, 2003). Thus, for CMO strategic resources contribute significantly in exploring and understanding customer value in VAS in order to successfully commercialize mobile services (Alkemade, 2003). Customer value dimensions are functional value, social value, emotional value, conditional value, epistemic value, and monetary value (Sheth Newman & Gross, 1991; Sigala, 2006; Pihlstrom & Brush, 2008) which subscribers consider while assessing the value of services.

H6: The customer value will influence the superior performance positively.

H6a: The customer value will influence the strategic performance positively.

H6b: The customer value will influence the operational performance positively.

H6c: The customer value will influence the financial performance positively.

Each of the six dimensions of customer value plays an antecedent role towards creating superior performance for a CMO firm.

H6d: Functional value will positively affect the superior performance.

H6e: Social value will positively affect the superior performance.

H6f: Emotional value will positively affect the superior performance.

H6g: Conditional value will positively affect the superior performance.

H6h: Epistemic value will positively affect the superior performance.

H6i: Monetary value will positively affect the superior performance.

The behavioural intention is customers' willingness to recommend and repurchase intention (Stauss et. al., 2001). Customer value has been examined as the antecedent of consumer's behavioural intention to purchase a product or service (Sweeney & Soutar, 2001; Parasuraman & Grewal, 2000; Zeithaml, 1988; Sheth, Newman, & Gross, 1991; Yang and Jolly, 2006). Behavioral intention is predicted by

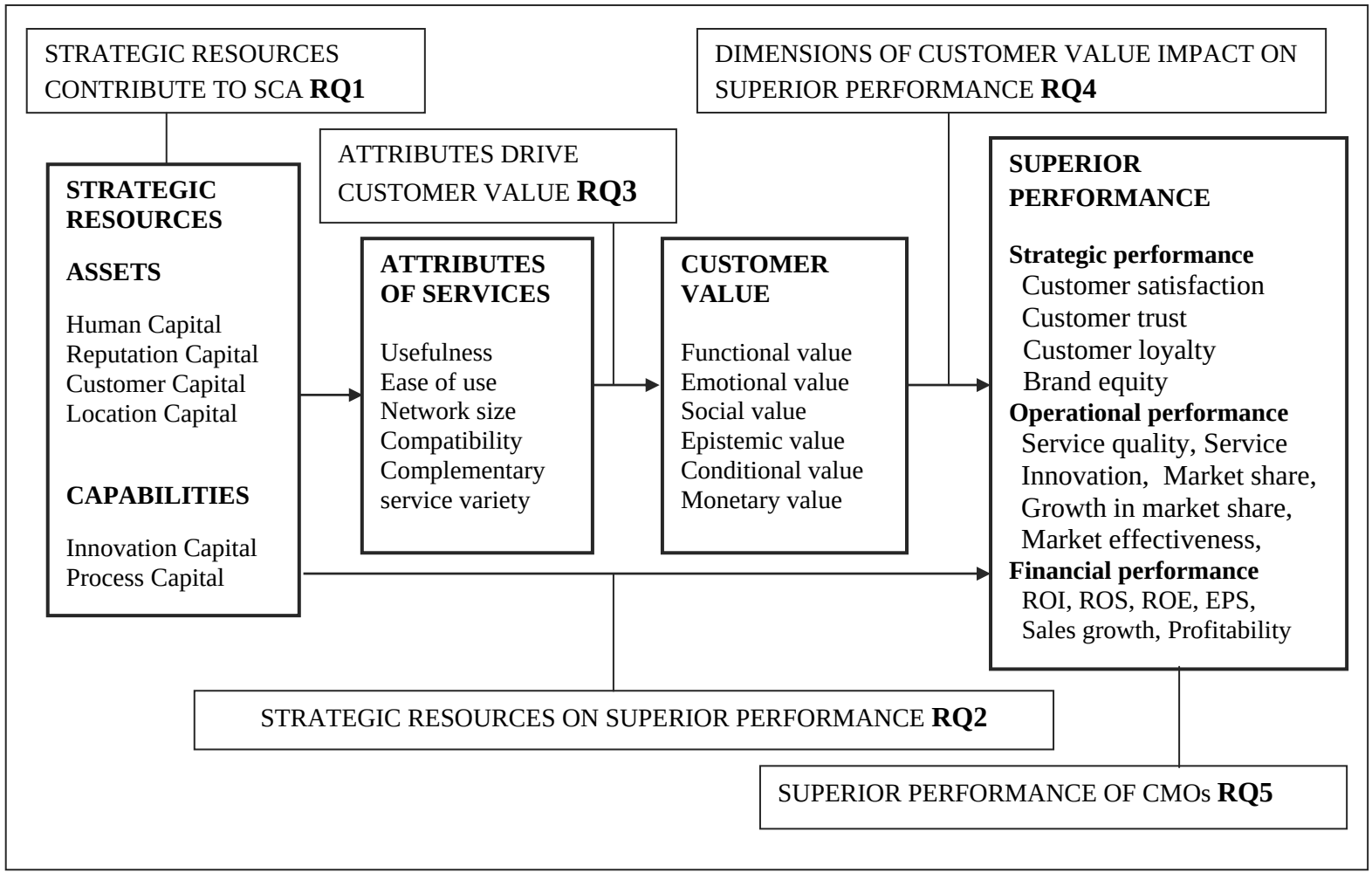
the individual's attitude towards the behavior (Ajzen, 1991; Fishbein & Ajzen, 1975). Value is defined as beliefs that relate to desirable end states or modes of conduct transcend specific situations, and guide selection or evaluation of behavior (Rokeach, 1973). The individual consumer's value is relevant to the concept of a person's beliefs in the behavioral intention theories. Switching behavior characterized in terms of retreat and relationship ending represents a decision of a customer not to buy products or services offered by a particular organization (Zikiene & Bakanauskas, 2009).

H7: Switching intention of customers will be negatively influenced by the strategic resources.

H8: Switching intention of customers will be negatively influenced by the attributes of services

H9: Switching intention of customers will be negatively influenced by the customer value.

There is a need for cellular mobile operator firms to identify, develop, protect and deploy strategic resources to create distinctive services and deliver distinct value to attain SCA and superior performance. It is necessary to understand attributes of cellular mobile services that drive customer value and which attributes affect more on customer value. It is also required to know customer value dimensions for cellular mobile services and their relation to superior performance. Finally, the research framework is developed for cellular mobile operator organizations with integration of strategic resources, attributes of services and customer value, to achieve superior performance as shown in figure 2.4 and figure 2.5.



Source: Literature Review Note: RQ= Research Questions

Figure 2.4

The Research framework: Resource Based View and Sustainable Competitive Advantage for CMO

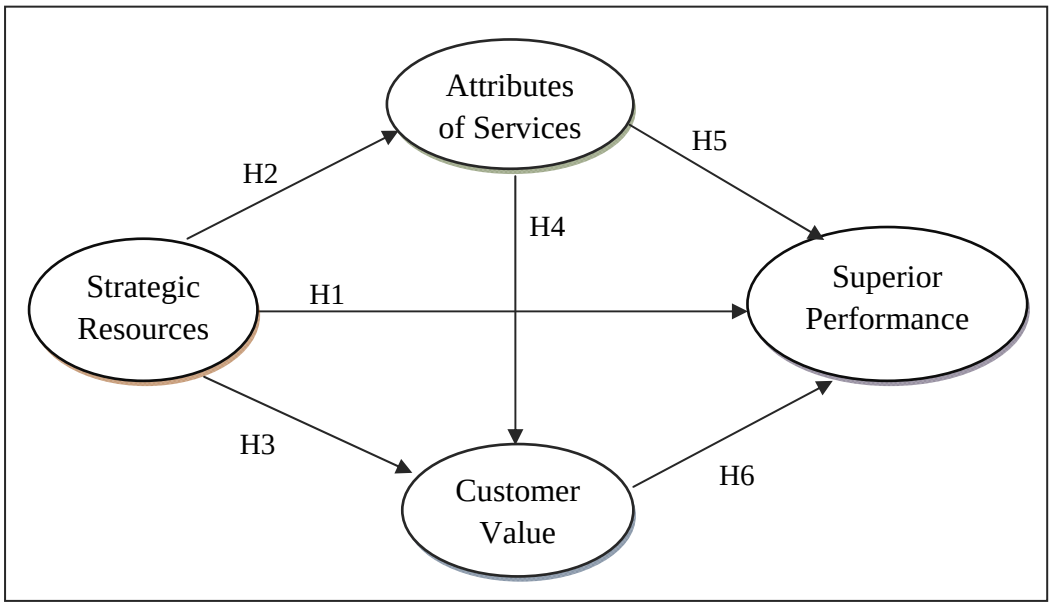


Figure 2.5

The Condensed Research Framework

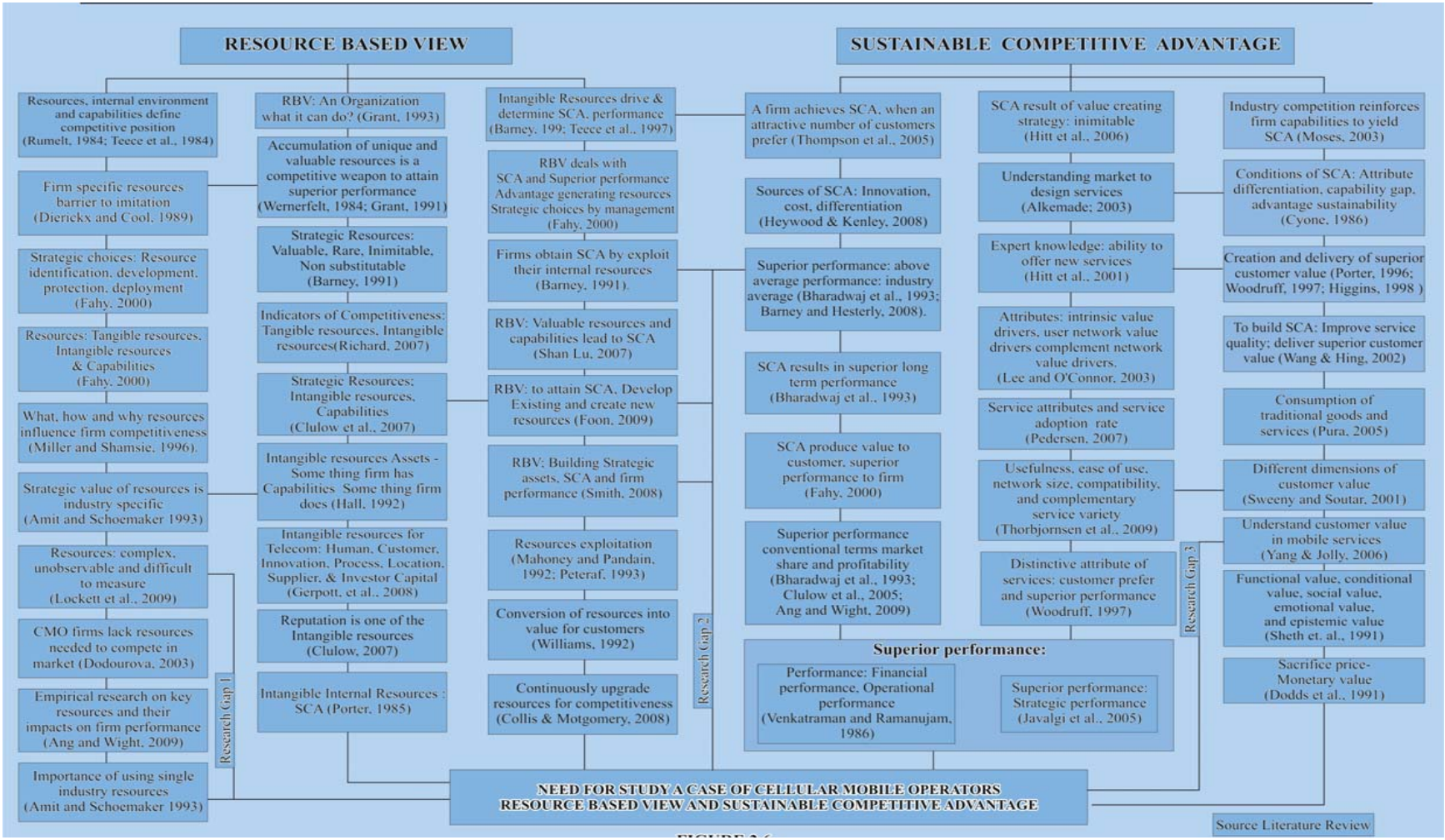


Figure 2.5 Literature Survey Map of RBV and SCA: An Investigation among Cellular Mobile Operators

2.11 Summary

The literature reviewed in this chapter provides the theoretical framework of identifying the set of strategic resources, and its contribution in achieving sustainable competitive advantage and superior performance for cellular mobile operator firms. The review illustrates the importance and dearth of empirical study of RBV theory regarding strategic resources and superior performance in single industry. There is a need to approach the research problem from the perspective of management, customer, and the organization. As discussed, there is an immense need for exploring strategic resources and its impact on SCA and superior performance which presents an opportunity to contribute to the existing body of knowledge. The literature has reveals that there is a need to develop a holistic approach to evaluate SCA and superior performance of CMO firms based on the strategic resources they possess and the distinctive value they create and deliver to their customers. The literature review proves that there is a dearth of knowledge of drivers of customer value and dimensions of customer value related to cellular mobile services. There is a challenge for measurement of superior performance and rudimentary research evidence in measuring superior performance. Literature review shows that the superior performance measurement in the empirical study related to RBV have focused on operational and financial performance. Strategic performance reflects as leading indicators of business prospects of a firm. Strategic performance indicates a company's competitiveness, market position and the positioning of CMOs in the mind of the customers. These are indicators of future performance of the service providers based on past and present services they offer. These act as guidelines for managers. Therefore, it is necessary to have a comprehensive measure of performance. The research framework is developed considering the strategic resources, attributes of services and customer value dimensions, to study resource based view to attain sustainable competitive advantage and superior performance for CMO organizations.

CHAPTER THREE

RESEARCH DESIGN

CHAPTER THREE
RESEARCH DESIGN

3.1 Chapter Overview

This chapter details the research design used to test the theoretical model established in Chapter Two, using inductive and deductive approaches. It is divided into fourteen sections. The second section (Section 3.2) deals with methodological overview. Section 3.3 discusses the empirical research design involving the four areas, viz., research questions (Section 3.3.1), unit analysis (Section 3.3.2), secondary data (Section 3.3.3), and data collection and analysis (Section 3.3.4). Section 3.4 discusses the issues related to validity and reliability. Section 3.5 discusses the inductive and deductive approaches to develop the framework for resource based view and sustainable competitive advantage in the CMO firm. Section 3.6 discusses the population and sampling. Section 3.7 explains survey methodology. Section 3.7.1 justifies the self administered questionnaire. Section 3.8 gives an account of scale items used in the survey. Section 3.9 explains the measurement of the model and testing of hypotheses. Section 3.10 explains the confirmatory factor analysis. Section 3.11 discusses analytical hierarchical process used to rank CMO firms. Section 3.12 discusses Kruskal Wallis test used to determine "significant" differences among the population medians. Section 3.13 discusses regression analysis. Lastly Section 3.14 summarizes the chapter.

3.2 Methodological Overview

Research methods are the basis for the production of knowledge in any given field (Pinsonneault & Kraemer, 1993). Empirical research is used as a research strategy in many situations to contribute to the body of knowledge. Every type of empirical research has implicit, if not explicit, research design. In the most elementary sense, the design is a logical sequence that connects empirical data to a study's initial research questions and ultimately, to its conclusions. In a sense the research design is a blueprint of research, dealing with at least four problems: what questions to study, what data are relevant, what data to collect, and how to analyze the results (Yin, 1994). It is much more than a work plan because the main purpose is to help to avoid

the situation in which the evidence does not address the initial research questions. The role of empirical methods is to help researchers discover general features byanalyzing specific discourse phenomena or programs that interpret or generate them. Once relevant features are identified, hypotheses about the relationship between them can be formed, and controlled studies that test the hypothesized relationships can be devised. This approach leads to general theories via the following steps, which many readers will recognize as a variation of Cohen's empirical generalization strategy (Cohen, 1995). 1. Feature identification: identify features of the discourse, tasks, and context that may influence the target behavior; 2. Modeling: develop a causal model of how these features influence the target behavior; 3. Evaluation: assess the performance of the model for producing the target behavior on the tasks and in the contexts for which it was devised; 4. Generalization: once the model makes accurate predictions, generalize the features so that other discourses, tasks, and contexts are encompassed by the causal model, and test whether the general model accurately predicts behavior in the larger set of discourses, tasks, and contexts.

For the current study secondary data was gathered from the books, journals, newsletters, study reports, and annual reports of telecom regulatory authority, cellular mobile operators association. The data published by Centre for Monitoring Indian Economy was collected and used for the study. The reports submitted by various agencies and departments relevant for the study was referred to and incorporated whenever necessary to substantiate primary data. The study was conducted through exploratory and descriptive research methods. The closed ended questionnaires were designed and prepared on the basis of objectives to capture data from executives and customers. The validity of the instrument was obtained by experts in the area and pilot tested for a small group of respondents and reliability by Cronbach's alpha. To rank CMO firms based on the level of resources they possess analytic hierarchy process was used. Chi Square, Fishers exact test, Kruskal Wallis test, correlation and regression analysis were applied using SPSS (Statistical Package for Social Sciences) version 17.0.

3.3 Empirical Research Method

Research design is "the entire process of research from conceptualizing a problem to writing research questions, and on to data collection, analysis, interpretation, and report writing" (Creswell, 1994). It is the "logical sequence that connects the empirical data to a study's initial research questions, and ultimately, to its conclusions" (Yin, 2003). The choice of which method to employ is dependent upon the nature of research problem. Morgan & Smircich (1980) argue that the actual suitability of a research method derives from the nature of the social phenomenon to be explored. According to Clarke (1998), research methods can be described, considered and classified at different levels, the most basic of which is the philosophical level. There are two basic methodological traditions of research in social sciences namely positivism and post positivism. Smith (1998) provides a useful insight into positivist thinking within social sciences with this description: 'Positivist approaches to the social sciences . . . assume things can be studied as hard facts and the relationship between these facts can be established as scientific laws. For positivists, such laws have the status of truth and social objects can be studied in much the same way as natural objects'. The basic reasoning of positivism assumes that an objective reality exists which is independent of human behavior and is therefore not a creation of the human mind. For the post-positivist researcher reality is not a rigid thing, instead it is a creation of those individuals involved in the research. Comte (1971) suggests that all real knowledge should be derived from human observation of objective reality. Reality does not exist within a vacuum, its composition is influenced by its context, and many constructions of reality are therefore possible (Hughes 1994).

Empirical research methods are a class of research methods in which empirical observations or data are collected in order to answer particular research questions. Scientific knowledge is based on the accumulation of empirical evidence (Kazdin, 2003).

The *empirical approach* is an evidence-based approach that relies on direct observation and experimentation in the acquisition of new knowledge. In the empirical approach, scientific decisions are made based on the data.

A wide range of research methods can be used in the course of developing a empirical design, both quantitative and qualitative data can be collected and obtained from different sources (Marelli, 2007). The research design uses both inductive and deductive approaches. Inductive approach explores industry specific strategic resources, attributes of cellular mobile services and customer value dimensions for cellular mobile services from literature. The deductive approach uses self administered questionnaire for strategic resources, attributes of cellular mobile services, dimensions of customer value and superior performance. The empirical research design is focused on the study of RBV and SCA in CMO firms from executives, customers and secondary data through integrative perspective (Figure 3.1).

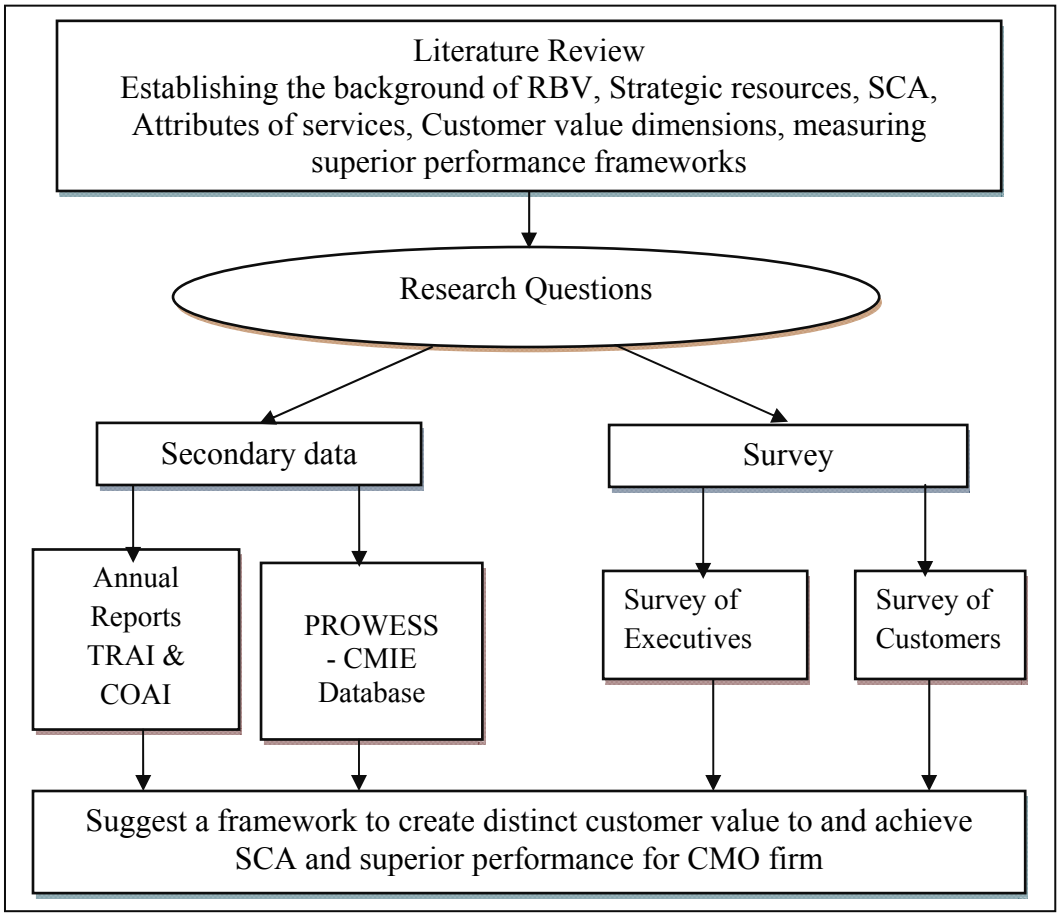


Figure 3.1
Research Design Areas for the Proposed Research

The research deign used in this research involves the following areas:

3.3.1 Research Questions

Defining research questions represents one of the most important steps to be undertaken in any empirical study (Benbasat et al., 1987). One of the key criteria for the appropriate use of the empirical study method is the type of research questions posed. To formulate research questions the researcher conducted literature review and prepared a literature map. The critical review of literature led to insightful questions about the problem. Five research questions were framed on a limited number of events, conditions and their interrelationships, to study RBV and SCA in CMO firms.

3.3.2 Secondary Data

Secondary data refers to data that have been collected and made available by a primary source. Secondary data are often collected for a specific purpose but can also be used to address questions in other fields of research (Boslaugh, 2007). In addition, general repositories of data exist to aid researchers with factual statistics about a population of interest. Heaton (2004) defines secondary data analysis as 'a research strategy which makes use of pre-existing quantitative data or pre-existing qualitative data for the purposes of investigating new questions or verifying previous studies'. In other words, secondary data analysis is the use of previously collected data, for some other purpose. Reasons for conducting a secondary data analysis include: applying a new research question (Heaton, 2004); using old data to generate new ideas (Fielding, 2004); 'verification, refutation and refinement of existing research' (Heaton, 2004,), and exploring data from a different perspective (Hinds, Vogel & Clarke-Steffen, 1997). Secondary data can arise from both cross-sectional and longitudinal research designs. The advantages of working with secondary data are: economy; the breadth of data available and the data collection process is done by expertise with professionalism. Secondary data used for analysis like the financial data, and sales data were collected for all the six CMO organizations from "PROWESS" published by Centre for Monitoring Indian Economy (CMIE), Telecom Regulatory Authority of India (TRAI), and Cellular Operators Association of India (COAI).

3.3.3 Survey

A survey is a method of collecting data in a consistent way. A survey is a systematic examination of a population by means of a series of specific, targeted questions. Survey research is useful for documenting existing conditions, characteristics of a population, and opinion. Kerlinger (1973) considered survey research as social scientific research and focuses on people, the vital facts of people, and their beliefs, opinions, attitudes, motivations and behaviour. A survey is a means of "gathering information about the characteristics, actions, or opinions of a large group of people, referred to as a population" (Tanur, 1982). Survey analysis may be primarily concerned either with relationships between variables, or with projecting findings descriptively to a predefined population (Glock, 1967).

3.3.4 Data Collection and Analysis

Researchers administer questionnaires to some samples of a population to learn about the distribution of characteristics, attitudes, or beliefs. In deciding to survey a group of people, researchers make one critical assumption—that a characteristic or belief can be described or measured accurately through self-reporting. In using questionnaires, researchers rely totally on the honesty and accuracy of participants' responses.

Questionnaires typically entail several questions that have structured response categories; some open-ended questions may also be included. The questions are examined sometimes for bias, sequence, clarity, and face-validity. Questionnaires are usually tested on small groups to determine their usefulness and, perhaps, reliability. A structured questionnaire, is one in which the questions asked are precisely decided in advance. When used as an interviewing method, the questions are asked exactly as they are written, in the same sequence, using the same style, for all interviews. Nonetheless, the structured questionnaire can sometimes be left a bit open for the interviewer to amend to suit a specific context.

Any finding or conclusion in empirical research is more convincing and accurate if it is based on different sources of information (Dube & Guy, 2003). This research uses data triangulation which includes questionnaire for customers, questionnaire for executives, archival records and documentation (secondary data published by TRAI, COAI, and CMIE).

This researcher examines raw data and uses many interpretations in order to find linkages between the research objectives and outcomes with reference to the research questions. Throughout the evaluation and analysis process, the researcher remained open to new opportunities and insights. The empirical reserch method, with its use of multiple data collection methods and analysis techniques, provided the researcher with opportunities to triangulate data in order to strengthen the research findings and conclusions. The researcher categorized, tabulated, and recombined the data to address the initial propositions or purpose of this study, and conduct cross-checks of facts and discrepancies in accounts.

3.4 Validity and Reliability

An important consideration in the empirical design is to create a design with construct validity, internal validity, external validity and reliability. Construct validity deals with the use of instruments and measures and operationalises the constructs for the study. Internal validity is obtained by internal consistency of scale items through Cronbach's alpha. External validity is done through the specification of theoretical relationships, from which generalizations can be made. Since all the scale items used in the research are selected from literature review, Confirmatory Factor Analysis was used which is a better method for use in research where hypotheses about the grounded theoretical model exist (Bollen, 1989). The Confirmatory Factor Analysis was used to determine whether the number of factors and the loadings of measured indicators (items) conformed to what was expected, based on theory. In using Confirmatory Factor Analysis a factor loading of 0.50 and above on a specified factor has been considered to be acceptable (Hair et al., 1998), and in this research all the items showed factor loading above this level. The rationale for internal consistency is that the individual items of the scale should all be measuring the same construct and thus be highly inter-correlated (Nunnally, 1978). One type of diagnostic measure is the reliability coefficient that assesses the consistency of the entire scale, with Cronbach's alpha being the most widely used measure (Nunnally, 1978; Cronbach, 1990). These alpha values range from 0 to 1, higher values indicate higher levels of internal consistency. The generally agreed upon lower limit for Cronbach's alpha is 0.7, although it may decrease to 0.60 in exploratory research (Saraph et. al., 1989). Content validity is established through a review of the literature and with the help of experts. It subjectively assesses the correspondence between the individual items and the concepts through ratings by experts, pre tests with multiple sub populations or other means (Hair et. al., 1998). In order to obtain content validity, the researcher followed the recommendations of Cooper and Schindler (2001) through identifying the existing scales from the literature and with panel of experts (including academicians and practitioners from the industry), asking them to give comments on the instrument. The expert team members for the content validity were: two

Professors in strategic management, and one Chief Executive Officer of a cellular mobile service provider firm.

3.5 Inductive and Deductive Approach

An inductive approach advocates starting with a specific organization in a specific country. To do this one must develop a context by combining the necessary dimension and appropriate definitions to generate a working model. This model in turn becomes a foundation for the strategic resources, customer value dimensions and superior performance in cellular mobile operator industry. On the other hand, the deductive approach follows a general model developed somewhere in the world, such as resource based view of customer value and sustainable competitive advantage; firm resources and SCA; and a framework to SCA. Such RBV and SCA models, though sound in their reasoning, may not be strategic for the purpose. From the literature review it is evident that RBV and SCA researchers all over the world are comparing the advantages and disadvantages of the deductive approach. This researcher identifies that there is a need to combine both inductive and deductive approaches to deal with changing business environment. In this thesis, the researcher used structured closed ended questions for unit analysis. This approach is inductive.

Resource based view and sustainable competitive advantage efforts around the world follow two distinct scenarios. The first scenario is that a research interest develops a context of what is needed by the organization or the academic purpose. In the present study a cellular mobile operator firm, to gain competitiveness, has to achieve SCA. The researcher reviews the RBV and SCA ideas around the world and uses exploratory methods to obtain new information on RBV. This sequence is inductive. The second scenario has a different sequence. Any researcher, or organization or country develops an interest in RBV and SCA because of the literature it encounters. Once an interest is sparked in the subject matter, it further investigates the topic. Most likely, it will pursue the original source and conduct the investigations. This sequence is deductive.

Analysis of the results was carried by mixed method approach (Inductive and Deductive). The researcher organizes the inductive and deductive approaches in the

following ways: Inductive approach explores industry specific strategic resources, attributes of cellular mobile services and customer value dimensions for cellular mobile services. Deductive approach uses RBV and SCA framework for achieving superior performance in CMO firm and to provide framework to achieve SCA and superior performance. Both qualitative (to explore and discover the contributing factors to SCA and performance) and quantitative methods (survey by questionnaire) are used in the overall study. Exploratory research was used to identify factors of SCA and to formulate hypothesis. To test the hypotheses and for analysis of attributes of services and dimensions of customer value, criteria for selecting particular service provider, descriptive research method was used.

3.6 Population and Sampling

In order to achieve the objective of the study, all the CMOs operating in India were considered as the population for this study. The population consisted of 14 service providers and the sample survey was derived from the annual report of Telecom Regulatory Authority of India- March 2010. It was found that majority of market share (92 per cent) was held by six service providers who operate in the entire country. For the present research the researcher selected purposively six service providers based on the inclusion and exclusion criteria.

Inclusion Criteria: All CMOs who are operating in India from the last five years (i.e. from 2005) since we need to evaluate long term performance.

Exclusion Criteria: Based on Market share as on 31st of March 2010 (TRAI – Annual Report 2010), those CMOs where market shares were less than 10 per cent were excluded for the study. Based on inclusion and exclusion criteria, the following six cellular mobile service providers were selected for the study: BSNL, Reliance Communications, Vodafone Essar Limited, Bharti Airtel Ltd., Tata Teleservices Ltd., and Idea Cellular Limited. It was found that around 92 % of the market share was controlled by these six service providers. The present study was designed with cooperation from six cellular mobile service provider organizations. The required data regarding strategic resources were collected from the CEOs of the six CMO firms using structured questionnaire.

Malhotra et. al. (1996) defines purposive sample as "a form of convenience sampling in which the population elements are purposively selected based on the judgement of the researcher". Dillion et al. (1993) defines purposive sampling as "selecting certain respondents for participation in the study presumably because they are representative of the population of interest and / or meet the specific needs of the research study". For the research all the cellular mobile users in India were considered as population. Since population is very large, the researcher used snowball sampling technique which is a subset of purposive sampling. Purposive sampling technique was used taking into consideration the respondents' availability, willingness to share the information, location of subscriber, and use of value added services, which is a very important criterion for the study. Snowball sampling is a method typically used with unknown populations. Members of these populations have not all been previously identified and are more difficult to locate or contact than known populations (Coleman, 1958; Goodman, 1961; Spreen, 1992). The primary advantage of snowball sampling is its success in identifying individuals from unknown (and potentially very large) populations beyond any known segments of the population. As on March 2010 the country had 584 million mobile subscribers, which is the population for the research. Based on sample size calculation formula which is very much used by American Marketing Association, sample size was calculated. At Confidence Level of 95 per cent and Confidence Interval of '3' the sample size needed is 1067. To collect data from cellular mobile users, self administered questionnaire survey was conducted in Bombay, Chennai, Hyderabad and Bangalore. Of these cosmopolitan cities which are sources of major revenue, Bombay and Chennai belong to Metro circle and Bangalore and Hyderabad belong to circle A. For the present study, data was collected from 300 respondents from each city totaling up to 1200 cellular mobile users.

3.7 Conducting Survey

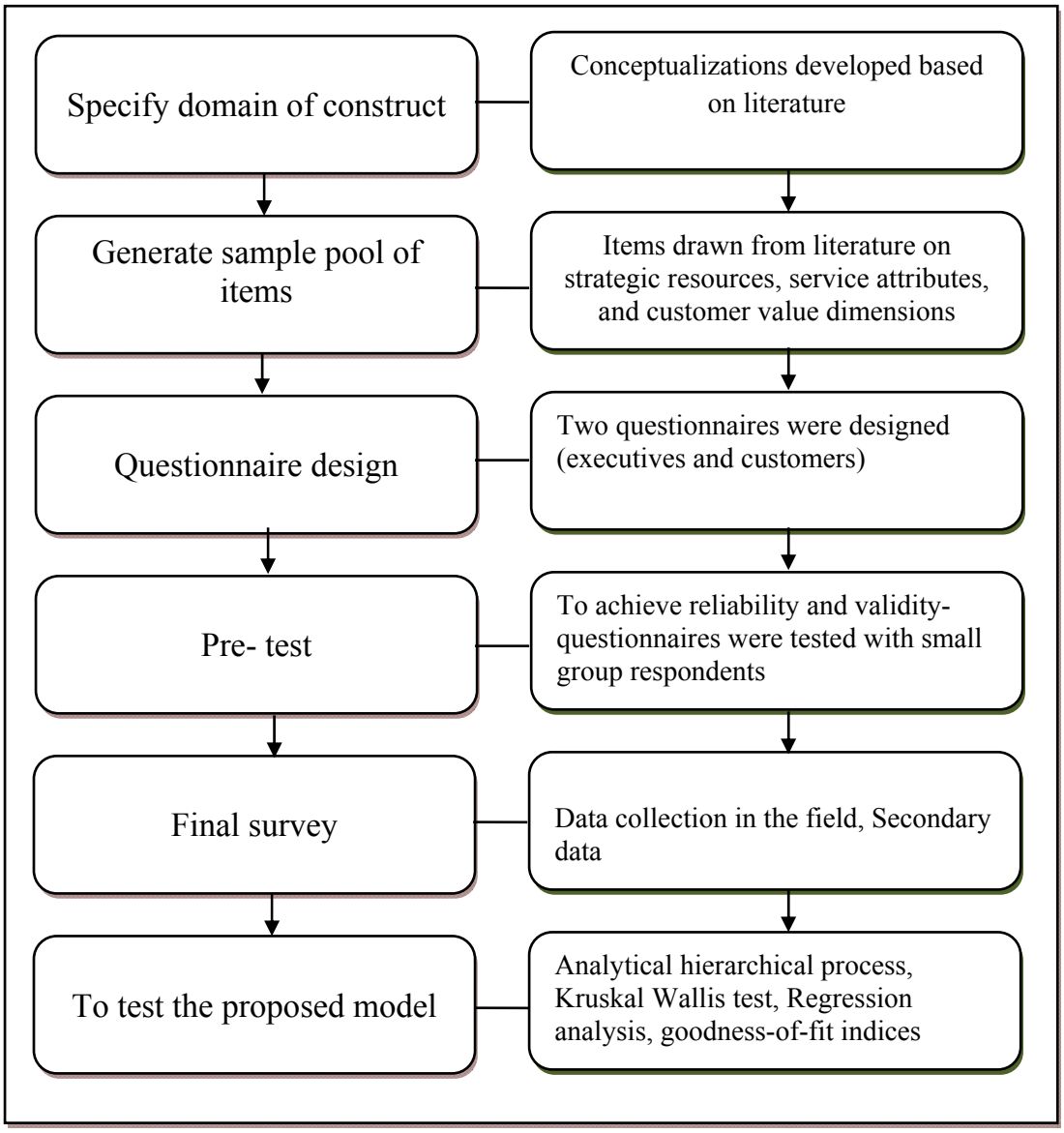
Deductive approach uses descriptive (Questionnaire) method to study strategic resources, attributes of cellular mobile services, customer value, and SCA in CMO. For this purpose a self administered survey is more useful to collect data for the following reasons: it is an effective tool; it provides accurate means of assessing

information about the sample and enables the researcher to draw conclusions about generalizing the findings from a sample of responses to a population (Creswell, 1994); it is more concerned about causal research situations (Hair et.al., 2003); finally it is considered useful because it is quick, inexpensive, efficient and can be administered to a large sample (Zikmund, 2003). Hair et. al. (2003) regards large sample (i.e. more than 200 respondents) as one of the main reasons for using survey research. The guidelines recommended by Hair et al. (2003) were taken into account to ensure precision and to avoid these problems associated with the survey methods. All the scales used in the research to measure constructs were tested previously for reliability and validity. Systematic response distortion was addressed by ensuring that the questionnaire was designed in a way that it would be easy for the respondents to understand and would be free of response bias. As for the issue of research control, any research method has its own limitations. However, the above mentioned reasons were considered for choosing the survey method. The next section addresses the type of survey method used.

3.7.1 Self Administered Questionnaire.

Self administered Questionnaire was used to collect data which is one of the better methods because of large sample size. Using this method we can administer quickly and economically compared to other methods like telephonic and personal interview. The questionnaire could be completed whenever the respondents had time, it reached a geographically widespread sample with lower cost because the researcher is not required to be present (Zikmund, 2003). Self administered questionnaire also used drop off survey method. This method involves the researcher travelling to respondents' location to deliver by hand the survey questionnaires or a representative of the researcher at the research setting distributing the survey questionnaires. Following this, the completed surveys are picked up by the representative after the respondents have finished (Hair et al., 2003; Zikmund, 2003). The advantages of this method as outlined by Hair et al. (2003) are the availability of a person to answer questions and the ability to generate interest in completion of questionnaires. The overview of survey methodology is presented in (Figure 3.2). The self administered

questionnaire used in the study for executives is given in Appendix III and for cellular mobile users is given in Appendix IV.



