

**“A Critical Evaluation of Consumer Behaviour: A Case
Study of Mobile Network Communication in Uttar Pradesh”**

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SUPERVISOR'S CERTIFICATE

This is to certify that **Mr. Praveen Kumar Rai** has completed the thesis titled “**A Critical Evaluation of Consumer Behaviour: A Case Study of Mobile Network Communication in Uttar Pradesh**” for the award of **Ph.D. Degree in Management, Maharishi University of Information Technology, Lucknow** under my supervision. To the best of my knowledge and belief the thesis under reference is based on original piece of research work done by him. He fulfills the conditions laid down in relevant ordinances.

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DECLARATION

I hereby declare that the work reported in the Ph. D thesis entitled “**A Critical Evaluation of Consumer Behaviour: A Case Study of Mobile Network Communication in Uttar Pradesh**” submitted at **Maharishi University of Information Technology, Lucknow, U.P. India**. It is an authentic record of my work carried out for the accomplishment of the degree of Doctor of Philosophy in the faculty of Management under the mentorship and supervision of **Dr. Vijay Kumar, Assistant Professor, Department of Business Management, Maharishi University of Information Technology, Lucknow**. The other books, articles and websites, which I have referred, are acknowledged at the respective places in the text. I have not submitted this work elsewhere for any other degree, diploma, thesis and no degree or diploma or distinction has been conferred on me before, either in this or in any other University. The thesis has been checked on Anti-Plagiarism Software (Turtin) at the Tagore Library of Maharishi University of Information Technology, Lucknow.

Praveen Kumar Rai
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A Critical Evaluation of Consumer Behaviour: A Case Study of Mobile Network Communication in Uttar Pradesh

Abstract

These days, telecommunication business is in development stage. In the interim, India is one of the biggest open market to telecommunication service providers. India has numerous telecommunication provider organizations. There is a great deal of rivalry among service providers to draw in more clients. Learning client conduct is one of the ways of procuring client. By knowing client conduct, organization can know form an opinion about the service or product that a customer needs. The Mobile Phone Network service has been perceived all through the world as a significant device for financial advancement of a country. As greater part of individuals rely upon cell phone for correspondence, banking, web and different exercises. Cell Phone service providers are offering different offices to draw in the client alongside latest technology. The test for the service providers is to discover the basic factors that impact the client inclination. A Customer generally attempts to purchase an item which has many credits satisfying their need. As discernment towards quality is more, clients are becoming more diligently to please, more intelligent, seriously requesting, less sympathetic and they are drawn closer by many service providers with pretty much equivalent offers. The basic objective of service providers is to expand consumer loyalty and to keep up with long haul client relationship. Service quality goes probably as a trailblazer to direct of consumers. Evaluation of service quality in an endeavour is critical to further develop effectiveness and augmentation consumer steadfastness.

The buying conduct of consumers in any part of the world is revolved essentially around progression, esteem, quality, organization and social components. Association consideration, add on services, client care and notice accept vital positions too, but the meaning of these factors changes as per the consumer's needs.

There is no doubt that now a days consumers control the market. They decide which company will flourish and which will perish.

The main focus of this work is on analyzing and understanding the consumer behaviour in choosing the cell service providers in the state of Uttar Pradesh in India.

First Chapter is an introductory part of research work, and gives the background of the cellular services and their providers that are available in India. This chapter also talks about the factors that are generally considered by any consumer while selecting a service provider for availing the mobile services in India.

Second Chapter is concise literature review in which several journals, newspapers, books and magazines have been referred and studied in order to understand the cell service market in India and the expectations of consumers from cell service providers.

Third Chapter is related to research methodology and discusses the proposed methodology that has been utilized for understanding the consumer behaviour of cell phone users in India.

The Fourth Chapter delineates the idea, conduct and administrations in cell phone administrations environment and incorporates the results of various situations that have been utilized to comprehend the buyer conduct of cell phone users in Uttar Pradesh.

The Fifth Chapter discusses evaluation of effecting factors on the consumer behaviour and verification and testing of proposed study.

The Six Chapter highlights the main findings of the research work and talks about the future scope of this research work

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LIST OF ABBREVIATION

ABBREVIATION	FULL FORM OF ABBREVIATION
Fig	Figure
Tab	Table
MCN	Mobile Communication Networks
GSM	Global System for Mobile Communications
GPRS	General Packet Radio Service
EDGE	Enhanced Data Rates for GSM Evolution
CDMA	Code Division Multiple Access
UMTS	Universal Mobile Telecommunications System
HSDPA	High-Speed Downlink Packet Access
LTE	Long-Term Evolution
BSC	Base Station Controller
SIM	Subscriber Identity Module
MSC	Mobile Switching Center
MNP	Mobile Number Portability
COAI	Cellular Operator Association of India
TRI	Telecom Regulatory Authority of India
OFDM	Orthogonal Frequency Division Multiplexing
TDMA	Time Division Multiple Access
ITU	International Telecommunication Union

CHAPTER 1

INTRODUCTION

1.1 Introduction

The consumer is the focal point of marketing exertion. The Modern Marketing Concept explains the genuine essentialness of purchaser behavior. Over the span of working the idea, the cutting edge marketing management attempts to tackle the fundamental issues of consumers in zone of utilization. Taking care of such utilization issues of consumer warrant, an exhaustive comprehension of such issues. It includes concentrated endeavours to comprehend the very purchasing cycle and all the elements impacting it. Further, consumer behavior is dynamic. It is these marketing managers to study analyse furthermore, decipher the ever-changing consumer behavior, with the goal that he can screen such investigation to settle on steady choices in regard of the four 'p's of the marketing blend. It is consumer inclination whether positive or negative that makes or damages the benefit position of a given item. The investigation of purchaser behavior takes us to the underlying foundations of why a consumer has positive or negative inclination. Once more, the investigation of consumer behavior has gone more confounded in the light of expanding function of government in consumer development in all the non-industrial nations. Appreciating consumer needs, desires and yearnings combined with issues is must to abuse marketing openings and meeting the difficulties is set alongside the chances.

The mobile platform has been proclaimed as the following wilderness for current business making completely new standards for intelligent marketing activities in non-industrial nations like India. The telecom area industry is portrayed by solid rivalry and elective specialist organizations with the execution of Mobile Number Portability, consumers have the opportunity to browse among the accessible other options. The examination had two destinations. To start with, it looked to distinguish factors that impact singular consumer's decision of a mobile telephone specialist co-op in the mobile phone industry. Mobile telephone administration is seen as an item by clients everywhere on the world. The telecommunications area is changing drastically in this serious time. The progressions are driven by a mix of market, contenders, business and different innovative powers. There are numerous components that impact the Telecom Sector like Globalization, Customer Awareness, Quality, Pricing and Government Policies. Clients are constantly been significant for the any business be it assembling or administration

industry. With the high pace of rivalry in each market, it is basic to hold the client and convert them into steadfast clients.

With the expansion in the availability of choices and data to the clients today, it has become an awkward task to get the clients back to you in the telecom area. Quality assistance is getting significant in client maintenance in the mobile communication industry. Presently a day, the clients are happy to dish out additional cash for good assistance quality. So consumer loyalty assumes an essential part for any assembling or administration area industry. With the entrance of increasingly more mobile specialist organizations it has gotten mind boggling in creation of choice as respect which administration or item to utilize.

Customer satisfaction is one of the main elements among different for expanding the associations client base, kindness, repurchases probability and benefits. It plainly expresses that the mobile specialist co-ops ought to fulfil their clients so they become faithful and stay with administrators. The principle result of consumer loyalty is the client faithfulness, and an organization having huge portion of steadfast clients, at that point there is increment in repurchase rate, more noteworthy cross purchasing potential, greater cost resistance, positive suggestion behavior and lower exchanging inclinations. Old and fulfilled clients are some of the time less delicate to the cost and are faithful to the specialist organization. A held client will consistently show protection from contenders' allurements and offers and will have the option to give both requested and spontaneous referral. Consumer behavior is a modern and new philosophy. It helps marketers to identify consumer needs and wants and develop goods and services accordingly. Thus, by satisfying the needs and wants of the consumers a marketer can differentiate them from the competitors. Hence it serves as a vital tool for marketing success. The ability to identify and satisfy unmet consumer needs is the key to a company's survival, profitability and growth. Hence the study of consumer behavior helps the company to achieve its marketing goals. The study of consumer behavior is very useful for dealers and salesmen. It helps them to meet the consumer needs and wants successfully. Therefore, knowledge of consumer behavior is essential for improving the performance of the entire distribution system. Marketing program includes various elements such as product, price, place and

promotion. The study of consumer behavior helps marketers to design a better and more relevant marketing programme. Relevant and effective marketing programs are essential to achieve marketing goals and objectives. Consumer behavior can also help to project future market trends. A thorough analysis of consumer behavior helps marketers to identify various opportunities and threats present in the marketing environment. Consumer behavior study helps marketers to face intense competition in the market. After analyzing consumer behavior a marketer can provide better goods and services to the consumer than what the competition is offering. Therefore, consumer behavior is useful for marketers in maintaining their competitive strengths.

With the opening up to the business sectors or the post progression time frame has brought about numerous organizations entering the business sectors with contributions of their products and ventures. This made every advertiser to understand that he needs to continually update the consumers' information about his items by finding new dimensions. In the present situation the customer procurement cost has expanded though the maintenance cost is moderately less expensive, it's significant for each help industry to comprehend its consumer and oblige its necessities to get by in this serious market. With the rise of so numerous mobile telecom organizations and the mantra being "customer satisfaction", it is critical to know which mobile telecom network has the most great picture and climate the customers are really happy with the administration quality gave. Customer satisfaction has increased a great deal of significance over the most recent thirty years. In the previous days, this idea was not exceptionally well known in light of the fact that organizations thought it was more essential to increase new customers than hold the current ones. In present occasions, associations have increased better comprehension of the significance of customer satisfaction (particularly administration delivering organizations) and embraced it as a high need operational objective. This examination targets exploring the general customer satisfaction of the mobile Network benefits in Kumbakonam town concerning a portion of the telecom players, for example, Jio, Reliance, Vodafone, and BSNL.

1.1.1 The concept of a want carries with it a number of implications

- The consumer is not always conscious of his/her wants until some stimulus, like advertising, facilitates recall or activates that wants.
- The consumer may be a product in anticipation of wanting it, so that reminding the consumer to plan for the future may help generate current sales.
- Consumers may want something they do not need (e. g., cigarettes) but they can also need something they do not want since a need that is not being met (e. g., job skills for the unemployed) may not always manifest itself in a want to remedy the deficiency.
- Active wants weight the feasibility of satisfying a want, so that expressed wants do not necessarily take into account all secret wants. A consumer may rule out wants for products that are beyond his or her budget or wants for products that are not available. But wants that are currently non-realizable may remain active and prompt action to remedy the position (e.g., saving for a down payment on a house). In any case, it is important for the seller to facilitate the attainment of wants (e.g., through the provision of credit).
- An individual consumer's want can be described as a cluster concept. That is, a want can be thought of as a cluster of attributes not all of which must be possessed by an offering for the consumer to feel the want is being met. Thus, there are several makes of car that a particular consumer believes will meet his want because they all display the crucial performances that are sought. However, no single car displays all the exact attributes the individual consumer wants.
- Consumers may actually want something they do not consciously believe they want. Consumers may think they want what in fact they do not want. Wanting something is neither a necessary nor sufficient condition for the consumer to be satisfied with the product after it is bought what consumer might want with perfect understanding of their goals may differ widely from what is currently wanted. A husband and wife may believe they want an apartment in the city, but when they reflect on the true goals of a quiet, relaxed life style, they find a house in the country would better meet their needs.

1.2 Cellular Mobile Service in Indian Scenario

In the last ten years, the mobile revolution has truly changed the socio-economic landscape of India and played a pivotal role in the growth and development of the economy. According to Cellular Operator Association of India (COAI), India ranks between the top ten telecom network in the world and the second largest in Asia. India is also one of the fastest growing markets in mobile communications. In the 21st century, mobile has brought a revolution in the field of communication. In this third millennium, mobile is being seen as an important tool to bring change in the way of governance. Initially mobile was used only as a medium of communication, but today it is being used by government agencies to not only convey important information to the people but also to provide them government services "anytime and anywhere". Purpose is being done. Today, services related to health, education, banking, business etc. are being provided to the people through mobile. According to the Department of Telecommunications and Telecom Regulatory Authority of India, Indian Telecom Sector has registered phenomenal growth during the last few years and today it is the second largest telephone network in the world after China Telecom Regulatory Authority of India's report on Telecom Services Performance (TRAI, 2010) indicates cellular mobile subscriber base touching 635.71 million in June 2010. Growth in India's mobile telephone sector has been nothing short of spectacular in the past few years, aided by higher subscriber volumes, lower tariffs and falling handset prices. India is home to a number of global mobile operators working with local companies and mobile market has consistently experienced very high annual growth rates with the continuous decline in tariff. The telecommunication sector, especially the mobile phone sector, in India is one of the fastest growing business segments of the country which provide a lot of value addition to the society with its service and creation of employment opportunities. At present there are fifteen mobile phone operators in the country –

- Bharti Airtel Limited (Bharti),
- Reliance Communications Limited (Reliance),
- Vodafone Essar Limited (Vodafone),

- Bharat Sanchar Nigam Limited (BSNL)- Government of India owned public sector company,
- Tata Teleservices Limited (Tata),
- Idea Cellular Limited (IDEA),
- Aircel Limited (Aircel), Unitech Wireless Limited (Unitech),
- Mahanagar Telephone Nigam Limited (MTNL),
- Sistema Shyam Tele Services Limited (Sistema),
- Loop Mobile (India) Limited - Formerly BPL. Mobile (Loop Mobile),
- Videocon Telecommunications Limited (Videocon),
- S Tel Private Limited (S Tel),
- Himachal Futuristic Communications Limited (HFCL)
- Etisalat DB Telecom Private Limited (Etisalat).

All of them compete with each other to grab customers by providing wide range of services. They not only offer basic services of cell phone but also produce other value added services. Along with the normal services all of the operators are now offer internet facilities which enable the subscribers to reach the whole world through internet easily and their services includes prepaid, post-paid, internet, value added services, roaming and devices.

The mobile revolution has really changed the financial scene of India and assumed a critical function in the development and improvement of the economy. As per Cellular Operator Association of India (COAI), India positions between the main ten telecom network on the planet and the second biggest in Asia. India is likewise one of the quickest developing business sectors in mobile communications. Telecom Regulatory Authority of India's report on Telecom Services Performance (TRAI, 2010) shows cell mobile supporter base contacting 635.71 million in June 2010. Development in India's mobile phone area has been completely stupendous in the previous few years, supported by higher supporter volumes, lower levies and falling handset costs. India is home to various worldwide mobile administrators working with nearby organizations and mobile market has reliably experienced high yearly development rates with the consistent decrease in tariffs.



Fig 1.1 Reason for entering industry in India

The mobile area supporters India have developed from around 10 million endorsers in the year 2002 to 250.93 million before the finish of February 2008. As per Telecom Regulatory Authority of India (TRAI), an aggregate of 8.49 million telephone associations were added during February 2008. The yearly development of mobile cell administrations recorded in India during the most recent couple of years has been almost 100%, yet, after longer than a time of beginning of mobile administrations in the nation, just 30% of the 600 million addressable business sectors of mobile clients in the nation of more than one billion individuals have been reached. Today, around 8,000,000 new telephone supporters are being included India consistently. This is generally in the mobile telephone portion.

The telecommunication area, particularly the mobile telephone area, in India is one of the quickest developing business fragments of the nation which give a great deal of significant worth expansion to the general public with its administration and making of work openings. At present there are fifteen mobile telephone administrators in the nation - Bharti Airtel Limited (Bharti), Reliance Communications Limited (Reliance),

Vodafone Essar Limited (Vodafone), Bharat Sanchar Ni-gam Limited (BSNL)- Government of India claimed public area organization, Tata Teleservices Limited (Tata), Idea Cellular Limited (IDEA), Aircel Limited (Aircel), Unitech Wireless Limited (Unitech), Mahanagar Telephone Ni-gam Limited (MTNL), Sistema Shyam Teleservices Limited (Sistema), Loop Mobile (India) Limited - Formerly BPL Mobile (Loop Mobile), Videocon Telecommunications Limited (Videocon), S Tel Private Limited (S Tel), Himachal Futuristic Communications Limited (HFCL) and Etisalat DB Telecom Private Limited (Etisalat). Every one of them contend with one another to get customers by giving wide scope of services.

Communications is the quickest developing area inside India's economy. The normal build pace of development of the area works out to 24.02 percent per annum since the turn of these thousand years. Public mobile telephone history starts during the 1940s after World War II. Albeit crude mobile telephones existed before the War, these were uniquely changed over two-way radios utilized by government or industry, with calls fixed physically into the land-line telephone organization. With an endorser base of more than 811.59 million, the Mobile Telecommunications Industry in India is the second biggest on the planet and it was opened up to private parts during the 1990s. Rivalry has made costs drop and calls across India are one of the least expensive on the planet. A mobile telephone (otherwise called a cellular telephone, PDA and a hand telephone) is a gadget that can settle on and get telephone decisions over a radio connection while moving around a wide geographic territory. It does as such by associating with a cellular organization give by a mobile telephone administrator, permitting admittance to the public telephone organization. Paradoxically, a cordless telephone is used extraordinarily inside the short extent of a singular, private base station.

Notwithstanding communication, present day mobile phones additionally uphold a wide assortment of different administrations, for example, text informing, MMS, email, Internet access, short-range remote communications (infrared, Bluetooth), business applications, gaming and photography. Mobile phones that offer these and more broad processing capacities are alluded to smart phones.

The majority of administrator follows GSM mobile framework works under 900MHz transmission capacity few late players began working under 1800MHz transfer speed. CDMA administrators work under 800Mhz band; they are first to present EVDO based fast remote information administrations through USB dongle. Disregarding this immense development Indian telecom area is hit by extreme range crunch, defilement by India Govt. authorities and monetary difficulties.

In 2008, India entered the 3G fields with the dispatch of 3G empowered Mobile and Data administrations by Government claimed MTNL and BSNL. Later from November 2010 private administrator's begun to dispatch their administrations. India has picked the utilization of both the GSM (worldwide framework for mobile communications) and CDMA (code-division different access) advances in the mobile area. Notwithstanding landline and mobile phones, a portion of the organizations likewise give the WLL administration.

In fewer than twenty years, mobile phones have gone from being rare and expensive pieces of equipment used by businesses to a pervasive low-cost personal item. In the era of information explosion, people are to be provided with quick and timely access to information. Indian Telecom industry is one of the fastest growing telecom markets in the world. In earlier day the mobile phone being viewed as an expensive luxury only affordable to the power and rich .Today, not only in all urban areas, also in smaller towns and remote rural farms, the mobile phone has become a common, affordable, and convenient communication device. Reduction in the tariff has made affordable to all and increased its uses significantly. In telecom industry, service providers are the main drivers; whereas equipment manufacturers are witnessing growth. Nowadays, telecommunication business is in maturity phase. Meanwhile, India is open market to telecommunication service provider. India has many telecommunication provider companies. The competition makes service provider compete to acquire customer. Learning customer behavior is one way to acquire customer. By knowing customer behavior, company can know formulate product or service that offered. The study of this research show that brand, network and distribution have significant relation to customer preference while choose service provider. Tariff, promotion and relation have not significant effect to customer behavior while choose service provider. This study to know customer behavior intention while choose telecommunication service provider.

1.2.1 Service Quality of Cellular Mobile

The success of telecommunication industry depends on prudent efforts and feasible investments. In a competitive market, service providers are expected to compete on both price and quality of services and also it is necessary for the service providers to meet the consumers' requirements and expectations in price and service quality. The positive relationship of service quality with customer satisfaction, customer preference (Ranaweera and Neely, 2003), profitability, competitiveness, is well proven in the academic literature. Government of India - Department of Telecommunication's data shows that, both BSNL and MTNL are losing market share to private operators in the mobile telephony segment. BSNL and MTNL together are down from a 17% market share at the beginning of March 2008 to 13.6% in August 2009. In contrast, the private sector's share jumped from 83% to 86.4% during the same period. So the challenge for the mobile service providers in India is to find out the critical factors that influence the customer's preference. Investigators have also found customer satisfaction from a multi dimensional nature and view overall satisfaction as a function of satisfaction with multiple experiences with the service provider. In general satisfaction is developed on the information from all prior experiences with the service supplier and is consider as a function of all prior transaction and information. Nowadays cellular mobile is a very necessary products for our daily communication. Customers are mainly purchase this product for instant communication and various services provided by the companies. Services mainly depend on some factors and customers are always tried to buy that product which has many factors or attributes fulfilling their desire. Recently the concept of customer satisfaction has received much attention. In cellular mobile market, customers bring higher expectations for communication from its service providers and if companies are not able to meet these expectations, the customers will take their business elsewhere. The consumers want and expectations are altering all the time, this directs to a condition where customers create ever higher benchmarks. Applying customer satisfaction approach means customers, and then finding their wants and expectations, and to end with their perceptions. A company's most important success factor is the ability to deliver better customer value than competitors do, and the objective of a strategy is to deliver value to the customers in order to provide required returns to the shareholders and employees. There are many variables and Factors Determinants the Choice of Mobile Service Providers.