Source: Research data

Figure 3.2
Overview of Survey Methodology

3.8 Scale Development

In research to measure subjective variables (attitudes, feelings, personal opinions, or word usage), a scale is used. The Likert scale is by far the most popular attitude scale type (Babbie, 1983). A statement is followed by several levels of

agreement: strongly agree, agree, no opinion, disagree, strongly disagree. This five-point scale is commonly used, but other scales, from four to ten points, can be used as well (Muller, 1986). The Likert-type scale is also used to capture qualitative data that is (1) difficult to measure or (2) addresses a sensitive topic, to which a respondent would likely not respond, or would response falsely, if asked directly.

The scales used in this thesis have been developed from a review of relevant literature, and results of the pilot study. Most of the scales used were pre-tested and used in previous studies. A total of 86 scale items were used to measure the constructs in the research framework as discussed in the Chapter Two (Table 3.1). All of the scale items used in the questionnaire designed for customers were based on a five point Likert scale ranging from 1 (very low) to 5 (very high) and were modified for cellular mobile services context. In the research to measure strategic resources we used a five point Likert scale 1 to 5, ranging through Strongly Disagree, Disagree, Somewhat Agree, Agree, and Strongly Agree. The CEOs of the six CMO firms were asked to rate each strategic resource of their firm on the 5 point rating scale. The respondents were also asked to give their priority on each strategic resource for a cellular mobile organization on a 10 point rating Likert scale ranging from 1 = lowest priority to 10 = highest priority based on their experience for main criteria.

Table 3.1
Scale Items Used in the Thesis

Construct	Attribute/Variables	Number of Items	Sources
Strategic Resources*	Human Capital	6	(Gerpott, et al., 2008)
	Reputation Capital	3	
	Customer Capital	4	
	Location Capital	3	
	Innovation Capital	5	
	Process Capital	5	
Attributes of Cellular Mobile Services	Usefulness	3	(Thorbjørnsen et al., 2009)
	Ease of use	4	
	Network size	2	
	Compatibility	2	
	Complementary service variety	3	
Customer Value	Functional Value	6	(Sheth et al. 1991; Sigala, 2006; Pihlstrom and Brush, 2008)
	Emotional Value	4	
	Social Value	3	
	Epistemic Value	3	
	Conditional Value	3	
	Monetary Value	3	
Superior Performance	Customer satisfaction	4	(Westbrook and Oliver's, 1991)
	Customer trust	4	(Tariq and Moussaoui, 2009)
	Customer loyalty	3	(Kish, 2000; Bridgewater, 2001)
	Brand equity	3	(Holehonnur et al., 2009)
	Service Innovation	3	(Hee Shin and Yong Kim, 2007)
	Service Quality	4	
Behavioural Intention	Switching Intention	3	(Hee Shin and Yong Kim, 2007)

* Executives

3.9 Measurement Model

Analytic Hierarchy Process was used to rank the CMOs based on strategic resources. Kruskal Wallis test was used to evaluate whether a dependent variable was the same across all levels of a factor in the independent variables. To test hypotheses that reflect the relationships between these theoretical constructs, the model fit was determined through regression analysis and significance by Pearson's correlation. The

goodness -of-fit statistics displayed are R, R^2 and adjusted R^2 and standard error of the estimate.

3.10 Factor Analysis

Exploratory Factor Analysis (EFA) has widely been suggested as the appropriate tool when a theory is absent or new scales are being developed (Anderson & Gerbing, 1988; Byrne, 1989; Hair et al., 1998). In addition Anderson & Gerbing (1988) have argued that exploratory factor analysis cannot assess unidimensionality directly, but aims to assess the factor structure of a scale. Therefore, Confirmatory Factor Analysis (CFA) is a better method for use in research where hypotheses about the grounded theoretical model exist (Hair et al., 1998), as is the case in this thesis. Thus, CFA is considered a more powerful and more flexible technique than exploratory factor analysis for such an assessment (Hair et al., 1998). Since all the scale items used in the research are selected from literature review confirmatory factor analysis was used which is a better method for use in research where hypotheses about the grounded theoretical model exist (Bollen, 1989). The confirmatory factor analysis was used to determine whether the number of factors and the loadings of measured indicators (items) conformed to what was expected, based on theory. In using confirmatory factor analysis a factor loading of 0.50 and above on a specified factor has been considered to be acceptable (Hair et al., 1998), and in the research all the items showed above this level.

3.11 Analytic Hierarchy Process

Analytic Hierarchy Process (AHP), is a powerful tool that may be used to make decisions when multiple and conflicting objectives/criteria are present, and both qualitative and quantitative aspects of a decision need to be considered (Saaty, 1980). The importance of the criteria could be approximated by the AHP using pairwise comparisons: The AHP considers a set of evaluation criteria, and a set of alternative scenarios among which the best decision is to be made. It generates a weight for each evaluation criterion and scenario according to the information provided by the decision maker. The AHP combines the objective and scenario evaluations

determining a ranking of the scenarios. The AHP has been used in a wide variety of complex decision making problems, such as the strategic planning of organizational resources (Saaty, 1990), and the evaluation of strategic alternatives (Yang & Lee, 1997). AHP is effective in dealing with complex decision making because it reduces complex decisions to a series of pairwise comparisons. AHP reduces the bias in the decision making process because it also checks the consistency of the decision maker's evaluations. AHP may be considered as a tool that is able to translate the pairwise relative evaluations (both qualitative and quantitative) made by the decision maker into a multi-criteria ranking. There are three major concepts related to the AHP: a) The AHP is analytic because it converts decision maker's inputs into numbers. b) The AHP structures the problem as a hierarchy. c) The AHP is hierarchical because it reduces complex decision-making problems into pairwise comparisons.

The AHP helps in the decision-making process. The AHP incorporates decision maker's inputs and defines a process for decision-making.

The AHP consists of these steps:

(1) Computing the vector of objective weights,

(2) Computing the matrix of scenario scores,

(3) Ranking the scenarios,

(4) Checking the consistency.

In this research the data collected through structured questionnaire from the six CEOs of the six CMO firms was analyzed using AHP. AHP was used to rank CMO firms based on the strategic resources they possess.

The data collected with 5-point Likert scale is converted to a 10-point equivalent. The process employed to conversion is basically anchoring the end points of the scale to the 10-point. So 1 stays as 1, 5 becomes 10. The points in between are converted as 2 becomes 3.25; 3 becomes 5.5; 4 becomes 7.75. This assumes the data are "equal interval" (e.g. the distance between 1 and 2 is the same as between 2 and 3 on the scale). As Dawes (2008), proves with an experiment, on either a 5-point, 7-point or 10-point scale, the three scales give almost identical results. In the present research to

rank the CMO firms based on strategic resources steps of AHP from (Roger, 1987) and (Perera & Costa, 2008) were adopted.

3.12 Kruskal-Walli's Test:

The Kruskal-Wallis test evaluates whether the population medians on a dependent variable are the same across all the levels of a factor. To conduct the Kruskal-Wallis test, using the K independent samples procedure, cases must have scores on an independent or grouping variable and on a dependent variable. The independent or grouping variable divides individuals into two or more groups, and the dependent variable assesses individuals on at least an ordinal scale.

This test is appropriate for use under the following circumstances:

(a) You have three or more conditions that you want to compare;

(b) Each condition is performed by a different group of participants; i.e. you have an independent-measures design with three or more conditions.

(c) The data do not meet the requirements for a parametric test. (i.e. use it if the data are not normally distributed; if the variances for the different conditions are markedly different; or if the data are measured on an ordinal scale). To analyse the data collected from customers regarding attributes of services, customer value dimensions, strategic performance, Kruskal Wallis test was used to arrive at the solution of ranking each service provider on each criterion.

3.13 Regression Analysis

The objective of this study is to identify whether there exists some relationship between variables, which is usually done by a study of correlation between the variables (Hair et. al., 1998). The regression analysis was applied to investigate the relationships between dependent variables (i.e. Superior Performance) and independent variables (i.e. Strategic resources). Linear regressions estimate the coefficients of the linear equation, involving one or more independent variables that best predict the value of the dependent variable. The variance of the distribution of the dependent variable should be constant for all the values of independent variable. The relationship between the dependent variable and each independent variable should be

linear, and all observation should be independent. The direction of the relationship between dependent and independent variables can be determined by looking at 'the regression coefficient' (β) associated with the independent variables (Bryman & Cramer, 1996). If the regression coefficient is positive then there is positive relationship between these variables, otherwise they are negatively related. Thus strategic resources are empirically tested and shown to be related to customer value, and superior performance.

3.14 Summary

The research design briefly describes the empirical research design used. The research design used mixed approach with both inductive and deductive approaches. Inductive approach was used based on the Literature review to identify strategic resources, cellular mobile service attributes, dimensions of customer value and superior performance in cellular mobile services. Deductive approach was used with the standard model of "Resource Based View and Sustainable Competitive Advantage" to assess cellular mobile operators framework through descriptive method using self administered questionnaire. To examine the service provider's performance and SCA, deductive approach method was used to draw conclusion from facts. In order to obtain content validity, this research followed the procedures recommended by Cooper & Schindler (2001) through identifying the existing scales from the literature, and conducting interviews with panel of experts (including academicians and practitioners from the industry), asking them to give their comments on the research tools used. The expert team members for content validity consisted of a senior executive from CMO firm and two professors in management and business administration. The pilot study was conducted with a sample size of 58 respondents to examine content validity of the questionnaire and reliability was confirmed through calculating Cronbach's alpha. The self administered questionnaires were used to study strategic resources, attributes of services, customer value dimensions, and superior performance of CMO firms. A total of 86 scale items were used to measure the constructs in the research framework. The empirical research design was focused on the study of RBV and SCA in CMO firms through an integrated perspective. The measurement model RBV and SCA for superior

performance was developed and a framework suggested for RBV and SCA to gain superior performance as an outcome of inductive and deductive analysis in CMO firms.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATIONS

CHAPTER FOUR
DATA ANALYSIS AND INTERPRETATIONS

4.1 Chapter Overview

This chapter analyses the data collected from the cellular mobile operator firms and aims to interpret the data in relation to the research problem. It starts with analyzing data collected from executives on strategic resources using AHP, followed by data collected from customers and secondary data on attributes of services, customer value dimensions, and superior performance.

Finally the measurement model of RBV and SCA for superior performance is presented as a result of inductive and deductive analysis. Results have been concluded with a brief summary at the end of the chapter.

4.2. Data Editing, Coding and Screening

Following the data collection, the data was transferred into a worksheet to ensure completeness and consistency of the data. Editing was considered as a part of data processing and analysis. Coding was used to assign numbers to each answer and allow the transference of data from questionnaire to SPSS. In this thesis, the coding procedure was performed by establishing the data file in SPSS, and all questions were pre-coded. Data editing procedures were undertaken after data were entered into the data file in order to detect any errors in data entry. Screening of the data in SPSS indicated that no variable had any missing data.

4.3 Ranking CMO Firms Based on Strategic Resources Using AHP

The data related to the strategic resources: human capital, reputation capital, customer capital, location capital, innovation capital, and process capital were analysed using analytic hierarchical process.

Human Capital: Employees sound domain knowledge, relevant education and experience in cellular mobile operations, the basic values of organization, learning as the key to improvement, employee attrition rate, job satisfaction level, and personnel capability to handle complex situations and problems; **Reputation Capital:**

Customers feeling about firm, security in services, great deal of respect for firm; **Customer Capital:** Customer churn rate, strong loyal customer base, strategy of competitive advantage is based on the understanding of customer needs, and the commitment to retain valued customers; **Location Capital:** Services in economically highly attractive places, geographical coverage has exclusive advantage, and spatial location contributes significantly; **Innovation Capital:** Innovation in services and processes on R&D results are readily accepted, Management actively seeks innovative ideas, People are not penalized for new ideas that do not work, Introduce new services before competitors, value added services are more attractive compared to competitors; **Process Capital:** Internal work sequences are contributing significantly in delivering quality services, queue in call centre is reduced drastically, reduction in number of complaints received, able to answer and resolve customer queries instantly, and number of complaints handled by employees per hour in call center is increasing.

The hierarchical tree of the model using main criteria and sub criteria was developed for strategic resources to arrive at the end results of ranking CMO firms (Figure 4.1). The data collected from the six executives of six CMO firms were analysed using pairwise comparison matrix to arrive at priority vector for main criteria. Similarly priority vector were calculated for sub criterion and normalised weights were calculated. The table showing normalised weights of main criteria, sub criteria and overall priority score for each alternative is given in Appendix VI.

HIERARCHICAL TREE

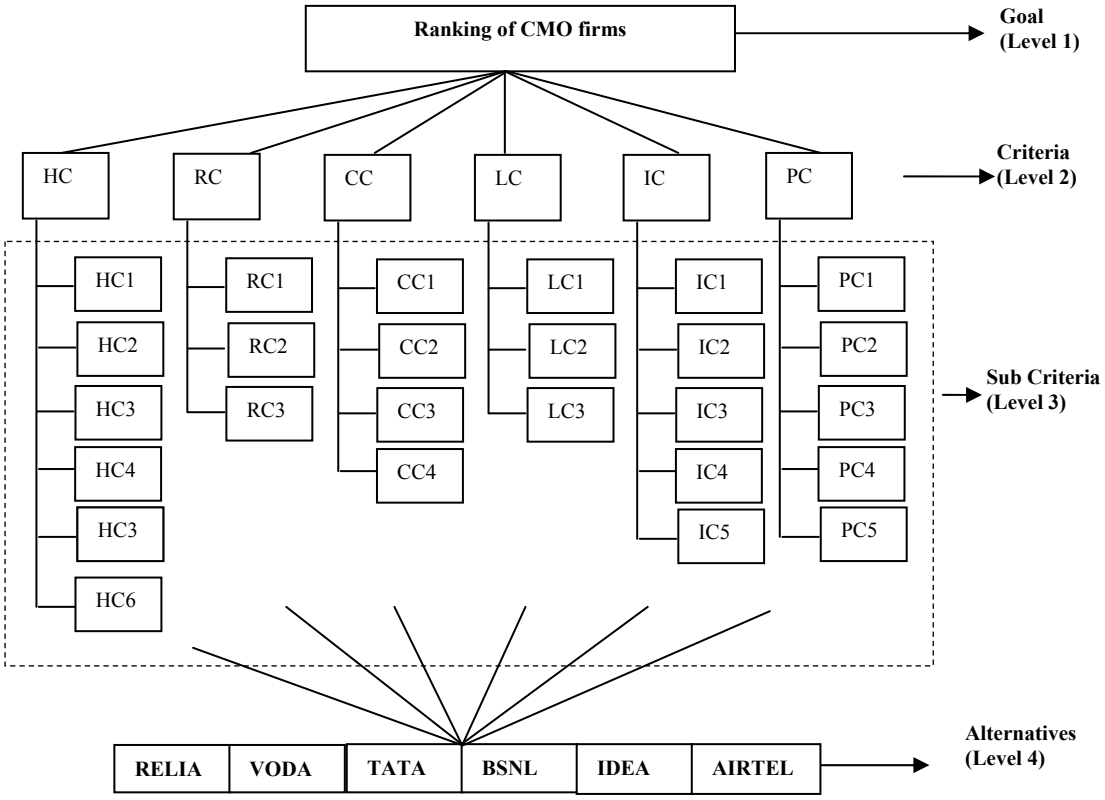


Figure 4.1

A Hierarchical Structure of AHP Model to Rank CMO firms

Note: HC= Human Capital; RC= Reputation Capital; CC= Customer Capital; LC= Location Capital; IC= Innovation Capital; PC= Process Capital

Results of the pairwise comparison of the ranking of strategic resources are shown in Table 4.1, and consistency ratio for all the matrices are less than 0.1 which are within the prescribed limit and hence the quality of judgments is consistent and valid.

Criteria and Overall Priority Score for Each Alternative.

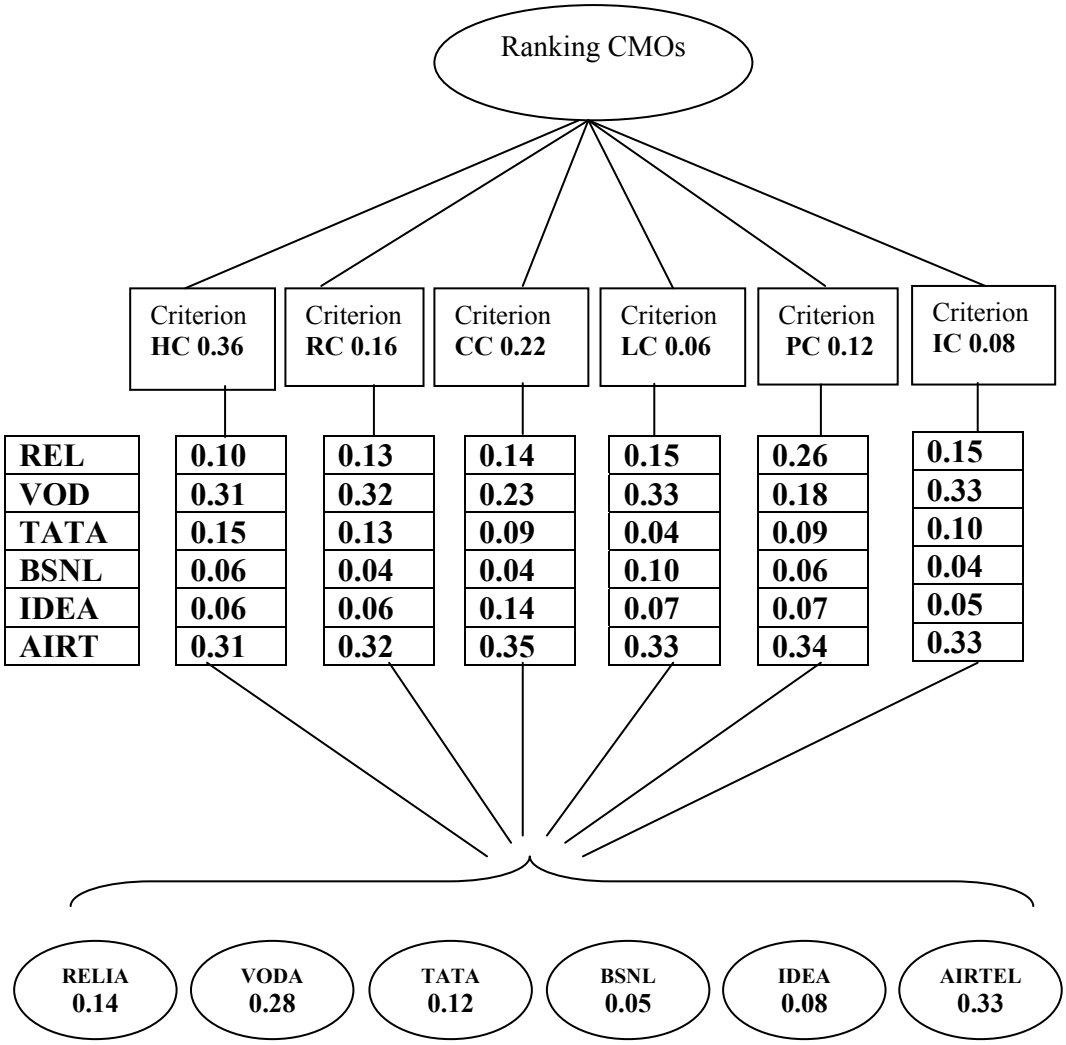


Figure 4.2

Normalised Weights of Main Criteria Sub Criteria and Overall Priority

Table 4.1 shows cellular mobile service provider wise strategic resources weights and the overall rank.

Table 4.1

Rank of CMO Firms Based on Strategic Resources

CMO	0.36* HC	0.16* RC	0.22* CC	0.06* LC	0.12* IC	0.08* PC	OVERALL RANK
AIRTEL	0.31	0.32	0.35	0.33	0.34	0.33	0.33
VODA	0.31	0.32	0.23	0.33	0.18	0.33	0.28
RELIA	0.1	0.13	0.14	0.15	0.26	0.15	0.14
TATA	0.15	0.13	0.09	0.04	0.09	0.1	0.12
IDEA	0.06	0.06	0.14	0.06	0.07	0.05	0.08
BSNL	0.06	0.04	0.04	0.1	0.06	0.04	0.05

Source: Survey Results *Weight for main criteria

The Figure 4.3 shows the graph of cellular mobile service provider ranks based on their strategic resources.

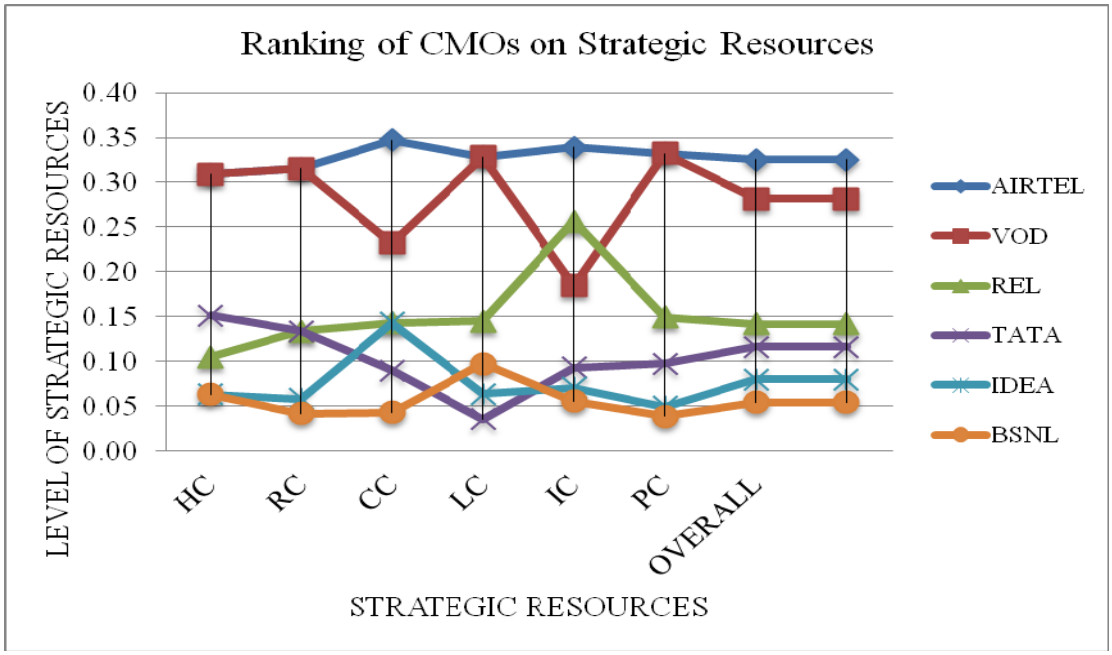


Figure 4.3
Ranks of Cellular mobile operator firms Based on Strategic Resources

The ratings given by experts on six strategic resources which are main criteria and their sub criteria were considered for the framework to evaluate the CMOs. The finding reveals that Airtel emerged as the first rank holder with a overall score of

0.33, followed by Vodafone as second with a score of 0.28, Reliance as third with score of 0.14. Tata had fourth rank with score of 0.12, Idea being ranked fifth with score of 0.08, and finally, BSNL was ranked last amongst the selected CMOs with overall score of 0.05.

Table 4.2
Experience of Executives in Years

CMO	Present Organization	Telecom Industry	Overall Experience
Airtel	10	12	21
Vodafone	10	10.	20
Reliance	5	9.5	15
BSNL	34	34	34
TATA	5	9	20
Idea	6	10	24

Source: Survey Results

Table 4.2 shows the experience of executives of the six CMO firms who shared the information by filling questionnaire. The table shows the experience in the present organization, telecommunication industry and total experience as an executive. All the executives have more than five years of experience in current organization, more than nine years of experience in telecommunication industry and overall they have more than fifteen years of experience as executives.

4.4 Sample Characteristics of Customers

Table 4.3
Gender Wise Distribution of Respondents (per cent)

CMO	Male	Female
Airtel	64.10	35.90
Reliance	62.50	37.50
Vodafone	54.40	45.60
Tata	57.30	42.70
Idea	67.00	33.00
BSNL	56.00	44.00
Total	**60.00**	**40.00**

Source: Survey Results
$\chi^2 = 10.09$, P=0.121

As shown in Table 4.3, chi-square test revealed that there is no significant difference with respect to the gender of cellular mobile subscribers. Among the respondents, overall 60 percent were male and 40 percent were female. This pattern is almost the same for every service providers.

Table 4.4
Age Wise Distribution of Respondents (per cent)

CMO	**18-30**	**31-40**	**41-50**	**Above 50**
Airtel	53.40	42.20	2.70	1.70
Reliance	45.50	46.00	3.60	4.50
Vodafone	65.20	29.40	5.10	0.30
Tata	64.30	35.10	0.60	0.00
Idea	61.40	38.60	0.00	0.00
BSNL	46.00	40.00	8.00	6.00
Total	57.00	38.08	3.25	1.67

Source: Survey Results
Fishers exact test $p = 0.0001$, $p<0.001$

The age distribution of the cellular mobile subscribers is shown in the above Table 4.4. The Fisher's test reveals that there is a significant difference with respect to the age of subscribers with 57.5 per cent of the respondents belonging to the age group of 18-30 years, 38.3 per cent to the age group of 31-40 years, and 2.9 per cent to the age group of 41-50 years and only few people belonged to the age group of more than 50 years. This indicated the youth segment (18-30 years) is the major segment with Vodafone (65.4%), Tata (64.3%) and Idea 61.4(%) having very high percentage of subscribers in this age group.

Table 4.5

Education Wise Distribution of Respondents (per cent)

CMO	Under Graduate	Graduate	Post Graduate
Airtel	19.40	47.30	33.30
Reliance	12.50	64.30	23.20
Vodafone	33.10	34.10	32.80
Tata	15.80	51.50	32.70
Idea	12.50	37.50	50.00
BSNL	30.00	44.00	26.00
Total	**21.50**	**45.80**	**32.80**

Source: Survey Results

$\chi^2 = 64.699$, $P<0.001$, Highly significant

As shown in the Table 4.5 chi-square test revealed that there is a significant difference among the service providers with respect to the education level of cellular mobile subscribers. Among the respondents, 21.5 percent were under graduates, 45.80 percent of them graduates and remaining 32.8 percent of them were post graduates.

Table 4.6

Occupation Wise Distribution of Respondents (per cent)

CMO	Student	Salaried	Business	Housewife
Airtel	27.70	63.60	8.00	0.70
Reliance	9.80	83.90	5.40	0.90
Vodafone	43.60	51.40	3.70	1.40
Tata	24.00	67.30	8.80	0.00
Idea	28.40	70.50	1.10	0.00
BSNL	32.00	54.00	10.00	4.00
Total	**29.30**	**63.10**	**6.80**	**0.80**

Source: Survey Results

Fishers exact test $p = 0.0001$, $p<0.001$, Highly significant

The occupation distribution of the cellular mobile subscribers is as shown in the Table 4.6. The Fisher's exact test reveals that there is a significant difference in occupation of subscribers. Among the respondents, 29.10 percent of them were students, 63.60 percent were salaried, 6.30 percent were business and a small 0.10 per cent was housewife.

Table 4.7
Average Monthly Expense Wise Distribution of Respondents (per cent)

CMO	Less than Rs 150	Rs 151 - 499	Rs 500-1000	More than Rs 1000
Airtel	15.50	74.00	7.50	2.90
Reliance	11.60	79.50	8.90	0.00
Vodafone	16.90	80.40	1.70	1.00
Tata	18.10	78.40	3.50	0.00
Idea	19.30	76.10	4.50	0.00
BSNL	32.00	62.00	4.00	2.00
Total	17.60	75.90	5.20	1.30

Source: Survey Results
Fishers exact test p = 0.0001, p<0.001, Highly significant

The distribution of average monthly expense of the cellular mobile subscribers is as shown in the Table 4.7. The Fisher's exact test reveals that there is a significant difference in monthly expenses of subscribers. Among the respondents, 17.60 percent of them spend less than Rs. 150, 75.90 percent of them spend between Rs.151 to Rs. 499, 5.20 percent spend between Rs. 500 to Rs. 999, and 1.30% percent spends more than Rs. 1000. Maximum number of respondents belongs to the group of average monthly expense between Rs.151 to Rs. 499.

Table 4.8
Service Type Wise Distribution of Respondents (per cent)

CMO	Post paid	Pre paid
Airtel	9.20	90.80
Reliance	13.40	86.60
Vodafone	12.50	87.50
Tata	7.60	92.40
Idea	8.00	92.00
BSNL	22.00	78.00
Total	**11.00**	**89.00**

Source: Survey Results
χ^2 = 15.297, P=0.018, Significant

As shown in the Table 4.8 chi-square test revealed that there is a significant difference with respect to service type of cellular mobile subscribers. Among the

respondents, 11 percent were postpaid service subscribers, and 89 percent of them were pre paid subscribers.

Table 4.9
Service Provider Wise Respondents

CMO	Percent
Airtel	34.3
Vodafone	24.7
Tata	14.3
Reliance	12.9
Idea	7.3
BSNL	6.5
Total	**100**

Source: Survey Result, N=1200

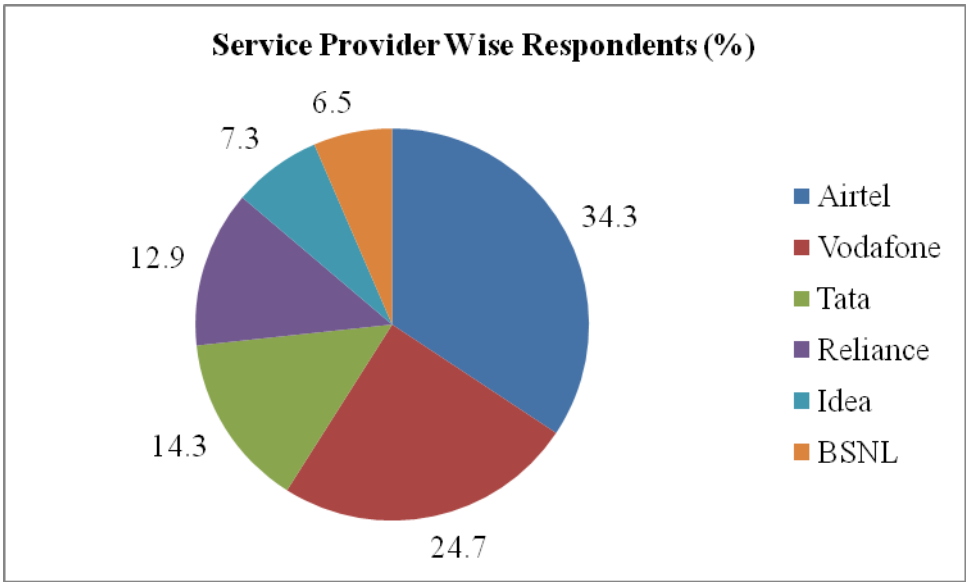


FIGURE 4. 4

Service Provider Wise Respondents (%)

The Table 4.9 and Figure 4.4 show that among the respondents 34.3 percent of them were subscribers for Airtel, 24.7 percent of them were subscribers for Vodafone, 14.3 percent of them use Tata, 12.9 percent of them use Reliance, 7.3 percent of them use Idea and 6.5 percent of them were subscribers for BSNL.

Table 4.10
Duration of Subscriber's Stay with the Service Provider (per cent)

CMO	Less than 3 Months	3- 6 Months	7–12 Months	More than 1 Year
Airtel	1.70	2.70	3.90	91.70
Reliance	1.80	7.10	3.60	87.50
Vodafone	2.00	1.40	1.40	95.30
Tata	1.80	5.30	13.50	79.50
Idea	1.10	2.30	6.80	89.80
BSNL	0.00	0.00	2.00	98.00
Total	**1.60**	**2.90**	**4.80**	**90.80**

Source: Survey Results
Fishers exact test p = 0.0001, p<0.001, Highly significant

The Table 4.10 shows the duration of stay of subscribers with their service providers. The Fisher's exact test reveals that there is a significant difference in duration of stay of subscribers with their service providers. Among the respondents, 90.80 percent of them stay with their service provider more than one year, 4.8 percent of them stayed between 7–12 months, 2.90 percent of them stayed between 3- 6 months, and 1.60 percent of them stayed less than 3 months.

Table 4.11

Changed Service Provider

Changed to CMO	Percent
Airtel	19.20
Reliance	19.60
Vodafone	27.00
Tata	39.20
Idea	17.00
BSNL	23.00
Total	**23.50**

Source: Survey Results
$\chi^2 = 33.59$, P=0.000, Highly significant

As shown in the Table 4.11 chi-square test revealed that there is a significant difference among the service providers with respect to change of service provider.

Among the respondents, 76.50 percent of them did not change their service provider, and remaining 23.50 percent of them have switched from their service providers.

Table 4.12
Reason for Change of Service Provider

Reasons	Percent
Higher price	58.5
Poor customer service	35.6
Poor coverage	30.4
Less value added service	22.5
Poor response	49.1

Source: Survey Results

The Table 4.12 shows that the subscribers switched from previous service providers because of higher price (58.5 percent), poor response from service providers (49.1 percent), poor customer service (35.6 percent), poor coverage (30.4 percent) and less value added services (22.5 percent.)

Table 4.13
Reasons for Choosing a Particular Service Provider

Factors	Percent
Has Coverage	67
Brand	58.25
Quality of service	54.75
Convenience	43.42
Affordable	35.42
Has Exact Features	28.5
Status Orientated	10.25
Did Not Choose	1.92
Did Not Know	1.83

Source: Survey Results

The Table 4.13 shows that the respondents considered following factors while choosing a particular service provider: network coverage (67 %), brand (58.25 %), quality of service (54.75 %), convenience (43.42 %), affordability (35.42 %), and having the exact features desired (28.5 %). Very few respondents choose a service

provider without considering any factors: did not choose (1.92 %), did not know (1.83 %). Maximum number of customers selects service providers based on network coverage, brand, quality of service, convenience and affordability.

Table 4.14
Use of Value Added Services (per cent)

Value Added Service	Percent
SMS	100
MMS	11.0
Games	24.2
News/weather	8.3
Internet	69.9
Contest	5.5
Ringtone	20.8
Video/TV	2.4
Music download	31.3
Alert	40.8
Chat	51.4

Source: Survey Results
N=1200

The Table 4.14 shows the different cellular mobile value added services and their usage pattern. Among the respondents all of them (100 percent) use short message services, 69.9 percent of them use internet access, 51.4 percent of them use chat, 40.8 percent of them use alerts, 31.3 percent of them use music download, 24.2 percent of them use games, 20.8 percent of them use ringtone, 11 percent of them use MMS, (8.3 percent) of them use news/weather, (5.5 percent) of them use contest services and a small (2.4%) of them use video/TV services.

4.5 Assessment of Attributes of Services

The data related to attributes of basic and VAS was analyzed using Kruskal Wallis test. The overall process that was used in the analysis of the constructs is described below. Attributes of Services are usefulness, ease of use, network size, compatibility, and complementary service variety which are the drivers of customer value for cellular mobile services.

Usefulness: Using services of service provider saves my time, using services of service provider improves my efficiency, and mobile services are useful to me.

Ease of Use: Learning to use "service" is easy for me, It is easy to make the "service" do what I want it to, My interaction with "service" is clear and understandable, It is easy to use "service".

Compatibility: Using "service" is compatible with all aspects of my mobile service use, "Service" is completely compatible across all my mobile service providers.

Network Size: The "service" is used by a large number of users, A large number of users, also beyond those I know of, use this "service".

Complementary Service Variety: Availability of complementary services, a large number of different complementary services, and great variety of "complementary services".

To measure variables in the study we have used five point rating Likert scale, hence if mean value of the variable is less than 3, we have considered it as low; if it is equal to 3 as moderate; and if it is greater than 3 as high.

Table 4.15
Assessment of Usefulness

	CMO	Mean	SD	Median	Percentage Mean	Kruskal-Wallis test χ^2
Using services saves time	Airtel	3.49	.889	4.00	69.71	36.627 **p<0.001**
	Reliance	3.40	.799	4.00	68.04	
	Vodafone	3.47	.867	4.00	69.46	
	Tata	3.57	.964	4.00	71.46	
	Idea	2.85	1.01	3.00	57.05	
	BSNL	3.24	1.11	3.00	64.80	
	Total	3.42	.927	3.00	68.35	
Using services improves efficiency	Airtel	3.67	.950	4.00	73.45	66.418 **p<0.001**
	Reliance	3.23	.939	3.00	64.64	
	Vodafone	3.65	.867	4.00	72.91	
	Tata	3.74	.851	4.00	74.74	
	Idea	2.84	.993	3.00	56.82	
	BSNL	3.60	1.10	4.00	72.00	
	Total	3.55	.957	4.00	70.98	
Mobile services are useful	Airtel	3.84	.950	4.00	76.84	27.336 **p<0.001**
	Reliance	3.64	.804	4.00	72.86	
	Vodafone	3.72	.803	4.00	74.32	
	Tata	3.81	.946	4.00	76.26	
	Idea	3.20	1.25	3.00	64.09	
	BSNL	3.52	.931	3.50	70.40	
	Total	3.69	.943	4.00	73.88	
Usefulness	Airtel	3.67	.752	3.67	73.33	59.808 **p<0.001**
	Reliance	3.43	.670	3.67	68.51	
	Vodafone	3.61	.698	3.67	72.23	
	Tata	3.71	.754	3.67	74.15	
	Idea	2.97	.870	3.00	59.32	
	BSNL	3.45	.859	3.33	69.07	
	Total	3.55	.775	3.67	71.07	

Source: Survey Results

Average level of usefulness of service is high (3.67± 0.775) with percentage mean value of 71.10 as shown in Table 4.15. Kruskal - Wallis test shows that there is a significant ($p < 0.001$) difference among the service providers with respect to usefulness of services. The Table 4.15 also shows that the mean value of usefulness of service is high for the service providers Airtel, Reliance, Vodafone, Tata and BSNL and low for Idea (2.97). Percentage mean value shows that usefulness of services is above average for Airtel, Vodafone, Tata and BSNL, whereas for Reliance and Idea it is below industry average.