In order to achieve higher levels of quality service in service companies should deliver higher levels of service quality and in the present context customers' perceptions are highest. From the perspective of the service organization, there is a desire to survive and compete in a global environment. From the perspective of the customer, there is a desire for better quality services. In fact the private sector's singular focus is on economic efficiency, as it is generally viewed that profit and/or cost reduction are key ingredients to survival and growth. Service is a form of attitude which is related to satisfaction and also leads to consumer preference and future purchase. In particular consumers prefer service quality when the price and other cost elements are held constant. It has become a distinct and important aspect of the product and service offering. According to Lehtinen and Lehtinen (1991) service quality helps to create the necessary competitive advantage by being an effective differentiating factor. It includes not only the buying price but also the call charges. Generally, a price-dominated mass market leads to customers having more choices and opportunities to compare the pricing structures of diverse service providers. A company that offers lower charges would be able to attract more customers committing themselves to the telephone networks, and, significant number of "call minutes" might be achieved. Consumer's perception of product quality is always an important aspect of a purchasing decision and market behavior. Consumers regularly face the task of estimating product quality under conditions of imperfect knowledge about the underlying attributes of the various product offers with the aid of personal, self-perceived quality criteria.

1.3 Consumer Buying Behaviour

It is the study of people, gatherings, or associations and the methods they use to choose, secure, use, and discard items, administrations, encounters, or thoughts to fulfil needs and the effects that these cycles have on the consumer and society. Since customer is the motivation behind why any association exists, it is important to comprehend the customer and study the example of his buying behaviour. Consumer buying behaviour is all mental, social and actual behavior of possible customers as they become mindful of, assesses, buy, devour and enlighten others regarding items and services."Understanding consumers' buying behavior is one of the components that helps in accomplishing marketing objectives. Without this understanding increasing the customer base is a complex task, especially in the present times, when people are aware and have many other

options. It additionally enables when customers to will purchase more from business. Their buying behaviour is one of the components which must be perceived for a superior view about the customer profile. Financial aspects clarify consumer behaviour comparable to monetary components. Human science and social humanities flexibly clarifications concerning the impacts of family and gathering behaviour upon singular behaviour, the dissemination of new items and thoughts (development) among different gatherings, and the effect of culture on its individuals. Psychologists explain the motivation that underlines buying behaviour, the perceptions individuals have of themselves and the products they buy. The internal and external forces and influences interact in highly complex ways, affecting the individual's total pattern of behaviour as well as his buying behaviour. Consumer behavior is the study of individuals, groups, or organizations and the processes they use to select, secure, and dispose of products, services, experiences, or ideas to satisfy needs and the impacts that these processes have on the consumer and society. The telecommunication sector, especially the mobile phone sector, in India is one of the fastest growing business segments of the country which provide a lot of value addition to the society with its service and creation of employment opportunities. The success of telecommunication industry depends on prudent efforts and feasible investments. In a competitive market, service providers are expected to compete on both price and quality of services and also it is necessary for the service providers to meet the consumers' requirements and expectations in price and service quality.

Consumer behaviour alludes to the behaviour that consumers show in looking for buying, utilizing assessing and discarding items and administrations that will fulfil their requirements. The investigation of consumer behaviour is the investigation of how individual settle on choices to spend their accessible assets (time, cash, exertion) on utilization related things. It incorporates the investigation of what they get it, when they get it, where they get it, how frequently they get it, and how regularly they use it? The response to these inquiries can be found through consumers and give advertisers significant contribution for item planning, plan alteration and special technique.

The cutting edge marketing idea makes customer at the middle phase of association endeavors. The concentration inside the marketing idea to arrive at the objective customer sets the ball moving for breaking down every one of the states of the

objective market. The first being to discover interest of such people as would become planned customers. At that point comes the readiness of such intrigued people to purchase the offered item. However, since customer needs start things out and afterward the association offers the item, as basic of the marketing idea, customer's readiness to purchase can't be concentrated in separation of the premium of such possibilities to fulfil a fundamental need from various satisfiers. Customers need(s) acknowledgment, their contribution level, the accessible other options, the choice to purchase and post buy behaviour, all are important for the general consumer behaviour. Each consumer is special and this uniqueness is show in inquiry, buying, devouring, and responding and so on. In this manner, advertisers should appropriately comprehend consumer behaviour. In investigating the getting exercises, the analyst is keen on inspecting following sorts of behaviour.

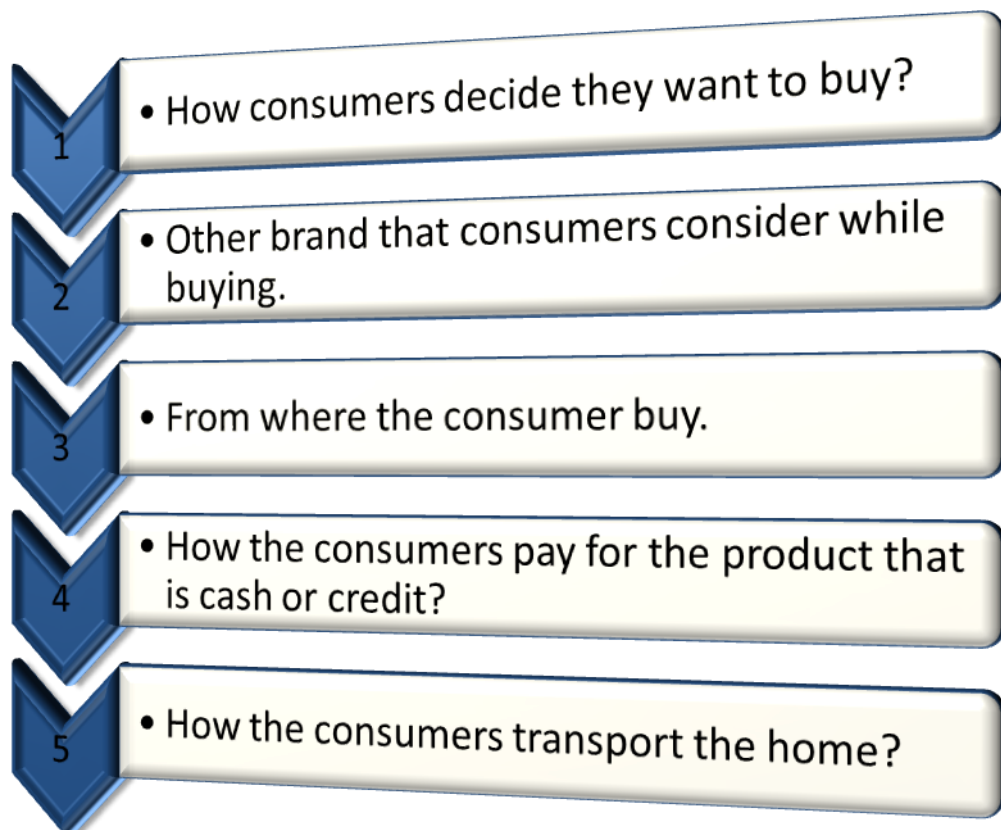


Fig 1.2analysing the obtaining activities of consumer's behaviour

Customer buying behavior is the sum total of a customer's attitudes, preferences, intentions, and decisions regarding the customers behavior in the market place when purchasing a product or service. The study of customer behavior draws upon social science disciplines of anthropology, psychology, and economics. Customer buying behavior is also the process by which individuals search for, select, purchase, use and dispose of goods and services, in satisfaction of their needs and wants. The consumer behavior fluctuates time to time according to the technological up gradation, change of trend in fashion, change of trend in market, as well as some times by swing of mood so there is no rigid thumb rule which may help in grabbing the consumers perception towards his very own problems and its very own solution by a product. That is the duty and need of a marketer to understand the customers need and make a suitable option (a product or a service) which may help him to resolve the customers Problem / Need / Desire / expectations. There are many more conducts which may help the enterprises to make a positive impact in customers mind towards his or her business, it may help in making a new customers as well possibly he may retain the customer for a long time, the excellent use of the marketing technique may change the new customer in a loyal customer of the enterprise. There are many options of the products from different brands but usually people prefer to use the same brands product (brand loyalty) which usually results when the customer gets a full satisfaction by using / consuming the product and feels the product has fulfilled all the aspects regarding the products quality, products quantity, price of the product, availability of the product, packaging, labelling, and grading of the product and etc. In the case of purchasing a mobile phone, the consumer goes through all the five stages of rational decision making or he makes a quick purchase on the account of hedonic considerations. The general belief in the purchase process is that in case of utilitarian products, rational decision-making is involved, whereas in case of hedonic products, emotional decision making is involved. For mobile phone purchase, both rational and hedonic considerations are undertaken by consumers. The purchase decisions for mobile phones mostly follow rational buying process, but in certain cases the decision may also be influenced by symbolic preference associated with some brands. It has been observed that younger consumers value more hedonic features in mobile phones, while the older consumers are influenced by rational buying process. But in the present context the mobile companies should launch any mobile model by considering the market research of the region. Thus it's essential for the market researchers that they should have

complete information about the required features, brand etc of the mobile phones in any specific region.

1.3.1 Basis of Consumer Behaviour

Consumer Behaviour rests on four essential premises:

1. The consumer is Sovereign. He has full capabilities to screen out all attempts of influence, with the outcome that everything done by the business firm must be adapted to consumer motivation and behaviour.
2. Consumer motivation and behaviour can be understood through research. Perfect prediction is not possible, but strategic outcomes are notably improved through properly and utilized research.
3. Consumer behaviour influence thought persuasive activity that taken the consumer seriously as being sovereign and powerful.
4. Consumer persuasion influence has socially beneficial outcomes as long as legal, ethical and moral safeguards are in place to curb attempts to manipulation.

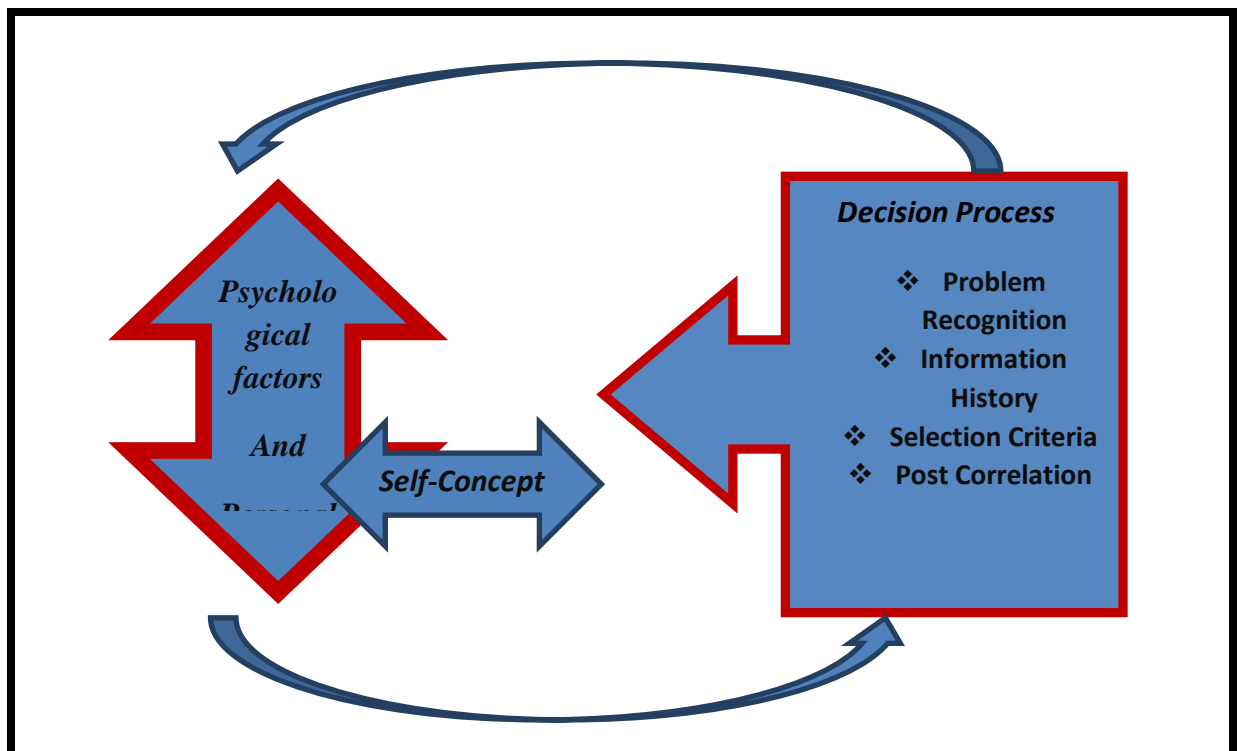


Fig 1.3 Decision Steps for Consumer

- **Psychological Factors**

Fruitful organizations see step by step instructions to utilize the different parts that sway customer buying conduct to viably exhibit their things and lift deals. Studies show that there are conventionally four central point that expect a limit in the customer's purchasing conduct. These parts combine social variables, social segments, solitary segments and mental segments. The mental components that influence a person's choice to make a buy are moreover mentioned into the person's inspirations, recognitions, learning and his emotions and perspectives.

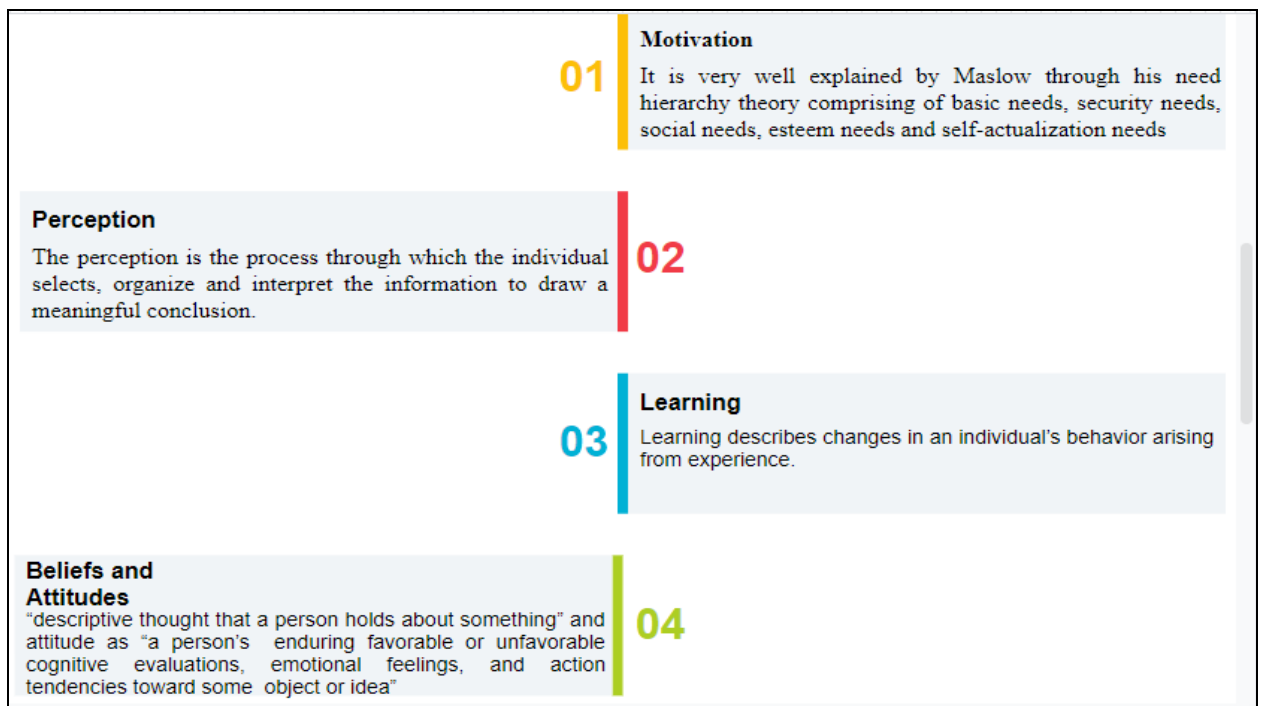


Fig 1.4 Effective Factors_ Psychological

- **Personal Factors**

These are the solitary components to the purchasers that energetically influence their purchasing practices. These variables change from individual to individual that outcomes in a substitute plan of acknowledgments, attitudes and conduct towards specific products and ventures.

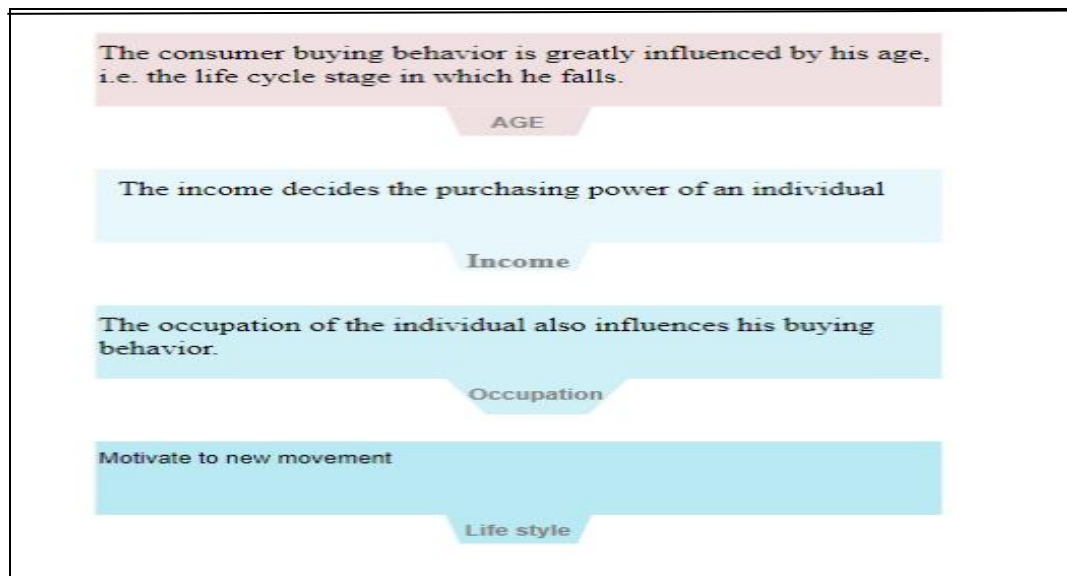


Fig 1.5 Effective Factors_ Personal

In actuality, customer is the point of convergence around which the entire mechanical arrangement of today spins. The economists have considered the customer a ruler. He is much the same as an elector in vote based system. It is choice of merchandise or administrations decide the reality of the items/administrations. Thus, to draw him to an ever increasing extent, the marketing staff should know their customers well so they could deal with them in the right way, present them merchandise in the way that they will acknowledge and bring a deal to a close so that consumer satisfaction is made.

1.4 Marketing Concept & Consumer Behaviour

Area of consumer behaviour is the sub system of the total marketing systems. Journey of marketing concept started from initial production concept (emphasis on product varieties and attributes) to selling concept (emphasis on production, product, distribution and promotion) to marketing concept (emphasis on consumer needs & wants and other elements emphasized in previous concept). Marketing orientation simply means producing those products, which the consumers need and want. General Electric adopted this approach in mid-50. It came to be known as the marketing concepts, which emphasizes the needs and wants of the target market and delivery of products to satisfy these, better than competitors. This concept spread widely, and so also the study of consumer behaviour. In order to produce want satisfying products it is necessary to assess those needs and wants.

Marketing Reach was therefore, necessary. Consumers were then recognized to be extremely complex individuals with a variety of needs and wants. Each consumer segment had unique needs. Thus behaviour will be necessary to design suitable products and marketing them. Marketing concept is the fountainhead of consumer behaviour studies undertaken for formulation of the marketing strategies.

1.4.1 Reasons for Studying Consumer Behaviour

The consumer is the focal point of marketing endeavors. The Modern Marketing Concept illuminates the genuine essentialness of purchaser behavior. Throughout working the idea, the cutting edge marketing management attempts to tackle the fundamental issues of consumers in territory of utilization. Tackling such utilization issues of consumers warrants an intensive comprehension of such issues. It includes concentrated endeavors to comprehend the very buying cycle and all the elements affecting it. Further, consumer behavior is dynamic. It is this marketing to consider, break down and decipher the consistently changing consumer behavior, so he can screen such examination for the reason if settling on trustworthy choices in regard of the four 'P' s of the marketing blend. It is consumer inclination whether positive or negative that makes or damages the benefit position of a given item. The investigation of purchaser behavior takes us to the foundations of why a consumer has positive or negative inclination. Once more, the investigation of consumer behavior has gone more confounded in the light of expanding function of government in consumer development in all the non-industrial nations. Appreciating consumer needs, desires and yearnings combined with issues is an absolute necessity to misuse marketing openings and meeting the difficulties is set alongside the chances.

Customers buy so as to fulfil needs. A portion of these necessities are fundamental and must be filled by everybody on the planet while others are not needed for essential endurance and differ contingent upon the individual. It likely bodes well to characterize needs that are not a need as needs or wants. Knowing why and how individuals devour items causes advertisers to comprehend that how to improve existing items, what kinds of items are required in the commercial centre, or how to draw in consumers to purchase their items. Presently with the advances in innovation whole world has become a solitary

market and consumers have been bombarded with many options. The economically tight market has vanished and wide open market has come up. This has prompted outlook change of the maker's consideration from item to consumer and all the more thus, on the consumer behavior. The assessment of marketing idea from simple offering idea to consumer-situated marketing has brought about purchaser behaviour turning into a free order. Consumer Behavior is the investigation of how people settle on choice to spend their accessible assets (time, cash and exertion) on utilization related viewpoints. It is the investigation of when, why, how, where and what individuals do or don't accepting items.