Table 4.16
Assessment of Ease of Use

	CMO	Mean	SD	Median	Percentage Mean	Kruskal-Wallis Test χ^2
Learning to use service is easy	Airtel	3.75	.828	4.00	74.95	32.714 **p<0.001**
	Reliance	3.47	.735	3.00	69.46	
	Vodafone	3.55	.796	4.00	71.08	
	Tata	3.62	.855	4.00	72.40	
	Idea	3.20	.961	3.00	64.09	
	BSNL	3.80	.756	4.00	76.00	
	Total	3.59	.833	4.00	71.85	
It is easy to make "service" do what I want it to	Airtel	3.81	.797	4.00	76.21	59.251 **p<0.001**
	Reliance	3.35	.927	3.00	66.96	
	Vodafone	3.52	.819	3.00	70.47	
	Tata	3.61	.770	4.00	72.16	
	Idea	3.20	1.00	3.00	64.09	
	BSNL	3.72	.970	4.00	74.40	
	Total	3.58	.854	4.00	71.65	
Interaction with service is clear and understandable	Airtel	3.70	.892	4.00	73.98	19.159 **p<0.001**
	Reliance	3.48	.849	3.50	69.64	
	Vodafone	3.67	.784	4.00	73.38	
	Tata	3.65	.863	4.00	73.10	
	Idea	3.23	1.01	3.00	64.55	
	BSNL	3.62	.967	3.00	72.40	
	Total	3.60	.869	4.00	72.00	
It is easy to use "service"	Airtel	3.90	.865	4.00	77.96	40.610 **p<0.001**
	Reliance	3.55	1.05	4.00	71.07	
	Vodafone	3.74	.796	4.00	74.80	
	Tata	3.64	.950	4.00	72.75	
	Idea	3.32	1.01	3.00	66.36	
	BSNL	3.86	1.01	4.00	77.20	
	Total	3.73	.904	4.00	74.52	
Ease of Use	Airtel	3.79	.664	3.75	75.78	50.982 **p<0.001**
	Reliance	3.46	.738	3.50	69.29	
	Vodafone	3.62	.640	3.63	72.43	
	Tata	3.63	.708	3.50	72.60	
	Idea	3.24	.848	3.25	64.77	
	BSNL	3.75	.754	3.75	75.00	
	Total	3.63	.701	3.75	72.50	

Source: Survey Results

Average level of ease of use of services is high (3.63± 0.701) with percentage mean of 72.50 as shown in Table 4.16. Kruskal - Wallis test shows that there is a highly significant ($p < 0.001$) difference among the service providers with respect to

ease of use of services. The Table 4.16 also shows that the mean value of ease of use of service is high for the service providers Airtel, Tata, BSNL, Reliance, Vodafone, and Idea. Percentage mean value shows that ease of use of services are above average for Airtel, Tata and BSNL whereas for Vodafone, Reliance and Idea, it is below industry average.

Table 4.17
Assessment of Compatibility

	CMO	Mean	SD	Median	Percentage Mean	Kruskal-Wallis Test χ^2
Using service is compatible with all other services	Airtel	3.65	.755	4.00	72.91	25.017 **p<0.001**
	Reliance	3.46	.721	3.00	69.11	
	Vodafone	3.47	.823	4.00	69.39	
	Tata	3.42	.825	4.00	68.42	
	Idea	3.25	.925	3.00	65.00	
	BSNL	3.50	.789	3.00	70.00	
	Total	3.49	.799	4.00	69.85	
Service is compatible across all service providers	Airtel	3.77	.930	4.00	75.34	34.191 **p<0.001**
	Reliance	3.44	.908	3.00	68.75	
	Vodafone	3.70	.821	4.00	73.92	
	Tata	3.55	.947	3.00	70.99	
	Idea	3.24	.922	3.00	64.77	
	BSNL	3.94	1.01	4.00	78.80	
	Total	3.63	.923	4.00	72.57	
Compatibility	Airtel	3.71	.729	3.50	74.13	37.114 **p<0.001**
	Reliance	3.45	.745	3.50	68.93	
	Vodafone	3.58	.700	3.50	71.66	
	Tata	3.49	.802	3.50	69.71	
	Idea	3.24	.858	3.00	64.89	
	BSNL	3.72	.852	3.75	74.40	
	Total	3.56	.762	3.50	71.21	

Source: Survey Results

Average level of compatibility of services is high (3.56± 0.762) with the percentage mean of 71.20 as shown in Table 4.17. Kruskal - Wallis test shows that there is a significant ($p < 0.001$) difference among the service providers with respect to compatibility of services. The Table 4.17 also shows that the mean value of compatibility of service is high for the service providers Airtel, Tata, Reliance, Vodafone, BSNL and Idea. Percentage mean value shows that compatibility of services is above average among Airtel, Vodafone and BSNL whereas for Tata,

Reliance and Idea, it is below industry average.

Table 4.18
Assessment of Network Size

	CMO	Mean	SD	Median	Percentage Mean	Kruskal-Wallis Test χ^2
Service is used by a large number of users	Airtel	3.87	.799	4.00	77.43	42.870 **p<0.001**
	Reliance	3.63	.749	4.00	72.50	
	Vodafone	3.75	.732	4.00	74.93	
	Tata	3.53	.870	4.00	70.64	
	Idea	3.23	1.090	3.00	64.55	
	BSNL	3.54	.930	4.00	70.80	
	Total	3.67	.845	4.00	73.35	
A large number of users, beyond those I know of, use "service"	Airtel	4.03	.854	4.00	80.58	59.410 **p<0.001**
	Reliance	3.54	.815	4.00	70.89	
	Vodafone	3.81	.814	4.00	76.22	
	Tata	3.78	.957	4.00	75.56	
	Idea	3.31	1.043	3.00	66.14	
	BSNL	3.82	1.063	4.00	76.40	
	Total	3.81	.902	4.00	76.10	
Net work Size	Airtel	3.95	.687	4.00	79.00	21.786 **p<0.001**
	Reliance	3.58	.697	3.50	71.70	
	Vodafone	3.78	.676	4.00	75.57	
	Tata	3.65	.819	3.50	73.10	
	Idea	3.27	1.011	3.00	65.34	
	BSNL	3.68	.896	4.00	73.60	
	Total	3.74	.769	4.00	74.73	

Source: Survey Results

Average level of network size of services is high (3.74± 0.769) with the percentage mean of 74.70 as shown in Table 4.18. Kruskal - Wallis test shows that there is a significant ($p < 0.001$) difference among the service providers with respect to network size of services. The Table 4.18 also shows that the mean value of network size is high for the service providers Airtel, Tata, Reliance, Vodafone, BSNL and Idea. Percentage mean value shows that network size of service providers are above average among Airtel, and Vodafone where as for Tata, Reliance, BSNL and Idea, it is below industry average.

Table 4.19
Assessment of Complementary Service Variety of Services

	CMO	Mean	SD	Median	Percentage Mean	Kruskal-Wallis test χ^2
Complementary services are available	Airtel	3.71	.732	4.00	74.27	18.253 **p<0.001**
	Reliance	3.48	.723	3.00	69.64	
	Vodafone	3.58	.807	4.00	71.62	
	Tata	3.52	.877	4.00	70.41	
	Idea	3.35	.971	3.00	67.05	
	BSNL	3.54	.734	4.00	70.80	
	Total	3.57	.792	4.00	71.47	
Service has a large amount of "complementary services"	Airtel	3.89	.818	4.00	77.77	46.204 **p<0.001**
	Reliance	3.48	.949	4.00	69.64	
	Vodafone	3.66	.856	4.00	73.24	
	Tata	3.59	.879	4.00	71.81	
	Idea	3.27	1.04	3.00	65.45	
	BSNL	3.94	1.11	4.00	78.80	
	Total	3.69	.891	4.00	73.82	
Variety of "complementary services" available	Airtel	3.77	.879	4.00	75.34	47.659 **p<0.001**
	Reliance	3.35	.835	3.00	66.96	
	Vodafone	3.63	.842	4.00	72.57	
	Tata	3.69	.849	4.00	73.80	
	Idea	3.18	.965	3.00	63.64	
	BSNL	3.84	.817	4.00	76.80	
	Total	3.62	.881	4.00	72.47	
Complementary Service Variety	Airtel	3.79	.648	4.00	75.79	49.995 **p<0.001**
	Reliance	3.44	.693	3.50	68.75	
	Vodafone	3.62	.698	3.67	72.48	
	Tata	3.60	.703	3.67	72.01	
	Idea	3.27	.902	3.33	65.38	
	BSNL	3.77	.730	4.00	75.47	
	Total	3.63	.706	3.67	72.58	

Source: Survey Results

Average level of complementary service variety of services is high (3.63± 0.706) with the percentage mean of 72.60 as shown in Table 4.19. Kruskal - Wallis test shows that there is a significant ($p < 0.001$) difference among the service providers with respect to complementary service variety of services. The Table 4.19 also shows that the mean value of complementary service variety is high for the service providers Airtel, BSNL, Tata, Reliance, Vodafone and Idea. Percentage mean

value shows that complementary service variety offered by service providers are above average for Airtel whereas for Vodafone, Tata, Reliance, BSNL and Idea, it is below industry average.

Table 4.20
Assessment of Attributes of Services

CMO	Mean	SD	Median	Percentage Mean	Kruskall wallis test χ^2	p value
Airtel	3.78	0.573	3.875	75.61	64.383	**p<0.001** HS
Reliance	3.47	0.613	3.4917	69.43		
Vodafone	3.64	0.558	3.6417	72.87		
Tata	3.61	0.661	3.6167	72.31		
Idea	3.19	0.76	3.0583	63.94		
BSNL	3.67	0.691	3.8	73.51		
Total	3.62	0.623	3.6667	72.42		

Source: Survey Results

Average level of attributes of services that drive customer value in cellular mobile services industry is high (3.62± 0.623) with percentage mean of 72.42 as shown in Table 4.20. Kruskal - Wallis test shows that there is a significant ($p < 0.001$) difference among the service providers with respect to attributes of services. The Table 4.20 also shows that the mean value of attributes of services is high for all the service providers Airtel, Tata, Reliance, Vodafone, BSNL and Idea. Percentage mean value shows that attributes of services of service providers are above average among Airtel, Vodafone and BSNL whereas for Tata, Reliance and Idea it is below industry average.

Table 4.21
Mean and Standard Deviation of Attributes of Services

Dimensions	Mean	SD
Usefulness	3.55	0.775
Ease of use	3.63	0.701
Compatibility	3.56	0.762
Net work size	3.74	0.769
Complementary service variety	3.63	0.706
Attributes of Basic and VAS	3.62	0.623

Source: Survey Results

Descriptive information regarding the means and standard deviations indicated the strong response of the respondents towards the attributes of services dimensions (Table 4.21). The results show there was no strong response bias and the degree of variation was not very high indicating that there was uniformity or consistency. Descriptive information regarding the means and standard deviations indicated their high response towards usefulness; ease of use; compatibility; network size and complementary service variety.

4.6 Factor Analysis Results of Attributes of Services

Factor analysis of Attributes of Services confirmed that attributes on the scale were reliable in their measurement and most of them were found above the adequacy. Among the five Attributes of service, Ease of use had (0.9) higher sample adequacy and Compatibility had lower (0.7) sample adequacy. The KMO score of 0.7 and above considered being good sample adequacy. However, the overall sample adequacy above 0.5 was considered to be a reasonable sample adequacy for factor analysis. The KMO (Kaiser-Meyer-Olkin) measures of sampling adequacy were found greater than 0.5 (Table 4.22). The measure of sampling adequacy produced a score of 0.824 for “Usefulness”, 0.912 for “Ease of use”, 0.705 for “Compatibility”, 0.838 for “Network size”, and 0.891for “Complementary service variety”. The Bartlett test of sphereicity rejected the null hypothesis that the data matrix was an identity matrix, therefore suggesting that significant correlations existed between at

least some of the Attributes of services. The reliability was obtained by computing Cronbach Alpha that measures the internal consistency of the items. Owing to multidimensionality of the Attributes of services, coefficient alpha was computed separately. The Alpha Coefficients for Attributes of services ranged from 0.825 to 0.898, indicating good consistency among the items within each attributes.

Table 4.22

Factor Analysis Results of Attributes of Services

Attributes of Services	Factor Loadings[1]	Cronbach's alpha[2]	Number of Items[3]	KMO Sampling Adequacy[4]	Bartlett's Test of Sphericity[5]
Usefulness	0.654	0.825	3	0.824	Appox χ^2 2487.986 df 378 Sig 0.000
Ease of use	0.653	0.898	4	0.912	Appox χ^2 111.524 df 36 Sig 0.000
Compatibility	0.630	0.863	2	0.705	Appox χ^2 569.271 df 91 Sig 0.000
Network size	0.601	0.873	2	0.838	Appox χ^2 1157.742 df 136 Sig 0.000
Complementary service variety	0.697	0.864	3	0.891	Appox χ^2 2022.368 df 231 Sig 0.000

Source: Survey Results

Note: 1. Factor loading greater than 0.5 is considered
2. Alpha value of 0.7 or higher is considered
3. Number of items used for the Dimension
4. Kaiser- Meyer – Olkin (KMO) Sampling Adequacy above 0.5 is considered
5. Bartlett's Test of Sphericity is significant

4.7 Assessment of Customer Value

The data related to dimensions of customer value were analyzed using Kruskal Wallis test. The overall process that was used in the analysis of the constructs is described below. Customer value dimensions are: functional value, social value, emotional value, conditional value, epistemic value, and monetary value which subscribers consider while assessing value of services.

Functional/Convenience Value: I save time and money when I order the information via the mobile service, I value the ease of using this mobile service, I value the option of using this service instantly via my mobile device, Using this mobile service makes my life easier, Using this mobile service is an efficient way to manage my time, I value the option of using this mobile service without others noticing.

Social Value: Using this mobile service helps me feel accepted by others. Using this mobile service makes a good impression on other people. Using this mobile service gives me social approval.

Emotional Value: Using this mobile service gives me pleasure. Using this mobile service makes me feel good. Using this mobile service makes me feel relaxed I value the option of sending emotional messages to my friends via this mobile service.

Conditional Value: I value the information / entertainment this service offers, with the help of which I get what I need in a certain situation. I value the independence of place and time offered by the use of this mobile service. I value the real time information and interaction that this service makes possible.

Epistemic Value: I used this mobile service to experiment with new ways of doing things. I used this mobile service to test the new technologies. I used this mobile service out of curiosity.

Monetary Value: The price of this mobile service is acceptable, this mobile service is good value for money, and this mobile service is better value for money than what I would pay for the same service via other channels.

Table 4.23: Assessment of Functional Value

	CMO	Mean	S.D	Median	Percentage Mean	Kruskal-Wallis Test χ^2
Save time and money	Airtel	3.39	.956	3.00	67.72	9.759 **p<0.001**
	Reliance	3.28	.738	3.00	65.54	
	Vodafone	3.51	.831	4.00	70.27	
	Tata	3.43	.952	4.00	68.65	
	Idea	3.41	.967	3.00	68.18	
	BSNL	3.28	1.011	3.00	65.60	
	Total	3.42	.908	3.00	68.48	
Ease of using mobile service	Airtel	3.66	.829	4.00	73.16	19.232 **p<0.001**
	Reliance	3.51	.859	4.00	70.18	
	Vodafone	3.62	.794	4.00	72.36	
	Tata	3.57	.913	4.00	71.46	
	Idea	3.28	.896	3.00	65.68	
	BSNL	3.60	1.010	4.00	72.00	
	Total	3.59	.860	4.00	71.85	
Instant use of service via mobile is value	Airtel	3.71	.846	4.00	74.27	19.037 **p<0.001**
	Reliance	3.38	.830	3.00	67.68	
	Vodafone	3.58	.790	4.00	71.69	
	Tata	3.60	.771	4.00	72.05	
	Idea	3.43	.841	3.00	68.64	
	BSNL	3.52	.995	3.00	70.40	
	Total	3.59	.832	4.00	71.87	
Mobile service makes life easier	Airtel	3.79	.767	4.00	75.83	27.363 **p<0.001**
	Reliance	3.52	.782	4.00	70.36	
	Vodafone	3.72	.878	4.00	74.46	
	Tata	3.73	.773	4.00	74.62	
	Idea	3.34	.856	3.00	66.82	
	BSNL	3.70	.909	4.00	74.00	
	Total	3.68	.830	4.00	73.53	
Mobile service is an efficient way to manage time	Airtel	3.73	.810	4.00	74.56	21.772 **p<0.001**
	Reliance	3.49	.723	3.50	69.82	
	Vodafone	3.67	.866	4.00	73.45	
	Tata	3.71	.809	4.00	74.15	
	Idea	3.31	.975	3.00	66.14	
	BSNL	3.68	.913	4.00	73.60	
	Total	3.65	.848	4.00	72.90	
Using mobile service without others noticing is value	Airtel	3.79	.838	4.00	75.78	21.551 **p<0.001**
	Reliance	3.37	.910	3.00	67.32	
	Vodafone	3.65	.908	4.00	72.97	
	Tata	3.74	1.00	4.00	74.85	
	Idea	3.50	1.20	3.00	70.00	
	BSNL	3.84	.792	4.00	76.80	
	Total	3.68	.932	4.00	73.63	

Table 4.23
Assessment of Functional Value (Continuation)

	CMO	Mean	S.D	Median	Percentage Mean	Kruskal-Wallis Test χ^2
Functional Value	Airtel	3.68	0.622	3.67	73.6	32.264 **p<0.001**
	Reliance	3.42	0.559	3.5	68.5	
	Vodafone	3.63	0.637	3.67	72.5	
	Tata	3.63	0.661	3.67	72.6	
	Idea	3.38	0.714	3.5	67.6	
	BSNL	3.6	0.765	3.58	72.1	
	Total	3.6	0.651	3.67	72	

Source: Survey Results

Average level of functional value in services is high (3.60± 0.651) with the percentage mean of 72.00 as shown in Table 4.23. Kruskal - Wallis test shows that there is a significant ($p < 0.001$) difference among the service providers with respect to functional value they deliver. The Table 4.23 also shows that the mean value of functional value subscribers get from their service providers is high for all the service providers. Percentage mean value shows that functional value of services is above average among Airtel, Vodafone, Tata and BSNL, whereas for, Reliance, and Idea it is below industry average.

Table 4.24
Assessment of Social Value

	CMO	Mean	SD	Median	Percentage Mean	Kruskal-Wallis test χ^2
Mobile service helps to feel accepted by others	Airtel	3.39	.964	3.00	67.82	3.971 **p<0.001**
	Reliance	3.30	.826	3.00	66.07	
	Vodafone	3.44	.854	3.00	68.85	
	Tata	3.31	.922	3.00	66.20	
	Idea	3.27	1.10	3.00	65.45	
	BSNL	3.08	.829	3.00	61.60	
	Total	3.35	.915	3.00	66.95	
Mobile service makes a good impression on other people	Airtel	3.59	.922	4.00	71.84	24.188 **p<0.001**
	Reliance	3.46	.889	4.00	69.11	
	Vodafone	3.59	.827	4.00	71.76	
	Tata	3.44	.895	4.00	68.77	
	Idea	3.07	1.13	3.00	61.36	
	BSNL	3.44	.787	3.00	68.80	
	Total	3.51	.903	4.00	70.10	
Mobile service gives social approval	Airtel	3.55	1.02	4.00	71.02	16.419 **p<0.001**
	Reliance	3.38	.829	3.00	67.50	
	Vodafone	3.58	.946	4.00	71.55	
	Tata	3.50	.942	4.00	70.06	
	Idea	3.20	1.09	3.00	64.09	
	BSNL	3.26	.922	3.00	65.20	
	Total	3.50	.971	4.00	69.95	
Social Value	Airtel	3.51	.848	3.67	70.23	19.165 **p<0.001**
	Reliance	3.38	.705	3.33	67.56	
	Vodafone	3.54	.761	3.67	70.72	
	Tata	3.42	.783	3.67	68.34	
	Idea	3.18	.982	3.00	63.64	
	BSNL	3.26	.647	3.33	65.20	
	Total	3.45	.800	3.67	69.00	

Source: Survey Results

Average level of social value in services is high (3.45± 0.8) with the percentage mean of 69.00 as shown in Table 4.24. Kruskal - Wallis test shows that there is a significant ($p < 0.001$) difference among the service providers with respect to social value they deliver. The Table 4.24 also shows that the mean value of social value is high for all the service providers Airtel, Reliance Vodafone, Tata, BSNL and Idea. Percentage mean value shows that social value that subscribers get in cellular services is above industry average among Airtel, and Vodafone, whereas for Tata,

BSNL, Reliance and Idea it is below industry average.

Table 4.25
Assessment of Emotional Value

	CMO	Mean	SD	Median	Percentage Mean	Kruskal-Wallis Test χ^2
Mobile service gives pleasure	Airtel	3.52	.988	4.00	70.44	14.354 **p<0.001**
	Reliance	3.31	.748	3.00	66.25	
	Vodafone	3.50	.823	3.00	70.07	
	Tata	3.34	.827	3.00	66.78	
	Idea	3.40	.953	3.00	67.95	
	BSNL	3.36	.921	3.00	67.20	
	Total	3.45	.898	3.00	68.95	
Mobile service makes feel good	Airtel	3.70	.926	4.00	73.98	14.876 **p<0.001**
	Reliance	3.38	.988	3.50	67.50	
	Vodafone	3.62	.879	4.00	72.36	
	Tata	3.50	.954	4.00	69.94	
	Idea	3.53	1.082	4.00	70.68	
	BSNL	3.48	.953	3.50	69.60	
	Total	3.59	.926	4.00	71.78	
Mobile service makes feel relaxed	Airtel	3.59	.909	4.00	71.89	29.220 **p<0.001**
	Reliance	3.17	.826	3.00	63.39	
	Vodafone	3.48	.875	4.00	69.66	
	Tata	3.49	.929	4.00	69.82	
	Idea	3.31	1.021	3.00	66.14	
	BSNL	3.30	1.035	3.00	66.00	
	Total	3.46	.909	3.50	69.25	
Sending emotional messages is value	Airtel	3.57	.990	4.00	71.41	20.256 **p<0.001**
	Reliance	3.36	.837	3.00	67.14	
	Vodafone	3.48	1.080	4.00	69.66	
	Tata	3.51	.954	4.00	70.18	
	Idea	3.14	1.116	3.00	62.73	
	BSNL	3.06	.793	3.00	61.20	
	Total	3.46	.995	4.00	69.22	
Emotional Value	Airtel	3.60	.778	3.75	71.93	29.068 **p<0.001**
	Reliance	3.30	.716	3.38	66.07	
	Vodafone	3.52	.755	3.50	70.44	
	Tata	3.46	.696	3.50	69.18	
	Idea	3.34	.875	3.50	66.88	
	BSNL	3.30	.633	3.50	66.00	
	Total	3.49	.754	3.50	69.80	

Source: Survey Results

Average level of emotional value in services is high (3.49± 0.754) with the percentage mean of 69.80 as shown in Table 4.25. Kruskal - Wallis test shows that there is a significant ($p < 0.001$) difference among the service providers with respect to emotional value they deliver. The Table 4.25 also shows that the mean value of emotional value is high for all the service providers. Percentage mean value shows that emotional value of services is above industry average among Airtel and Vodafone, whereas for Tata, BSNL, Reliance and Idea, it is below industry average.

Table 4.26: Assessment of Conditional Value

	CMO	Mean	SD	Median	Percentage Mean	Kruskal-Wallis Test χ^2
Information/ entertainment of mobile service in a certain situation is value	Airtel	3.33	.868	3.00	66.65	19.101 **p<0.001**
	Reliance	3.20	.804	3.00	63.93	
	Vodafone	3.32	.779	3.00	66.49	
	Tata	3.19	.875	3.00	63.74	
	Idea	2.99	.903	3.00	59.77	
	BSNL	3.18	.919	3.00	63.60	
	Total	3.26	.840	3.00	65.17	
Mobile service offered independence of place and time is value	Airtel	3.44	.854	4.00	68.83	22.979 **p<0.001**
	Reliance	3.24	.923	3.00	64.82	
	Vodafone	3.37	.861	3.00	67.36	
	Tata	3.15	.908	3.00	63.04	
	Idea	3.03	1.10	3.00	60.68	
	BSNL	3.48	1.16	4.00	69.60	
	Total	3.33	.903	3.00	66.65	
Real time information interaction is value	Airtel	3.32	.983	3.00	66.31	13.821 **p<0.001**
	Reliance	3.13	.902	3.00	62.50	
	Vodafone	3.41	.935	3.00	68.24	
	Tata	3.13	1.01	3.00	62.69	
	Idea	3.28	1.03	3.00	65.68	
	BSNL	3.24	.981	3.00	64.80	
	Total	3.29	.964	3.00	65.70	
Conditional Value	Airtel	3.36	.747	3.33	67.27	20.640 **p<0.001**
	Reliance	3.19	.723	3.33	63.75	
	Vodafone	3.37	.718	3.33	67.36	
	Tata	3.16	.793	3.00	63.16	
	Idea	3.10	.874	3.00	62.05	
	BSNL	3.30	.839	3.00	66.00	
	Total	3.29	.751	3.33	65.84	

Source: Survey Results

Average level of conditional value in services is high (3.28± 0.494) with the percentage mean of 65.50 as shown in Table 4.26. Kruskal - Wallis test shows that there is a significant ($p < 0.001$) difference among the service providers with respect to the conditional value they deliver. The Table 4.26 also shows that the mean value of conditional value is high for the service providers Airtel, Vodafone, BSNL, Reliance, Tata and Idea. Percentage mean value shows that conditional value that subscribers get in cellular services is above industry average among Airtel, Vodafone, and BSNL whereas for Reliance, Tata and Idea, it is below industry average.

Table 4.27
Assessment of Epistemic Value

	CMO	Mean	SD	Median	Percentage Mean	Kruskal-Wallis test χ^2
Mobile service to experiment with new ways of doing things	Airtel	3.13	.941	3.00	62.57	4.919 **p<0.001**
	Reliance	3.11	.649	3.00	62.14	
	Vodafone	3.14	.919	3.00	62.77	
	Tata	3.00	.946	3.00	60.00	
	Idea	3.01	.916	3.00	60.23	
	BSNL	2.76	.716	3.00	55.20	
	Total	3.09	.896	3.00	61.80	
Mobile service to test the new technologies	Airtel	3.14	.989	3.00	62.72	22.766 **p<0.001**
	Reliance	3.02	.794	3.00	60.36	
	Vodafone	3.15	1.01	3.00	63.04	
	Tata	2.81	1.02	3.00	56.26	
	Idea	2.88	1.09	3.00	57.50	
	BSNL	2.82	.919	3.00	56.40	
	Total	3.04	.993	3.00	60.72	
Mobile service is used with curiosity	Airtel	2.96	.988	3.00	59.22	11.107 **p<0.001**
	Reliance	2.88	.969	3.00	57.50	
	Vodafone	3.07	1.00	3.00	61.42	
	Tata	2.74	1.20	3.00	54.85	
	Idea	2.85	1.23	3.00	57.05	
	BSNL	2.64	1.04	3.00	52.80	
	Total	2.92	1.05	3.00	58.35	
Epistemic Value	Airtel	3.08	.840	3.00	61.50	19.039 **p<0.001**
	Reliance	3.00	.651	3.00	60.00	
	Vodafone	3.12	.837	3.00	62.41	
	Tata	2.85	.925	3.00	57.04	
	Idea	2.91	.968	3.00	58.26	
	BSNL	2.74	.710	3.00	54.80	
	Total	3.01	.844	3.00	60.29	

Source: Survey Results

Average level of epistemic value of services is moderate (3.01± 0.844) with the percentage mean of 60.30 as shown in Table 4.27. Kruskal - Wallis test shows that there is a significant ($p < 0.001$) difference among the service providers with respect to epistemic value they deliver. The Table 4.27 also shows that the mean value of epistemic value is medium for the service providers Airtel, Vodafone, and Reliance whereas for BSNL, Tata and Idea, it is low. Percentage mean value shows that epistemic value is above industry average among Airtel and Vodafone whereas for Reliance, Tata, BSNL and Idea, it is below industry average.

Table 4.28: Assessment of Monetary Value

	CMO	Mean	SD	Median	Percentage Mean	Kruskal-Wallis Test χ^2
The price for mobile service is acceptable.	Airtel	3.55	.951	4.00	71.07	6.971 **p<0.001**
	Reliance	3.52	.805	3.00	70.36	
	Vodafone	3.57	.845	4.00	71.35	
	Tata	3.68	.937	4.00	73.57	
	Idea	3.33	1.17	4.00	66.59	
	BSNL	3.64	.942	4.00	72.80	
	Total	3.55	.925	4.00	71.07	
Mobile service is good value for money	Airtel	3.64	.903	4.00	72.82	27.708 **p<0.001**
	Reliance	3.38	.941	3.00	67.50	
	Vodafone	3.57	.906	4.00	71.49	
	Tata	3.85	.865	4.00	77.08	
	Idea	3.36	.973	4.00	67.27	
	BSNL	3.68	1.01	4.00	73.60	
	Total	3.61	.924	4.00	72.18	
Mobile service is better value for money than other channels	Airtel	3.67	.894	4.00	73.50	9.551 **p<0.001**
	Reliance	3.54	.793	4.00	70.89	
	Vodafone	3.53	1.06	4.00	70.68	
	Tata	3.73	1.03	4.00	74.50	
	Idea	3.49	.871	3.50	69.77	
	BSNL	3.54	1.16	4.00	70.80	
	Total	3.62	.958	4.00	72.37	
Monetary Value	Airtel	3.62	.771	3.67	72.46	19.995 **p<0.001**
	Reliance	3.48	.716	3.33	69.58	
	Vodafone	3.56	.828	3.67	71.17	
	Tata	3.75	.805	4.00	75.05	
	Idea	3.39	.842	3.67	67.88	
	BSNL	3.62	.844	4.00	72.40	
	Total	3.59	.797	3.67	71.87	

Source: Survey Results

Average level of monetary value is high (3.59± 0.797) with the percentage mean of 71.90 as shown in Table 4.28. Kruskal - Wallis test shows that there is a significant ($p < 0.001$) difference among the service providers with respect to monetary value of services. The Table 4.28 also shows that the mean value of monetary value is high for all the subscribers of all service providers. Percentage mean value shows that monetary value is above average among Airtel, Tata and BSNL, whereas for Vodafone, Reliance and Idea, it is below industry average.

Table 4.29
Assessment of Customer Value

CMO	Mean	SD	Median	Percentage Mean	Kruskall Wallis test χ^2	p value
Airtel	3.47	0.565	3.47	69.49	25.04	**p<0.001**
Reliance	3.29	0.513	3.34	66.01		
Vodafone	3.45	0.543	3.44	69.11		
Tata	3.37	0.561	3.44	67.57		
Idea	3.21	0.623	3.1	64.38		
BSNL	3.3	0.516	3.35	66.08		
Total	3.4	0.553	3.44	68.14		

Source: Survey Results

Average level of perceived customer value in cellular mobile services industry is high (3.40± 0.553) with moderate percentage mean of 68.14 as shown in Table 4.29 Kruskal - Wallis test shows that there is a significant ($p < 0.001$) difference among the service providers with respect to customer value they deliver. The Table 4.29 also shows that the mean value of customer value is high for all the service providers Airtel, Vodafone, Reliance, Tata, BSNL and Idea. Percentage mean value shows that customer value is above industry average among Airtel and Vodafone whereas for Reliance, Tata, BSNL and Idea, it is below industry average.

Table 4.30
Mean and Standard Deviation of Customer Value

Dimensions	Mean	SD
Monetary Value	3.59	0.797
Functional value	3.60	0.651
Social value	3.45	0.800
Emotional value	3.49	0.754
Conditional value	3.28	0.494
Epistemic value	3.01	0.844
Customer Value	**3.40**	**0.553**

Source: Survey Results

Descriptive information using the means and standard deviations indicated there is a strong response towards the customer value (Table 4.30). The results show there was no strong response bias and the degree of variation was not very high indicating that there was uniformity or consistency. Descriptive information regarding the means and standard deviations indicated their high response towards functional value and low response for epistemic value.

4.8 Factor Analysis Results of Customer Value Dimensions

Factor analysis of Customer Value Dimensions confirmed that attributes on the scale were reliable in their measurement and most of them were found above the adequacy. Among the six Customer Value Dimensions, Monetary Value had (0.96) higher sample adequacy and Emotional Value had lower (0.812) sample adequacy. The KMO score of 0.7 and above was considered being good sample adequacy. However, the overall sample adequacy above 0.5 was considered to be a reasonable sample adequacy for factor analysis. The KMO (Kaiser-Meyer-Olkin) measures of sampling adequacy were found greater than 0.5 (Table 4.31). The measure of sampling adequacy produced a score of 0.960 for “Monetary Value”, 0.867 for “Functional Value”, 0.854 for “Social Value”, 0.812 for “Emotional Value”, 0.846 for “Conditional Value”, and 0.876 for “Epistemic Value”. The Bartlett test of sphereicity rejected the null hypothesis that the data matrix was an identity matrix, therefore suggesting that significant correlations existed between at least some of the Customer

Value Dimensions. The reliability was obtained by computing Cronbach Alpha that measures the internal consistency of the items. Owing to multidimensionality of the Attributes of services, coefficient alpha was computed separately. The Alpha Coefficients for Attributes of services ranged from 0.752 to 0.900, indicating good consistency among the items within each attributes.

Table 4.31
Factor Analysis Results of Customer Value Dimensions

Customer Value Dimensions	Factor Loadings[1]	Cronbach's alpha[2]	Number of Items[3]	KMO Sampling Adequacy[4]	Bartlett's Test of Sphericity[5]
Monetary Value	0.691	0.876	3	0.960	Appox χ^2 946.475 df 253 Sig 0.000
Functional Value	0.672	0.872	6	0.867	Appox χ^2 1344.54 df 147 Sig 0.000
Social Value	0.711	0.957	3	0.854	Appox χ^2 1667.56 df 327 Sig 0.000
Emotional Value	0.719	0.869	4	0.812	Appox χ^2 2456.78 df 786 Sig 0.000
Conditional Value	0.700	0.752	3	0.846	Appox χ^2 2486.75 df 120 Sig 0.000
Epistemic Value	0.714	0.900	3	0.876	Appox χ^2 1692.09 df 231 Sig 0.000

Note: 1. Factor loading greater than 0.5 is considered
2. Alpha value of 0.7 or higher is considered
3. Number of items used for the Dimension
4. Kaiser- Meyer – Olkin (KMO) Sampling Adequacy above 0.5 is considered
5. Bartlett's Test of Sphericity is significant

4.9 Assessment of Switching Intentions of Respondents

The data related to switching Intentions of customers was analyzed using Kruskal Wallis test. The constructs used for Switching Intention: are intention to switch from current service provider; I shall need services of other service provider; and would not continue to avail service from my current service provider.

Table 4.32
Assessment of Switching Intentions

	CMO	Mean	SD	Median	Percentage Mean	Kruskal-Wallis Test χ^2
Intend to switch from current service provider	Airtel	1.84	1.030	2.00	36.70	68.706 **p<0.001**
	Reliance	2.26	1.105	2.00	45.20	
	Vodafone	2.15	1.129	2.00	43.00	
	Tata	2.06	1.007	2.00	41.30	
	Idea	2.63	.914	3.00	52.50	
	BSNL	2.20	1.161	2.00	44.00	
	Total	2.09	1.070	2.00	41.80	
Next time need services of other service provider	Airtel	1.88	1.014	2.00	37.70	45.677 **p<0.001**
	Reliance	2.30	1.089	2.00	46.10	
	Vodafone	2.07	1.122	2.00	41.40	
	Tata	2.04	1.073	2.00	40.70	
	Idea	2.59	1.274	2.00	51.80	
	BSNL	2.28	1.196	2.00	45.60	
	Total	2.09	1.105	2.00	41.80	
Would not continue to avail service from current service provider	Airtel	1.73	1.068	1.00	34.60	47.432 **p<0.001**
	Reliance	2.05	1.081	2.00	41.10	
	Vodafone	2.02	1.129	2.00	40.40	
	Tata	2.01	1.210	2.00	40.10	
	Idea	2.42	1.172	2.00	48.40	
	BSNL	2.02	1.059	2.00	40.40	
	Total	1.96	1.133	2.00	39.30	
Switching Intentions	Airtel	1.82	.913	1.67	36.30	74.506 **p<0.001**
	Reliance	2.21	.916	2.00	44.10	
	Vodafone	2.08	1.037	1.67	41.60	
	Tata	2.04	.928	1.67	40.70	
	Idea	2.55	.988	2.33	50.90	
	BSNL	2.17	1.059	1.67	43.30	
	Total	2.05	.975	1.67	40.90	

Source: Survey Results

Average level of switching intention is low (2.05± 0.975) with the percentage

mean of 40.90 as shown in Table 4.32. Kruskal - Wallis test shows that there is a significant ($p < 0.001$) difference among the service providers with respect to switching intention of customers. The Table 4.32 also shows that the mean value of switching intention of subscribers is low for all service providers. Percentage mean value shows that switching intention of subscribers in cellular services is below average among Airtel, and Tata, whereas for Vodafone, Reliance, BSNL and Idea it is above industry average.

4.10 Assessment of Strategic Performance

The data related to strategic performance were analyzed using Kruskal Wallis test. The overall process that was used in the analysis of the constructs is described below. Measures of strategic performances are: customer trust, customer satisfaction, customer loyalty and brand equity.

Customer Satisfaction: I am satisfied with my decision to choose this service provider, I did the right thing in selecting this service provider, My choice is a wise one, I have good experience with this service provider.

Customer Loyalty: I want to continue with this service provider, I recommend others to use the service provider, I am proud to be a customer of this service provider.

Customer Trust: My service provider meets all my expectations, My service provider never disappoints me, My service provider is honest and sincere in addressing my concerns, I can rely on my service provider for all my requirements.

Brand Equity: Even if another service provider has same features as this I would prefer to use this service provider, If I have to choose among brands of service providers I prefer to use this service provider, Even if another service provider has same tariff plan as this I prefer to choose this service provider.

Table 4.33
Assessment of Customer Satisfaction

	CMO	Mean	SD	Median	Percentage Mean	Kruskal-Wallis Test χ^2
The service meets all the requirements	Airtel	3.73	.872	4.00	74.66	29.911 **p<0.001**
	Reliance	3.43	.744	3.00	68.57	
	Vodafone	3.52	.887	4.00	70.41	
	Tata	3.53	.890	4.00	70.53	
	Idea	3.13	1.133	3.00	62.50	
	BSNL	3.20	.990	3.00	64.00	
	Total	3.53	.907	4.00	70.67	
Satisfied with the service	Airtel	3.76	.903	4.00	75.19	46.076 **p<0.001**
	Reliance	3.35	.898	3.00	66.96	
	Vodafone	3.66	.900	4.00	73.11	
	Tata	3.62	.908	4.00	72.40	
	Idea	3.08	1.085	3.00	61.59	
	BSNL	3.76	.870	4.00	75.20	
	Total	3.60	.925	4.00	72.08	
The service satisfies need	Airtel	3.87	.850	4.00	77.38	44.186 **p<0.001**
	Reliance	3.56	.888	4.00	71.25	
	Vodafone	3.63	.813	4.00	72.64	
	Tata	3.71	.942	4.00	74.27	
	Idea	3.19	.993	3.00	63.86	
	BSNL	3.32	.978	3.50	66.40	
	Total	3.65	.898	4.00	72.97	
Inconvenience from unwanted calls / SMS	Airtel	3.55	1.167	4.00	70.97	32.700 **p<0.001**
	Reliance	3.29	1.054	3.00	65.89	
	Vodafone	3.54	1.175	4.00	70.88	
	Tata	3.15	1.329	3.00	63.04	
	Idea	2.94	1.118	3.00	58.86	
	BSNL	3.22	1.183	3.00	64.40	
	Total	3.38	1.204	3.00	67.60	
Customer Satisfaction	Airtel	3.73	.688	3.75	74.55	55.476 **p<0.001**
	Reliance	3.41	.708	3.50	68.17	
	Vodafone	3.59	.681	3.50	71.76	
	Tata	3.50	.729	3.50	70.06	
	Idea	3.09	.886	3.25	61.70	
	BSNL	3.38	.651	3.50	67.50	
	Total	3.54	.727	3.50	70.83	

Source: Survey Results

Average level of customer satisfaction is high (3.54±0.727) with percentage mean value of 70.80 as shown in Table 4.33. Kruskal - Wallis test shows that there is

a significant ($p < 0.001$) difference among the service providers with respect to customer satisfaction. The Table 4.33 also shows that mean value of customer satisfaction is high for all the service providers. The percentage mean value of customer satisfaction among Airtel and Vodafone is above industry average whereas for Reliance, BSNL, Tata and Idea, it is below industry average.

Table 4.34
Assessment of Customer Loyalty

	CMO	Mean	SD	Median	Percentage Mean	Kruskal-Wallis Test χ^2
Continue with this service provider	Airtel	3.93	.861	4.00	78.59	32.375 **p<0.001**
	Reliance	3.52	.838	4.00	70.36	
	Vodafone	3.77	.946	4.00	75.47	
	Tata	3.59	1.01	4.00	71.81	
	Idea	3.57	1.10	4.00	71.36	
	BSNL	3.52	.886	4.00	70.40	
	Total	3.73	.935	4.00	74.53	
Recommend others to use the service provider	Airtel	3.83	.970	4.00	76.55	67.984 **p<0.001**
	Reliance	3.27	.880	3.00	65.36	
	Vodafone	3.73	.922	4.00	74.53	
	Tata	3.75	.900	4.00	75.09	
	Idea	2.98	1.23	3.00	59.55	
	BSNL	3.38	1.19	4.00	67.60	
	Total	3.62	1.01	4.00	72.35	
Wish to have one more connection, I would prefer the current service provider	Airtel	3.70	1.13	4.00	73.93	39.892 **p<0.001**
	Reliance	3.47	.794	3.00	69.46	
	Vodafone	3.56	1.17	4.00	71.15	
	Tata	3.62	.977	4.00	72.40	
	Idea	2.86	1.279	3.00	57.27	
	BSNL	3.00	1.370	3.00	60.00	
	Total	3.50	1.140	4.00	70.02	
Customer Loyalty	Airtel	3.82	0.78	4	76.4	93.788 **p<0.001**
	Reliance	3.42	0.696	3.33	68.4	
	Vodafone	3.69	0.842	4	73.7	
	Tata	3.65	0.804	3.67	73.1	
	Idea	3.14	0.987	3.33	62.7	
	BSNL	3.3	0.986	3.67	66	
	Total	3.61	0.844	3.67	72.3	

Source: Survey Results

Average level of customer loyalty is high (3.61±0.844) with percentage mean value of 72.30 as shown in Table 4.34. Kruskal – Wallis test shows that there is a significant ($p < 0.001$) difference among the service providers with respect to

customer loyalty towards their service providers. The Table 4.34 also shows that the mean value of customer loyalty is high for all the service providers. Percentage mean value of customer loyalty is above the industry average among Airtel Vodafone and Tata whereas it is below the industry average for Reliance, BSNL and Idea.

Table 4.35
Assessment of Customer Trust

	CMO	Mean	SD	Median	Percentage Mean	Kruskal-Wallis test χ^2
Confident about the service quality of the service provider	Airtel	3.82	.795	4.00	76.31	58.574 **p<0.001**
	Reliance	3.45	.804	3.00	68.93	
	Vodafone	3.57	.849	4.00	71.42	
	Tata	3.37	.958	4.00	67.49	
	Idea	3.20	1.063	3.00	64.09	
	BSNL	3.30	.763	3.00	66.00	
	Total	3.57	.880	4.00	71.35	
Can rely on my service provider for all requirements	Airtel	3.74	.924	4.00	74.85	39.261 **p<0.001**
	Reliance	3.42	.824	3.00	68.39	
	Vodafone	3.56	.821	4.00	71.28	
	Tata	3.45	.827	4.00	69.01	
	Idea	3.18	1.001	3.00	63.64	
	BSNL	3.54	.838	4.00	70.80	
	Total	3.55	.892	4.00	70.98	
Service provider meets all expectations	Airtel	3.79	.987	4.00	75.78	55.762 **p<0.001**
	Reliance	3.43	.779	3.00	68.57	
	Vodafone	3.50	.974	4.00	70.07	
	Tata	3.53	.896	4.00	70.64	
	Idea	2.95	1.164	3.00	59.09	
	BSNL	3.24	1.021	3.00	64.80	
	Total	3.55	.986	4.00	70.95	
Customer Trust	Airtel	3.78	0.762	4	75.6	78.863 **p<0.001**
	Reliance	3.43	0.652	3.33	68.6	
	Vodafone	3.55	0.749	3.67	70.9	
	Tata	3.45	0.784	3.67	69	
	Idea	3.11	0.964	3	62.3	
	BSNL	3.36	0.776	3.5	67.2	
	Total	3.55	0.787	3.67	71.1	

Source: Survey Results

Average level of customer trust is high (3.55±0.787) with the percentage mean of 71.10 as shown in Table 4.35. Kruskal – Wallis test shows that there is a significant ($p < 0.001$) difference among the service providers with respect to trust of customers towards their service provider. Table 4.35 also shows that the mean value of customer

trust is high for all the service providers. Percentage mean value of customer trust is above the industry average for Airtel and whereas it is below the industry average for Vodafone, Tata, Reliance, BSNL and Idea.

Table 4.36
Assessment of Brand Equity

	CMO	Mean	SD	Median	Percentage Mean	Kruskal-Wallis Test χ^2
Even if another service provider has same features as this I would prefer to use this service provider	Airtel	3.67	.968	4.00	73.45	18.043 **p<0.001**
	Reliance	3.49	.816	4.00	69.82	
	Vodafone	3.43	1.052	3.00	68.58	
	Tata	3.50	1.031	4.00	69.94	
	Idea	3.27	1.191	3.00	65.45	
	BSNL	3.36	.875	3.00	67.20	
	Total	3.50	1.005	4.00	69.93	
If I have to choose among brands of service providers I prefer to use this service provider	Airtel	3.84	.964	4.00	76.89	20.616 **p<0.001**
	Reliance	3.42	1.019	3.50	68.39	
	Vodafone	3.69	.935	4.00	73.72	
	Tata	3.64	1.044	4.00	72.87	
	Idea	3.51	1.145	4.00	70.23	
	BSNL	3.42	.950	3.00	68.40	
	Total	3.66	.998	4.00	73.17	
Even if another service provider has same tariff plan as this I prefer to choose this service provider	Airtel	3.80	.968	4.00	75.92	37.270 **p<0.001**
	Reliance	3.34	.896	3.00	66.79	
	Vodafone	3.67	1.018	4.00	73.31	
	Tata	3.65	1.093	4.00	72.98	
	Idea	3.20	1.074	3.00	64.09	
	BSNL	3.78	.815	4.00	75.60	
	Total	3.63	1.014	4.00	72.58	
Brand Equity	Airtel	3.77	.828	4.00	75.42	32.694 **p<0.001**
	Reliance	3.42	.783	3.33	68.33	
	Vodafone	3.59	.834	3.67	71.87	
	Tata	3.60	.935	3.67	71.93	
	Idea	3.33	.964	3.33	66.59	
	BSNL	3.52	.674	3.67	70.40	
	Total	3.59	.858	3.67	71.89	

Source: Survey Results

Average level of brand equity is high (3.59±0.858) with the percentage mean value of 71.90 as shown in the Table 4.36. Kruskal – Wallis test shows that there is a significant ($p < 0.001$) difference among the service providers with respect to brand equity towards their service providers. The Table 4.36 also shows that the mean value

of brand equity is high for all the service providers. Percentage mean value of brand equity is above the industry average for Airtel and Tata, whereas it is below industry average for Vodafone, Reliance, BSNL and Idea.

4.11 Mean and Standard Deviation of Strategic Performance

Descriptive information regarding the means and standard deviations indicated there is a strong response towards the strategic performance (Table 4.37). The results show there was no strong response bias and the degree of variation was not very high indicating that there was uniformity or consistency. Descriptive information using the means and standard deviations indicated their high response towards customer loyalty and low response for customer satisfaction.

Table 4.37
Mean and Standard Deviation of Strategic Performance

Dimensions	Mean	Std. Deviation
Customer Satisfaction	3.54	0.727
Customer Loyalty	3.61	0.844
Customer Trust	3.55	0.787
Brand Equity	3.59	0.858
Strategic Performance	3.58	0.691

Source: Survey Results

Table 4.38
Assessment of Strategic Performance

CMO	Mean	SD	Median	Percentage Mean	Kruskal Wallis Test χ^2	p value
Airtel	3.78	0.651	3.84	75.49	66.263	**p<0.001**
Reliance	3.42	0.617	3.46	68.38		
Vodafone	3.6	0.645	3.71	72.07		
Tata	3.55	0.712	3.69	71.03		
Idea	3.17	0.841	3.32	63.32		
BSNL	3.39	0.665	3.46	67.78		
Total	3.58	0.691	3.69	71.53		

Source: Survey Results

Average level of strategic performance is high (3.58±0.691) with the percentage mean value of 71.53 as shown in the Table 4.38. Kruskal – Wallis test shows that there is a significant ($p < 0.001$) difference among the service providers with respect to strategic performance. The Table 4.38 also shows that the mean value of strategic performance is high for all the service providers. Percentage mean value of strategic performance is above the industry average for Airtel and Vodafone, whereas it is below industry average for, Tata, Reliance, BSNL and Idea.

4.12 Operational Performance

To evaluate the Operational performance of CMOs variables such as service innovation, service quality, market share, growth in market share relative to competitors and addition of new subscribers were analyzed as shown below.

Service Innovation: Rate of introducing new services by my service provider compared to competitors is better, I am satisfied with the value added services available with the service provider, my service provider services are attractive compared to competitors;

Service Quality: I think that service provider provides satisfying services, I think that the services of my service provider are valuable, when I have a problem the response from the service provider is satisfactory, my mobile service provider provides quality of content and services that I need.

Table 4.39
Assessment of Service Innovation

	CMO	Mean	SD	Median	Percentage Mean	Kruskal-Wallis Test χ^2
Rate of introducing new services by service provider compared to competitors	Airtel	3.52	.945	4.00	70.40	48.093 **p<0.001**
	Reliance	3.38	.902	3.00	67.50	
	Vodafone	3.67	.931	4.00	73.30	
	Tata	3.54	1.024	4.00	70.90	
	Idea	3.31	.998	3.00	66.10	
	BSNL	3.06	.935	3.00	61.20	
	Total	3.48	.963	4.00	69.60	
Satisfied with the value added services available with the service provider	Airtel	3.71	.970	4.00	74.20	45.896 **p<0.001**
	Reliance	3.36	.967	3.50	67.10	
	Vodafone	3.67	.883	4.00	73.30	
	Tata	3.51	.857	4.00	70.20	
	Idea	3.33	1.220	3.50	66.60	
	BSNL	3.44	.972	4.00	68.80	
	Total	3.56	.974	4.00	71.10	
Services are attractive compared to competitors	Airtel	3.63	.994	4.00	72.50	45.435 **p<0.001**
	Reliance	3.36	.899	3.00	67.10	
	Vodafone	3.74	.893	4.00	74.70	
	Tata	3.60	.998	4.00	71.90	
	Idea	3.17	.925	3.00	63.40	
	BSNL	3.42	1.180	3.00	68.40	
	Total	3.55	.978	4.00	71.10	
Service Innovation	Airtel	3.62	.783	3.67	72.40	59.812 **p<0.001**
	Reliance	3.36	.748	3.33	67.30	
	Vodafone	3.69	.740	3.67	73.80	
	Tata	3.55	.786	3.67	71.00	
	Idea	3.27	.902	3.33	65.40	
	BSNL	3.31	.857	3.33	66.10	
	Total	3.53	.798	3.67	70.60	

Source: Survey Results

Average level of service innovation is high (3.53±0.798) with the percentage mean of 70.60 as shown in Table 4.39. Kruskal - Wallis test shows that there is a significant ($p < 0.001$) difference among the service providers with respect to service innovation. The Table 4.39 also shows that innovation in services is high with all the service providers. Percentage mean value shows that innovation in services is above industry average among Airtel, Vodafone and Tata whereas for Reliance, BSNL and Idea it is below industry average.

Table 4.40
Assessment of Service Quality

	CMO	Mean	SD	Median	Percentage Mean	Kruskal-Wallis Test χ^2
Service provider provides satisfying services	Airtel	3.69	.847	4.00	73.74	23.268 **p<0.001**
	Reliance	3.35	.813	3.00	66.96	
	Vodafone	3.62	.839	4.00	72.43	
	Tata	3.51	.942	4.00	70.29	
	Idea	3.26	1.05	3.00	65.23	
	BSNL	3.42	.906	3.00	68.40	
	Total	3.55	.882	4.00	71.02	
Services of service provider are valuable	Airtel	3.83	.883	4.00	76.60	40.869 **p<0.001**
	Reliance	3.44	.878	3.00	68.75	
	Vodafone	3.76	.814	4.00	75.27	
	Tata	3.51	.843	4.00	70.18	
	Idea	3.34	1.06	3.50	66.82	
	BSNL	3.62	.901	4.00	72.40	
	Total	3.66	.888	4.00	73.25	
Response from the service provider is satisfactory	Airtel	3.68	.925	4.00	73.59	22.936 **p<0.001**
	Reliance	3.38	.750	3.00	67.68	
	Vodafone	3.58	.982	4.00	71.55	
	Tata	3.55	.915	4.00	70.99	
	Idea	3.31	.876	3.00	66.14	
	BSNL	3.14	1.16	3.00	62.80	
	Total	3.53	.935	4.00	70.68	
Service provider provides quality of content and services	Airtel	3.83	.870	4.00	76.50	44.213 **p<0.001**
	Reliance	3.40	.843	3.00	68.04	
	Vodafone	3.84	.852	4.00	76.76	
	Tata	3.67	.907	4.00	73.33	
	Idea	3.30	1.04	3.00	65.91	
	BSNL	3.56	1.09	4.00	71.20	
	Total	3.68	.915	4.00	73.67	
Service Quality	Airtel	3.76	.685	4.00	75.11	45.670 **p<0.001**
	Reliance	3.39	.674	3.50	67.86	
	Vodafone	3.70	.711	3.75	74.00	
	Tata	3.56	.709	3.75	71.20	
	Idea	3.30	.878	3.50	66.02	
	BSNL	3.44	.864	3.50	68.70	
	Total	3.61	.733	3.75	72.15	

Source: Survey Results

Average level of service quality is high (3.61±0.733) with the percentage mean of 72.20 as shown in Table 4.40. Kruskal - Wallis test shows that there is a significant ($p < 0.001$) difference among the service providers with respect to service

quality. The Table 4.40 also shows that the mean value of service quality in services is high with all the service providers. Percentage mean value shows that service quality in services is above industry average among Airtel, and Vodafone whereas for Reliance, Tata, BSNL and Idea it is below industry average.

Table 4.41

Market Share

CMO	March - 2010 (%)
Airtel	21.84
Reliance	17.53
Vodafone	17.29
BSNL	11.89
Tata	11.29
IDEA	10.92
Others	9.24
Total	**100**

Source: TRAI Annual Report -2010

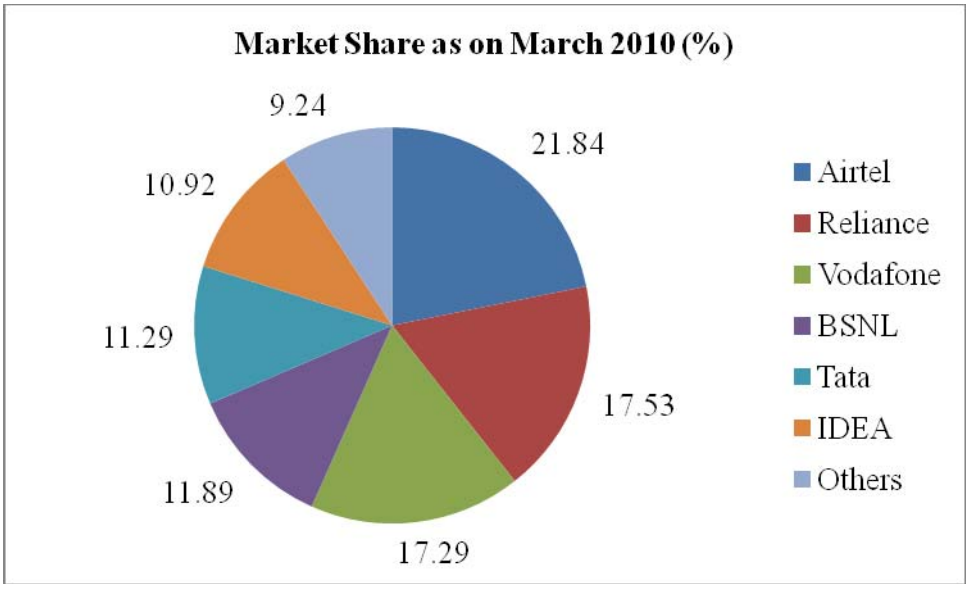


FIGURE 4.5

Market Share (%)

Market share of CMO firms as on 31st of March 2010 is shown in Table 4.41 and Figure 4.5. Among the service providers, Airtel was the market leader (21.84 percent), followed by Reliance (17.53 percent) in second position, Vodafone (17.29

percent) is in third position, BSNL (11.89 percent) in fourth position, Tata (11.29 percent) in fifth position, Idea (10.92 percent) in sixth position and all other service providers together have 9.24 percent of market share.

Table 4 .42

Market Share Growth (%)

CMO	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Airtel	21	21.72	22.49	23.74	23.97	21.84
BSNL	19	19.58	18.77	15.62	13.31	11.89
Reliance	20	19.21	16.96	17.54	18.55	17.53
Vodafone	14.9	17.04	16.01	16.9	17.55	17.29
Tata	2.1	5.38	9.7	9.32	8.96	11.29
IDEA	12.5	11.32	10.15	10.8	10.98	10.92

Source: TRAI Annual Report -2010

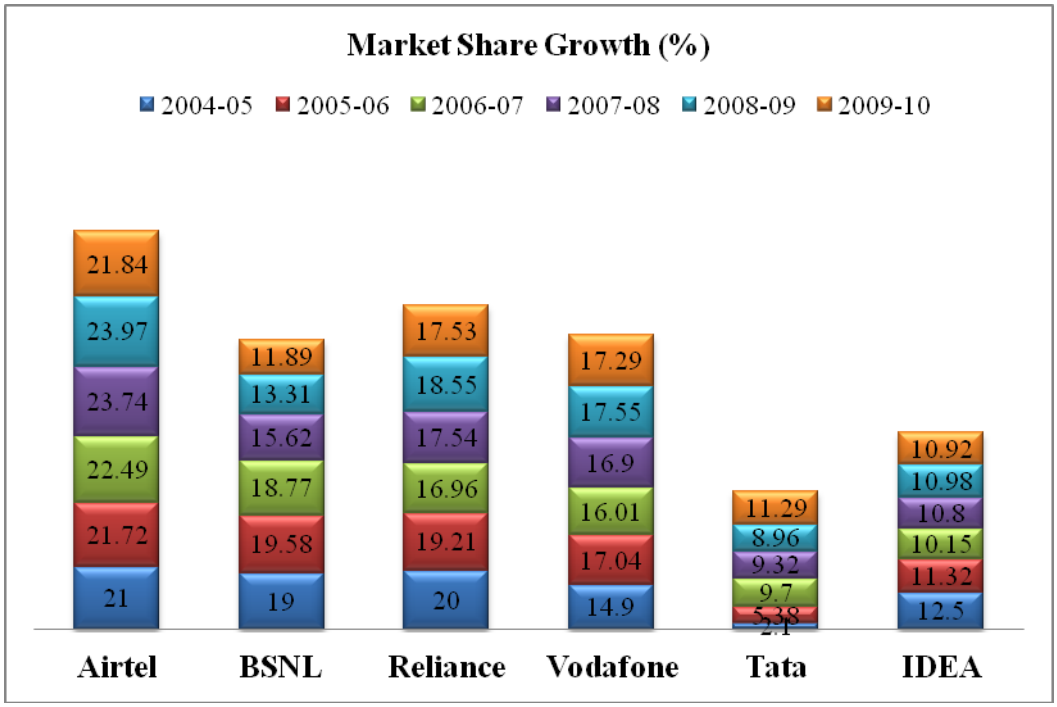


Figure 4.6

Market Share Growth (%)

The Table 4.42 and Figure 4.6 show that Market share of CMO firms from 2005-06 to 2009-10. Among all the service providers, growth in market share is consistently

positive for Airtel in all the years except 2009–2010. Whereas for BSNL, Reliance, Vodafone, Tata and Idea, it is cyclical with positive and negative variation.

Table 4 .43

New Subscribers Added (in Million)

CMO	2005-06	2006-07	2007-08	2008-09	2009-10
Airtel	8.6	17.56	24.84	31.94	33.7
Vodafone	7.56	11.08	17.69	24.64	32.09
Reliance	6.86	10.7	17.78	26.88	29.75
Tata	3.76	11.17	8.31	10.79	30.82
BSNL	7.75	13.34	9.8	11.36	17.3
IDEA	2.79	7.44	11.471	14.809	20.8

Source: TRAI Annual Report -2010

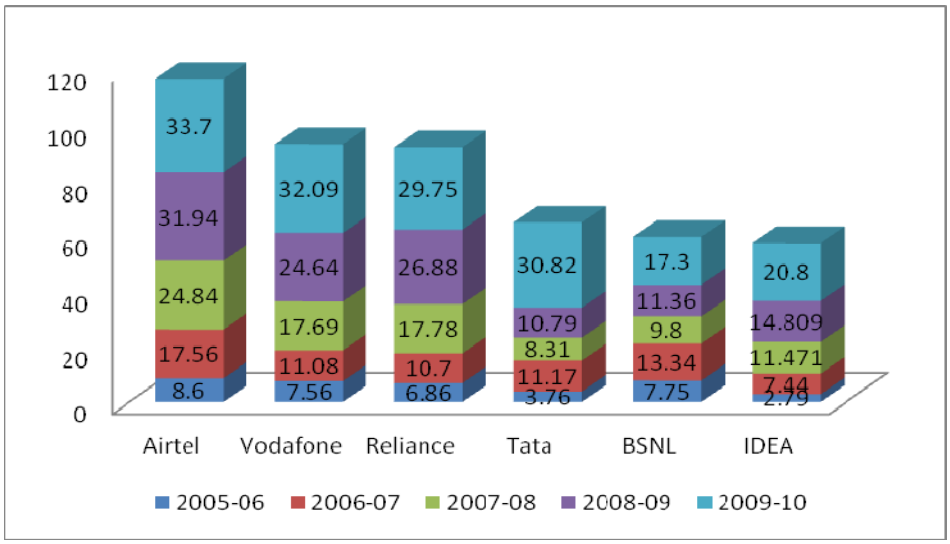


Figure 4. 7

New Subscribers Added (in Million)

The Table 4.43 and Figure 4.7 show the number of new subscribers added from 2005-06 to 2009-10 for all the CMO firms. Among all the service providers, Airtel stands first consistently in all the years in acquiring new customers. In the last year (2009-10), Vodafone attained second position by overtaking Reliance and pushing it to third position in adding new customers. In adding new customers, Graph 3 shows that Idea is consistent where as Tata and BSNL have not consistently increased.

The firm level secondary data from March 2005 to March 2010 has been converted into single measurement using average of year to year change.

To arrive at operational performance variables, such as service innovation, service quality, market share, growth in market share relative to competitors and addition of new subscribers, were added and converted to standard scores. The whole data is categorized into three parts as poor, moderate, and good performance using normal distribution formula (Mean ± 0.425*Standard deviation). If the performance score is less than (Mean - 0.425*Standard deviation) it is 1. If the performance score is between (Mean - 0.425*Standard deviation) and (Mean + 0.425*Standard deviation) it is 2. If the performance score is greater than (Mean + 0.425*Standard deviation) it is 3.

Table 4 .44

Descriptive Statistics of Operational Performance

	Minimum	Maximum	Mean	Std. Deviation
Operational Performance	-8.45	6.07	.00	2.88

The Table 4.44 shows that Mean value is zero with standard deviation of 2.887, hence (Mean - 0.425*Standard deviation) value is – 1.23. If the score is less than -1.23 it is considered as poor performance, in between – 1.23 to 1.23 it is considered as moderate performance and if score is greater than 1.23, it is considered as good performance. To evaluate the superior performance of cellular mobile operators, poor and moderate performing service providers are considered as below average and good performing are considered as above average performers as shown in Table 4.45.

Table 4 .45

Operational Performance Level

CMO	Poor	Moderate	Good
Airtel			YES
Reliance			YES
Vodafone			YES
Tata	YES		
Idea	YES		
BSNL	YES		

The Table 4.45 shows that with respect to operational performance, the performance of Airtel, Vodafone, and Reliance performance were good. The service providers Tata, Idea and BSNL were poor with respect to operational performance.

4.13 Financial Performance

To evaluate the financial performance of CMO firms variables such as return on investment (ROI), return on equity (ROE), return on sales (ROS), Shareholders fund, Earnings per share (EPS), Revenue, and sales growth were analyzed for five years from March 2005 to March 2010 as shown below.

The firm level secondary data from March 2005 to March 2010 has been converted into single measurement using average of year to year change.

Table 4 .46

Return on Investment (%)

CMO	Mar-05	Mar-06	Mar-07	Mar-08	Mar-09	Mar-10
BSNL	8.7	8.1	7.2	4.1	1.3	-1.4
Airtel	19.5	14.7	20.3	20.5	17.9	19
Tata	14.5	8.7	8.5	5.3	8.2	6.8
Vodafone		22.5*	25*	22.9*	11.5	16.1
Reliance		0.15*	7.50*	6.8	7.8	1.9
Idea	6.5	8	12.2	14.4	10.8	7.6
Average	12.3	10.4	13.5	12.3	9.6	8.3

*Source : CMIE. *Annualised to Indian financial year*

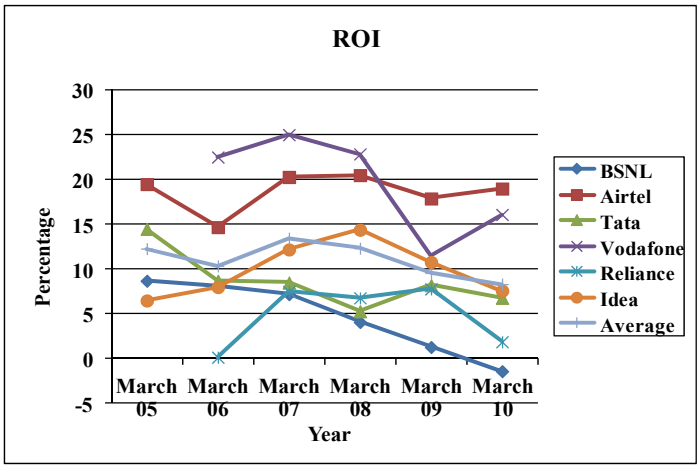


Figure 4.8

Return on Investment

The Table 4.46 and Figure 4.8 show that among the service providers with respect to return on investment, Airtel and Vodafone stand above industry average. The Figure 4.8 shows that the service providers BSNL, Tata, Reliance, and Idea are below industry average in return on investment.

Table 4 .47

Return on Equity (%)

CMO	Mar-05	Mar-06	Mar-07	Mar-08	Mar-09	Mar-10
BSNL	16.9	12.9	10.2	3.8	0.7	-2.3
Airtel	26	34.1	43	39.4	32.3	29.3
Tata	13.9	8.1	7.5	4.7	7.7	6.9
Vodafone		15.8*	36.97*	33.67*	15.4	13.5
Reliance		0.08*	10.73*	11.4	12.6	0.9
Idea	4.8	20.2	35.1	36.5	13.5	9.3
Average	15.4	15.1	23.9	21.5	13.7	9.6

*Source : CMIE. *Annualised to Indian financial year*

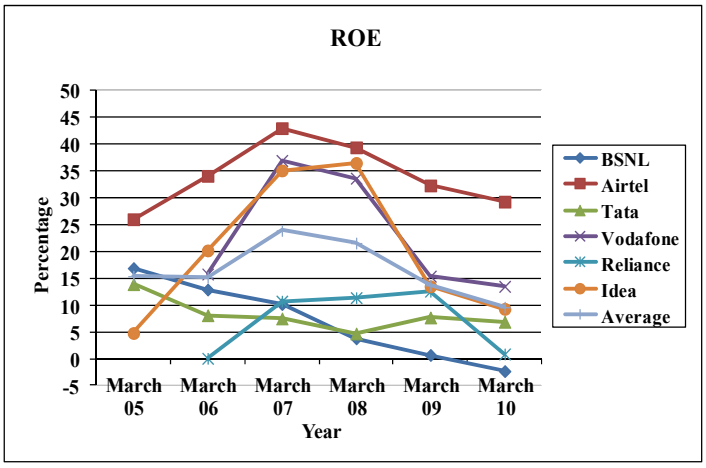


Figure 4.9

Return on Equity

The Table 4.47 and Figure 4.9 show that among the service providers with respect to return on equity, Airtel and Vodafone stand above industry average. The return on equity of Idea was raised to above average and in the last two years, (March 09 and March 10) it is equal to industry average. The Figure 4.9 shows that the

service providers BSNL, Tata, and Reliance are below industry average in return on equity.

Table 4 .48

Return on Sales (%)

CMO	Mar- 05	Mar-06	Mar-07	Mar-08	Mar-09	Mar-10
BSNL	25.9	21.9	19.6	7.9	1.6	-5.7
Airtel	14.6	17.8	22.4	24	22.4	25.6
Tata	19.1	11.9	11.8	8.8	11.9	12.1
Vodafone		23.3*	28.5*	25.3*	14.3	12.4
Reliance		42.6*	18.5*	16.9	24.1	2.9
Idea	1.6	6.2	11.4	15.1	9.7	8.5
Average	15.3	20.6	18.7	16.3	14	9.3

*Source : CMIE. *Annualised to Indian financial year*

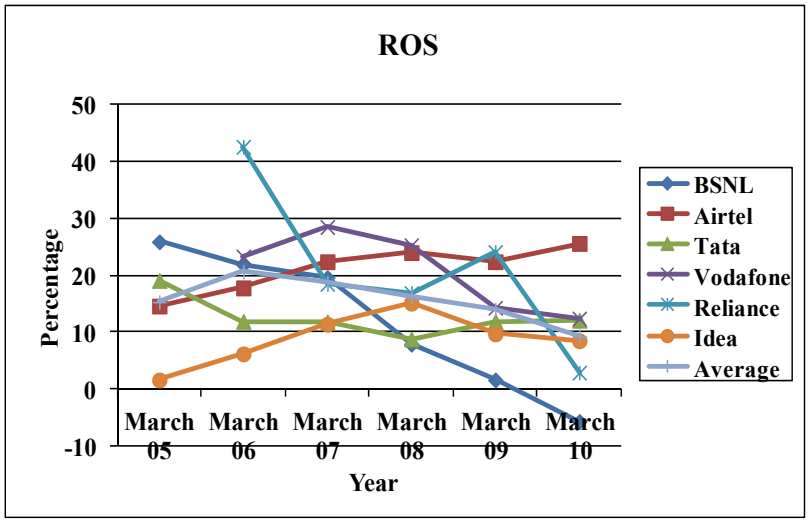


Figure 4.10

Return on Sales

The Table 4.48 and Figure 4.10 show that among the service providers with respect to return on sales, Vodafone stands above industry average for all the years. Return on sales for Airtel was below industry average for initial two years and later it became

above industry average. The Figure 4.10 shows that the return on sales for service providers BSNL, Tata, Reliance and Idea are below industry average.

Table 4 .49

Shareholders Fund (in Millions)

CMO	March 05	March 06	March 07	March 08	March 09	March 10
BSNL	72,779.11	80,756.51	86,948.02	88,128.25	88,633.58	86,475.66
Airtel	44,731.20	73,354.90	114,384.80	202,391.70	276,417.30	367,350.60
Tata	57,280.60	60,611.70	63,595.00	65,473.40	67,980.50	72,807.80
Vodafone		9181.35*	18073.51*	16085.54*	20,910.20	23,950.40
Reliance	0.1*	195001.48*	164204.32*	248,400.30	516,903.20	504,988.90
Idea	10,429.30	11,685.30	21,791.60	35,460.40	112,944.30	114,572.50
Average	37,044.06	71,765.21	78,166.21	109,323.27	180,631.51	195,024.31

*Source : CMIE. *Annualised to Indian financial year*

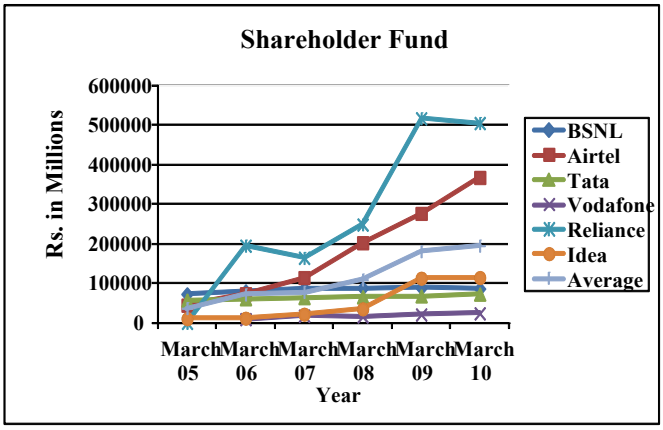


Figure 4.11

Shareholders Fund

The Table 4.49 and Figure 4.11 show that among the service providers with respect to shareholders fund, Airtel and Reliance (except for Reliance in the year, March 2005) stand above industry average. The Figure 4.11 shows that the service providers BSNL, Tata, Vodafone, and Idea are below industry average in shareholders fund.

Table 4 .50

Earnings Per Share (%)

CMO	Mar-05	Mar-06	Mar-07	Mar-08	Mar-09	Mar-10
BSNL	18.8	16.3	14	4.4	1.1	-3.6
Airtel	6.5	10.7	21.3	32.9	40.8	24.8
Tata	26.5	16.8	16.4*	10.7*	18.1	16.9
Vodafone		14.61*	20.42	22.83	15	15.1
Reliance			9.59*	12.6	23.3	2.3
Idea	-0.1	0.4	2.2	4	3.4	3.4
Average	12.9	11.7	13.9	14.5	16.9	9.8

*Source : CMIE. *Annualised to Indian financial year*

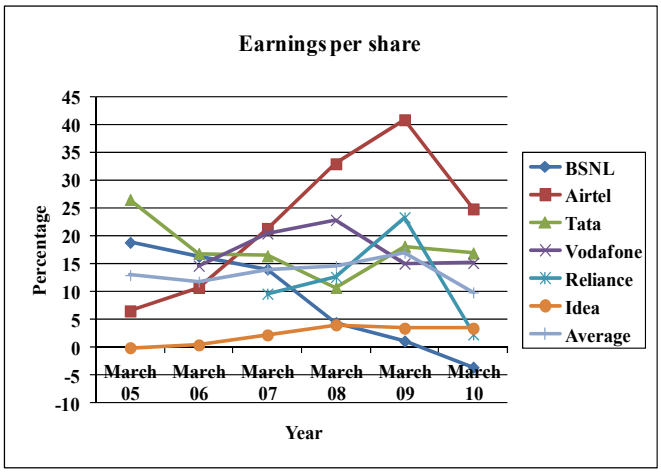


Figure 4.12

Earnings Per Share

The Table 4.50 and Figure 4.12 show that among the service providers with respect to earnings per share, Airtel (except for initial two years March 2005 and March 2006) stands above industry average. Tata stands above industry average in earnings per share except for the year March 2008. Vodafone stands above industry average in earnings per share except for the year March 2009. The Figure 4.12 shows that the service providers BSNL, Reliance, and Idea are below industry average in earnings per share.

Table 4 .51

Revenue (In Millions)

CMO	Mar-05	Mar-06	Mar-07	Mar-08	Mar-09	Mar-10
BSNL	393,575.70	407,595.40	398,326.30	382,060.30	358,209.80	320,717.90
Airtel	83,090.30	113,318.30	180,055.80	260,640.80	345,395.60	368,382.80
Tata	39,493.00	40,349.40	39,759.00	34,680.40	43,379.00	39,869.80
Vodafone		11761.8*	14808.15*	18053.12*	20973.8	24425.8
Reliance		26166.84*	104136.96*	153,276.40	199,673.90	166,801.80
Idea	16,351.00	20,209.10	44,125.40	69,190.30	103,344.50	124,376.30
Average	133,127.50	103,233.47	130,201.94	152,983.55	178,496.10	174,095.73

*Source : CMIE. *Annualised to Indian financial year*

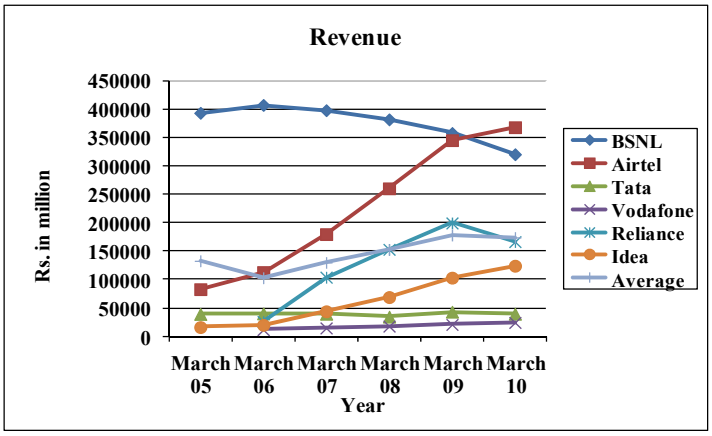


Figure 4.13

Revenue (In Millions)

The Table 4.51 and Figure 4.13 show that among the service providers with respect to revenue, BSNL and Airtel (except for Airtel in the year, March 2005) stand above industry average. Figure 4.13 shows that the service providers Reliance, Tata, Vodafone, and Idea are below industry average in revenue.