1.4.2 Consumer behaviour in telecommunication markets

Nowadays, telecommunication business is in maturity phase. Meanwhile, Indonesia is open market to telecommunication service provider. India has many telecommunication provider companies. The competition makes service provider compete to acquire customer. Learning customer behavior is one way to acquire customer. By knowing customer behavior, company can know formulate product or service that offered. Switching patterns provide an important indicator that the demand-side of a market is well-developed and consumers sufficiently empowered to participate actively. The motivation to participate is generally a function of consumers' estimate of the performance of their existing supplier; and whether or not they believe there are better alternatives available from other suppliers on the aspects of service that matter to them. If the market is perceived to be undifferentiated and/or if their current supplier is perceived to be the best on the market on the criteria that are important, there is no expected benefit from switching. It is important to note, however, that switching is not the only measure of a vibrant demand-side nor is switching necessarily always in consumers' best interests. The decision to engage in co-ordinated information gathering that will support the decision to switch or not to switch is also important. If a consumer is satisfied with his/her current provider, switching is not necessarily an improvement. Moreover, choosing a new service does not necessarily mean switching provider. This section examines the available evidence of consumer behaviour and satisfaction levels in the telecommunications industry and of influences on such behaviour. In general, satisfaction surveys need to be treated with some caution in that results may vary widely according to how, and in what context, a question is formulated. For this reason, it is useful to analyse consumer

satisfaction surveys side by side with consumer complaints data, where available, to get a fuller picture of the market.

1.5 Mobile Networks Communication

Mobile Communication Networks (MCN) are a sort of telecommunications networks with an assortment of terminals, elements, and hubs associated with one another through connections that empower telecommunication between the clients of the terminals. The elements speak to individuals utilizing convenient mobile gadgets, and simultaneously, they are speaking with one another by messages or voice call signals. MCN is upheld and offered by numerous advancements, for example, Global System for Mobile Communications (GSM), General Packet Radio Service (GPRS), and Enhanced Data Rates for GSM Evolution (EDGE), Code Division Multiple Access (CDMA), Universal Mobile Telecommunications System (UMTS), High-Speed Downlink Packet Access (HSDPA), and Long-Term Evolution (LTE). Communication networks speak to the way that individuals impart and interface with one another. Through history, individuals utilized various ways and advancements to speak with one another, for example, mail, fax, broadcast, fax, radio frameworks, landline phones, mobile telephone, and email messages. Mobile Communication Networks are presently the most well-known way that individuals speak with one another because of their adaptability being used anyplace and anytime. It began as two-way radio frameworks and afterward created to arrive at mobile organizations with 4G innovations that send excellent video and voice calls. Enormous and weighty gadgets Due to the high spread of mobile innovation between individuals, designers began to deliver numerous mobile applications that make communication considerably simpler and help individuals to deal with their clinical, monetary, instructive, and public activities with quick admittance to their data in any case where they are or where the data is. Utilizing mobile applications individuals can know the consequences of their clinical tests, have their clinical records in their grasp if there should be an occurrence of crisis, know their family's news when they are abroad, get the opportunity to know new individuals, make new kinships and relations, take care of their tabs, move cash to their families and youngsters, learn new dialects, study their courses, share information, hold conferences with associates and accomplices, and considerably more.

MCN is considered as a sort of complex organization. Complex organizations model the perplexing frameworks of the genuine human world as organizations, for example, informal organizations, traffic organizations, cellular neural organizations, and communication organizations. Every mind boggling network presents explicit topological highlights that portray its availability and exceptionally impact the elements of cycles executed on the network. MCN is a radio organization conveyed over land regions where each is served by at any rate one cell site or base station. Each base station gives radio sign inclusion over a specific geographic zone that empowers enormous quantities of compact gadgets to speak with one another regardless of whether they are moving starting with one base station then onto the next. MCN doesn't rely upon any actual association between the communication elements, and it has adaptability in changing the association starting with one element then onto the next. The framework of MCN comprises of the accompanying principle segments:

- **Mobile Station:** It is utilized by the mobile assistance endorsers and it comprises of mobile hardware and the Subscriber Identity Module (SIM) which gives individual versatility. Clients can peruse the Internet, send Short Message Service (SMS), and get and settle on decisions from any mobile gadget when they embed the SIM card into the mobile gadget.
- **Base Station Subsystem:** It controls the radio connection with the Mobile Station. It comprises of at least one Base Transceiver Station (BTS) and a Base Station Controller (BSC). BTS contains radio reception apparatus and radio handsets that characterize a phone and handles the radio connection conventions with the Mobile Station. The BSC deals with the radio assets for at least one BTS. It handles radio channel arrangement and frequency hopping and deals with the handovers starting with one cell then onto the next.
- **Network Switching Subsystem:** Its principle part is the Mobile Switching Center (MSC) which plays out the exchanging of calls between the mobile clients and among mobile and fixed organization clients. MSC additionally handles the mobility management tasks, for example, enrollment, confirmation, and area refreshing.

1.5.1 Features of Mobile Network Communication

Mobile Network Communication is the utilization of innovation that permits us to speak with others in various areas without the utilization of any actual association (wires or links). Mobile communication makes our life simpler, and it spares time and exertion. A mobile telephone (additionally called mobile cellular organization, PDA or hand telephone) is an illustration of mobile communication (remote communication). It is an electric gadget utilized for full duplex two-way radio telecommunication over a cellular organization of base stations known as cell site. Coming up next are the highlights of mobile communication:

- **High capacity load balancing:**

Each wired or remote foundation must fuse high limit load adjusting. High limit load adjusting implies, when one passage is over-burden, the framework will effectively move clients starting with one passageway then onto the next relying upon the limit which is accessible.

- **Scalability:**

The development in prevalence of new remote gadgets ceaselessly expanding step by step. The remote organizations can begin little if vital, however grow regarding inclusion and limit varying - without upgrading or assemble an altogether new organization.

- **Network management system:**

Presently, remote organizations are substantially more unpredictable and may comprise of hundreds or even large number of passages, firewalls, switches, overseen power and different parts. The remote organizations have a smarter method of dealing with the whole organization from a unified point.

- **Mobile device management:**

Assume, numerous mobile gadgets are getting to your remote organization, presently consider the huge number of uses are running on those mobile gadgets. How would you plan on dealing with these gadgets and their applications, particularly as

gadgets travel every which way from your business? Mobile gadget management can give control of how you will oversee admittance to projects and applications. Indeed, even you can distantly wipe the gadget on the off chance that it is lost or taken.

1.6 Advantages of Mobile Communication

Mobile communication technology includes devices such as cellular phones, Wi-Fi-enabled hand-held devices and wireless laptops that can connect through Wi-Fi or with a cellular connection. Consumers envision the benefits of these kinds of devices before purchasing them and sign a provider carrier contract. But it is important to understand the advantages and disadvantages of mobile communication technology before getting involved in a long-term agreement. A mobile communication device can be helpful in case of an emergency. If emergency authorities are needed, then the cellular phone can be used to contact them. Communications devices with built-in digital phones can be used to catalog the events at the scene of an accident to help determine responsibility and assess damage. Hikers can take mobile communication devices with them and use the GPS tracking system to find their way, or call for help if needed. There are following advantages of mobile communication:

- **Flexibility:** Wireless communication enables the people to communicate with each other regardless of location. There is no need to be in an office or some telephone booth in order to pass and receive messages.
- **Cost effectiveness:** In wireless communication, there is no need of any physical infrastructure (Wires or cables) or maintenance practice. Hence, the cost is reduced.
- **Speed:** Improvements can also be seen in speed. The network connectivity or the accessibility was much improved in accuracy and speed.
- **Accessibility:** With the help of wireless technology easy accessibility to the remote areas is possible. For example, in rural areas, online education is now possible. Educators or students no longer need to travel to far-flung areas to teach their lessons.
- **Constant connectivity:** Constant connectivity ensures that people can respond to emergencies relatively quickly. For example, a wireless device like mobile can ensure you a constant connectivity though you move from place to place or while you travel, whereas a wired landline can't.

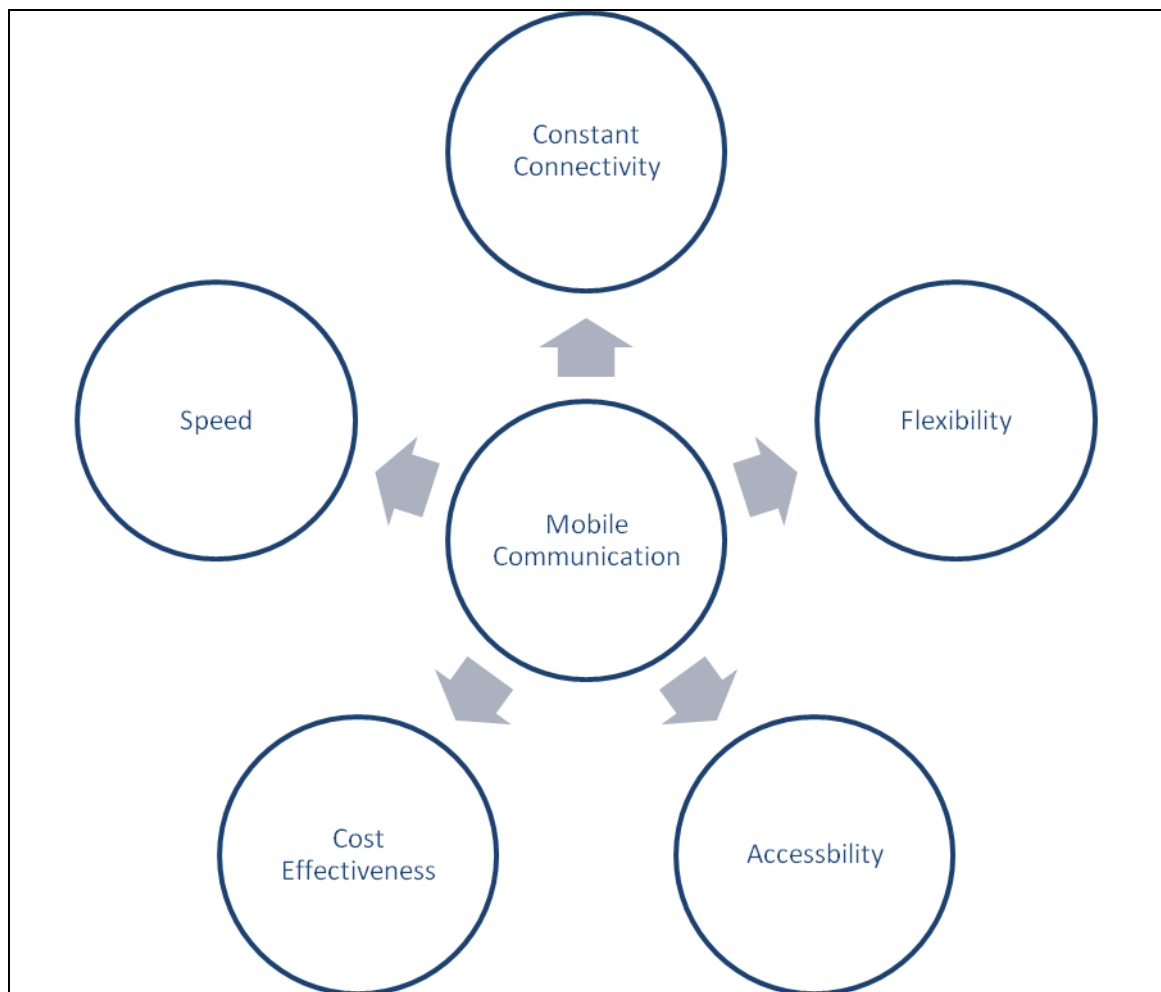


Fig. 1.6 Advantages of Mobile Communication

1.7 Effective Psychological Factors

There are four mental components that impact consumer behavior: Motivation, discernment, learning, and demeanour or conviction framework. Inspiration addresses the inward requirements of the consumer. Seeing how to inspire your customer is a useful asset. The manner in which your objective customer sees the world or finds out about your item, regardless of whether on the web or face to face, can likewise impact behavior. At long last, conviction frameworks can impact the entirety of the above mentioned. For instance, a few people learn best outwardly. Proficient pictures and pictures of your item or administration can impart 1,000 words paying little mind to conviction framework. This clarifies why pictures and pictures are so significant for marketing. Consumer

behavior is, generally, a mental cycle and the brain science of buying behaviour is profoundly identified with the feelings that the consumer experiences. To start with, the consumer will start by perceiving the way that they need the item. They will at that point discover some approach to settle their necessities. They will discover where they can get the item, the amount it costs, which merchants are the best to get it from, when is the best an ideal opportunity to get it, etc. When the consumer is happy with all the data they have accumulated on the issue, they will execute the arrangement and make an acquisition of the item.