Table 4 .52

Sales Growth (%)

CMO	March 06	March 07	March 08	March 09	March 10
BSNL	9.68	-4.14	-9.53	-7.68	-7.45
Airtel	38.7	58.9	43.9	32.3	4.6
Tata	14.7	-0.8	-12.6	14.1	-14.1
Vodafone		26.3*	23.2*	17.1	5.4
Reliance		299.3*	44.8	1.9	-10.1
Idea	23.4	117.5	53.9	46.6	20.2
Average	21.6	82.8	23.9	17.4	-0.2

*Source : CMIE. *Annualised to Indian financial year*

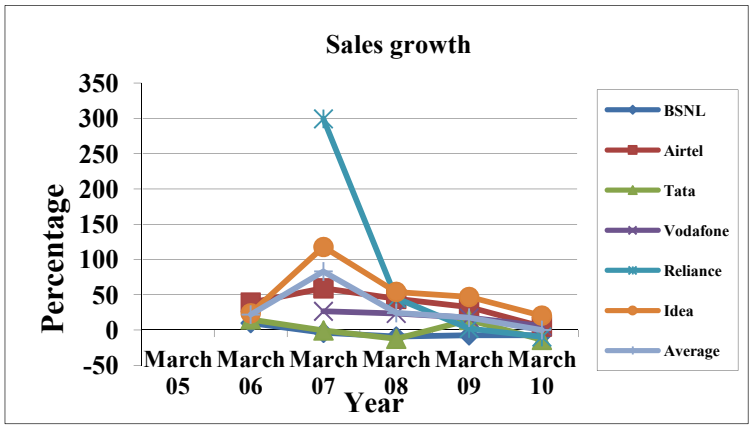


Figure 4.14

Sales Growth

The Table 4.52 and Figure 4.14 show that among the service providers with respect to sales growth, Idea and Airtel (except for Airtel in the year, March 2007) stand above industry average. The Figure 4.14 shows that the service providers Reliance, Tata, Vodafone, and BSNL are below industry average in sales growth.

To arrive at financial performance variables such as ROI, ROE, ROS, shareholder fund, EPS, revenue and sales growth were added and converted to standard scores. The whole data is categorized into three parts as poor, moderate, and good performance using normal distribution formula (Mean ±0.425*Standard deviation). If the performance score is less than (Mean - 0.425*Standard deviation) it is 1. If the performance score is between (Mean - 0.425*Standard deviation) and

(Mean + 0.425*Standard deviation) it is 2. If the performance score is greater than (Mean = 0.425*Standard deviation) it is 3.

Table 4 .53 Descriptive Statistics of Financial Performance

	Minimum	Maximum	Mean	Std. Deviation
Financial Performance	-7.45	6.17	.00	5.30

The Table 4.53 shows that Mean value is zero with standard deviation of 5.30, hence (Mean - 0.425*Standard deviation) value is – 2.25. If the score is less than -2.25 it is considered as poor performance, in between -2.25 to 2.25 it is considered as moderate performance and if score is greater than 2.25, it is considered as good performance. To evaluate the superior performance of cellular mobile operators, poor and moderate performing service providers are considered as below average and good performing are considered as above average performers as shown in Table 4.54.

Table 4 .54 Assessment of Financial Performance Level

CMO	Poor	Moderate	Good
Airtel			YES
Reliance	YES		
Vodafone		YES	
Tata	YES		
Idea	YES		
BSNL		YES	

The Table 4.55 shows that the financial performance of Airtel is good, and it is moderate for Vodafone and BSNL. The financial performance of Reliance, Tata and Idea were found to be poor.

By aggregating strategic performance, operational performance and financial performance (Javalgi et al., 2005) single measure superior performance was arrived.

4.14 Testing of Hypotheses of Strategic Resources on Superior Performance

Since the number of firms here are six, we have used qualitative methodology (POOR/MODERATE/GOOD) to rate the firms as suggested by (Miles & Huberman, 1994). Table 4.55 to 4.62 present's the results using qualitative scaling.

Four hypothesised relationships between strategic resources and superior performance (Chapter Two) were tested:

H1: The strategic resources will be positively related to superior performance of the firm.

H1a: The strategic resources will be positively related to strategic performance of the firm.

H1b: The strategic resources will be positively related to operational performance of the firm.

H1c: The strategic resources will be positively related to financial performance of the firm.

The hypothesis test includes, standardised regression coefficients (β), coefficients of determination (adjusted R square) and significant parameter of fitted model.

4.14.1 Pearson Correlation

Correlation analysis indicated the significant relationship between strategic resources and superior performance (Table 4.55). A significant correlation was observed between strategic resources with superior performance ($r = 0.679$, $p<0.001$), operational performance ($r = 0.717$, $p<0.001$), and financial performance ($r = 0.693$, $p<0.001$). The correlation between strategic resources and strategic performance ($r = 0.414$, $p<0.001$) was found to be moderate. The correlation between customer capital ($r = 0.827$, $p<0.001$) and innovation capital ($r = 0.831$, $p<0.001$) with superior performance was found to be significant. The Pearson correlation between human capital and superior performance is ($r = 0.563$, $p<0.001$). Similarly there is a significant correlation between reputation capital and superior performance ($r = 0.565$, $p<0.001$), customer capital and superior performance ($r = 0.827$, $p<0.001$), location capital and superior performance ($r = 0.564$, $p<0.001$), innovation capital and superior performance ($r = 0.831$, $p<0.001$), and process capital and superior performance ($r = .0.573$, $p<0.001$). There was also significant inter group correlation between individual strategic resources and hence strategic resources were significantly correlated with each other ($p<0.001$).

Table 4. 55
Pearson Correlation Matrix of Strategic Resources

		RC	CC	LC	PC	IC	SPRP	SP	OP	FP	Strategic Resources
Human Capital (HC)	r	0.995	0.846	0.906	0.710	0.975	0.563	0.323	0.807	0.529	0.955
	p	0.000*	0.000*	0.000*	0.000*	0.000*	0.000*	0.000*	0.000*	0.000*	0.000*
Reputation Capital (RC)	r		0.872	0.933	0.752	0.990	0.565	0.417	0.839	0.540	0.974
	p		0.000*	0.000*	0.000*	0.000*	0.000*	0.000*	0.000*	0.000*	0.000*
Customer Capital (CC)	r			0.873	0.891	0.889	0.827	0.399	0.932	0.717	0.939
	p			0.000*	0.000*	0.000*	0.000*	0.000*	0.000*	0.000*	0.000*
Location Capital (LC)	r				0.793	0.974	0.564	0.484	0.876	0.687	0.968
	p				0.000*	0.000*	0.000*	0.000*	0.000*	0.000*	0.000*
Innovation Capital (IC)	r					0.785	0.831	0.499	0.983	0.796	0.863
	p					0.000*	0.000*	0.000*	0.000*	0.000*	0.000*
Process Capital (PC)	r						0.573	0.407	0.870	0.602	0.911
	p						0.000*	0.000*	0.000*	0.000*	0.000*
Superior Performance (SPRP)	r							0.395	0.827	0.851	0.679
	p							0.000*	0.000*	0.000*	0.000*
Strategic Performance (SP)	r								0.265	0.170	0.414
	p								0.000*	0.000*	0.000*
Operational Performance (OP)	r									0.820	0.717
	p									0.000*	0.000*
Financial Performance (FP)	r										0.693
	p										0.000*

Source: Survey Results

Note r= Pearson Correlation; p is level of significance p<0.001, *Correlation is significant at the 0.01 level (2-tailed).

4.14.2 Model Summary of Effect of Strategic Resources on Superior Performance

Among the three measures of superior performance, strategic resources yielded 31.9 percent on strategic performance, 51.4 percent on operational performance, 48 percent on financial performance, and 46.1 percent on superior performance (Table 4.56).

Table 4 .56

Model Summary of Effect of Strategic Resources on Superior Performance

Strategic Resources	R	R^2	Adjusted R^2	Std. Error of the Estimate
Strategic Performance	0.414	0.172	0.018	1.00
Operational Performance	0.717	0.514	0.514	1.92
Financial Performance	0.693	0.480	0.479	3.8
Superior Performance	0.679	0.461	0.830	13.1

Source: Survey Results

The estimated non standardised coefficients, standardised coefficients, and t statistics for the hypothesised relationships of strategic resources on superior performance is shown in Table 4.57. Strategic resources have a very strong positive relationship with superior performance (β= 0.711 for H1), a strong positive relationship with operational performance (β= 0.717 for H1b), and financial performance (β= 0.693 for H1c), and it has a moderate relationship with strategic performance (β= 0.336 for H1a).

Table 4 .57

Beta Coefficients of Effect of Strategic Resources on Superior Performance

Performance	Non standardized Coefficients		Standardized Coefficients	t	Sig.
	β	Std. Error	β		
Strategic Performance	1.63	0.318	0.336	5.137	.000
Operational Performance	2.46	0.610	0.717	8.459	.000
Financial Performance	4.5	1.213	0.693	5.892	.000
Superior Performance	3.5	4.165	0.711	8.725	.000

Source: Survey Results

The research hypotheses tested here provide a relationship between strategic resources and superior performance (Table 4. 58). The findings showed strategic resources had a significant influence on superior performance (H1: t= 8.725, p<0.001). Similarly strategic resources had a significantly positive relationship with strategic performance (H1a: t= 5.137, p<0.001), operational performance (H1b: t= 8.459, p<0.001) and financial performance (H1c: t= 5.892, p<0.001). Thus strategic resources had a significantly positive influence on Superior performance, strategic performance, operational performance and financial performance.

Table 4 .58

Underlying Hypotheses of Strategic Resources on Superior performance

Hypotheses	Strategic resources	r	β	p	Supported
H1	Superior Performance	0.679	0.711	0.000*	YES
H1a	Strategic Performance	0.414	0.336	0.000*	YES
H1b	Operational Performance	0.717	0.717	0.000*	YES
H1c	Financial Performance	0.693	0.693	0.000*	YES

Source: Survey Results

4.15 Testing Hypotheses of Strategic Resources on Attributes of Services and Customer Value

Two hypothesised relationships between strategic resources with attributes of services and customer value were tested:

H2: The strategic resources have a positive influence on the attributes of services.

H3: The strategic resources positively influence customer value.

The hypothesis test include, standardised regression coefficients (β), coefficients of determination (adjusted R square), and significant parameter of fitted model.

4.15.1 Pearson Correlation

Correlation analysis indicated the significant relationship between strategic resources with attributes of services and customer value (Table 4.59). A moderately significant correlation was found between strategic resources with attributes of services ($r = 0.346$, $p<0.001$), customer value ($r = 0.316$, $p<0.001$). There is a significant positive relationship between strategic resources with attributes of services and customer value.

Table 4 .59

Pearson Correlation Matrix of Strategic Resources with Attributes of Services and Customer Value

		Attributes of Services	Customer Value
Strategic Resources	r	0.346(**)	0.316(**)
	p	0.000	0.000

Source: Survey Results

** Correlation is significant at the 0.001 level

4.15.2 Model Summary of Effect of Strategic Resources on Attributes of Services and Customer Value

Strategic resources had an influence of 12.9 percent on attributes of services and 10.4 percent on customer value (Table 4.60).

Table 4 .60

Model Summary of Effect of Strategic Resources on Attributes of Services and Customer Value

Strategic Resources	R	R^2	Adjusted R^2	Std. Error of the Estimate
Attributes of Services	0.346	0.12	.011	.72855
Customer Value	0.316	0.10	.009	.65840

Source: Survey Results

The estimated non standardised coefficients, standardised coefficients, and t statistics for the hypothesised relationships of strategic resources with attributes of services and customer value is shown in Table 4.61. Strategic resources have a very strong positive relationship with attributes of services (β= 0.109 for H2), and customer value (β= 0.098 for H3).

Table 4 .61

Beta Coefficients of Effect of Strategic Resources on Attributes of Services and Customer Value

Strategic resources	Non standardized Coefficients		Standardized Coefficients		
	β	Std. Error	β	t	Sig.
Attributes of Services	.947	.231	0.109	4.103	0.000
Customer Value	.767	.209	0.098	3.679	0.000

Source: Survey Results

The research hypotheses tested here provide a relationship between strategic resources with attributes of services and customer value (Table 4.62). The findings showed strategic resources had a significant influence on attributes of services (H2: t=

4.103, p<0.001). Similarly strategic resources had a significantly positive relationship with customer value (H3: t= 3.679, p<0.001). Thus strategic resources had a significantly positive influence on attributes of services and customer value.

Table 4 .62

Underlying Hypotheses of Effect of Strategic Resources on Attributes of Services and Customer Value

Hypotheses	Strategic Resources	r	β	p	Supported
H2	Attributes of Services	0.346	0.109	0.000*	YES
H3	Customer Value	0.316	0.098	0.000*	YES

Source: Survey Results

The measurement model of strategic resources specifies the strength of their relationship with attributes of services and customer value.

4.16 Testing of Hypotheses on Attributes of Services and Customer Value

Five hypothesised relationships between attributes of services with attributes of customer value were tested:

H4a: Usefulness of cellular mobile services will positively affect the customer value.

H4b: Ease of use of cellular mobile services will positively affect the customer value.

H4c: Compatibility of cellular mobile services will positively affect the customer value.

H4d: Network size of cellular mobile services will positively affect the customer value.

H4e: Complementary service variety of cellular mobile services will positively affect the customer value.

The hypothesis test include, standardised regression coefficients (β) and significant parameter of fitted model.

4.16.1 Pearson Correlation

Correlation analysis indicated significant relationship between attributes of cellular mobile services and customer value (Table 4.63). A high correlation was found

between ‘complementary service variety’ (r =0.686, p<0.01) and ‘customer value’. Correlation ranked highest for ‘complementary service variety’, second for ‘ease of use’, third for ‘compatibility’, fourth for ‘usefulness’, and fifth for ‘network size’, with ‘customer value’. There was also inter - group correlation between attributes of services and they are significantly correlated with each other (p<0.01).

Table 4 .63

Pearson Correlation Matrix of Attributes of Services and Customer Value

Attributes of Services		**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Customer Value (1)	r p	0.621 0.000	0.633 0.000	0.622 0.000	0.528 0.000	0.686 0.000
Usefulness (2)	r p	1.00	0.645 0.000	0.630 0.000	0.563 0.000	0.638 0.000
Ease of use (3)	r p		1.00	0.692 0.000	0.574 0.000	0.678 0.000
Compatibility (4)	r p			1.00	0.564 0.000	0.699 0.000
Network Size (5)	r p				1.00	0.643 0.000
Complementary Service Variety (6)	r p					1.00

Source: Survey Results

Note: r is Pearson correlation coefficient; p is level of significance, p<0.001. N= 1200

The estimated non standardized coefficients, and standardized coefficients, t statistics for the hypothesized relationship of attributes of cellular mobile services on customer value are shown in Table 4.64. Among the five attributes of services, except for network size (β=0.029, p = 0.268 not significant), all have a significant effect on customer value. Among the significant factors influence of ‘complementary service variety’ stands first (β=0.333) followed by ‘usefulness’ (β=0.200), ‘ease of use’ (β=0.174), and ‘compatibility’ (β=0.126) (Table 4.64).

4.16.2 Model Summary of Effect of Beta Coefficients of Attributes of Services on Customer Value

Table 4 .64

Beta Coefficients of Attributes of Services on Customer Value

	Non standardized Coefficients		Standardized Coefficients		
	β	**Std. Error**	**β**	**t**	**Sig**
Usefulness	.143	.020	0.200	7.14	.000
Ease of use	.138	.024	0.174	5.77	.000
Compatibility	.092	.022	0.126	4.15	.000
Network size	.021	.019	0.029	1.10	.268
Complementary service variety	.261	.025	0.333	10.6	.000

Source: Survey Results

It is found in the Table 4.65 that all the standardized path coefficients (excluding network size) related to the five attributes of services with customer value have positive sign and are statistically significant ($p<0.01$): hypotheses H4a, H4b, H4c, and H4e are accepted. Whereas hypothesis H4d is rejected and it has some positive influence on customer value but it is statistically not significant.

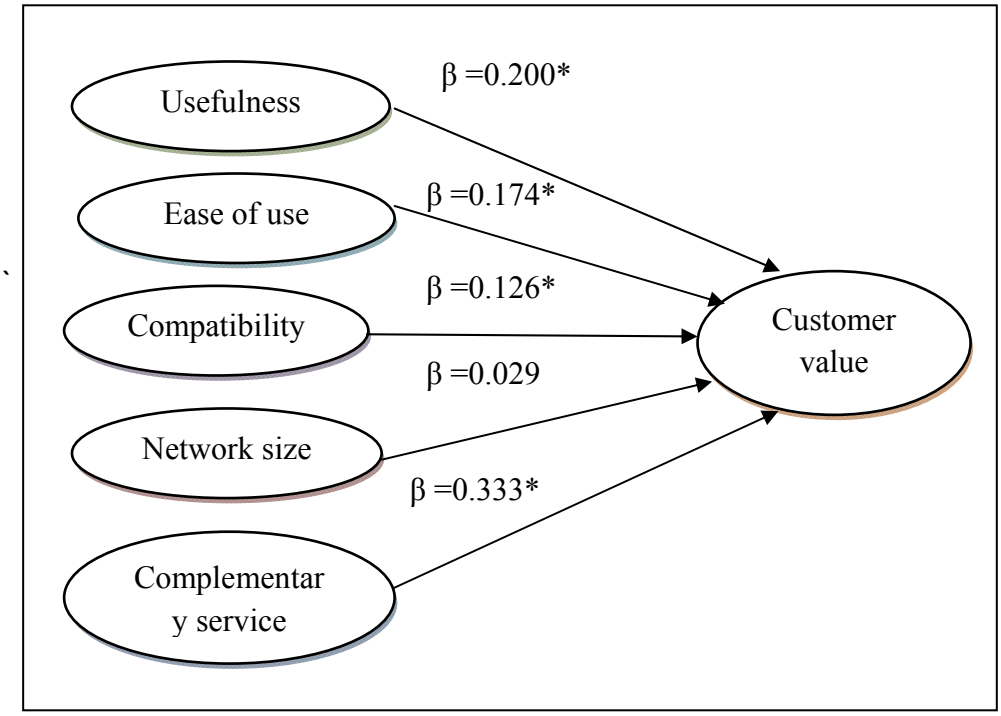
The research model for the study with the standardized coefficients of each parameter is shown in Figure 4.15

Table 4 .65

Underlying Hypotheses of Effect of Attributes of Services on Customer Value

Hypotheses	Customer Value Dimensions	r	β	p	Supported
H4a	**Usefulness**	0.621	0.200	0.000*	YES
H4b	**Ease of use**	0.633	0.174	0.000*	YES
H4c	**Compatibility**	0.622	0.126	0.000*	YES
H4d	**Network size**	0.528	0.029	0.268	NO
H4e	**Complementary service variety**	0.686	0.333	0.000*	YES

Source: Survey Results



Note: * indicate significance at p<0.001

Figure 4.15

Measurement Model of Attributes of Services

4.17 Testing of Hypotheses of Effect of Attributes of Services on Customer Value and Superior Performance

Five hypothesised relationships between attributes of services with customer value and superior performance were tested:

H4: The attributes of services will influence the customer value positively.

H5: The attributes of services will have a positive influence on the superior performance.

H5a: The attributes of services will influence the strategic performance positively.

H5b: The attributes of services will influence the operational performance positively.

H5c: The attributes of services will influence the financial performance positively.

The hypothesis test includes, standardised regression coefficients (β), coefficients of determination (adjusted R square), and significant parameter of fitted model.

4.17.1 Pearson Correlation

Correlation analysis indicated significant relationship between attributes of services with customer value, strategic performance, operational performance, financial performance and superior performance (Table 4.66). There was a high correlation of attribute of services with customer value ($r = 0.803$, $p < 0.001$), and with strategic performance ($r = 0.840$, $p < 0.001$). Correlation of attributes of services with superior performance ($r = 0.556$, $p < 0.001$), operational performance ($r = 0.568$, $p < 0.001$), and financial performance ($r = 0.387$, $p < 0.001$), was found to be moderate.

Table 4 .66
Pearson Correlation Matrix of Attributes of Services with Customer Value and Superior Performance

		Attributes of Services
Customer Value	r p	0.803 (**) 0.000
Strategic Performance	r p	0.840 (**) 0.000
Operational Performance	r p	0.568 (**) 0.000
Financial Performance	r p	0.387 (**) 0.000
Superior Performance	r p	0.556 (**) 0.000

Source: Survey Results
Note: r is Pearson correlation coefficient; p is level of significance
** Correlation is significant at the 0.01 level (2-tailed). N=1200

4.17.2 Model Summary of Effect of Attributes of Services on Customer Value and Superior Performance

The effect of attributes of services was found to be 64.5 percent on customer value; 70.5 percent on strategic performance; 32.3 percent on operational performance; 15 percent on financial performance; and 31 percent on superior performance (Table 4.67).

Table 4 .67

Model summary of Effect of Attributes of Services on Customer Value and Superior Performance

Attributes of Services	R	R^2	Adjusted R^2	Std. Error of the Estimate
Customer Value	0.803	0.645	0.645	.386
Strategic Performance	0.840	0.705	0.705	.543
Operational Performance	0.568	0.323	0.322	2.37
Financial Performance	0.387	0.150	0.141	5.26
Superior Performance	0.556	0.310	0.301	3.42

Source: Survey Results

The estimated non standardized coefficients, standardized coefficients, and t statistics for the hypothesized relationship of attributes of services with customer value, strategic performance, operational performance, financial performance and superior performance is shown in Table 4.68. Attributes of services had a very significant effect on customer value (β=0.803 for H4), and strategic performance (β=0.840 for H5a). Attributes of services had a significant effect on operational performance (β=0.568 for H5b). There is a moderately significant effect of attributes of services on financial performance (β=0.123 for H5c).and superior performance (β=0.175 for H5).

Table 4 .68

Beta Coefficients of Effect of Attributes of Services on Customer Value and Superior Performance

Attributes of Services	Non standardized Coefficients		Standardized Coefficients		
	β	Std. Error	β	t	Sig
Customer Value	.721	.014	0.803	5.005	0.000
Strategic Performance	1.16	.019	0.840	9.593	0.000
Operational Performance	2.26	.085	0.568	6.611	0.000
Financial Performance	.891	.192	0.123	4.636	0.000
Superior Performance	7.64	1.147	0.175	6.664	0.000

Source: Survey Results

The research hypotheses tested here provide a relationship between attributes of services with customer value, strategic performance, operational performance, financial performance and superior performance (Table 4.69). The findings showed that attributes of services had a significant influence on customer value (H4: $t = 5.005$, $p < 0.001$); strategic performance (H5a: $t = 9.593$, $p < 0.001$); operational performance (H5b: $t = 6.611$, $p < 0.001$); financial performance (H5c: $t = 4.636$, $p < 0.001$); and superior performance (H5: $t = 6.664$, $p < 0.001$). Thus attributes of services had a significant positive influence on customer value, strategic performance, operational performance, financial performance and superior performance.

Table 4 .69

Underlying Hypotheses of Effect of Attributes of Services on Customer Value and Superior Performance

Hypotheses	Attributes of Services	r	β	p	Supported
H4	Customer Value	0.803	0.803	0.000	YES
H5	Attributes of Services On Superior Performance	0.556	0.175	0.000	YES
H5a	Strategic Performance	0.840	0.840	0.000	YES
H5b	Operational Performance	0.568	0.568	0.000	YES
H5c	Financial Performance	0.387	0.123	0.000	YES

Source: Survey Results

4.18 Testing of Hypotheses of Effect of Customer Value on Superior Performance

Four hypothesised relationships between customer value and superior performance were tested:

H6: The customer value will influence the superior performance positively.

H6a: The customer value will influence the strategic performance positively.

H6b: The customer value will influence the operational performance positively.

H6c: The customer value will influence the financial performance positively.

The hypothesis test includes standardised regression coefficients (β), coefficients of determination (adjusted R square) and significant parameter of fitted model.

4.18.1 Pearson Correlation

Correlation analysis indicated significant relationship of customer value with strategic performance, operational performance, financial performance and superior performance (Table 4.70). A high correlation was found between customer value and strategic performance ($r = 0.663$, $p < 0.01$). Correlation between customer value with

operational performance (r =0.531, p<0.01), financial performance (r =0.467, p<0.01), and superior performance (r =0.470, p<0.01), was found to be moderate.

Table 4 .70

Pearson Correlation Matrix of Customer Value and Superior Performance

Performance		Customer Value
Strategic Performance	r p	0.663** 0.000
Operational Performance	r p	0.531** 0.000
Financial Performance	r p	0.467** 0.000
Superior Performance	r p	0.470** 0.000

Note: r is Pearson correlation coefficient; p is level of significance

** Correlation is significant at the 0.001 level. N=1200

4.18. 2 Model Summary of Effect of Customer Value on Superior Performance

The effect of customer value on strategic performance was found to be 44.2 percent; 28.2 percent on operational performance; 21.9 percent on financial performance; and 21.1 percent on superior performance (Table 4.71).

Table 4 .71

Model summary of Effect of Customer Value on Superior Performance

Customer Value	R	R^2	Adjusted R^2	Std. Error of the Estimate
Strategic Performance	0.663	0.442	0.242	2.51477
Operational Performance	0.531	0.282	0.242	2.51477
Financial Performance	0.467	0.219	0.180	5.28363
Superior Performance	0.470	0.221	0.211	31.57227

Source: Survey Results

The estimated non standardized coefficients, standardized coefficients and t statistics for the hypothesized relationship of customer value with strategic performance, operational performance, financial performance and superior performance is shown in Table 4.72. Customer value had a very high significant effect on strategic performance (β=0.738 for H6a). Customer value had a moderately

significant effect on operational performance (β=0.492 for H6b). The effect of customer value on financial performance (β=0.194 for H6c) and superior performance (β=0.148 for H6) is low significant.

Table 4.72
Beta Coefficients of Effect of Customer Value on Superior Performance

Customer value	Non standardized Coefficients		Standardized Coefficients		
	β	Std. Error	β	t	Sig
Strategic Performance	1.137	.027	0.738	4.165	0.000
Operational Performance	2.188	.100	0.492	2.793	0.000
Financial Performance	.753	.214	0.194	3.526	0.000
Superior Performance	7.144	1.276	0.148	5.597	0.000

Source: Survey Results

The research hypotheses tested here provide a relationship between customer value and superior performance (Table 4.73). The findings showed that customer value had a positive influence on superior performance (H6: $t=5.597$, $p<0.001$), on strategic performance (H6a: $t=4.165$, $p<0.001$), on operational performance (H6b: $t=2.793$, $p<0.001$), and on financial performance (H6c: $t=3.526$, $p<0.001$). Thus customer value had a significantly positive influence on strategic performance, operational performance, financial performance and superior performance.

Table 4 .73
Underlying Hypotheses of Effect of Customer Value on Superior Performance

Hypotheses	Customer Value	r	β	p	Supported
H6	Superior Performance	0.470	0.148	0.000	YES
H6a	Strategic Performance	0.663	0.738	0.000	YES
H6b	Operational Performance	0.531	0.492	0.000	YES
H6c	Financial Performance	0.467	0.194	0.000	YES

Source: Survey Results

4.19 Testing of Hypotheses of Effect of Customer Value Dimensions and Superior Performance

Each of the six dimensions of customer value plays an antecedent role towards creating superior performance for a CMO firm. Six hypothesised relationships between the six dimensions of customer value with superior performance were tested:

H6d: Functional value will positively affect the superior performance.
H6e: Social value will positively affect the superior performance.
H6f: Emotional value will positively affect the superior performance.
H6g: Conditional value will positively affect the superior performance.
H6h: Epistemic value will positively affect the superior performance.
H6i: Monetary value will positively affect the superior performance.

The hypothesis test includes standardised regression coefficients (β) and significant parameter of fitted model.

4.19.1 Pearson Correlation

Correlation analysis indicated significant relationship between dimensions of customer value with superior performance (Table 4.74). A very significant correlation was found between monetary value and superior performance ($r = 0.785$, $p<0.001$) and also between, functional value ($r = 0.724$, $p<0.001$) and superior performance. The correlation ranked highest for 'monetary value', second for 'functional value', third for 'social value', fourth for 'epistemic value', fifth for 'emotional value', and sixth

for ‘conditional value’. There was also inter - group correlation between dimensions of customer value and they are significantly correlated with each other ($p<0.001$).

Table 4 .74
Pearson Correlation Matrix of Customer Value Dimensions

		Functional Value	Social Value	Emotional Value	Conditional Value	Epistemic Value	Monetary Value
Superior performance	r	0.724	0.551	0.532	0.379	0.540	0.785
	p	0.000	0.000	0.000	0.000	0.000	0.000
Functional Value	r		0.51	0.479	0.492	0.271	0.590
	p		0.000	0.000	0.000	0.000	0.000
Social Value	r			0.666	0.448	0.382	0.304
	p			0.000	0.000	0.000	0.000
Emotional Value	r				0.563	0.381	0.381
	p				0.000	0.000	0.000
Conditional Value	r					0.451	0.38
	p					0.000	0.000
Epistemic Value	r						0.192
	p						0.000

Source: Survey Results Note: r is Pearson correlation coefficient; p is level of significance, $p<0.001$.

4.19.2 Model Summary of Effect of Customer Value Dimensions on Superior Performance

The estimated non standardized coefficients, standardized coefficients and t statistics for the hypothesized relationship of dimensions of customer value with superior performance is shown in Table 4.75. All the dimensions of customer value have a significant effect on superior performance. Among the significant factors, influence of ‘monetary value’ stands first ($\beta=0.262$ for H6i) followed by ‘functional value’ ($\beta=0.246$ for H6d), ‘emotional value’ ($\beta=0.184$ for H6f), ‘social value’ ($\beta=0.181$ for H6e) ‘epistemic value’ ($\beta=0.119$ for H6h) and ‘conditional value’ ($\beta=0.101$ for H6g) (Table 4. 75).

Table 4 .75
Beta Coefficients of Effect of Customer Value Dimensions on Superior Performance

Customer value Dimensions	Non standardized Coefficients		Standardized Coefficients		
	β	Std. Error	β	t	p
Functional value	0.246	0.036	0. 246	11.36	0.000
Social value	0.095	0.030	0. 181	9.365	0.000
Emotional value	0.106	0.033	0. 184	5.313	0.000
Conditional value	0.108	0.030	0.101	6.438	0.000
Epistemic value	0.087	0.023	0.119	2.060	0.000
Monetary value	0.232	0.026	0. 262	3.199	0.000

Source: Survey Results

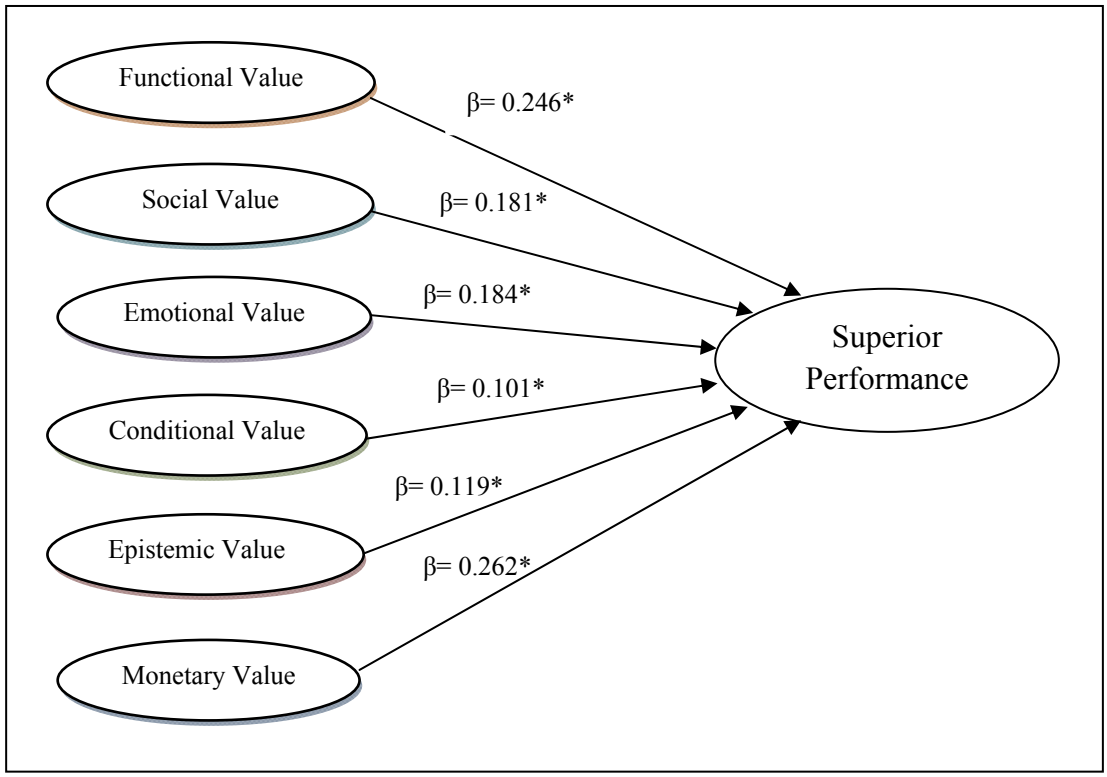
The research hypotheses tested here provide a relationship between dimensions of customer value and superior performance (Table 4.76). The findings showed that monetary value had the highest influence on superior performance (H6i: $t=3.199$, $p<0.001$). Similarly functional value; (H6d: $t=11.36$, $p<0.001$), emotional value; (H6f: $t=5.31$, $p<0.001$), social value; (H6e: $t=9.36$, $p<0.001$), epistemic value; (H6h: $t=2.06$, $p<0.001$), and conditional value; (H6g: $t=6.438$, $p<0.001$) (Table 4.76) also had a very significant influence on superior performance. Thus the dimensions of customer value: monetary value, functional value, emotional value, social value, epistemic value and conditional value had a significantly positive influence on superior performance.

The measurement model of customer value dimensions specifies strength of their relationship with superior performance (Figure 4.16).

Table 4 .76
Underlying Hypotheses of Effect of Customer Value Dimensions on Superior Performance

Hypotheses	Superior Performance	r	β	p	Supported
H6d	**Functional Value**	0.724	0. 246	0.000	YES
H6e	**Social Value**	0.551	0. 181	0.000	YES
H6f	**Emotional Value**	0.532	0. 184	0.000	YES
H6g	**Conditional Value**	0.379	0.101	0.000	YES
H6h	**Epistemic Value**	0.540	0.119	0.000	YES
H6i	**Monetary Value**	0.785	0. 262	0.000	YES

Source: Survey Results



Note: * indicate significance at p<0.001

Figure 4.16

Measurement Model of Effect of Customer Value Dimensions on Superior Performance

4.20 Testing of Hypotheses of Effect of Strategic Resources, Attributes of Services, and Customer Value on Switching Intention

Three hypothesised relationships between the switching intention of customer with strategic resources, attributes of services, and customer value were tested:

H7: Switching intention of customers will be negatively influenced by the strategic resources.

H8: Switching intention of customers will be negatively influenced by the attributes of services

H9: Switching intention of customers will be negatively influenced by the customer value.

The hypothesis test includes, standardised regression coefficients (β), and significant parameter of fitted model.

4.20.1 Pearson Correlation

Correlation analysis indicated a significant negative relationship between switching intention of customer with strategic resources, attributes of services, and customer value (Table 4.77). Strategic resources ($r = -.152$, $P<0.001$); attributes of services ($r = -.402$, $p<0.001$); and customer value ($r = -.353$, $p<0.001$) had a negative significant influence on switching intention of customers.

Table 4 .77
Pearson Correlation of Switching Intention

		Switching intentions
Strategic Resources	r	-.152(**)
	p	0.000
Attribute of Services	r	-.402(**)
	p	0.000
Customer Value	r	-.353(**)
	p	0.000

Source: Survey Results

4.20.2 Model Summary of Effect of Strategic Resources, Attributes of Services, and Customer Value on Switching Intention

Table 4 .78

Beta Coefficients of Switching Intention

	Non standardized Coefficients		Standardized Coefficients			Hypotheses	Supported
	β	Std. Error	β	t	Sig.		
Strategic Resources	-0.942	0.319	-0.081	-2.953	.000	H7	YES
Attributes of services	-0.462	0.63	-0.296	-7.313	.000	H8	YES
Customer value	-0.230	0.070	-0.132	-3.281	.000	H9	YES

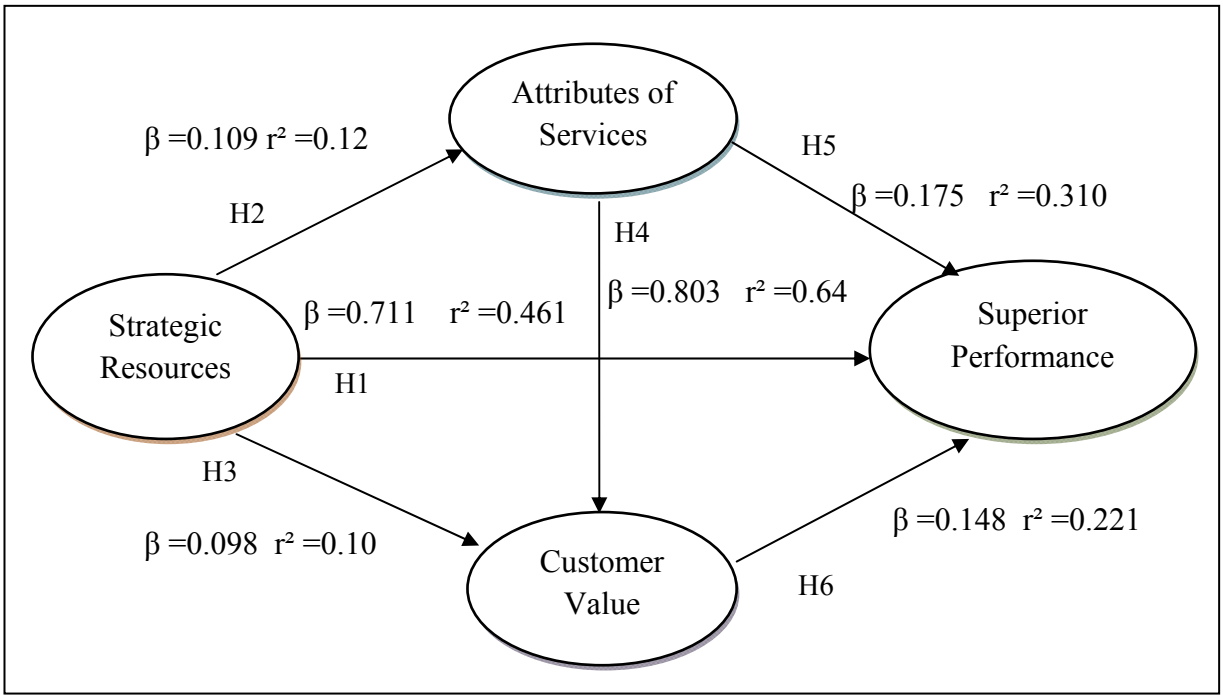
Source: Survey Results

The estimated non standardized coefficients, standardized coefficients and t statistics for the hypothesized relationship of switching intention on strategic resources, attributes of services and customer value are shown (Table 4.78). Strategic resources (β = -0.081for H7); attributes of services (β = -0.296 for H6d); and customer value (β = -0.132 for H6f) had significantly negative influence on switching intention of customers. Thus strategic resources, attributes of services and customer value had a significantly negative influence on switching intention.

4.21 Strategic Resources and Superior Performance in CMO Firms

In the measurement of strategic resources and superior performance, 83 indicator variables were used from the four constructs. The strategic resources on superior performance (β = 0.711), attributes of services (β = 0.109) and on customer value (β = 0.098) strengthened the relationship. The relationship of attributes of services with customer value (β = 0.803), and superior performance (β = 0.175) as well as customer value with superior performance (β = 0.148) strengthened. All hypotheses (H1, H2, H3, H4, H5, and H6) were supported and statistically significant in the model ($p<0.001$). This indicates that strategic resources had significant

contribution towards development of distinguished services, creation of better customer value and attainment of superior performance for CMO firms. The study aligned attributes of services, and customer value dimensions to obtain a holistic view of RBV and SCA in CMO firms. Finally to develop the comprehensive system to achieve SCA and superior performance, the strategic resources, attributes of services, and customer value dimensions were integrated into the model (Figure 4.17)



Source: Survey Results

Figure 4.17

Model of Effect of Strategic Resources on Superior Performance

4.22 Summary

The results of the study indicated that there was a significant relationship between strategic resources and superior performance. There was a significant relationship between attributes of services, customer value and superior performance. The strategic resources: human capital, reputation capital, customer capital, location capital, process capital and innovation capital, identified in the research have positive relationship with superior performance and contribute significantly to the superior

performance of a firm. The attributes of services: usefulness, ease of use, network size, compatibility and complementary services have a positive influence on customer value. All the attributes of services, except network size, all the attributes influence significantly the customer value. The six dimensions of customer value; functional value, social value, emotional value, conditional value, epistemic value and monetary value all have a significantly positive influence on superior performance. Airtel is the only service provider in India which has achieved superior performance in all performance measures; strategic performance, operational performance and financial performance. Strategic resources, attributes of services and customer value have a significantly negative influence on the switching intention of customers. Thus the study adopted inductive and deductive approaches successfully and integrated strategic resources, attributes of services, and customer value dimensions to obtain a holistic view of resource based view to achieve sustainable competitive advantage and superior performance for cellular mobile operator firms.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION

AND

RECOMMENDATIONS

CHAPTER FIVE
SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATONS

5.1 Chapter Overview

The chapter discusses the summary of findings, conclusions and recommendations of inductive and deductive analysis and hypotheses testing. The chapter also discusses theoretical and managerial implications, limitations of the research and directions for future research.

5.2 Summary of Findings

(A) Strategic Resources

1. Strategic resources has significant positive influence on superior performance of CMO firms (H1: $t = 8.725$, $p<0.001$, $r = 0.679$).

2. Executives opine that among strategic resources identified, human capital is of highest priority (0.36) and location capital (0.06) is of lowest priority for CMO firms.

3. The strategic resources analysed using analytic hierarchical process and correlation yielded the following results:

    a. **Human Capital:** The important factors of human capital are: (i) Employees Sound Domain Knowledge (ii) Relevant Education and Experience in Cellular Mobile Operations (iii) The Basic Values of Organization (iv) Learning as the Key to Improvement (v) Employee Attrition rate (vi) Job Satisfaction Level and (vii) Personnel Capability to Handle Complex Situations and Problems. Human capital has significant correlation with superior performance ($r = 0.563$, $p<0.001$).

    b. **Reputation Capital:** The important factors of reputation capital are: Customers Feeling About (i) Firm, (ii) Secure in Services, and (iii) Great

deal of respect for Firm. Reputation capital has significant correlation with superior performance ($r = 0.565$, $p<0.001$).

c. **Customer Capital:** The important factors of customer capital are: (i) Customer Churn Rate (ii) Strong Loyal Customer Base (iii) Strategy of Competitive Advantage is Based on Understanding Customer Needs and (iv) Commitment to Retain Valued Customers. Customer capital has significant correlation with superior performance ($r = 0.827$, $p<0.001$).

d. **Location Capital:** The important factors of location capital are: (i) Services in Economically Highly Attractive Places (ii) Geographical Coverage and (iii) Spatial Location. Location capital has significant correlation with superior performance ($r = 0.564$, $p<0.001$).

e. **Innovation Capital:** The important factors of innovation capital are: (i) Innovation in Services and Processes on R&D results are readily accepted (ii) Management actively seeks innovative ideas (iii) People Are Not Penalized for New Ideas that do not Work (iv) Introduce New Services Before Competitors and (v) Value Added Services are More Attractive Compared to Competitors. Innovation capital has significant correlation with superior performance ($r = 0.831$, $p<0.001$).

f. **Process Capital:** The important factors of Process capital are: (i) Internal Work Sequences are Contributing Significantly in Delivering Quality Services (ii) Queue in Call Centre is Reduced Drastically (iii) Reduction In Number of Complaints Received (iv) Able to Answer and Resolve Customer Queries Instantly and (v) Number of Complaints Handled by Employees Per Hour in Call Center is Increasing. Process capital has significant correlation with superior performance ($r = 0.573$, $p<0.001$).

4. Strategic resources have significant influence on strategic performance (H1a: t = 5.137, p<0.001, r = 0.414), operational performance (H1b: t= 8.459, p<0.001, r = 0.717) and financial performance (H1c: t= 5.892, p<0.001, r = 0.693).

5. Strategic resources have significant influence on attributes of services (H2: p<0.001, r = 0.346). The influence of strategic resources on attributes of services is 10.9 percent.

6. Strategic resources have significant influence on customer value (H3: p<0.001, r = 0.316). The influence of strategic resources on customer value is 9.8 percent.

(B) Attributes of Services

1. Attributes of services have significant correlation with customer value (H4: t= 5.005, p<0.001, r =0.803).

2. Attributes of services namely: (i) Usefulness (ii) Ease of use (iii) Network size (iv) Compatibility and (v) Complementary service variety yielded 64.5 per cent explanatory power on customer value.

3. The strength of the attributes of services with customer value is as follows. Complimentary service variety with customer value (β=0.333; H4e), usefulness with customer value (β=0.200; H4a), ease of use with customer value (β=0.174; H4b), compatibility with customer value (β=0.126; H4c). The strength of network size with customer value (β=0.029; H4d), (p = 0.268) is positive but not significant.

4. Complementary service variety played the most important role in creating customer value for cellular mobile subscribers, followed by usefulness of the services, ease of use, and compatibility with existing services.

5. Among the attributes of services, complimentary service variety has the highest influence on customer value. Customers perceive complimentary service variety as value for: Availability of complementary services, a large amount of different

complementary services, and great variety of "complementary services" (r = 0.686; p< 0.001).

6. Customers perceive that they get value when the services are useful like: Using services saves time, using services improve efficiency, and services are useful (r = 0.621; p< 0.001).

7. Customers perceive that they get value when the services are easy to use like: Learning to use "service" is easy, easy to make use of "service" to do what they want in it, interaction with "service" is clear and understandable, and it is easy to use "service" (r = 0.633; p=0.268).

8. Customers perceive that they get value when the services are compatible like: Using "service" is compatible with all aspects of mobile service use, and "Service" is completely compatible across all services (r = 0.622; p< 0.001).

9. Network size insignificantly affects customer value means customers perceive that this attribute does not create value in cellular mobile services(r = 0.528; p = 0.268). Customers perceive that network size like the "service" is used by a large number of users they know, and also beyond those they know of, does not add value to them.

10. Attributes of services have significant influence on superior performance (H5: t = 6.664, p<0.001, r = 0.556). Attributes of services have influence of 17.5 per cent on superior performance.

11. Attributes of basic and value added services have significant influence on strategic performance (H5a: t= 9.59, p<0.001), operational performance (H5b: t= 6.611, p<0.001) and financial performance (H5c: t= 4.636, p<0.001).

(C) Customer Value

1. Customer value has significant correlation with superior performance (H6: $t= 5.597$, $p<0.001$, $r =0.470$).

2. Customer value has significant influence on strategic performance (H6a: $t=4.165$, $p<0.001$, $r = 0.663$), operational performance (H6b: $t=2.793$, $p<0.001$, $r = 0.531$), and financial performance (H6c: $t=3.526$, $p<0.001$, $r = 0.467$).

3. Customer value dimensions namely (i) functional value (ii) social value (iii) emotional value (iv) conditional value (v) epistemic value and (v) monetary value influence 14.8 per cent explanatory power on superior performance.

4. The highest positive correlation was found for monetary value on superior performance ($r = 0.785$, $p<0.001$). The conditional value had lowest positive correlation on superior performance ($r = 0.379$, $p<0.001$).

5. The strength of the customer value dimensions with superior performance is as follows. Monetary value with superior performance ($\beta=0.262$ for H6i), functional value with superior performance ($\beta=0.246$ for H6d), emotional value with superior performance ($\beta=0.184$ for H6f), social value with superior performance ($\beta=0.181$ for H6e), epistemic value with superior performance ($\beta=0.119$ for H6h) and conditional value with superior performance ($\beta=0.101$ for H6g)

6. Monetary value has positive and significant effect on superior performance ($r = 0.785$, $p<0.001$). It signifies that customers look for value they get when they pay. The innovative services should be such that it gives them monetary benefits.

7. Functional value has positive and significant effect on superior performance ($r = 0.724$, $p<0.001$). Functional value is characterized by timeliness, ease of use, efficiency and reliability.

8. Emotional value has positive and significant effect on superior performance ($r = 0.532$, $p<0.001$). Emotional value is characterized by fun, pleasure, relaxation and feels good factors.

9. Social value has positive and significant influence on superior performance ($r = 0.551$, $p<0.001$). Social value can be provided by developing services that provide social networking through cellular mobile services, as a branded service provider in the society.

10. Epistemic value has positive and significant effect on superior performance ($r = 0.540$, $p<0.001$). The epistemic value is characterized by curiosity, new way of doing things and adopting latest and advanced technologies in cellular mobile services.

11. Conditional value has positive and significant effect on superior performance ($r = 0.379$, $p<0.001$). Characteristics of conditional value are real time interaction and information, independent of place and time.

(D) Superior Performance

1. The survey revealed that the strategic performances of the cellular mobile service providers Airtel and Reliance are above average. The strategic performances are below average for Vodafone, Tata, Idea and BSNL.

2. The survey revealed that the operational performance of the cellular mobile service providers Airtel, Reliance, Vodafone was above average. The operational performance was below average for service providers Tata, Idea and BSNL.

3. The survey revealed that the financial performance of the cellular mobile service provider Airtel is above average. The financial performance is below average for Reliance, Vodafone, Tata, Idea and BSNL.

(E) Switching Intention of Customers

1. The survey revealed that the strategic resources have significant negative influence on switching intention of customers (H7: $t = 2.953$, $p<0.001$, $r = -0.152$).

2. The survey revealed that the attributes of services have significant negative influence on switching intention of customers (H8: $t = 7.313$, $p<0.001$, $r = -0.402$).

3. The survey revealed that the customer value has significant negative influence on switching intention of customers (H9: $t = 3.281$, $p<0.001$, $r = -0.353$).

(F) Demographics

1. The survey revealed that 60 per cent respondents were male and 40 percent were female and also it is the same pattern for every service provider.

2. The age distribution of the respondents reveals that 57 per cent belong to the age group of 18 - 30 years, 38.08 percent belong to the age group of 31 – 40 years, 3.25 percent belong to age group of 41 – 50 years, and only 1.67 per cent was in the age group of above 50 years. This indicates cellular mobile subscribers of the age group 18 – 40 years are the major (youth) segment who use value added services.

3. The education distribution of respondents showed that 21.5 percent were under graduates, 45.80 percent of them graduates and remaining 32.8 percent of them were post graduates. This indicates that majority of subscribers are very well educated.

4. The occupation pattern of respondents reveals that 29.10 percent of them were students, 63.60 percent were salaried, 6.30 percent were businessmen and a small 0.10 per cent were housewives. It indicates that majority of the respondents were salaried people.

5. The average monthly expense pattern showed that 17.60 per cent of them spend less than Rs. 150, 75.90 per cent of them spend between Rs.151 to Rs. 499, 5.20 percent spend between Rs. 500 to Rs. 999, and 1.30% percent spends more than Rs. 1000. This indicates that majority of subscribers spend on an average of Rs. 151 to Rs.500.

6. The survey revealed that 89 per cent of the subscribers were prepaid and 11 per cent were post paid. It indicates majority of subscribers were prepaid.

(G) Other Findings

1. The survey revealed that 90.80 percent of them stay with their service provider for more than one year, 4.8 percent of them stayed between 7–12 months, 2.90 percent of them stayed between 3- 6 months, and 1.60 percent of them stayed less than 3 months. It indicates that majority of subscribers stayed with their service providers for more than one year.

2. The survey revealed that 23.50 percent of them switched from their service providers and 76.50 percent of them stayed with their service providers. This indicates that majority of respondents stayed with their service providers.

3. The survey revealed that of those subscribers who switched from their service providers, 58.5 per cent switched because of higher price, 49.1 per cent because of poor response from service providers, 35.6 per cent because of poor customer service, 30.4 per cent because of poor coverage and 22.5 percent because of less value added services. This indicates that the reasons for customers switching are higher price, poor response from service providers, poor customer service, poor coverage and less value added services.

4. The survey revealed that 67 per cent of the customers while selecting a service provider consider network coverage, 58.25 per cent of them consider brand, 54.75 per cent of them consider quality of service, 43.42 per cent of them consider convenience, 35.42 per cent of them consider affordable price, and 28.5 per cent of them consider features. Very few respondents selected without considering any

factors. This indicates that customers while choosing service providers consider coverage, brand, service quality, convenience, and affordable price.

5. The survey revealed that all of them (100 percent) use short message services, 69.9 percent of them use internet access, 51.4 percent of them use chat, 40.8 percent of them use alerts, 31.3 percent of them use music download, 24.2 percent of them use games, 20.8 percent of them use ringtone, 11 percent of them use MMS, 8.3 percent of them use news/weather, 5.5 percent of them use services to participate in contest and a small 2.4 percent of them use video/TV services. This indicates that the subscribers use mobile services for SMS, internet access, chatting and very few subscribers use value added services.

The major six hypotheses (H1, H2, H3, H4, H5 and H6) were supported and are statistically significant in the model ($p < 0.001$). The research work documented the accumulation and deployment of strategic resources and its impact on attributes of services, customer value and superior performance. The study aligned strategic resources with attributes of services that drive customer value and customer value dimensions that lead to superior performance in CMO firms.

The results of the study also indicated that strategic resources contribute significantly to achieve sustainable competitive advantage and superior performance in CMO firms. This study suggests a framework for SCA as an outcome of inductive and deductive analysis, as a road map for cellular mobile service provider to achieve SCA and superior performance.

5.3 Conclusion and Recommendations

Conclusion

Based on the findings of the study, grounded theory and survey, the following conclusions have been drawn in relation to the objectives of the study.

5.3.1 The Strategic Resources in Cellular Mobile Service Provider Firm

The resource based view theory literature identifies that strategic resources contribute significantly to achieve sustainable competitive advantage and superior performance for cellular mobile service provider organization. The literature review identified the scope of resource based view research and it emphasizes the need for identifying strategic resources that contribute to superior performance for cellular mobile service provider organization.

The literature review shows that strategic resources contribute significantly in value generating activity (Barney, 1991). Imitation of these resources by other firms becomes next to impossible resulting in causal ambiguity. Strategic resources are embedded in unique patterns of routines, and are developed and accumulated over a period of time. Hence it is difficult to analyze and imitate (Dierickx & Cool,1989; Lippman & Rumelt, 1982). Strategic resources include assets and capabilities that are typically rooted deeply in the firm's history and have accumulated over time. If the strategic resource is something that the firm "has", it is an asset. If the strategic resource is something that the firm "does", it is a capability. The research review identified assets for CMO firms that are non-physical, typically rooted deeply in the firm's history and accumulated over time. Assets are something which a CMO owns like human capital, customer capital, location capital, and reputational capital which are internal and within the control of service provider, which contribute significantly for the superior performance of the CMO firm. Capabilities are complex bundles of skills and accumulated knowledge, exercised through organizational processes, which enable firms to coordinate activities and make use of their assets. A firm may achieve rents not because it has better resources, but because of the firm's distinctive capabilities like

innovation and process capabilities which make better use of its resources. The literature review identified innovation capital and process capital as the capabilities of a CMO firm. These capabilities have the ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments. A CMO firm which accumulates and deploys strategic resources identified in the research: human capital, customer capital, location capital, reputational capital, innovation capital and process capital attains SCA and superior performance because of causal ambiguity.

5.3.2 The Relationship Between Strategic Resources and Superior Performance

This thesis developed a theoretical model that was empirically tested leading to a better understanding of the relationship between strategic resources and superior performance in cellular mobile service provider organization. As discussed in Chapter Two, the underlying constructs used to examine the proposed theoretical model were conceptualized and hypotheses were formulated and tested. The relationship between strategic resources and superior performance was supported. The relationship between strategic resources and superior performance was tested using model fit indices (r^2 and β). The results of the study suggest that there is a significant relationship between strategic resources and superior performance (Barney & Arikan, 2001).

5.3.3 The Attributes of Basic and Value Added Services that Drive Customer Value in Cellular Mobile Services

The key drivers of customer value in networked services such as cellular mobile services stem from different sources. SCA is a function of attribute differentiation, the capability gap, and the most important condition is that existing and potential competitors cannot or will not take actions to close the gap (Coyne, 1986). The literature review identified usefulness, ease of use, network size, compatibility, and complementary service variety as attributes of networked services which are the drivers of customer value for cellular mobile services. The five attributes of cellular mobile services were measured as antecedents of customer value and superior performance in this study. To

test the antecedent effect of attributes of services on customer value, five hypotheses (H4a, H4b, H4c, H4d and H4e) were proposed and tested using Pearson correlation, regression analysis and standardized path coefficients (β). All the standardized path coefficients (excluding network size) relating to the five attributes of cellular mobile services with customer value have positive sign and are statistically significant ($p<0.001$): hypotheses H4a, H4b, H4c, and H4e are accepted. Whereas hypothesis H4d is rejected and it has some positive influence on customer value but it is statistically not significant. Based on the result, complementary service variety played the most important role in creating customer value for cellular mobile subscribers, followed by usefulness of the services, ease of use, and compatibility with existing services. Network size insignificantly affects customer value which means that customers perceive that this attribute does not create value in cellular mobile services.

5.3.4 Customer Value and Superior Performance

Customers prefer services from the service provider who creates and delivers to them better value. A service provider with strategic resources can understand the market and attributes that drive customer value, can be utilized to develop new distinct VAS (Hall, 1992) which will maintain, and win market share by creating unique value for subscribers, hence SCA for the firm. Creating customer value and providing VAS should be based on a deep understanding of the mobile market and insight of potential mobile service consumers. The literature review identified six dimensions of customer value that customers consider in evaluating the cellular mobile service: functional value, social value, emotional value, conditional value, epistemic value, and monetary value. Each of the six dimensions of customer value plays an antecedent role towards creating superior performance for a CMO firm. Six hypothesised (H6d, H6e, H6f, H6g, H6h and H6i) relationships between the six dimensions of customer value with superior performance were tested using (r and β). All the dimensions of customer value have a significant effect on superior performance. Among the significant factors influence of monetary value was highest followed by functional value, emotional value, social value, epistemic value, and

conditional value on superior performance. Thus the dimensions of customer value: monetary value, functional value, emotional value, social value, epistemic value and conditional value have a significantly positive influence on superior performance.

5.3.5 Superior Performance of Cellular Mobile Service Providers

The literature review on resource based view reveals the role of strategic resources in creating superior performance or persistent or sustainable abnormal profits. A firm's superior performance depends on its ability to innovate, and defend strategic resources (Teece, 2000). Competence of company's strategy implementation is indicated by its performance: strategic performance, operational performance, and financial performance. The sustainability of firm abnormal profit is defined as abnormal profitability that persists over a long period of time (Fahy, 2000). To evaluate superior performance of CMO firms the research considered strategic performance, operational performance, and financial performance. Strategic performance shows a company's strength in market standing, competitive vitality and future business prospects. To evaluate strategic performance, indicators like customer trust, customer satisfaction, customer loyalty and brand equity were used. The results revealed that the strategic performances of the service providers Airtel and Vodafone were above industry average performance i.e. superior strategic performance. To evaluate operational performance, indicators like market share, market effectiveness, service quality, and service innovation were used. The operational performance of Airtel, Vodafone and Reliance was above industry average performance i.e. superior operational performance. To evaluate the financial performance of CMO's, indicators such as return on investment, return on equity, return on sales, shareholders fund, earnings per share, revenue, and sales growth were used.

5.3.6 RBV and SCA Model for Cellular Mobile Operators

In the measurement of RBV and SCA model for cellular mobile operators 86 scale items were used from the four constructs and secondary data was used regarding operational and financial performance of CMO firms. The strategic resources on: superior performance ($\beta = 0.711$); attributes of services ($\beta = 0.109$); and customer value ($\beta = 0.098$), attributes of services on: customer value ($\beta = 0.803$); and superior performance ($\beta = 0.175$), as well customer value on superior performance ($\beta = 0.738$) strengthened the relationships. All the hypotheses H1, H2, H3, H4, H5 and H6 were supported and statistically significant in the model ($p<0.001$). The research work was documented based on RBV theory that the strategic resources contribute significantly to the superior performance of firm. The study reveals that the strategic resources have a significant influence in developing attributes of services that drive customer value as well as in creation and delivery of value to customers. The attributes of services contribute significantly in the creation of customer value and for attainment of superior performance. The study reveals that customer value plays a significant role in superior performance.

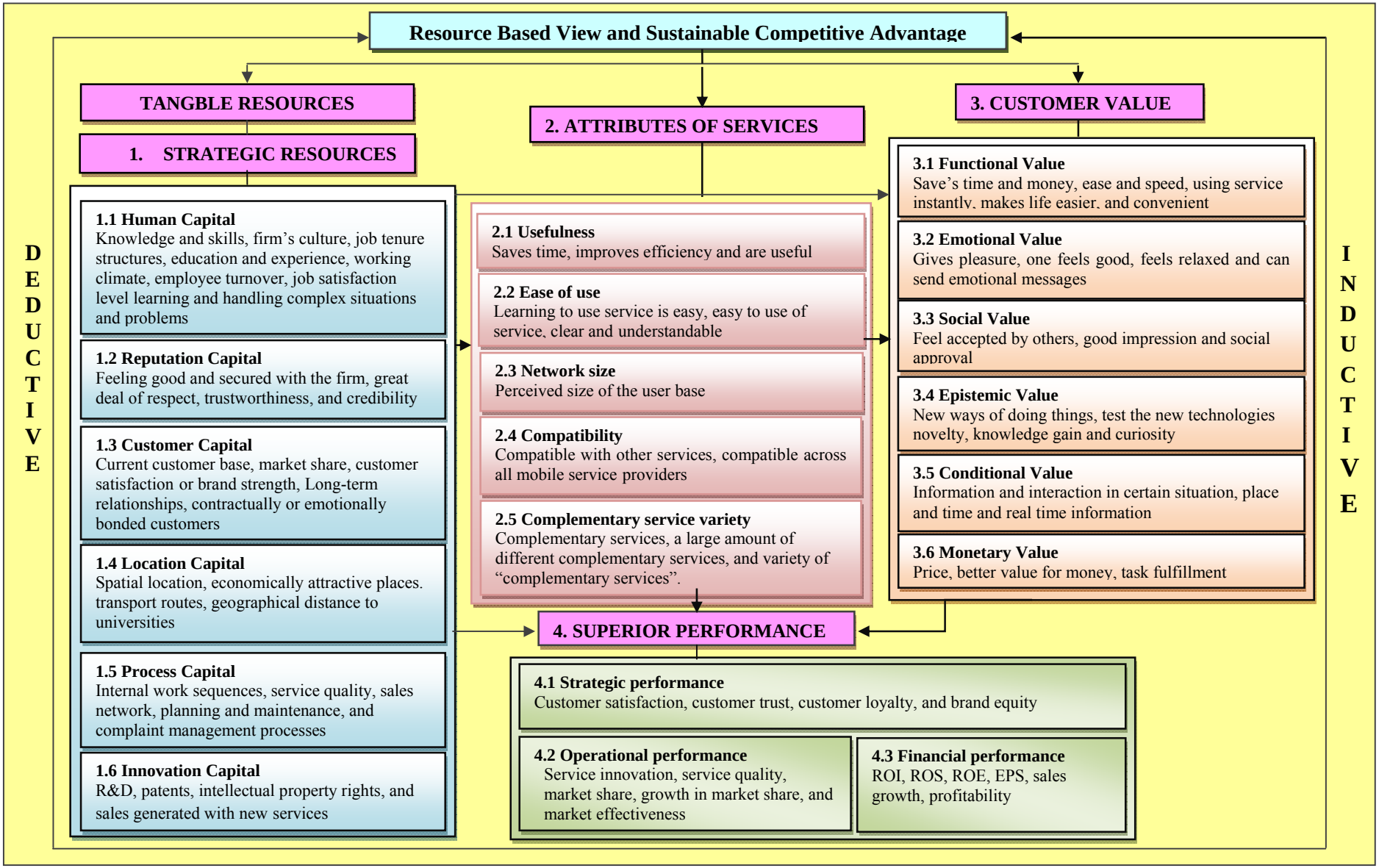
5.4 Recommendations

In the competitive environment achieving SCA, superior performance and thereby the organization goal is the ultimate responsibility of management. The results of the study indicated that strategic resources play a key role in achieving SCA and superior performance for an organization. The study suggested a framework for RBV and SCA as an outcome of deductive and inductive analysis, as a road map for cellular mobile service provider organization to achieve superior performance (Figure 5.1).

- Human capital should focus on employee based value drivers of a firm such as knowledge and skills, job tenure structures, employee turnover, job satisfaction levels, firm's culture and working climate. The management has to employ people

with relevant cellular mobile services education, experience, and sound domain knowledge. It should motivate people for learning and train them in new skills and provide knowledge. It should also create an environment in the firm with good culture and working climate, so that it improves job satisfaction level, employee stays longer, grows in the organization and reduce attrition rate.

- Reputation capital should focus on creating credibility, trustworthiness, and feel good factor, feeling of security and respect for firm among stakeholders. The management has to focus on developing brand image in the market so that it creates higher level of confidence in customers as well as employees. Should command greater respect from the market by creating good status in the industry. Should build a name in the mind of customers with the characteristics of credibility, trustworthiness and feel secure with the cellular mobile services that you offer.
- Customer capital should focus on improving market related variables such as customer base, market share, customer satisfaction, loyalty, and long term relationship with customers. Management has to make a firm commitment to build strong customer base, retain valued customers, and reduce customer switching, understand needs of customers, create satisfied customers, convert them as loyal customers, and build long term relationship with customers contractually or emotionally.



Source: Research data

Figure 5.1
Suggested Framework for RBV and SCA in CMO firm

- Location capital should focus on spatial location of company such as valuable transport routes, universities, colleges and economically highly attractive places. Management has to offer their services in valuable transport routes like national and state highways, train routes, and locate the firm services near universities, colleges with excellent graduates because they use innovative value added services, and offer services in economically highly attractive and human traffic areas like airport, shopping centers.

- Process capital should focus on the level of sophistication of internal work sequences such as sales network, planning and maintenance, and complaint management process. Management should focus on improving internal work sequences that contribute significantly in delivery of quality services, reduces queue in call centers. The management should also improve and make easy simple processes that are able to answer and resolve customer queries instantly, reduce number of complaints, and ensure improvement in number of complaints handled per hour.

- Innovation management should focus on R&D capitalization such as patents, intellectual property rights, and sales generated with new services. Management has to focus on investment in R&D, seeking innovative ideas, and accepting innovation in services and processes. It has to innovate continuously and introduce new services before competitors, and ensure innovative value added services are more attractive compared to competitors.

The attributes of basic and value added services drive customer value, the services should focus on the five attributes as follows

- Usefulness of service is functionality of content of the value added services characterized by accessibility of network any time, time saving, money saving, improving efficiency and reliability. The value added services designed should be

useful to the customer. The customers should be able to save time by using these services and hence perform activities more efficiency. While designing and developing services, service providers need to focus on these characteristics of usefulness so that they add value to subscribers and hence they use these services frequently.

- Value added services with ease of use characteristics like easy to learn, unambiguous, user friendly, and easy to operate, add value to customers and hence they prefer to use the services. Services designers should focus on developing user friendly, easy to learn and easy to use application. Interaction with service should be clear and understandable and the customer should be easily able to do what he wants to do. A service can be made easy to use by innovatively developing services that are integrated with multimedia and interactive voice response technology even for illiterates also.

- Services should be compatible with other services, compatible with other service providers and other applications. A service provider while designing and developing new value added services has to ensure services are compatible with already existing services. Compatibility of services will speed up adoption rate by customers due to fast diffusion of innovation and hence it adds to increase in customer perceived value.

- Characteristics of network size are installed base and network strength that creates the customer value for cellular mobile services. As the network size of a service provider increases, it can increase the number of subscribers and handle that capacity smoothly so that there is instant connection on dialing, increase in speed of operation and avoid congestion. Services should be useful to large number of customers so that more number of customers use services. Service provider has to focus on network base and strength. These characteristics add value to their subscribers so that they use services more.

- Many different and variety complimentary services should be offered. All services should be complimentary to each other. Customer perceived value for cellular mobile services is indirectly affected by the increased supply of complementary services. Service provider has to develop and offer multiple services which are complementary and are on the same technological platform or portal. This increases perceived value of customers more significantly.

- The study shows that complementary service variety has the strongest effect on customer value for cellular mobile services. The service providers need to focus on developing and offering number of distinctive complimentary services to add value to customer.

- The cellular mobile service provider firms should focus on designing and developing innovative value added services with the attributes like usefulness, ease of use, network size, compatibility, and complementary service variety that drive value to customers.

The value customers perceive during and after use of cellular mobile services drive superior performance. Hence the service provider should focus on six dimensions of customer value. Each of the six dimensions contribute to overall perception of customer value and leads to superior performance of the firm

- Functional value is characterized by timeliness, ease of use, efficiency and reliability. Services offered should create functional value such as time saving and money saving for customers. Services should be easy to use, to be used instantly wherever and whenever, and should make life easy. The applications offered through cellular services should be reliable and trustworthy.

- Emotional value is characterized by fun, pleasure, relaxation and feel good factors. The service providers should focus on developing services that provide entertainment to the customers which contribute significantly to customer value.

Services offered should create emotional value by giving pleasure to users and make them feel good. The services offered should make the user relaxed and there should be provision for exchange of emotions with others.

- Services offered should create social value by making customers feel accepted by others, create good impression and recognized in society, and facilitate social approval. Social value in cellular mobile services can be provided by developing services that provide social networking services, and as a branded service provider in the society.

- The epistemic value is characterized by curiosity, new way of doing things and adopting latest and advanced technologies in cellular mobile services. The service providers should focus on continuous innovation to develop new services using latest technology to introduce new services. Services offered should create epistemic value by creating curiosity and novelty in services, so that customers adapt quickly to do things in new ways and use new applications frequently so that it can contribute in creation of overall customer value and superior performance.

- Characteristics of conditional value are real time interaction and information, independent of place and time that creates the customer value. Services offered should create conditional value by delivering information or entertainment in a certain situation, at any time and any place and real time information and interaction.

- Services offered should create monetary value with acceptable price, customers should get value for money on the amount they spend. The cellular mobile services should offer services so that customers get better value for money compared to other channels. The innovative services should be such that it gives them monetary benefits.

- The study shows that monetary value has the strongest effect on superior performance in cellular mobile services. It signifies that customers look for value they get when they pay. The innovative services should be such that it gives them monetary benefits.

- The cellular mobile service provider firms should focus on developing value added services that create monetary value, functional value, social value, emotional value, conditional value, and epistemic value so that customers prefer to use those services and that contributes to superior performance of the firm.

- The cellular mobile service provider firms should focus on recognizing developing, accumulating and deploying strategic resources so that it creates distinctive and distinguished services that deliver better value so that it wins the trust of customers, creates satisfied and loyal customers, and customers prefer the services.

- A CMO firm to achieve SCA and superior performance should continuously monitor, measure, evaluate and develop strategic resources, offer new innovative and creative services and deliver superior customer value so that the customer uses services frequently and remains loyal.

- To evaluate the performance of the CMO firm, the management should consider measuring strategic performance, operational performance as well as financial performance. Strategic performance indicates a company's competitiveness, and market position. Operational performance focuses on key operational success factors, financial performance focuses on financial strength, and profitability of firm. By evaluating the three performances management can assess the past, present and future status of the firm.

The RBV and SCA framework provide a systematic structure for a cellular mobile service provider to achieve SCA and superior performance. By looking at the key areas

1- 4, the management can identify key issues for further exploration, observation, analysis and implementation.

The strategic resources ensure superior performance for cellular mobile service providers. The results of the study showed that there is a significant relationship between strategic resources and superior performance in cellular mobile service provider firms. The findings confirmed that strategic resources not only contribute in attaining superior performance but also act as a source of SCA because of causal ambiguity. The application of this model shows the attainment of SCA and superior performance in cellular mobile service provider firm.

5.5 Theoretical and Managerial Implications

The thesis has focused on strategic resources and its impact on superior performance through an integrated perspective from customer, executive and the organization. Findings of the study have enriched the literature of RBV, SCA, strategic resources, attributes of networked services, customer value dimensions and superior performance in cellular mobile service provider organizations. The thesis has attempted to provide a model of strategic resources and superior performance that can be effectively used in CMO firms. The theoretical model examined the influence of strategic resources on superior performance, attributes of services and customer value through inductive and deductive approaches. This combined approach strengthens the theory of RBV and offers a framework for strategic resources and superior performance as useful direction for research. Further, from the managerial perspective, this thesis highlights the importance of strategic resources to achieve superior performance, creation of new value added services and their contribution in creating and delivering customer value in CMO firms. Also, this study demonstrates the antecedent effect of attributes of services in the creation of better customer value in CMO firms. The results of the study give guidelines for managers about which attributes need to be emphasized in cellular mobile services to create better customer value. This study also shows how to measure the six dimensions of

customer value and its influence on superior performance. It guides the managers to focus on those customer value dimensions that lead to superior performance. Thus the results of the study can be used as a guiding tool by managers to identify, develop, protect and deploy strategic resources for CMO firms to achieve superior performance. This study uses strategic performance, operational performance and financial performance to evaluate overall performance which acts as a guiding tool for evaluation of superior performance for CMO firms.

5.6 Limitations of the Research

1. The study was limited to CMO firms, hence the findings are not generalizable to other industry.

2. The study was limited to six strategic resources: human capital, reputation capital, customer capital, location capital, process capital and innovation capital.

3. One limitation of this study is that the items used to measure are attributes of services and customer value which were not designed to measure any specific value added services. If this study is measured with attributes of services and consumer value dimensions related to specific value added service, more detailed information and insight for future value added services development might have been apparent.

4. The attributes of services affect customer value and customer value dimensions that impact superior performance are related to India, and it cannot be generalized.

5. The sample drawn from four circles was purposive and convenience-based. Although the respondents from these circles represent the population, the results may not be generalized to entire India. Because India is a country of vast and diverse population with rural and urban, young and old and with varied educational levels.

6. There is room for increasing the firm level data.

7. The strategic performance based on consumer data has been analysed, but the weighted factor method for assigning weights to different service attributes has not been used. The results would be all attributes are treated at the same level of importance. This could be a limitation while applying the results of the study.

8. CMO Industry is a growing market. The turbulence in the industry could be a limitation.

9. Attributes of services and customer value differs from region to region could be a limitation.

5.7 Directions for Future Research

1. The theoretical model can be further examined in other service organisations related to education, bank, insurance, and healthcare. Additional research is needed to extend the understanding of the constructs used in this thesis, using different ways to investigate them.

2. Future research could explore the role of individual strategic resources like human capital, reputation capital, customer capital, location capital, process capital and innovation capital and their effect on superior performance.

3. More detailed analysis of individual segments may be possible in future research to probe which attributes drive customer value and which dimensions of customer value lead to superior performance.

5.8 Final Word

The theoretical model examined the influence of strategic resources: human capital, reputation capital, customer capital, location capital, process capital and innovation capital on superior performance. The results of the study indicated a

significant relationship between strategic resources and superior performance. The findings developed a holistic RBV and SCA framework for CMO firm. This study could guide the management to identify, develop, protect and deploy strategic resources to develop distinctive value added services with attributes that drive better customer value and to achieve SCA and superior performance.

The competition in CMO industry is so intense that to survive and grow in the market, the service provider has to develop strategic competitiveness. Strategic competitiveness of an organization is defined as its ability to understand changing customer needs and wants design and develop services that create value to them resulting in superior performance and sustainable growth rate relative to competitors. The RBV and SCA framework identify strategic resources that are capable of understanding customer needs and wants to design and develop services with attributes of services that create distinct customer value resulting in superior performance for CMO firms. This study was conducted with significant representations of sample of respondents and generalization of findings was in agreement with the RBV theory.

Indian CMO market has a lot of potential, so the service providers need to grab the opportunity. Service providers have to implement strategies that exploit their internal strengths through responding to environmental opportunities. Firms seeking SCA must demonstrate the ability to alter and control resources in such a way that their full potential is realised. There is a strong need to identify, develop, protect and deploy strategic resources that contribute significantly towards achieving SCA and superior performance. Further, it is evident that the RBV and SCA framework is useful to understand attributes of services that drive customer value and dimensions of customer value, to design and develop distinctive services. This study can be the starting point of crafting and executing value creating strategy for CMO firms to attain SCA and superior performance. The future research work can be focused on identifying additional strategic resources for CMO firms that contribute to SCA and superior performance. Overall, this study is a motivation for cellular mobile service provider firms to identify strategic resources to

develop distinctive services that create better value to customers, to achieve SCA and superior performance.