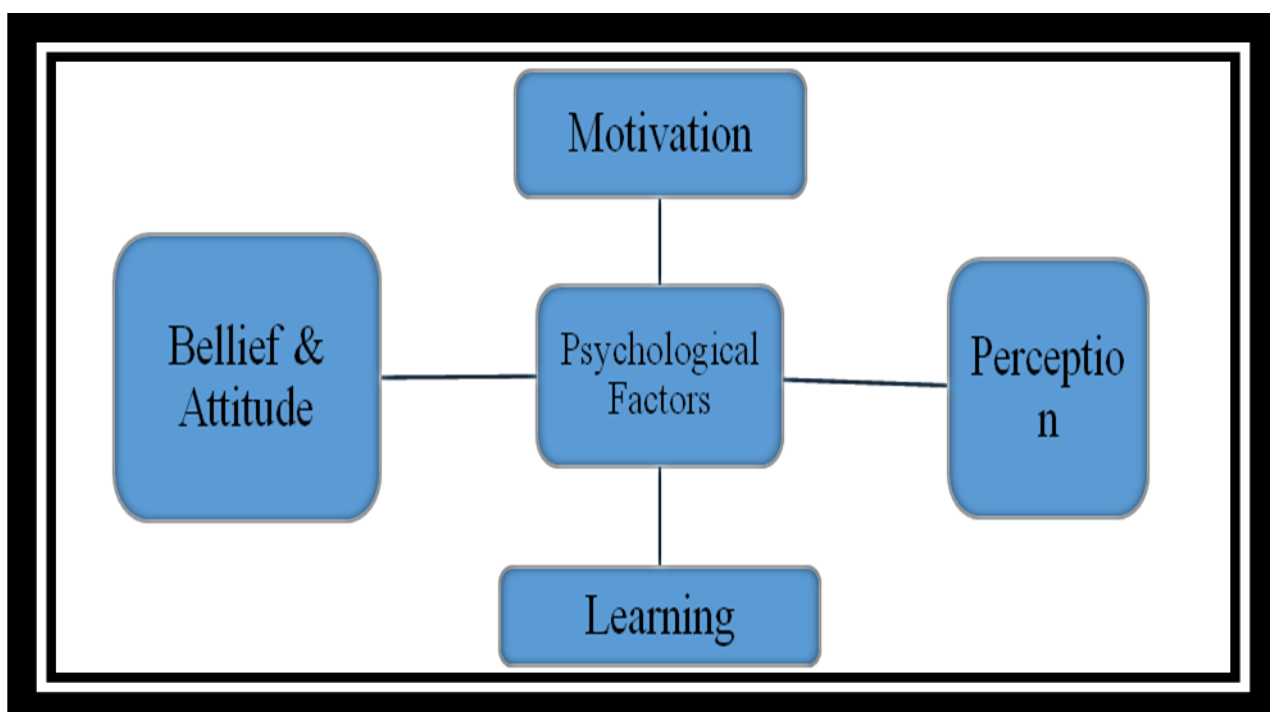


Fig 1.7 Effective Psychological Factors

1.7.1 Motivation

A motive is the internal drive or strain to make a move to fulfill a need. A profoundly energetic individual is a very objective arranged person. Regardless of whether objectives are positive or negative, a few people will in general have an elevated level of objective direction, while others will in general have a lower level of objective direction. Individuals may show various degrees of motivation in various parts of their lives. For instance, a secondary school junior might be failing geometry (low motivation) while

accomplishing champion execution levels at the computer game Guitar Hero (high motivation).

For any consumer buying choice to occur, the need must be stirred to a sufficiently high level that it fills in as a motive. At some random time, an individual has an assortment of necessities that are not of adequate desperation to create the motivation to act, while there are others for which he is exceptionally energetic to act. The powers that make a desire to move quickly and motivation might be interior (individuals get ravenous), ecological (you see a promotion for a Big Mac), or mental (contemplating food makes you hungry). For motivation to be valuable in marketing practice, it is useful for marketing administrators to see how motivation plays into a particular buying circumstance—what triggers consumers to set objectives, make a move, and take care of their need-based issues.

1.7.2 Perception

Consumer perception is a central point that impacts consumer behavior. Customer perception is where a customer gathers data about an item and deciphers the data to make a significant picture about a specific item. At the point when a customer sees ads, advancements, customer audits, online media input, and so on identifying with an item, they build up an impression about the item. Subsequently consumer perception turns into an incredible impact buying choice of consumers. Learning can be either restrictive or cognitive. Every consumer is extraordinary, and every consumer sees herself in a novel manner. The way that consumers see themselves, combined with their characters, will figure out which items and administrations they like.

1.7.3 Learning and Socialization

With regards to consumer behaviour, learning is characterized as changes in behaviour that outcome from past encounters. Learning is a continuous cycle that is dynamic, versatile, and subject to change. Learning does exclude behaviour related with instinctual reactions or brief conditions of an individual, for example, craving, weariness, or rest. Learning is an encounter and practice that really achieves changes in behaviour. For instance, to figure out how to play tennis, you may find out about the principles of the

game and the aptitudes tennis players need. You would rehearse the abilities and take an interest in tennis match-ups to pick up experience. Learning can likewise happen without really taking an interest in the actual experience. You can find out about something reasonably, as well. As such, you could figure out how to play tennis by noticing specialists and finding out about how to play without really doing it. This is called non-experiential learning.

Consumer choices can be affected by both experiential and non-experiential learning. Take an illustration of buying wine. Assume you are at a winery and you are thinking about buying a container of zinfandel, which you have never attempted. On the off chance that you taste the wine and find you don't like the solid fiery flavor, you have realized experientially that you don't care for zinfandel. Then again, you could get some information about the kind of zinfandel, and she may state that it takes after solid soda, in which case you may choose not to purchase the wine since you don't care for soda. In this subsequent case, you have found out about the item non-experientially.

1.7.4 Attitudes and Beliefs

Attitudes and beliefs represent another psychological factor that influences consumer behavior. A *belief* is a conviction a person holds about something, such as “dark chocolate is bitter,” or “dark chocolate is delicious,” or “dark chocolate is good for baking.” An *attitude* is a consistent view of something that encompasses the belief as well as an emotional feeling and a related behavior. For example, an attitude about dark chocolate might be expressed as a belief (“dark chocolate is delicious”), a feeling (“dark chocolate makes me happy,”) and a behavior (“I eat dark chocolate every afternoon as a pick-me-up”).

Individuals have convictions and mentalities pretty much a wide range of things: food, family, governmental issues, places, occasions, religion, brands, etc. Convictions and perspectives might be positive, negative, or unbiased, and they might be based on sentiment or truth. It is significant for advertisers to see how convictions and perspectives may influence consumer behavior and dynamic. In the event that an inaccurate or

hindering conviction exists among everybody or an intended interest group, marketing endeavours might be expected to adjust individuals' perspectives.

For instance, in 1993, the word spread broadly about a needle supposedly being found inside a jar of Diet Pepsi. The whole episode ended up being a fabrication, yet PepsiCo reacted with solid quick open explanations as well as with recordings and an advertising effort to suppress the gossipy tidbits and promise consumers that Pepsi items are protected. Convictions and perspectives don't generally convert into behaviors in certain circumstances customers may decide to accomplish something regardless of their own perspectives. Assume a consumer likes pizza yet doesn't care for Pizza Hut. In a social setting where every other person needs to go to Pizza Hut for supper, this individual may oblige the gathering as opposed to feasting alone or skipping supper.

At the point when consumer mentalities present a significant hindrance, advertisers have two options: possibly they can change consumers' perspectives to become with their item, or they can change the item to coordinate mentalities. Regularly it is simpler to change the item than to change consumers' mentalities. Perspectives can be extremely hard to change, primarily in light of the fact that they are interlaced with an example of convictions, feelings, and behaviours. Changing the disposition requires changing the entire example. When in doubt, it is simpler for marketing to line up with existing perspectives instead of attempting to modify them.

1.8 Research Objective

The study focuses on making the effective retail marketing services which is based on customer preferences. This objective was duly attained through the customer by a survey questionnaire on retail areas and study of marketing organization.

The data collection and its analysis are done through questionnaires. In questionnaires the mutual retailer, marketing design and promotion remains constant and in the marketing environment, efforts are made by the customer to take the product services to the end customers, but in a changing format, there are many new marketing strategies. This study specifically focuses on following points:

1. To explore the working of Mobile Service Providers in Uttar Pradesh
2. To explore the marketing practices adopted by mobile service providers
3. To explore and analyze the influence of service mix on consumer behaviour.
4. To explore and analyze the influence of service charges on consumer behaviour.
5. To determine the effective channel of distribution for customer in mobile services.
6. To explore and evaluate factors influencing medium of promotion for mobile users.
7. To examine the factors of satisfaction for mobile users in mobile services.

1.9 Summary

The study has investigated a portion of the central point that are impacting the consumers' conduct to switch their cell services providers through an exploratory examination. Nonetheless, there might be some different variables that have sway on consumers' exchanging conduct yet just the elements which are generally significant and applicable to cell services were inspected. The consequences of this investigation have demonstrated that all the different elements are altogether impacting the exchanging conduct of consumers. It is discovered that there is a connection between exchanging the service provider and the components. It is the investigation of effectively settled information relating to the zone that empower us to see obviously what is now illuminated around there what actually remained encompassed in murkiness. There are not many direct investigations accessible regarding this matter. Infact, in India, measured examinations have not been led identified with the subject up until this point. We learned that some factors are affected to the consumer behaviour and helps to take decisions in various themes. While the substance examination led in this investigation gives helpful data to shopper conduct scientists and experts, a few restrictions of the examination must be demonstrated which are portrayed as. The level of contrasts and preferences among network is exceptionally dictated by the level of purchaser's association in decision making. Henceforth, an investigation on the buyer purchasing conduct, particularly of durables, turns out to be extremely basic. Such endeavours to illuminate how the customers select, buy, use and dispose of items, organizations, considerations, or experiences to satisfy their prerequisites and needs.

1.10 Thesis Outline

The work carried out will be described in five chapters. It covers “Introduction chapter” and final chapter of “conclusions and future work”. The introduction chapter covers all basic terms as is explained. The remaining chapters are organized as follows:

Chapter 2: Literature Review

This section comprises of a survey of the related literature, conspicuously provides outline of Mobile Service Providers and consumer behaviour in efficient environment.

Chapter 3: Proposed Methodology

This chapter presents a proposed methodology for mobile service providers for develop to the efficient scenario and models to assist the proposed methodology.

Chapter 4: Profile of Mobile Network Communication

This chapter illustrates the concept, behaviour and services in mobile services environment and includes the outcomes of different scenarios that have been used to understand the consumer behaviour to mobile network communication in Uttar Pradesh.

Chapter 5: Evaluation of Effecting Factors on the Consumer Behaviour and Verification and Testing of Proposed Study

This chapter quantify to the parameters which are affected to mobile services environment and include the outcomes of different scenarios that have been used to successful growth the in services and verify to the significance of proposed study and highlights the impactful factors which affected to mobile services.

Chapter 6: Summary and Conclusion

Finally, this Chapter Highlights the most significant results of the research work and provide scope for future research.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Critical Evaluation of Consumer behaviour has been the term which refers to the formal and informal arrangements of providing Mobile network communication. It is consumer behaviour which over the past decades has changed the perception mobile network communication from consumer preference and recommending various methodologies to provide cellular services. Also, this research endeavours to study on which factors affecting the customer behaviour in using mobile telecommunication service in India. To overcome the area of this research, this study scope on mobile network communication in India. The participants of the study are user's consumer behaviour of mobile telecommunication services.

The telecommunication framework has been a quickest developing mechanism of communication reviving worldwide interface collaborations. The present improvement of communication innovation ignores the worldwide border and turned the world as "**global village**". This change of the communication innovation changed the good old voice telecom network into an extended and advanced data foundation, which is fit for conveying a wide range of data. The idea of the opposition today in the worldwide telecommunications industry is by all accounts prime market exercises that focus on fulfilment of upper hands through changes and mixes of multiple service variables without confining it in particular geographical regions. The achievement of telecommunication industry relies on prudent efforts and practicable investments. In a consumer market, mobile service providers are relied upon to endeavour on both cost and nature of services and furthermore to meet the dynamicity of consumers' necessities and desires in cost and service quality. Since, media transmission area is encountering excellent change with the progression and privatization of the area, which in outcome enlarges a furious rivalry. The framework has opened an expanse of chances for the likely consumers to appreciate flexible decisions among the service providers. The mobile telecommunication industry is one of the flourishing service organizations of the present perplexing and dynamic climate. With the significance of data in the regular exercises, this industry is likewise growing momentarily. With this quick change, the mobile service providers can give the clients new progressed includes and refreshed innovation at sensible costs so as to draw in new and hold existing client for long haul maintainable development. As in different business

area, MSPs additionally believe their client to be the main resource. The consistently developing necessities of clients have constrained the organizations to go for the pursuit of potential enhancements that can be embraced and spotlight on the idea of client inclination and fulfilment, since this is the key to maintain stability in the industry in terms of market share. A review of literature shows that researchers investigated the association between various attributes and overall consumer behaviour of mobile network communication and mobile services providers using different statistics and nature of attributes. In addition, the results of these studies empirically validate that proposed attributes considerably affects overall customer satisfaction of mobile telecommunication services provider.

2.2 Importance of Literature review

- 1 It helps in summarizing the previous research and analyze in associated areas of the subject to avoid the repetition of work.
- 2 It helps in search out the various dimensions of the study.
- 3 It assists the researcher to remove limitation of existing work or extend the prevailing study.
- 4 It renders useful source of information for the academicians and researcher for further research in an area.
- 5 It helps in segmenting the research into various categories and show how the research in a particular area has changed overtime.
- 6 It helps in establishing the research by depicting how it is various from other works in the same area.
- 7 It determines the previous research and distinguishes the gaps.
- 8 It empowers a scientist to get master, pro or authority in the particular territory, the aptitude required is straightforwardly corresponding to the endeavors put in writing Review. It changes to the reader about the knowledge and the work already done on the particular topic.

2.3 Mobile Phone Service Providers

India is a creating economy and we are pushing forward contrasted with other comparable economies in fast speed. Communication is the way to development and a mobile-telephone is a basic piece of this communication factor. This examination paper

centers around the various purposes individuals utilize their mobile telephones and their measures of selection of a service provider in their locale. Aside from that, with the new presentation of Mobile Number Portability (MNP) plan there have been a considerable amount of changes of service-providers among the clients. Service Intangibility and Its Impact on Consumer Expectations of Service Quality has brought up that among the regions which should be tended to in service quality examination is the idea of consumer desires over the scope of theoretical approach. Past explorations have looked at consumers service quality desires across services, yet various gatherings of subjects have been assessed for each unique service. The issue of utilizing various subjects for each service is that the subject's segment characteristics might be answerable for the huge contrasts in desires for quality. The exploration has utilized a controlled and rehashed proportion of plan, where subjects have been approached to assess three services, shifting in their level of intangibility. Customer Satisfaction Measurement have discovered that the feeling that client's recognition towards service and nature of an item decides the achievement of that item or service on the lookout. With better comprehension of clients' discernments, a firm can decide the reasonable activities to address the issues of clients. Firms can distinguish their own qualities and shortcomings in correlation with their rivals. Mobile phone service providers compete not only for networking quality by huge amount of investment in network quality, network extension and upgrading, but also to acquire the new customers and retention of old customer by direct and indirect reduction in price. Paulrajan and Harish (2011) examine the factors in selecting telecommunication service provider. It was found that communication and price increase have most preferential and influential factors. Service quality is significantly related to customer satisfaction, past purchase intention and perceived value. In a study on customer satisfaction in mobile service provider networks in International Market Research Business, that Airtel is the most excellent and good service provider. Airtel was found to be ahead of others in term of customer satisfaction. Next is Vodafone followed by BSNL which was found to be worst service provider. The study also reviewed that price factor is the most influential factor for the purchase of telecom service because of its value that satisfy customers. The study concluded that most of the users who are satisfied with their customer care service are also satisfied with the process of getting their complaints resolved. Users of all telecom companies were found satisfactorily with the waiting time their complaints resolved.

GSM network failure, quality of service diversion and its impact on e-learning. The result showed that overall network performance of the four GSM network providers is average and below the standard required for a graded quality of service. In investigating the effects of service quality and customer satisfaction on re-patronage intentions of Hotel existing customers, discovered a significant positive relationship between customer satisfaction and customer loyalty. Madjid (2013) are among other scholars who found satisfaction to be a major factor in determining loyalty. They contended that trust is the most crucial antecedent of customer loyalty. Loyal customers seem to be satisfied customer. A different commitment has introduced in table 2.1. Major characteristics that impact consumer loyalty are item quality, bundling, conveyance duties, value, responsiveness and capacity to determine protests.

Table 2.1 Critically examine the contribution by various experts

Expert Name	Year	Contributions
BhanumathyS et. al.	2006	Attention to cell phone services in Communication System
Negiet. al.	2009	Discussed to service quality of mobile communications
Schiffmanet. al.	2009	Complete description about consumer Behaviour
Chuet. al.	2008	Proposed model for consumer Behaviour
Khan, M. A.	2010	Empirical Assessment Of Service Quality Of Cellular Mobile Telephone Operators
Santish et. al.	2011	A criticallyobserved to consumer Switching Behaviour
Myilswamy, K.et al	2013	Consumer Preference Utilizing Mobile Communication Service Providers
Al-Debei et. al.	2015	Identify cause to move or switch other things
Nimako, S. G., et. al	2016	Consumer Behaviour towards Mobile Number Portability (MNP)
Abd-Elrahman, A. E. H.	2018	A Study of Telecommunications Service Quality Dimensions
Liu et. al.	2019	Examining the impact of marketing on customer engagement using AI
Abeet. al.	2020	Explain to Market trend during COVID

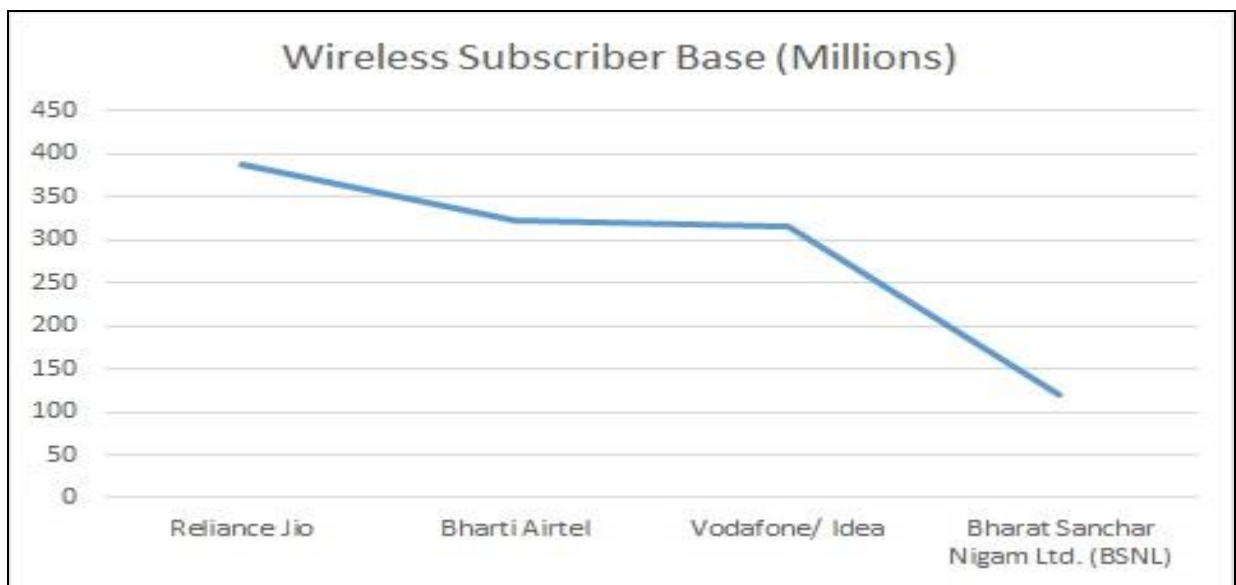
Dr. Arti Gaur, Suman Ghalawat (2012) highlighted that the overall satisfaction level of customers with regards to service providers. An attempt has been made to know various perception of the customer in selecting the mobile service provider and also to comprehend the present mobile market. The study clearly indicated that cell phone users are highly satisfied with the range of network followed by the cost of services and SMS services provided by the service provider. The study, however, revealed that there is no effect of age, gender and education, on the opinion of respondents in terms of satisfaction with mobile service providers also found that mobile users are very much aware of launching of new mobile handsets in the market.