BIBLIOGRAPHY

BIBLIOGRAPHY

Aaker, David A., (1989), "Managing Assets and Skills: The Key to a Sustainable Competitive Advantage", *California Management Review*, Vol. 31, No. 2, pp. 91–106.

Aaker, David A., (2004), "Brand Portfolio Strategy." New York: The Free Press.

Adler, P. S. and Shenbar, A., (1990), "Adapting Your Technological Base: The Organizational Challenge". *Sloan Management Review,* 25, pp. 25–37.

Ajzen, I., (1991), "The Theory of Planned Behavior", *Organizational Behavior and Human Decision Processes,* 50, pp. 179-211.

Alkemade, M., (2003), "The Cuddle Economy: The Role of Alliances and Partnerships in the Development of Mobile Data Services". Unpublished doctoral dissertation. Erasmus University, Rotterdam, The Netherlands

Amit, R, Schoemaker, P. J., (1993), "Strategic Assets and Organizational Rent", *Strategic Management Journal*, Vol. 14, pp. 33-46.

Anderson, J. C., Gerbing, D. W., (1988), "Structural Equation Modeling in practice: A Review and Recommended Two step Approach", *Psychological Bulletin,* 103(3), pp. 411-423.

Ang Siah Hwee, and Wight Ana-Maria, (2009), "Building Intangible Resources: The Stickiness of Reputation", *Corporate Reputation Review*, Vol. 12, No.1, pp 21-32.

ASSOCHAM Financial Pulse Study, (2010) – "Emerging Landscape in Mobile VAS Industry", India.

Babbie, E., (1983), "The Practice of Social Research". Belmont, CA: Wadsworth Publishing Company.

Babin, B. J., Darden, W. R. and Griffin, M., (1994), "Work and/or fun: Measuring Hedonic and Utilitarian Shopping Value", *Journal of Consumer Research*, Vol. 20 No. 4, pp. 644-56.

Barczak, G., (1995), "New Product Strategy, Structure, Process, and Performance in the Telecommunications Industry". *Journal of Product Innovation Management* 12(3):224–234.

Barney J. B, Mackey T., (2005). "Testing Resource-Based Theory". *Research Methodology in Strategy and Management.* (Vol. 2), Ketchen DJ, Bergh DD (eds).Elsevier: San Diego, CA; 1–13.

Barney J. B., Arikan A., (2001), "Resource-Based View: Origins and Implications." In *The Blackwell Handbook of Strategic Management*, Hitt M, Freeman R, Harrison J (eds). Blackwell: Malden, MA; 124–188.

Barney, J. B. and Hesterly, W., (2008), "Strategic Management and Competitive Advantage: Concepts and Cases." Pearson Education, India.

Barney, J. B., (1991), "Firm Resources and Sustained Competitive Advantage", *Journal of Management*, Vol.17, pp. 99-120.

Barney, J. B., (1995), "Looking Inside for Competitive Advantage", *Academy of Management Executive,* Vol. 9, No. 4, pp. 49-61.

Barney, J. B., Wright, M., & Ketchen, D. J., Jr., (2001), "The Resource-Based View of the Firm: Ten Years after 1991". *Journal of Management*, 27: 625-641.

Basu, A., Mazumdar, T. and Raj, S. P., (2003), "Indirect Network Effects on Product Attributes", *Marketing Science*, Vol. 22, pp. 209-21.

Belk, R. W., (1974), "An Exploratory Assessment of Situational Effect in Buyer Behavior". *Journal of Marketing Research*, Vol. 11, pp. 156–163.

Benbasat, I., Glodenstein, D. K., and Mead, M., (1987), "The Case Research Strategy in Studies of Information Systems", *MIS Quarterly*, Vol. 11, No. 3, pp. 369-385.

Berry, L. L., and Parasuraman, A., (1991), "Marketing Services: Competing through Quality", Free Press, New York.

Bettis, R. A. and Hitt, M. A., (1995), "The New Competitive Landscape". *Strategic Management Journal,* 16:7–19 (Special Summer Issue).

Bharadwaj, S., Varadarajan, P. and Fahy, J., (1993), "Sustainable Competitive Advantage in Services Industries: A Conceptual Model and Research Propositions" *Journal of Marketing*, Vol.57, pp. 83-99.

Bible, L., Kerr, S. and Zanini, M., (2006), "The Balanced Scorecard: Here and back", *Management Accounting Quarterly*, Vol. 7, No. 4, pp. 18-23.

Black, J. and Boal, K., (1994), "Strategic Resources: Traits, Configurations and Paths to Sustainable Competitive Advantage", *Strategic Management Journal*, 15, pp. 131-148

Bollen, K. A., (1989). "Structural Equations with Latent Variables". New York: Wiley.

Bolton, R. N. & Drew, J. H., (1991), "A Multistage Model of Customers' Assessments of Service Quality and Value". *Journal of Consumer Research,* Vol.17, No. 4, pp. 375-384.

Boslaugh Sarah, (2007), "Secondary Data Sources for Public Health: A Practical Guide." Cambridge University Press Cambridge.

Boulding, W., Kalram A., Stalin, R. and Zeithaml, V. A., (1993), "A Dynamic Process Model of Service Quality: from Expectation of Behavioural Intentions", *Journal of Marketing Research*, 30 (February), pp.7-27.

Bourne, M., (2005), "Reflections on the Role, Use and Benefits of Corporate Performance Measurement in the UK", *Measuring Business Excellence*, Vol. 9, No. 3, pp. 36-40.

Bowen, J. and Shoemaker, S., (1998), "Loyalty: A Strategic Commitment", *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 2, February, pp. 12-25.

Bridgewater, S., (2001), "Virgin Direct 2000: Market Oriented Personal Financial Services", in Jobber, D., (Ed.,) Principles and Practice of Marketing, 3rd ed., Mc.Graw – Hill, Maidenhead.

Bryman, A. and Cramer, D., (1996), "Quantitative Data Analysis with SPSS for Windows: a guide for social scientists." London: Routledge.

Burden Rebecca and Proctor Tony, (2000), "Creating a Sustainable Competitive Advantage through Training", *Team Performance Management: An International Journal,* Vol. 6, and No.5/6. pp. 90-96.

Burgelman, R., Maidique M. and Wheelwright S., (1996), "Strategic Management of Technology and Innovation." Home woods, IL, Irwin.

Byrne, B. M. (1989), "A Primer of LISREL: Basic Applications and Programming for Confirmatory Analytic Models", New York: Spring-Verlag.

Carman, J. M., (1990), "Consumer Perceptions of Service Quality: An Assessment of SERVQUAL Dimensions", *Journal of Retailing*, 66 (spring), pp.33-55.

Carmeli Abraham and Cohen Aaron, (2001), "Organizational Reputation as a Source of Sustainable Competitive Advantage and Above-Normal Performance: An Empirical Test among Local Authorities in Israel", *Public Administration & Management: An Interactive Journal,* Vol.6, No.4, pp. 122-165.

Caruana, A., Money, A.H. and Berthon, P.R., (2000), "Service Quality and Satisfaction – The Moderating Role of Value", *European Journal of Marketing*, Vol. 34 Nos 11/12, pp. 1338-54.

Cater Tomaz and Cater Barbara, (2009), "(In)Tangible Resources As Antecedents of A Company's Competitive Advantage and Performance", *Journal for East European Management Studies,* Vol. 2, pp.186-209.

Cellular Operators Association of India, (2008), "Annual Report - 2008", India.

Chaharbaghi, K. and Lynch, R., (1999), "Sustainable Competitive Advantage: Towards A Dynamic Resource-Based Strategy", *Management Decision*, Vol. 37 No. 1, pp. 45-50.

Chamberlin, E. H., (1935), "The Theory of Monopolistic Competition", Harvard University Press, Cambridge, Mass.

Chang Hong-Sheng, (2008), "Increasing Hotel Customer Value through Service Quality Cues in Taiwan", *The Service Industries Journal,* Vol. 28, No. 1, pp. 73–84.

Chapman, R. and Hyland, P., (2004), "Complexity and Learning Behaviours in Product Innovation". *Technovation* 24:553–561.

Chiou, J. S., Droge, C. and Hanvanich, S., (2002), "Does Customer Knowledge Affect How Loyalty Is Formed", *Journal of Service Research*, Vol. 5, No. 2, pp.113-125.

Clarke A. M., (1998), "The Qualitative-Quantitative Debate: Moving From Positivism and Confrontation to Post-Positivism and Reconciliation". *Journal of Advanced Nursing*. 27, 6, 1242-1249.

Clulow Val, Carol Barry and Julie Gerstman, (2007), "The Resource-Based View and Value: The Customer-Based View of the Firm" *Journal of European Industrial Training,* Vol. 31, No. 1, pp. 19-35.

Clulow, V., Gerstman, J. and Barry, C., (2003), "The Resource-Based View and Sustainable Competitive Advantage: The Case of a Financial Services Firm", *Journal of European Industrial Training,* Vol. 7, No. 5, pp. 220-252.

COAI - PwC Analysis, (2011), "Indian Mobile Services Sector-Struggling to Maintain Sustainable Growth", India.

COAI, (2008), "Annual Report - 2008", India.

Cohen, Paul. R. (1995), "Empirical Methods for Artificial Intelligence". MIT Press, Boston.

Coleman, J. S., (1958). "Relational Analysis: The Study of Social Organizations with Survey Methods." *Human Organization*, 17(4): 28-36.

Colgate Mark, (1998) "Creating Sustainable Competitive Advantage through Marketing Information System Technology: A Triangulation Methodology within the Banking Industry", *International Journal of Bank Marketing*, Vol. 16, No.2 pp. 80–89.

Collis, D. J., & Montgomery C. A., (2008), "Best of Harvard Business Review". *Harvard Business Review,* July-August, 140..

Collis, D. J., (1994), "How Valuable are Organizational Capabilities", *Strategic Management Journal,* Winter Special Issue 15: 143-152.

Comte, A., (1971), "The Positive Philosophy. In: Thompson K and Tunstall J (Eds) *Sociological Perspectives"*. Harmondworth, Penguin.

Cooper, D. R. and Schindler, P. S., (2001), "Business Research Methods", 7th Edition, New York, Harper and Row.

Coyne, K. P., (1986), "Sustainable Competitive Advantage – What It Is, What It Isn't". *Business Horizons*, 29, pp. 54-61.

Cravens, D. W., Holland, C. W., Lamb, C. W., & Moncrieff, W. C., (1988), "Marketing's Role in Product and Service Quality". *Industrial Marketing Management,* Vol.17, No. 4, pp. 285-304.

Creswell, J. W., (1994), "Research Design: Qualitative and Quantitative Approaches": Thousand Oaks: Sage Publications.

Cronbach, L. J., (1990), “Essentials of Psychological Testing”. New York: HarperCollins.

Cronin, J. J., Brady, M. K. and Hult, G. T. M., (2000), “Assessing the Effects of Quality, Value, and Customer Satisfaction on Consumer Behavioral Intentions in Service Environments”, *Journal of Retailing*, Vol. 76 No. 2, pp. 193-218.

Crook, T. R., Ketchen Jr., D. J., Combs, J. G., & Todd, S. Y., (2008), “Strategic resources and performance: A meta-analysis”. Strategic Management Journal, 29(11): 1141-1154.

Dawes John, (2008), "Do Data Characteristics Change according to the Number of Scale Points Used? An experiment using 5-point, 7-point and 10-point scales". *International Journal of Market Research*, Vol. 50, No. 1, pp. 61- 77.

Day, G. S. (1990), “Market Driven Strategy: Processes for Creating Value”, *Free Press,* New York, NY.

Day, G. S. (1994), “The Capabilities of Market-Driven Organizations”, *Journal of Marketing,* Vol. 58, No. 4, pp. 37–52.

Day. G. S., (1969), “A Two-Dimensional Concept of Brand Loyalty”, *Journal of Advertising Research,* 9(5), pp.29-36.

Delgado-Ballester, E., Munuera-Aleman J. L. and Yagiie-Guillen M. J. (2003), “Development and Validation of a Brand Trust Scale”. *International Journal of Market Research,* 45(1): 41.

Dick, A.S., and Basu, K., (1994), “Customer Loyalty: Toward an Integrated Conceptual Frame Work”, *Journal of the Academy of Marketing Science*, Vol.22, pp.99-113.

Dierickx, I. and Cool. K., (1989), “Asset Stock Accumulation and Sustainability of Competitive Advantage”, *Management Science,* Vol. 35. pp. 1504-11.

Dillon, W. R., Madden, T. J. & Firtle, N. H., (1993), “Essentials of Marketing Research”. Boston: Irwin.

Dodds, W. B., Monroe, K. B. and Grewal, D. Jr., (1991), “Effects of Price Brand and Store Information on Buyers’ Product Evaluations”, *Journal of Marketing Research,* Vol. 28, No. 3, pp. 307-19.

Dodourova Mariana, (2003), “Industry Dynamics and Strategic Positioning in The Wireless Telecommunications Industry: The Case of Vodafone Group plc”, *Management Decision*, Vol.41, No. 9, pp. 859-70.

Dowling, G. R., (2001), “Creating Corporate Reputations: Identity, Image, and Performance”, Oxford University Press, New York, USA.

Doyle, P., (1989), “Building Successful Brands: The Strategic Objectives”, *Journal of Marketing Management,* Vol. 5, No. 1, pp. 77-95

Dube and Guy, (2003), “Rigor in Information System Positivist Case Research: Current Practices, Trends, and Recommendation”, *MIS Quarterly,* Vol. 27, No. 4, pp. 597-635.

Duman T. and Mattila A., (2005), “The Role of Affective Factors on Perceived Cruise Vacation Value”. *Tourism Management,* Vol. 26, pp. 311–323.

Dwyer, F. R., and Tanner, J. F., (2002), “Business Marketing: Connecting Strategies”, Relationship and Learning, McGraw-Hill, Boston, MA.

Eisenhardt, K. M. and Martin, J. A., (2000), “Dynamic Capabilities: What are they?” *Strategic Management Journal*, 21, pp. 1105-1121.

Ernst & Young and Confederation of Indian Industry, (2008), "India 2012: Telecom Growth Continues", India.

Fahy, J., (2000), “The Resource-Based View of the Firm: Some Stumbling-Blocks on the Road to Understanding Sustainable Competitive Advantage”, *Journal of European Industrial Training,* Vol. 24, No. 2, pp. 94-104.

Falkenberg, A. W., (1996), “Marketing and the Wealth of Firms”. *Journal of Macro Marketing,* 16(4), pp. 4–24.

Fielding, N. (2004), “Getting The Most From Archived Qualitative Data: Epistemological, Practical And Professional Obstacles”. *International Journal of Social Research Methodology,* 7 (1), 97-104.

Fishbein, M. and Ajzen, I., (1975), “Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research, Reading”, MA: Addison-Wesley.

Fisher, A., (2001), “Winning the Battle for Customers”, *Journal of Financial Services Marketing,* Vol. 6, No. 2, pp. 77-83.

Fombrun Charles J (1996), “Reputation: Realizing Value from the Corporate Image”. Boston, *Harvard Business School Press*.

Foon Low Swee, (2009), “Capabilities Differentials as Sources of Sustainable Competitive Advantage”, *International Journal of Business and Society*, Vol. 10, No. 2, pp. 20-38.

Foss Nicolai, (1998), “The Resource-Based Perspective: An Assessment and Diagnosis of Problems”, *Scandinavian Journal of Management,* Vol. 14, No. 3, 133-149.

Gale, B. T. (1994), “Managing Customer Value”, The Free Press, New York, NY.

Gatignon, H. and Xuereb, J. M., (1997), “Strategic Orientation of the Firm and New Product Performance”, *Journal of Marketing Research*, Vol. 34, No. 1, pp.77–79.

Gerpott Torsten J., Thomas Sandra E. and Hoffmann Alexander P., (2008), “Intangible Asset Disclosure in the Telecommunications Industry”, *Journal of Intellectual Capital*, Vol. 9, No. 1, pp. 37-61

Gerpott, T. J., Rams, W., and Schindler, A., (2001), “Customer Retention, Loyalty and Satisfaction in the German Mobile Cellular Telecommunication Market”, *Telecommunication Policy*, Vol.25, pp.249-269.

Geyskens, I., Steenkanip J. B. E. M., Scheer L. K. and Kumar N., (1996), "The Effects of Trust and Interdependence on Relationship Commitment: A Trans-Atlantic Study", *International Journal of Research in Marketing*, Vol. 13, No. 4, pp. 303-317.

Glock, C.Y., (1967), “Survey Research in the Social Sciences”. New York, NY: Russell Sage Foundation..

Godfrey, P. C., Hill CWL. (1995). “The Problem of Unob-Servables in Strategic Management Research.” *Strategic Management Journal*, 16(7): 519–533.

Goodman, L. A., (1961). "Snowball Sampling". *Annals of Mathematical Statistics,* 32:148–170.

Grant, R. M., (1991), “The Resource Based Theory of Competitive Advantage: Implications for Strategy Formulation”, *California Management Review*, Vol. 33, No.3, pp. 114-135.

Grant, R. M., (1998), "Contemporary Strategy Analysis: Concepts, Techniques, Applications for Strategy Formulation", Malden: Blackwell.

Gummenson, E., (1991), "Qualitative methods in Management Research", Sage Publication, California.

Gupta, S., Jain D. C. and Sawhney, M. B., (1999), "Modeling the Evolution of Markets with Indirect Network Externalities: An Application to Digital Television", *Marketing Science,* Vol. 18, pp. 396-416.

Habbershon, T. G. and M. L., Williams, (1999), "A Resource – Based Framework for Assessing the Strategic Advantages of Family Firms". *Family Business Review*, Vol. 12, No. 1, pp. 1-21.

Hair, J. F., Anderson, R. E., Tatham, R. L. and Black, W. C., (1998), "Multivariate Data Analysis", 5th ed., Prentice-Hall Inc., Upper Saddle River.

Hall, R., (1992), "The Strategic Analysis of Intangible Resources", *Strategic Management Journal*, 13, pp. 135 – 144.

Hall, R., (1993), "A Framework for Linking Intangible Resources and Capabilities to Sustainable Competitive Advantage", *Strategic Management Journal,* Vol. 14, pp. 607-18.

Hamel, G. and Prahalad, C. K., (1994), "Competing for the Future", Harvard Business School Press, Boston, MA.

Han, J. K., Kim, N. and Srivastava, R. K. (1998), "Market Orientation and Organizational Performance: Is Innovation a Missing Link?" *Journal of Marketing,* Vol. 62, pp. 30-45.

Hartley Jean, (2004), "Case Study Research. In Catherine Cassell & Gillian Symon (Eds.), Essential Guide to Qualitative Methods in Organizational Research" (pp.323-333). London: Sage.

Heaton, J., (2004), "*Reworking Qualitative Data",* London: Sage Publications Limited.

Hee Shin Dong and Yong Kim Won, (2007), "Forecasting Customer Switching Intention in Mobile Service: An Exploratory Study of Predictive Factors in Mobile Number Portability", *Technological Forecasting and Social Change,* Vol. 75(6), pp. 854–874.

Heinonen, K., (2004), "Reconceptualizing Customer Perceived Value: The Value of Time and Place", *Managing Service Quality*, Vol. 14 No. 2/3, pp. 205-15.

Helfat, C. and Peteraf, M. A., (2003), "The Dynamic Resources-Based View: Capabilities Lifecycle". *Strategic Management Journal* 24(10): 997–1012.

Henri, J. F., (2006), "Are Your Performance Measurement Systems Truly Performing?" *CMA Management*, Vol. 80, No. 7, pp. 31-35.

Heywood, C. and Kenley, R., (2008), "The Sustainable Competitive Advantage Model for Corporate Real Estate", *Journal of Corporate Real Estate*, Vol. 10 No. 2, pp. 85-109.

Higgins, K. T., (1998), "The Value of Customer Value Analysis", *Marketing Research,* Vol. 10, Fall, pp. 39- 44.

Hinds, P. S., Vogel, R. J., & Clarke-Steffen, L. (1997), "The Possibilities and Pitfalls of Doing a Secondary Analysis of a Qualitative Data Set". *Qualitative Health Research,* 7 (3), 408-424.

Hirshliefer, J. (1980), "Price Theory and Applications", 2nd Ed. Englewood Cliffs, NJ, Prentice-Hall.

Hitt M. A., Bierman, L., Shimizu, K., and Kochhar R., (2001), "Direct and Moderating Effects of Human Capital on Strategy and Performance in Professional Service Firms: A Resource Based Perspective", *Academy of Management Journal*, 44, pp. 13–28.

Hitt, M. A, Keats, B. W. and DeMarie, S. M., (1998), "Navigating in the New Competitive Landscape: Building Strategic Flexibility and Competitive Advantage in the 21st Century." *Academy of Management Executive,* 12(4), 22-42.

Hitt, M. A. and Ireland, R. D. (1985), "Corporate Distinctive Competence, Strategy, Industry and Performance", *Strategic Management Journal*, 6, 273-293.

Hitt, M. A., Gimeno, J., and Hoskisson, R. E. (1998), "Current and Future Research Methods in Strategic Management". Organizational Research Methods, 1:6–44.

Hitt. A. Michael, Ireland Duane, and Hoskisson E. Robert, (2006), "Strategic Management Competitiveness and Globalization: Concepts and Cases", Sixth edition, Thomson, India.

Hoffman, K., Parejo, M., Bessant, J., and Perren, L. (1998), "Small Firms, R&D, Technology and Innovation in the UK: A Literature Review". *Technovation* Vol.18, No. 1, pp. 39–55.

Holehonnur Abhijith, Mary A. Raymond, Christopher D. Hopkins and Amanda C. Fine, (2009), "Examining the Customer Equity Framework from A Consumer Perspective", *Journal of Brand Management*, Vol. 17, 3, 165–180.

Hoopes, D. G., Madsen, T. L., and Walker G., (2003), "Guest editors' Introduction to the Special Issue: "Why is there a resource-based view? Toward a theory of competitive heterogeneity". *Strategic Management Journal*, October Special Issue 24: pp. 889–902.

Horovitz, J. (2000), "The Seven Secrets of Service Strategy", *Financial Times*-Prentice Hall, Harlow.

Hu, Yao-Su, (1995), "Theinternational Transferability of the Firm's Advantages." *California Management Review*. 37 (Summer): 73-88.

Hughes, J. (1994) "The Philosophy of Social Research." Essex, Longman.

Hussi, T. (2004), "Reconfiguring Knowledge Management – Combining Intellectual Capital, Intangible Assets and Knowledge Creation", *Journal of Knowledge Management,* Vol. 8, No.2, pp.36-52.

Itami, H. and Roehl, T. W., (1987), "Mobilizing Invisible Assets", *Harvard University Press*, Cambridge, MA.

Jacobson, R, (1988), "The Persistence of Abnormal Returns", *Strategic Management Journal*, 9, pp. 415-430

Javalgi Rajshekhar G. Radulovich Lori P. Pendleton Glenna and Scherer Robert F., (2005), "Sustainable Competitive Advantage of Internet Firms A Strategic Framework and Implications for Global Marketers", *International Marketing Review*, Vol. 22 No. 6, pp. 658-672.

Johne, A., (1999), "Using Market Vision to Steer Innovation". *Technovation* 19(4):203–207.

Johnson C., William and Sirikit Anuchit, (2002), "Service Quality in Thai Telecommunication Industry: A Tool for Achieving Sustainable Competitive Advantage", *Management Decision*, Vol. 40, No.7, pp. 693-701.

Johnson, M. D. & Ettlie, J. E. (2001), "Technology, Customization, and Reliability", *Journal of Quality Management*, 6(2): 193-210.

Johnson, M. D., and Fornell, C., (1991), "A Frame Work for Comparing Customers Satisfaction across Individuals and Product Categories", *Journal of Economic Psychology*, 12(2), pp.261-286.

Kamoche, K. (1999), "Strategic Human Resource Management within A Resource-Capability View of the Firm", Blackwell Publisher Ltd., Oxford.

Katz, M. and Shapiro, C. (1986), "Technology Adoption in the Presence of Network Externalities", *Journal of Political Economy*, Vol. 94, pp. 822-41.

Kay, John, 1993. "The Structure of Strategy." *Business Strategy Review*. 4: 17-37.

Kazdin, A. E. (2003). "Methodology: What it is and why it is so important". In A. E. Kazdin (Ed.),

Kazlauskaite, R., & Buciuniene, I., (2008), "The Role of Human Resources and Their Management in The Establishment Of Sustainable Competitive Advantage". *Engineering Economics,* 5 (60), 78-84.

Keller, Kevin Lane, (1993), "Conceptualizing, Measuring, and Managing Customer-Based Brand Equity," *Journal of Marketing*, 57 (January), 1–22.

Keller, Kevin Lane, (2002), "Branding and Brand Equity", Cambridge, MA: Marketing Science Institute.

Kerin, R. A., Jaine, A., Simmons, H. C., Cox, E. L. and Howard, D. J., (1992), "Store Shopping Experience and Consumer Price-Quality-Value Perceptions", *Journal of Retailing,* Vol. 68, No. 4, p. 376.

Kerlinger, F. N. (1973). "Foundations of Behavioral Research. Educational and Psychological Inquiry". New York: Holt, Rinehart and Winston.

Ketchen, D. J. Jr, Hult G. T. M., and Slater S. F., (2007), "Toward Greater Understanding of Market Orientation and Resource-Based View". *Strategic Management Journal,* Vol. 28 No. 9, pp. 961–964.

Kettinger, W., V. Grover, S. Guha and A. Segar, (1994), "Strategic Information Systems Revisited: A Study in Sustainability and Performance", *MIS Quarterly* March, 31–58.

Khalifa Azaddin Salem, (2004), "Customer Value: A Review of Recent Literature and an Integrative Configuration", *Management Decision*, Vol. 42. No. 5, pp. 645-666.

Khandekar Aradhana, and Sharma Anuradha, (2005), "Managing Human Resource Capabilities for Sustainable Competitive Advantage" *Education + Training* Vol. 47 No. 8/9, pp. 628-639.

Kim, M. Park, M and Jeong, D., (2004), "The Effects of Customer Satisfaction and Switching Barrier on Customer Loyalty in Korean Mobile Telecommunication Services", *Telecommunications Policy*, 28(2), pp.145-159.

Kish, J., (2000), "Before Your Customers Leave", Bank Marketing, 32(2), p.30.

Kotler, P., (2003), "Marketing Management", 11th edition, Upper Saddle River, N.J: Prentice Hall.

Lado, A. A., and Wilson, M. C., (1994), "Human Resource Systems and Sustained Competitive Advantage: A Competency-Based Perspective". *Academy of Management Review*, 19, pp. 699-27.

Lado, A. Augustine, Boyd G. Nancy, Wright Peter, (1992), "A Competency Based Model of Sustainable Competitive Advantage: Toward A Conceptual Integration", *Journal of Management*, Vol. 18, No. 1, pp. 77-91

Lane, P. J. and Lubatkin, M., (1998), "Relative Absorptive Capacity and Inter-Organizational Learning", *Strategic Management Journal*, 19, pp. 461–477.

Lee Y., Kim J., Lee I., and Kim H., (2002), "A Cross-Cultural Study on the Value Structure of Mobile Internet Usage: Comparison between Korea and Japan". *Journal of Electronic Commerce Research*, Vol.3, No. 4, 227-239.

Lee, Y. and O'Connor, G. C., (2003), "The Impact of Communication Strategy on Launching New Products: The Moderating Role of Product Innovativeness". *Journal of Product Innovation Management,* 4-21.

Lewis A. Michael, (2000), "Lean Production and Sustainable Competitive Advantage", *International Journal of Operations & Production Management*, Vol. 20, No. 8, pp. 959-978.

Lippman, S. A. and Rumelt, R. P. (1982), "Uncertain Imitability: An Analysis of Interfirm Differences in Efficiency under Competition". *The Bell Journal of Economics*, 13, pp. 418-38.

Lockett, A., Thompson S. and Morgenstern U., (2009), "The Developments of the Resource Based View of the Firm: A Critical Appraisal", *International Journal of Management Review,* Vol. 11 No. 1, pp. 9-28.

Lopez A. Vicente, (2007), "An Alternative Methodology for Testing a Resource Based View Linking Intangible Resources and Long Term Performance", *The Irish Journal of Management,* pp. 49-66.

Mahoney J. T. and Pandain Jr., (1992), "The Resource Based View within the Conversation of Strategic Management", *Strategic Management Journal*, Vol. 13, No. 5, pp. 363-80.

Malhotra, N. K., Agarwal, J. and Peterson, M., (1996), "Methodological Issues in Cross-Cultural Marketing Research: A State-Of-The-Art Review". *International Marketing Review,* 13(5): 7-43.

Markus, M. L. (1989), "Case Selection in a Discriminatory Case Study in J. L. Cash and P. R. Lawrence (eds.), The Information Systems Research Challenge: Qualitative Research Methods" (Volume 1), *Harvard Business School Press,* Boston, pp. 20-26.

Marr B, Schiuma G. and Neely, A., (2004), "The Dynamics of Value Creation: Mapping Your Intellectual Performance Drivers", *Journal of Intellectual Capital*, Vol. 5, No. 2, pp. 312-325.

Marrelli F. Anne, (2007), "Collecting Data through Case Studies: Performance Improvement" Vol. 46, No. 7.

Mata, J. Francisco, Fuerst L. William, Barney, B. Jay, (1995), "Information Technology and Sustainable Competitive Advantage: A resource based Analysis", *MIS Quarterly,* pp. 487-505.

Mazzarol Tim, Geoffrey Norman Soutar, (1999), "Sustainable competitive advantage for educational institutions: a suggested model" *The International Journal of Educational Management,* Vol.13, No.6 pp. 287-300

McDougall, G. H. G. and Levesque, T., (2000), "Customer Satisfaction with Services: Putting Perceived Value into the Equation", *Journal of Services Marketing,* Vol. 14 No. 4/5, pp. 392-410.

McGrath, R. G, Tsai, M. H., Venkataraman, S. and Macmillan, I. C., (1996), "Innovation, Competitive Advantage and Rent: A model and Test", *Management Science*, 42: pp. 389-403.

McWilliams, A., and Smart, D.L., (1995) "The Resource-Based View of the Firm: Does it Go Far Enough in Shedding the S-C-P Paradigm?" *Journal of Management Inquiry,* 4, 309-316.

Michalisin, M. D., Kline, D. M. and Smith, R. F., (2000), "Intangible Strategic Assets and Firm Performance: A Multi Industry Study of the Resource Based View", *Journal of Business Strategy*, Vol. 17, No. 2, pp. 91-117.

Michalisin, M. D., Smith, R. D., and Kline, D. M., (1997), "In Search of Strategic Assets", the International Journal of Organizational Analysis, Vol. 5 No. 4, pp. 360-87.

Miles, M. B. and Huberman, A. M. (1994), Qualitative data analysis: An expanded sourcebook, 2nd Ed. Thousand Oaks: Sage.

Miller, D., & Shamsie, J., (1996), "The Resource-Based View of the Firm in Two Environments: The Hollywood Film Studios from 1936 to 1965". Academy of Management Journal, 39(3), 519-543.

Monge, C. A. M., Rao, S. S., Gonzalez, M. E., and Sohal, A. S., (2006), "Performance Measurement of AMT: A cross sectional study", Benchmarking: An International Journal, Vol.13. pp. 135-146.

Moore, G. C., and Benbasat, I., (1991), "Development of an Instrument to Measure the Perceptions of Adopting an Information Technology Innovation", *Information Systems Research,* Vol. 2, pp. 192-223.

Moorman, C., Zaltman, G. and Deshpande R., (1992). "Relationships Between Providers and Users of Market Research: The Dynamics of Trust within and Between Organizations", *Journal of Marketing Research*, 29(3): 314-328.

Morgan, G., and Smircich, (1980), "The Case for Qualitative Research", *Academy of Management Review*, Vol. 5, No. 4, pp. 491-500.

Moses Acquaah, (2003), "Corporate Management, Industry Competition and the Sustainability of Firm Abnormal Profitability", *Journal of Management and Governance* 7: pp. 57–85.

Mueller Daniel, J., (1986), "Measuring Social Attitudes: A Handbook for Researchers and Practitioners", New York: Teachers College Press.

Narver J. C. and Slater S. F., (1990), "The Effect of A Market Orientation on Business Profitability", *Journal of Marketing*, Vol. 54. No. 4, pp. 20-35.

Newbert, L. Scott, (2007), "Empirical Research on the Resource Based View of the Firm: An Assessment and Suggestions for Future Research", *Strategic Management Journal,* Vol. 28, pp. 121- 146.

Newbert, L. Scott, (2008), "Value, Rareness, Competitive Advantage, and Performance: A Conceptual-Level Empirical Investigation of the Resource-Based View of the Firm", *Strategic Management Journal*, Vol., 29, pp. 745–768.

Nunnally, J. C., (1978), "Psychometric Theory". (2nd ed.). New York: McGraw-Hill.

Oliver, R. L., (1980), "A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions," *Journal of Marketing Research*, 17(4), pp.460-469.

Oliver, R. L., (1999), "Whence Consumer Loyalty?" *Journal of Marketing*, 63, pp. 33-44.

Ordonez de Pablos, P., (2005), "Western and Eastern Views on Social Networks", *The Learning Organization*, Vol.12, No. 5, pp. 436-456.

Parasuraman, A, Zeithalm, V. A., and Berry, L. L., (1988), "SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perception of Service", *Journal of Retailing,* 64 (spring), pp.12-40.

Parasuraman, A., & Grewal, D., (2000), "Serving Customers and Consumers Effectively in the Twenty-First Century: A Conceptual Framework and Overview". *Journal of the Academy of Marketing Science*, Vol.28, No. 1, pp. 9-16.

Parasuraman, A., Zeithaml V. A. and Berry, L. L., (1994), "Measurement of Expectations as a Comparison Standard in Measuring Service Quality: Implications for Future Research", *Journal of Marketing*, Vol.58, pp.111-124.

Pedersen, P. E., and Nysveen, H., (2003), "Usefulness and Self-Expressiveness: Extending Tam to Explain the Adoption of a Mobile Parking Service", paper presented at the 16th Electronic Commerce Conference, Bled, June 9-11.

Pedersen, P. E., Nysveen, H. and Thorbjørnsen, H., (2003), "Identity Expression in the Adoption of Mobile Services: The Case of Multimedia Messaging Services". SNF Working Paper No. 26/03. Samfunns og Næringslivs-Forskning AS (SNF), Bergen.

Penrose Edith, (1959), "The Theory of Growth of the Firm", Oxford: Blackwell.

Perera H.S.C. and Costa W.K.R., (2008), "Analytic Hierarchy Process for Selection of ERP Software for Manufacturing Companies" VISION—*The Journal of Business Perspective,* Vol. 12, No.4, pp. 1-11.

Peteraf, M. (1993), "The Cornerstones of Competitive Advantage: A Resource Based View", *Strategic Management Journal*, Vol. 14, pp. 179-192

Peteraf, M. A., Barney J. B., (2003), "Unraveling the Resource Based Tangle". *Managerial and Decision Economics* Vol. 24, No. 4, pp. 309–323.

Pfeffer Jeffrey, (2005), "Producing Sustainable Competitive Advantage through the Effective Management of People", *Academy of Management Executive*, Vol.19, No.4. pp. 95-106.

Pihlström Minna and Brush J. Gregory, (2008), "Comparing the Perceived Value of Information and Entertainment Mobile Services" *Psychology & Marketing,* Vol. 25, No. 8, pp. 732–755.

Pinsonneault, A., and Kraemer, K. L., (1993), "Survey Research Methodology in Management Information Systems: An Assessment", *Journal of Management Information Systems*, Vol. 10, No. 2, pp. 75-105.

Porter, M. E., (1985) "Competitive Advantage: Creating and Sustaining Superior Performance", *Free Press*, New York.

Porter, M. E., (1996) "What is Strategy?" *Harvard Business Review*, November-December: 61-78.

Porter, M. E., (1998), "Competitive Strategy: Techniques for Analyzing Industries and Competitors", Free Press, New York.

Prahalad, C. K. and Gary Hamel, (1990), "The Core Competence of the Corporation." *Harvard Business Review*, Vol. 68 No. 3, pp. 79-91.

Pura, M. (2005), "Linking Perceived Value and Loyalty in Location Based Mobile Services", *Managing Service Quality*, Vol. 15, No. 6, pp. 509-538.

Ramirez Pablo Gonzalo and Hachiya Toyohiko, (2008), "A Comprehensive Study on Profits and Sustainable Competitive Advantages", *Management Research News*, Vol. 31, No. 9, pp. 670-682.

Ratnasingam, P. and Pavlou, P., (2003), "Technology Trust in Internet-Based Inter Organizational Electronic Commerce", *Journal of Electronic Commerce in Organizations,* Vol. 1, No. 1, pp. 17-41.

Ray, G., Barney, J. B., & Muhanna, W., A. (2004), "Capabilities, Business Processes, and Competitive Advantage: Choosing the Dependent Variable in Empirical Tests of the Resource-Based View". *Strategic Management Journal*, 25(1), 23-37.

Reed R & DeFillippi R J (1990), "Causal Ambiguity, Barriers to Imitation, and Sustainable Competitive Advantage"; *Academy of Management Review*, 15 (1), 88-102

Reichheld, F. F.; Markey, R. G.; Hopton, C., (2000), "The Loyalty Effect – The Relationship between Loyalty and Profits"; *European Business Journal* (p. 134–139).

Rhodes Jo, Lok Peter, Yang Sang and Bambacas, (2009), "Resource Based View on Intangibles and Organizational Performance in China", *Journal of Global Strategic Management,* Vol. 05, No. 6, pp. 87-96.

Ricardo, D., (1966), “Economic Essays”, A. M. Kelly, New York.

Roberts, P.W., (1999), “Product Innovation, Product-Market Competition and Persistent Profitability in the U.S. Pharmaceutical Industry”. *Strategic Management Journal*, 20(7):655–670.

Roger, N., (1987), “Justification of FMS with the Analytical Hierarchy Process,” *Journal of Manufacturing*, Vol. 7, No. 3, pp.175 - 182.

Rokeach, M. J., (1973), “The Nature of Human Values”. New York: The Free Press.

Romijn, H. and Albaladejo, M., (2002). “Determinants of Innovation Capability in Small Electronics and Software Firms in Southeast England”. *Research Policy* 31:1053–1067.

Rouse M. J., Daellenbach U. S. (2002), “More Thinking on Research Method for the Resource-based Perspective”. *Strategic Management Journal,* 23(10): 693-967.

Rousseau, D., Sitkin, S.B., Burt, R. and Camerer, C., (1998), “Not So Different After All: A Cross-Discipline View of Trust”. *The Academy of Management Review*, 23(3): 255-404.

Rubin, Donald B., (1973), "Matching to Remove Bias in Observational Studies". *Biometrics* 29 (1): 159–183.

Rumelt, R. P., (1984), “Toward a Strategic Theory of the Firm”, in Lamb, R.B. Competitive Strategic Management, Prentice-Hall, Englewood Cliffs, NJ, pp. 556-70.

Rust, R.T., and Oliver, R.L., (1994), “Service Quality: Insights and Managerial Implications from the Frontier, in Rust, R.T. and Oliver, R.L., (eds.) Service Quality: New Directions in Theory and Practice”, Sage Publications, Thousand Oaks, CA, pp.72-94.

Saaty, T. L., (1980), “The Analytical Hierarchy Process”, Mc Graw Hill, New York,

Saaty, T.L., (1990), “How to Make a Decision: The Analytic Hierarchy Process”, *European journal of Operational Research*, 48, pp 9-26.

Saraph, J.V., Benson, P.G., and Schroeder, R.G., (1989), “An Instrument for Measuring the Critical Factors of Quality Management”. *Decision Sciences,* 20(4), 810-829.

Schiffman L. G. and Kanuk L. L., (1987), “Consumer Behavior” 3rd ed. Englewood Cliffs, New Jersey, Prentice-Hall.

Schultz, T. W., (1961), “Investment in Human Capital”, *American Economic Review,* Vol. 51, pp. 1–17.

Shan Lu, C., (2007). “Evaluating Key Resources and Capabilities for Liner Shipping Services” *Transport Reviews,* 27 (3), 285–310.

Sharkie Rob, (2003), "Knowledge Creation and its Place in the Development of Sustainable Competitive Advantage", *Journal of Knowledge Management*, Vol.7. No.1, pp 20-31.

Sheth, J., Newman, B. and Gross B., (1991), “Consumption Values and Market Choices, Theory and Applications”, Cincinnati: South-Western Publishing Co.

Shin Dong-Hee and Kim Won-Yong, (2008), “Forecasting Customer Switching Intention in Mobile Service: An Exploratory Study of Predictive Factors in Mobile Number Portability”, Technological Forecasting and Social Change, Vol. 75, No. 6, pp. 854–874.

Sigala Marianna, (2006), “Mass Customization Implementation Models and Customer Value in Mobile Phones Services Preliminary Findings from Greece”, *Managing Service Quality*, Vol. 16, No. 4, pp. 395-420.

Singh, J. V., and Sirdeshmukh, D. (2000), "Agency and Trust Mechanisms in Consumer Satisfaction and Loyalty Judgments", *Journal of the Academy of Marketing Science,* Vol 28, No. 1, pp. 150-167.

Smith, A. D., (2008), “Resource Based View of the Firm: Measures of Reputation Among Health Service Sector Businesses”, *Health Marketing Quarterly*, Vol. 25, No. 4, pp. 361-82.

Smith. M. J., (1998), “*Social Science in Question”*. London, Sage.

Spreen, M., (1992), "Rare Populations, Hidden Populations, And Link-Tracing Designs: What and Why?", Bulletin de Methodologie Sociologique, 36, pp.34-58.

Srinivasan, R., (2004), “Services Marketing”, The Indian context, Prentice-Hall of India Private Limited, New Delhi.

Srinivasan, R., (2008), “Strategic Management”, The Indian Context, Third Edition, Prentice Hall of India Private Limited, New Delhi.

Stauss B., Chojnacki, K., Decker, A. and Hoffman, F., (2001), "Retention Effects of A Customer Club" *International Journal of Service Industry Management*, Vol. 12, No. 1, pp. 7-19.

Stremersch, S., Tellis, G.J., Franses, P.H. and Binken, J. L. G., (2007), "Indirect Network Effects in New Product Growth", *Journal of Marketing*, Vol. 71 No. 3, pp. 52-74.

Sun Mingchun and Tse Edison, (2009), "The Resource Based View of Competitive Advantage in Two Sided Markets", *Journal of Management Studies*, Vol. 46, No.1, pp. 45-64.

Swart, J., (2006), "Intellectual Capital: Disentangling an Enigmatic Concept", *Journal of Intellectual Capital*, Vol. 7, No. 2, pp. 136-59.

Sweeney, J. C. and Soutar, G. N., (2001), "Consumer Perceived Value: The Development of A Multiple Item Scale", *Journal of Retailing*, Vol. 77, pp. 203–220.

Tanur, J.M. (1982). "Advances in methods for large-scale surveys and experiments", Washington, D.C.: National Academy Press..

Tariq, A. N., and Moussaoui, N. (2009). "The Main Antecedents of Customer Loyalty in Moroccan Banking Industry". *International Journal of Business and Management Science*, 2(2), 101-115.

Teece, D. J., (1984), "Economic Analysis and Strategic Management", *California Management Review*, Vol. 26, No. 3, pp. 87-110.

Teece, D. J., (2000), "Strategies for Managing Knowledge Assets: The Role of Firm Structure and Industrial Context". *Long Range Planning*, Vol. 33, pp. 35-54.

Teece, D. J., Pisano G & Shuen A (1997), "Dynamic Capabilities and Strategic Management", *Strategic Management Journal,* Vol. 18, No. 7, pp. 509-533.

Thompson Jr. A. Arthur, Strickland III A J, and Gamble E. John, (2005), "Crafting and Executing Strategy The quest for Competitive Advantage", Fourteenth edition, Tata McGraw Hill, India.

Thompson N. Kenneth and Coe J. Barbara, (1997), "Gaining Sustainable Competitive Advantage through Strategic Pricing: Selecting A Perceived Value Price", *Pricing Strategy & Practice*, Vol. 5, · No 2. pp. 70–79.

Thorbjørnsen Helge, Pedersen Per E, and Nysveen Herbjørn, (2007), "Categorizing Networked Services The Role of Intrinsic, User Network- and Complement Network Attributes", *European Journal of Marketing*, Vol. 43 No. 3/4, pp. 371-397

TRAI (2010), "The Indian Telecom Services Performance Indicators", Telecom Regulatory Authority of India.

Treacy, M., and Wiersima, F., (1995), "The Discipline of Market Leaders", HarperCollins, London.

Tuominen Matti, Matear Sheelagh, Sami Kajalo, Arto Rajala, Kristian Möller, Gordon E. Greenley, Graham J. Hooley, (2005), "Market Driven Intangibles and Sustainable Performance Advantages" *American Marketing Association*, No.2, pp. 290-291.

Ulrich Dave and Smallwood Norm (2004), "Capitalizing on Capabilities" *Harvard Business Review*, June, pp. 119-127.

Urban, G. L., Sultan, F., and Qualls, W. J., (2000), "Placing Trust at the Center of Your Internet Strategy", *Sloan Management Review*, (42:1), p 39.

VanDenVen, A., (1986), "Central Problems in the Management of Innovation", *Management Science,* Vol. 32 No. 5, pp. 590-607.

Venetis, K. A. & Ghauri, P. N., (2000). "The Importance of Service Quality on Customer Retention: An Empirical Study of Business Service Relationships". Proceedings of the Marketing in a Global Economy Conference, Buenos Aires, 215-224.

Venkatraman and Ramanujam, V., (1986), "Measurement of Business Performance in Strategy Research: A Comparison of Approaches". *Academy of Management Review,* Vol. 11 No. 4, pp. 801-814.

Verona Gianmario, Emanuela Prandelli, (2002), "A Dynamic Model of Customer Loyalty to Sustain Competitive Advantage on the Web", *European Management Journal,* Vol. 20, No. 3, pp. 299–309.

Verschuren, P. J. M., (2003), "Case Study as A Research strategy: Some Ambiguities and Opportunities", *International Journal of Social Research Methodology*, 6, 2, p. 121-139.

Vorhies, W. Douglas and Morgan, A. Neil, (2005), "Benchmarking the Marketing Capabilities for Sustainable Competitive Advantage", *Journal of Marketing*, Vol.69, pp. 80-94.

Voss, C.S., (1994), "Significant Issues for the Future of Product Innovation". *Journal of Product Innovation Management*, 11(5):460–463.

Walters, D., and Lancaster G., (1999), "Value-Based Marketing and Its Usefulness to Customers", *Management Decision*, Vol. 37, No. 9, 697-708.

Wang Yonggui and Po Lo Hing, (2002), "Service Quality, Customer Satisfaction and Behavior Intentions Evidence from Chin's Telecommunications Industry", *Info,* Vol. 4, No. 6, pp 50-60.

Wernerfelt B., (1984), "A Resource-Based View of the Firm", *Strategic Management Journal,* Vol. 5 No. 2, pp. 171-80.

Westbrook, R. A., and Oliver, R. L., (1991), "The Dimensionality of Consumption Emotion Patterns and Consumer Satisfaction", *Journal of Consumer Research,* 18(1), pp. 84-91.

Woodruff, R. B., (1997), "Customer Value: The next Source for Competitive Advantage" *Journal of the Academy Marketing Science*, Vol. 25, No. 2, pp.139-154.

Yang Kiseol and Jolly Laura D., (2006), "Value-added Mobile Data Services: The Antecedent Effects Of Consumer Value on Using Mobile Data Service", *International Journal of Mobile Marketing*, Vol. 1 No. 2, pp. 11-17.

Yang, J., and Lee, H., (1997), "An AHP Decision Model for Facility Location Selection". *Facilities,* 15(9/10), pp. 241-254.

Yap Thomas, S. C. (2006), "Corporate Branding: Its role in Sustainable Competitive Advantage" JASA, July, pp.38-40

Yin, R. K., (1994), "Case Study Research Design and Methods", 2nd Edition, Beverly Hills, C.A.: Sage Publications.

Yin, Robert K. (2003). "Applications of Case Study Research", (2nd ed., vol. 34). Thousand Oaks: Sage.

Yoo, B. and Donthu, N., (2001), ‘‘Developing and Validating a Multidimensional Consumer-based Brand Equity Scale.’’ *Journal of Business Research*, 52(1), pp. 1-14.

Zeithaml, V. A. and Bitner, M. J., (2000), “Services Marketing”, New York: McGraw-Hill.

Zeithaml, V. A., (1988), “Consumer perceptions of price, quality and value: a means-end model and synthesis of evidence”, *Journal of Marketing*, Vol.52, No. 8, pp. 2-22.

Zhu Yimin, (2009), “Exploratory Study on Value of Information Systems to Electrical Construction Companies: Resource Based View”, *Journal of Management in Engineering,* Vol. 25, No 2, pp. 50-58.

Zikiene Kristina and Bakanauskas Arvydas Petras, (2009), “Research of Factors Influencing Loyal Customer Switching Behaviour”, Organizacijų Vadyba: Sisteminiai Tyrimai, 52.

Zikmund, W. G., (1994), “Business Research Methods”, 4th Edition, Fort Worth.

Zikmund, W. G., (2003), “Business Research Methods”, 8th Edition, Cincinnati, Ohio: Thomson/South-Western.

APPENDICES

Appendix I: Sample Letter for Expert for Tool Validation

From
…….
…….
…….

To
……
……
……

Subject: Request for expert opinion and suggestions to establish content validity of the research tool.

Respected sir/Madam,

I am currently researching in the area of strategic management under the guidance of Prof. K.B. Kiran. The purpose of the study is to evaluate "Resource Based View and Sustainable Competitive Advantage: An Investigation among Cellular Mobile Operators". I have developed a questionnaire for this purpose.

Prior to conducting the full survey, I humbly request you to kindly go through the questionnaire items and give your valuable suggestions and opinions to develop the content validity of the tool.

Thanking you in anticipation,

Yours Faithfully

Place: Surathkal

Date: (C SOMASHEKAR)

Herewith I have enclosed,

1. Objectives of the study
2. Survey Questionnaire

Appendix II: Covering Letter to Seek Appointment for Data Collection

Date:

To

..

Dear Sir,

Subject: Request for an appointment

Mr. C. Somashekar is doing a research work under my supervision, entitled, "*Resource Based View and Sustainable Competitive Advantage: An Investigation among Cellular Mobile Operators"*, as a part of his Ph.D programme at National Institute of Technology Karnataka, Surathkal. The cellular mobile operators industry is experiencing stiff competition with increasing operating costs and decreasing tariff rates. An organization with sustainable competitive advantage results in superior performance over a prolonged period. The study aims to develop an integrated framework on intangible resources and its impact on customer value and superior performance in cellular mobile operator's organisation. It is a significant work that will add value to cellular mobile operator services in terms of theory and practice.

The survey is designed to obtain a better understanding of resources that impact the sustainable competitive advantage for cellular mobile operators. This study is also beneficial to your organisation, by providing managerially relevant information and recommendations. In addition, he will supply you with a summary of the report after finishing the data analysis. As a part of the research, you are selected for inclusion in his sample. I request you to kindly cooperate in the survey, and I assure you that the information collected will be kept strictly confidential, and used only for academic research purpose.

Your participation would be greatly appreciated.

Thank you in anticipation of your participation.

Yours sincerely,

(K.B. Kiran)

Appendix III: Questionnaire for Executives

GUIDELINES FOR COMPLETING THE SURVEY QUESTIONNAIRE

This questionnaire is designed to obtain a better understanding of intangible resources that impact the Sustainable Competitive Advantage.

The goal of this survey is to study intangible resources and how they help in sustaining competitive advantage.

Please answer all the questions. Please note that your responses to the questions in this survey are confidential and will be aggregated along with other respondents for the purpose of study. Your candid responses are highly appreciated.

Intangible Resources

The following statements describe Intangible resources of cellular mobile service provider organizations. Please read them carefully and assess your organization, based on these statements.

State how strongly you agree or disagree with these statements using the scale provided.

Strongly Disagree	**Disagree**	**Somewhat Agree**	**Agree**	**Strongly Agree**
1	**2**	**3**	**4**	**5**

A	**Human Capital**	**1**	**2**	**3**	**4**	**5**
1	Our employees have sound domain knowledge					
2	Our employees have relevant education and experience in cellular mobile operations					
3	The basic values of this organization include learning as the key to improvement					
4	On an average employee attrition rate is less than 25 %					
5	Job satisfaction level in our organization is very high					
6	Our personnel are capable of handling complex situations and problems					

B	Reputation Capital	1	2	3	4	5
1	Our customers have a good feeling about our company					
2	Our customers feel secure in our services					
3	Our customers have a great deal and respect for our company					

C	Customer Capital	1	2	3	4	5
1	On an average customer churn rate is greater than or equal to 8 % (Industry average)					
2	We do have a strong loyal customer base					
3	Our strategy of competitive advantage is based on our understanding of customers needs					
4	We are committed to retain our valued customers					

D	Location Capital	1	2	3	4	5
1	We have our services in economically highly attractive places					
2	Our geographical coverage has exclusive advantage for our company					
3	Spatial location is contributing significantly to our company					

E	Innovation Capital	1	2	3	4	5
1	Innovation in services and processes on R&D results are readily accepted					

2	Management actively seeks innovative ideas					
3	People are penalized for new ideas that do not work					
4	We introduce new services before our competitors introduce					
5	Our value added services are more attractive compared to competitors					

F	**Process Capital**	**1**	**2**	**3**	**4**	**5**
1	Our internal work sequences are contributing significantly in delivering quality services					
2	Because of our processes queue in call centre is reduced drastically					
3	Because of our process number of complaints that we receive are decreasing					
4	We are able to answer and resolve our customer queries instantly					
5	Number of complaints handled by our employees per hour in our call center is increasing					

II. Please rate following resources as per your priority (from 1 to 10) for Cellular mobile services

Lowest Priority									**Highest Priority**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**

	Resources	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
A	Human Capital										
B	Reputation Capital										
C	Customer Capital										
D	Location Capital										
E	Innovation Capital										
F	Process Capital										

a. How long have you been with your current organization? _____ Years

b. How long have you been in the Telecom industry? _____ Years

c. Total experience _____ Years

Thank you very much for your time

Appendix IV: Questionnaire for Customers

National Institute of Technology Karnataka, Surathkal.

Survey Questionnaire

I am a Research Scholar at **National Institute of Technology Karnataka, Surathkal**. I am doing research on "Resource – Based View and Sustainable Competitive Advantage: An Investigation among of Cellular Mobile Operators". As a part of my research work, I am conducting this survey. The aim of this survey is to study what is value for customers in cellular mobile services. I would therefore be very grateful for your time to answer these questions.

1. Gender: Male ☐ Female ☐
2. Age Group: 18- 30 years ☐ 31- 40 years ☐ 41-50 Years ☐ Above 50 ☐ Years
3. Education : Undergraduate ☐ Graduate ☐ Postgraduate ☐ Any other_____
4. Occupation: Student ☐ Salaried ☐ Business ☐ Any other _____
5. Approximately what is the average monthly expense on your mobile phone use?

   Less than Rs. 150 ☐ Rs. 151 to Rs. 499 ☐ Rs. 500 to Rs. 999 ☐ Rs. 1000 ☐ and above
6. Which type of service do you subscribe for your mobile at present?

   Post paid ☐ Prepaid ☐
7. Who is your current cellular service provider?

   AIRTEL ☐ RELIANCE ☐ VODAFONE ☐ TATA ☐ IDEA ☐

   BSNL ☐
8. Why did you choose this cellular service provider over other options available?

   Has Exact Features ☐ Status Orientated ☐ Has Exact Features/Status Orientated ☐ Convenience ☐ Did Not Choose ☐ Did Not Know ☐

   Affordable ☐ Quality of service is good ☐ Brand ☐ Has Coverage ☐

   If any other please specify _____

9. How long you have been with the current service provider?

Less than 3 months ☐ 3- 6 months ☐ 7–12 months ☐ more than 1 year ☐

10. Have you changed the service provider? Yes ☐ No ☐

A. If yes, who was your previous service provider?

AIRTEL ☐ RELIANCE ☐ VODAFONE ☐ TATA ☐ IDEA ☐ BSNL ☐ ANY OTHER _____

B. Why did you change the service provider?

Higher price ☐ Poor customer service ☐ Poor coverage ☐ Less value added service ☐ Poor response ☐ Any other, please specify _____

C. If NO what is the reason you are staying with the existing service provider?

Has Exact Features ☐ Status Orientated ☐ Has Exact Features/Status Orientated ☐ Convenience ☐ Did Not Choose ☐ Did Not Know ☐ Affordable ☐ Quality of service is good ☐ Brand ☐

Has Coverage ☐ Any other please specify _____

11. Please specify the Mobile services you use
SMS ☐ MMS ☐ Games ☐ News/ weather ☐ Internet ☐ Contests ☐ Ringtones ☐ Video/TV ☐ Music downloads ☐ Alerts ☐ Chat ☐ Any other_____

12. Please tick the following statements with respect to your assessment of the Mobile service of your service provider

Very Low	Low	Medium	High	Very High
1	2	3	4	5

Sl. No.	Service	Your assessment of the mobile service of your service provider				
1	**Service Innovation**	1	2	3	4	5
	Rate of introducing new services by my service provider compared to competitors is					
	I am satisfied with the value added services available with the service provider					
	My service provider services are attractive compared to competitors					

2	**Switching Intentions**	**1**	**2**	**3**	**4**	**5**
	Probability that I switch from current service provider is					
	Next time I shall need services of other service provider					
	I would not continue to avail service from my current service provider					
3	**Service Quality**	**1**	**2**	**3**	**4**	**5**
	I think that service provider provides satisfying services					
	I think that the services of my service provider are valuable					
	When I have a problem the response from the service provider is satisfactory					
	My mobile service provider provides quality of content and services that I need					
4	**Reputation**	**1**	**2**	**3**	**4**	**5**
	I have a good feeling about this service provider					
	I admire and respect this service provider a great deal					
	I feel more secure in services of this service provider					
5	**Customer Loyalty**	**1**	**2**	**3**	**4**	**5**
	I want to continue with this service provider					
	I recommend others to use the service provider					
	I am proud to be a customer of this service provider					
6	**Customer Trust**	**1**	**2**	**3**	**4**	**5**
	My service provider meets all my expectations					
	My service provider never disappoints me					
	My service provider is honest and sincere in addressing my concerns					
	I can rely on my service provider for all my requirements					
7	**Brand Equity**	**1**	**2**	**3**	**4**	**5**
	Even if another service provider has same features as this I would prefer to use this service provider					
	If I have to choose among brands of service providers I prefer to use this service provider					
	Even if another service provider has same tariff plan as this I prefer to choose this service provider					
8	**Customer Satisfaction**	**1**	**2**	**3**	**4**	**5**
	I am satisfied with my decision to choose this service provider					
	I did a right thing in selecting this service provider					
	My choice is a wise one					
	I feel good experience with this service provider					
9	**Usefulness**	**1**	**2**	**3**	**4**	**5**
	Using services of service provider saves my time					
	Using services of service provider improves my efficiency					
	Mobile services are useful to me					
10	**Ease of Use**	**1**	**2**	**3**	**4**	**5**
	Learning to use “service” is easy for me					
	It is easy to make “service” do what I want it to					
	My interaction with “service” is clear and understandable					
	It is easy to use “service”					
11	**Compatibility**	**1**	**2**	**3**	**4**	**5**
	Using “service” is compatible with all aspects of my mobile service use					

	"Service" is completely compatible across all my mobile service providers					
12	**Network Size**	**1**	**2**	**3**	**4**	**5**
	Today this "service" is used by a large number of users I know of					
	A large number of users, also beyond those I know of, use "service"					
13	**Complementary Service Variety**	**1**	**2**	**3**	**4**	**5**
	Using "service" makes a great deal of "complementary services" available					
	"Service" has a large amount of "complementary services" available					
	One of the unique attributes of "service" is the great variety of "complementary services" available					
14	**Monetary Value**	**1**	**2**	**3**	**4**	**5**
	The price of this mobile service is acceptable.					
	This mobile service is good value for money.					
	This mobile service is better value for money than what I would pay for the same service via other channels (internet /store)					
15	**Functional/Convenience Value**	**1**	**2**	**3**	**4**	**5**
	I save time and money when I order the information via the mobile service					
	I value the ease of using this mobile service					
	I value the option of using this service instantly via my mobile device					
	Using this mobile service makes my life easier					
	Using this mobile service is an efficient way to manage my time					
	I value the option of using this mobile service without others noticing					
16	**Social Value**	**1**	**2**	**3**	**4**	**5**
	Using this mobile service helps me to feel accepted by others					
	Using this mobile service makes a good impression on other people					
	Using this mobile service gives me social approval					
17	**Emotional Value**	**1**	**2**	**3**	**4**	**5**
	Using this mobile service gives me pleasure					
	Using this mobile service makes me feel good					
	Using this mobile service makes me feel relaxed					
	I value the option of sending emotional messages to my friends via this mobile service					
18	**Conditional Value**	**1**	**2**	**3**	**4**	**5**
	I value the information / entertainment this service offers, with the help of which I get what I need in a certain situation					
	I value the independence of place and time offered by the use of this mobile service					
	I value the real time information and interaction that this service makes possible					
19	**Epistemic (Curiosity/Knowledge) Value**	**1**	**2**	**3**	**4**	**5**
	I used this mobile service to experiment with new ways of doing things					
	I used this mobile service to test the new technologies					
	I used this mobile service out of curiosity					

Thank you very much for your time.

Appendix V: Pilot study Results

1	**Service Innovation**	**Mean (μ)**	**Std. Den.**	**Cronbach's alpha (α)**
	Rate of introducing new services by my service provider compared to competitors is	3.50	.909	.748
	I am satisfied with the value added services available with the service provider	3.60	.926	
	My service provider services are attractive compared to competitors	3.58	.859	
2	**Switching intentions**	**Mean (μ)**	**Std. Den.**	**Cronbach's alpha (α)**
	Probability that I switch from this service provider is	2.12	1.239	.901
	Next time I shall need services of other service provider	2.16	1.184	
	I would not continue to avail service from my this service provider	1.96	1.212	
3	**Service quality**	**Mean (μ)**	**Std. Den.**	**Cronbach's alpha (α)**
	I think that service provider provides satisfying services	3.54	1.034	.888
	I think that the services of my service provider are valuable	3.62	.923	
	When I have a problem the response from the service provider is satisfactory	3.34	1.189	
	My mobile service provider provides quality of content and services that I need	3.54	.952	
4	**Reputation**	**Mean (μ)**	**Std. Den.**	**Cronbach's alpha (α)**
	I have a good feeling about this service provider	3.60	.926	.911
	I admire and respect this service provider a great deal	3.38	.967	
	I feel more secure in services of this service	3.58	.992	

	provider			
5	**Customer Loyalty**	**Mean (μ)**	**Std. Den.**	**Cronbach's alpha (α)**
	I want to continue with this service provider	3.72	.904	.762
	I recommend others to use the service provider	3.46	1.232	
	I am proud to be a customer of this service provider	3.06	1.361	
6	**Customer Trust**	**Mean (μ)**	**Std. Den.**	**Cronbach's alpha (α)**
	My service provider meets all my expectations	3.46	1.034	.914
	My service provider never disappoints me	3.34	1.081	
	My service provider is honest and sincere in addressing my concerns			
	I can rely on my service provider for all my requirements	3.34	1.099	
7	**Brand Equity**	**Mean (μ)**	**Std. Den.**	**Cronbach's alpha (α)**
	Even if another service provider has same features as this I would prefer to use this service provider	3.26	1.209	.864
	If I have to choose among brands of service providers I prefer to use this service provider	3.46	1.199	
	Even if another service provider has same tariff plan as this I prefer to choose this service provider	3.52	1.199	
8	**Customer satisfaction**	**Mean (μ)**	**Std. Den.**	**Cronbach's alpha (α)**
	I am satisfied with my decision to choose this service provider	3.48	1.092	.810
	I did a right thing in selecting this service provider	3.44	1.146	
	My choice is a wise one	3.54	1.014	
	I feel good experience with this service provider	3.34	1.255	

9	**Usefulness**	**Mean (μ)**	**Std. Den.**	**Cronbach's alpha (α)**
	Using services of service provider saves my time	3.24	1.001	.825
	Using services of service provider improves my efficiency	3.22	.954	
	Mobile services are useful to me	3.50	.995	
10	**Ease of use**	**Mean (μ)**	**Std. Den.**	**Cronbach's alpha (α)**
	Learning to use “service” is easy for me	3.52	.839	.898
	It is easy to make “service” do what I want it to	3.38	.901	
	My interaction with “service” is clear and understandable	3.40	.990	
	It is easy to use “service”	3.58	.950	
11	**Compatibility**	**Mean (μ)**	**Std. Den.**	**Cronbach's alpha (α)**
	Using “service” is compatible with all aspects of my mobile service use	3.42	.785	.683
	“Service” is completely compatible across all my mobile service providers	3.42	.810	
12	**Network size**	**Mean (μ)**	**Std. Den.**	**Cronbach's alpha (α)**
	Today this “service” is used by a large number of users I know of	3.66	1.022	.773
	A large number of users, also beyond those I know of, use “service”	3.54	1.110	
13	**Complementary service variety**	**Mean (μ)**	**Std. Den.**	**Cronbach's alpha (α)**
	Using “service” makes a great deal of “complementary services” available	3.48	.863	.864
	“Service” has a large amount of “complementary services” available	3.44	.812	
	One of the unique attributes of “service” is the great variety of “complementary services” available	3.50	.863	

14	**Monetary Value**	**Mean (μ)**	**Std. Den.**	**Cronbach's alpha (α)**
	The price of this mobile service is acceptable.	3.54	.952	.876
	This mobile service is good value for money.	3.46	.973	
	This mobile service is better value for money than what I would pay for the same service via other channels (internet /store)	3.38	1.105	
15	**Functional/convenience value**	**Mean (μ)**	**Std. Den.**	**Cronbach's alpha (α)**
	I save time and money when I order the information via the mobile service	3.24	1.021	.872
	I value the ease of using this mobile service	3.48	.789	
	I value the option of using this service instantly via my mobile device	3.42	.758	
	Using this mobile service makes my life easier	3.40	.881	
	Using this mobile service is an efficient way to manage my time	3.52	.789	
	I value the option of using this mobile service without others noticing	3.50	.931	
16	**Social value**	**Mean (μ)**	**Std. Den.**	**Cronbach's alpha (α)**
	Using this mobile service helps me to feel accepted by others	3.16	1.113	.957
	Using this mobile service makes a good impression on other people	3.20	1.125	
	Using this mobile service gives me social approval	3.14	1.178	
17	**Emotional value**	**Mean (μ)**	**Std. Den.**	**Cronbach's alpha (α)**
	Using this mobile service gives me pleasure	3.42	.992	.869
	Using this mobile service makes me feel good	3.36	1.005	
	Using this mobile service makes me feel relaxed	3.44	1.033	

	I value the option of sending emotional messages to my friends via this mobile service	3.28	1.196	
18	**Conditional value**	**Mean (μ)**	**Std. Den.**	**Cronbach's alpha (α)**
	I value the information / entertainment this service offers, with the help of which I get what I need in a certain situation	3.18	.983	.752
	I value the independence of place and time offered by the use of this mobile service	3.36	.802	
	I value the real time information and interaction that this service makes possible	3.24	1.041	
19	**Epistemic (Curiosity/Knowledge) value**	**Mean (μ)**	**Std. Den.**	**Cronbach's alpha (α)**
	I used this mobile service to experiment with new ways of doing things	3.04	1.106	.900
	I used this mobile service to test the new technologies	2.96	1.068	
	I used this mobile service out of curiosity	2.98	1.020	

Appendix VI: Results of the Pairwise Comparison of the Ranking of Cellular Mobile Operators

Source: Survey Results

MAIN CRITERIA	HC	RC	CC	LC	IC	PC	Priority Vector
HC	1.00	3.00	2.00	4.00	3.00	4.00	0.36
RC	0.33	1.00	0.50	3.00	2.00	2.00	0.16
CC	0.50	2.00	1.00	3.00	2.00	3.00	0.22
LC	0.25	0.33	0.33	1.00	0.50	0.50	0.06
IC	0.33	0.50	0.50	2.00	1.00	2.00	0.12
PC	0.25	0.50	0.33	2.00	0.50	1.00	0.08
λ Max =6.1442	CI =0.029				CR =0.023		

Criterion Human Capital (HC)	RELIA	VODA	TATA	BSNL	IDEA	AIRTEL	Priority Vector
RELIA	1.00	0.33	0.50	2.00	2.00	0.33	0.10
VODA	3.00	1.00	3.00	4.00	4.00	1.00	0.31
TATA	2.00	0.33	1.00	3.00	3.00	0.33	0.15
BSNL	0.50	0.25	0.33	1.00	1.00	0.25	0.06
IDEA	0.50	0.25	0.33	1.00	1.00	0.25	0.06
AIRTEL	3.00	1.00	3.00	4.00	4.00	1.00	0.31
λ Max = 6.1159	CI =0.023				CR =0.019		

Criterion Reputation Capital (RC)	RELIA	VODA	TATA	BSNL	IDEA	AIRTEL	Priority Vector
RELIA	1.00	0.33	1.00	4.00	3.00	0.33	0.13
VODA	3.00	1.00	3.00	5.00	5.00	1.00	0.32
TATA	1.00	0.33	1.00	4.00	3.00	0.33	0.13
BSNL	0.25	0.20	0.25	1.00	0.50	0.20	0.04
IDEA	0.33	0.20	0.33	2.00	1.00	0.20	0.06
AIRTEL	3.00	1.00	3.00	5.00	5.00	1.00	0.32
λ Max =6.1536	CI =0.031				CR =0.025		

Criterion Customer Capital (CC)	RELIA	VODA	TATA	BSNL	IDEA	AIRTEL	Priority Vector
RELIA	1.00	0.50	2.00	4.00	1.00	0.33	0.14
VODA	2.00	1.00	3.00	4.00	2.00	0.50	0.23
TATA	0.50	0.33	1.00	3.00	0.50	0.33	0.09
BSNL	0.25	0.25	0.33	1.00	0.25	0.20	0.04
IDEA	1.00	0.50	2.00	4.00	1.00	0.33	0.14
AIRTEL	3.00	2.00	3.00	5.00	3.00	1.00	0.35
λ Max =6.1563	CI =0.031				CR =0.025		

Criterion Location Capital (LC)	RELIA	VODA	TATA	BSNL	IDEA	AIRTEL	Priority Vector
RELIA	1.00	0.33	4.00	2.00	3.00	0.33	0.15
VODA	3.00	1.00	6.00	4.00	5.00	1.00	0.33
TATA	0.25	0.17	1.00	0.25	0.33	0.17	0.04
BSNL	0.50	0.25	4.00	1.00	2.00	0.25	0.10
IDEA	0.33	0.20	3.00	0.50	1.00	0.20	0.07
AIRTEL	3.00	1.00	6.00	4.00	5.00	1.00	0.33
λ Max =6.2153	CI =0.043				CR =0.034		

Criterion Innovation Capital (IC)	RELIA	VODA	TATA	BSNL	IDEA	AIRTEL	Priority Vector
RELIA	1.00	2.00	3.00	4.00	4.00	0.50	0.26
VODA	0.50	1.00	3.00	3.00	3.00	0.50	0.18
TATA	0.33	0.33	1.00	2.00	2.00	0.25	0.09
BSNL	0.25	0.33	0.50	1.00	0.50	0.25	0.06
IDEA	0.25	0.33	0.50	2.00	1.00	0.25	0.07
AIRTEL	2.00	2.00	4.00	4.00	4.00	1.00	0.34
λ Max =6.1934	CI =0.039				CR =0.031		

Criterion Process Capital (PC)	RELIA	VODA	TATA	BSNL	IDEA	AIRTEL	Priority Vector
RELIA	1.00	0.33	2.00	4.00	4.00	0.33	0.15
VODA	3.00	1.00	4.00	6.00	6.00	1.00	0.33
TATA	0.50	0.25	1.00	3.00	3.00	0.25	0.10
BSNL	0.25	0.17	0.33	1.00	0.50	0.17	0.04
IDEA	0.25	0.17	0.33	2.00	1.00	0.17	0.05
AIRTEL	3.00	1.00	4.00	6.00	6.00	1.00	0.33
λ Max =6.1926	CI =0.039				CR =0.031		

Annexure I: Research Publications

Research Papers Published in International Journals

Somashekar C. and Kiran K. B., (2012), "Empirical study of customer value and its impact on customer satisfaction and behavior intention in cellular mobile services",. - *International Journal of Retail and Marketing,* September, pp. 108-117.

Somashekar C. and Kiran K. B., (2012), "Empirical study of customer value and its impact on strategic performance in cellular mobile services" *Opinion'-A Bi-Annual International Journal of Business Management,* December, pp. 1 - 15.

Somashekar C. and Kiran K. B., (2013), "Role of Intangible Resources in Creating Superior Performance for Cellular Mobile Operators", *PES Business Review***,** January, pp. 29 - 46.

Research Papers Presented in International Conferences

Somashekar, C. Sequeira A. H. and Kiran K. B., (2010), "A Philosophy to Develop Services for Bottom of the Pyramid Market: A Case of Cellular Mobile Service Provider", International conference on "Challenges to Inclusive Growth in the Emerging Economies" held at *Indian Institute of Management Ahmedabad, Gujarat,* India during December 15-17, 2010.

Somashekar C. and Kiran K. B., (2012), "Role of Intangible Resources in Creating Superior Performance for Cellular Mobile Operators", *Strategic management Forum Annual convention, Indian Institute of Management, Indore,* April 3- 6, 2012.

Somashekar C. and Kiran K. B., (2012), "Empirical Study of Superior Performance of Indian Cellular Mobile Service Providers", - *12th Consortium of Students in Management Research (COSMAR 2012), Indian Institute of Science, Bangalore* November 16-17, 2012.

Research Awards

Awarded first position for the paper titled "Empirical Study of Superior Performance of Indian Cellular Mobile Service Providers", at the 12th Consortium of Students in Management Research (COSMAR 2012) on 16th and 17th November, 2012 at Indian Institute of Science, Bangalore.

Annexure II: Resume of the Research Scholar

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Date of Birth: 16-01-1975

Educational Qualifications:

B.E. (Electronics & Communications)

M.B.A. (Marketing)

Industry / Teaching / Research Experience

26-12-2008 to 15-01-2013, Research Scholar, Department of Humanities, Social Sciences and Management, National Institute of Technology, Surathkal, Karnataka, India.

15-07-2005 to 24-12-2008: Lecturer, Post Graduate Department of Management Studies, Siddaganga Institute of Technology, Tumkur, Karnataka, India.

1-04-2003 to 13-07-2005: Senior Marketing Executive, V- GUARD Industries Private Limited, Bangalore.

1-11-2001 to 31-03-2003: Marketing Associate, IFFCO-Tokio General Insurance, Bangalore.

Research Interest: Services Marketing, Strategic Brand Management, Strategic Management, Strategic Marketing and Cellular Mobile Services.

Research Publications

a) Research Papers Published in International Journals

Somashekar C. and Kiran K. B., (2012), "Empirical study of customer value and its impact on customer satisfaction and behavior intention in cellular mobile services",. - *International Journal of Retail and Marketing*, September, pp. 108-117.

Somashekar C. and Kiran K. B., (2012), "Empirical study of customer value and its impact on strategic performance in cellular mobile services" *Opinion'-A Bi-Annual International Journal of Business Management*, December, pp. 1 - 15.

Somashekar C. and Kiran K. B., (2013) "Role of Intangible Resources in Creating Superior Performance for Cellular Mobile Operators", *PES Business Review***,** January, pp. 29 - 46.

b) Research Papers Presented in International Conferences

Somashekar, C. Sequeira A. H. and Kiran K. B., (2010), "A Philosophy to Develop Services for Bottom of the Pyramid Market: A Case of Cellular Mobile Service Provider", International conference on "Challenges to Inclusive Growth in the Emerging Economies" held at *Indian Institute of Management Ahmedabad, Gujarat,* India during December 15-17, 2010.

Somashekar C. and Kiran K. B., (2012), "Role of Intangible Resources in Creating Superior Performance for Cellular Mobile Operators", *Strategic management Forum Annual convention, Indian Institute of Management, Indore*, April 3- 6, 2012.

Somashekar C. and Kiran K. B., (2012), "Empirical Study of Superior Performance of Indian Cellular Mobile Service Providers", - *12th Consortium of Students in Management Research (COSMAR 2012), Indian Institute of Science, Bangalore* November 16-17, 2012.

Award and Recognition: Awarded first position for the paper titled "Empirical Study of Superior Performance of Indian Cellular Mobile Service Providers", at the 12th Consortium of Students in Management Research (COSMAR 2012) on 16th and 17th November, 2012 at Indian Institute of Science, Bangalore.