Mobile phones have become a necessity of life, without mobile phone, we do not think ourselves as complete. In our day-to-day life, we need mobile phones for quick appointment, dealing with clients and to maintain our social contacts. Mobile phone is not just an electronic device. With the advent of technology, the mobile phones are becoming a craze among the common people. The mobile phones are not used only for communication tools these days but are also considered as devices which have strong communication networks along with the other functionalities such as audio solutions, FM radio, camera features for clicking pictures of any moment, at any time. Earlier, people used to have mobile phones only for receiving and making of calls, sending and receiving messages. A revolutionary change of using mobile phones makes a huge difference among the thought and perception of the people. Mobile phones help us to stay connected with people we want to connect. Earlier, long way distances made it impossible to know about our near-and-dear ones' whereabouts and get information about their well-being, but hopefully in this era of globalization and mobile phone communication, we can get closer irrespective of the distance involved, within a few moments. Now our world has become a global village, now we can talk to our loved ones from anywhere. Mobile phones have really changed the way of communications. Mobile phones are the most used communication tool today. In the present time it is very hard to find a person who does not own a mobile phone. The present time is the age of communication as information and its quality has become the most important factor to decide the success and failure of any organization. The present era is the era of mobile communication and mobile communication services and devices have become omnipresent as well as omnipotent.

No field is left untouched by changes in the field of communication or mobile communication.

From India, the region of Delhi, NCR have been studied to direct this examination. The solid noteworthiness to the current mobile service providers, advertisers, new participants in mobile communication areas, market investigators, strategy creators and clients to comprehend the predominant consumer observation and elements for future development.

<i>Table 2.2 Telecom services</i>	
Operator	Wireless Subscriber Base (Millions)
Reliance Jio	389
Bharti Airtel	323
Vodafone/ Idea	315
Bharat Sanchar Nigam Ltd. (BSNL)	120



Graph 1 Wireless Subscriber Base

Dr. S.P. Mathiraj et al. (2019), highlight that the Mobile Phone service providers are offering various facilities to attract the customer along with updated technology. The test for the service providers is to discover the basic factors that impact the client inclination. A Customer consistently attempts to purchase an item which has numerous traits satisfying their need. As observation towards quality is more, clients are getting more earnestly to it would be ideal if you more brilliant, additionally requesting, less sympathetic and they are drawn nearer by many service providers with pretty much equivalent offers. The fundamental goal of service providers is to increase customer satisfaction and to maintain long term customer relationship. Nowadays, the mobile telephones are dynamically getting less expensive and reasonable for the individuals; the service providers are likewise presenting new plans, offers and innovation headway in their service. This has brought about an ever increasing number of consumers purchasing mobile telephones and Network Portability.

2.4 India's Telecommunication Network

The telecommunication industry in India is quickly developing and seeing numerous turns of events. It has experienced a few changes that has prompted serious rivalry in the industry. The telecommunications industry in India has seen numerous turns of events and gone through gigantic changes. It is one of the quickest developing enterprises on the planet and has end up being a worldwide achievement story. The Telecommunications Industry inside the area of data and communication innovation is comprised of all telecommunication organizations and web access providers and assumes the urgent function in the advancement of mobile communications and data society. Telecommunication industry is one of the key drivers of rapid growth of any developing economy, as the world is increasingly driven by information transfer (Arora, 2016). Fueled by the liberalization policies and corresponding de-monopolization, the telecommunication industry witnessed a rapid growth in the last decades and it currently stands as one of the fastest developing sectors in India. Furthermore, the industry has become one of the key employment generators of the nation and provides a lot of value addition to the society through its diversified services. However, this rapid growth of the telecommunication sector has invited more players into the industry, which in turn

increased competition among players to capture the market share. All these companies are providing a wide range of services as a part of winning customers and capturing the market share. Along with the normal services, other additional services, such as high-speed internet facilities, free roaming, and other value added services, are provided by these players. However, the quality of these services has declined year after year, which is not noticed by a majority of providers. The decline in service quality causes dissatisfaction among customers and they switch to other service providers. This attrition creates a huge impact on the profitability of providers. Hence, in order to curtail customers' attrition, service providers adopt a relationship-marketing tool, such as customer relationship management (CRM), which helps them to maintain a strong and long-lasting relationship with their customers. CRM is a business strategy to understand and manage the requirements of potential customers of the organization. It is defined as "the practice of analyzing and utilizing marketing databases and leveraging communication technologies to determine corporate practices and methods that will maximize the lifetime value of each individual customer" (Kumar & Reinartz, 2006). CRM is a strategy that enables organizations to use personality account information and develop an association with every valued customer to provide outstanding customer service (Kotler & Keller, 2006). CRM functions as a differentiator among customers for providing a sustainable competitive advantage to organizations. These strategies aim at building and maintaining strong relationships with customers and hence bridging the gap between the company and its customers. This enables organizations to identify the shifting pattern of customer behavior and formulate proactive strategies of retaining their customers. In today's increasingly competitive market, a majority of customers make purchasing decisions based on how they are being treated by organizations or service providers. It keeps on being at the focal point for development, advancement and disturbance for essentially any industry. Telecom industry is one of the quickest developing ventures on the planet and has huge ability to serve individuals straightforwardly or by implication. India is at present the world's second biggest telecommunications market with an endorser base of 1.19 billion and has enlisted solid development in the previous decade and half. The Indian mobile economy is developing quickly and will contribute generously to India's GDP as per a report arranged by GSM Association. The exponential growth throughout the most recent couple of years is principally determined by moderate levies, more extensive accessibility,

turn out of Mobile Number Portability, extending 3G and 4G inclusion, developing utilization examples of endorsers and a favorable administrative climate.

The mobile telecommunication area had been working in a generally steady and managed climate. Today the climate has changed and the area is a profoundly serious and divided commercial center. To have the option to confront the savage rivalry, telecommunication providers need to zero in on making an upper hand. Patterns inside the business have been changed during the previous years to place cautious advertising in concentration to hold clients. There is a need to accentuate on expanding client faithfulness through guarded showcasing instead of zeroing in on increasing new clients through hostile advertising. This is because of the troubles of making a decent hostile showcasing technique in a dynamic and develop climate with high rivalry. A determinant of the relationship responsibility is the service quality a firm gives to the client. Quality depends on client needs, desires and wishes. Nonetheless, there is no commonly acknowledged operational meaning of how to quantify service quality; there is however a developing agreement that clients access service quality by contrasting their service quality desires and their view of the service they have gotten. At the point when seen service quality misses the mark regarding desires, a service quality hole happens. Management's work is fundamentally to forestall or dispense with service quality holes. The enthusiastic response to a particular item/service insight; the passionate responses come from disaffirmation of a consumers' saw execution of the item/service and the consumers' desires for the exhibition.

Krishan Kumar (2013) In Indian telecom sector, the Tangibility aspect of service quality is one of the important attributes which includes the appearance of physical facilities, equipment, personnel and communication material. In the present research study the reliability is measured by the variables keep promises, sympathetic & reassuring attitude, and ability to provide service at promised time, and keep records accurately. Responsiveness as dimension of service quality has been highlighted as willingness of the firm's staff to help customers and provide prompt service. Telecom customer expects prompt response from telecom operators and responsiveness means that the service is accomplished on promised time and customer service staff is always willing to help

customers. In mobile telecom services assurance as dimension of service quality relates to the knowledge and courtesy of employees and their ability to convey trust and confidence to the customers. Network Quality in mobile telecom services is an indicator of mobile network performance in terms of voice quality, call drop rate, network coverage and network congestion. In the context of cellular mobile communication network quality is a very important dimension. Convenience as dimension of service quality is the comfort that mobile telecom customer expect from the telecom operators. It may be in terms of convenient business hours and good mechanism of handling customer's queries and complaints.

Dr. T.Sisili, et. Al (2017),The creator in this examination has dissected the impact found in the telecom area in India after the Reliance Jio dispatch. The Objective of this examination was to discover the impact and mindfulness about the Jio offer, what were the contributions made by the contenders to secure their piece of the overall industry and what were the procedures were utilized by Jio to catch the market. The outcomes got from the study poll on "**Dependence Jio Effect**" show that Jio has had a colossal effect available just as the contenders. They have focused on the youthful age and the contenders have coasted offers to either hold or add new clients. The outcomes unmistakably show that the clients know about the offers skimmed by Jio and are pulled in towards them and that on the off chance that the contenders don't reexamine their arrangements and techniques, at that point Jio will doubtlessly catch the market.

Anand Deo (2017), highlighted that telecommunication sector has become an integral part of the Indian economy. While the industry is working under stringent regulations, latest government policies are providing this sector with good growth opportunities through reduced spectrum charges and flexible rate plans. Most analysts had expected telcos to avoid bidding for the band, given the steep price, the financial strain on the debt ridden telecom industry and more intense competition following the entry of Reliance Jio Infocomm Ltd. Identified challenges are Substantial Investments in 4G Infrastructure, Lack of Telecom Infrastructure in Semirural and Rural areas, Pressure on Margins Due to Stiff Competition, Rapidly Falling ARPU (Average Revenue Per User), Delays in Roll Out of Innovative Products and Services, Limited Spectrum Availability and Low Broad Band Penetration. The opportunities are notified as Boost to Telecom Manufacturing

Companies, Continuous Enhancements to the Mobile Value Added Services (MVAS), Expeditionary Roll-out of 4G Services, Infrastructure Sharing, Availability of Affordable Smart Phones and Lower Tariff Rates, and Rural Telephony– Connecting the Real India.

NoorulHaq, 2017 states that the Telecom Sector is under extreme competition with each service provider is attempting to come on top by skimming appealing plans and utilizing diverse promoting procedures to bait and hold their clients. The Research paper will in general create the effect of dispatching of Reliance Jio in the Indian Telecom Sector on the clients and other market players like Airtel, Idea Cellular, and Vodafone and so forth In this exploration paper the creator has examined various references and information sources and the general effect available, clients and productivity of the contending organizations. This examination has likewise investigated the brief effect of Jio in the current situation and furthermore the future possibilities to comprehend the effect deliberately. The goal of this paper is to contemplate and inspect the effect of Reliance Jio on the telecom area in India. The paper depends on auxiliary information which is sourced from site, online sources and insightful articles, magazines, books, web and Ministry of telecommunication.

2.5 Mobile Communication Technologies

The communication industry constitutes a strategic sector that drives economy of a nation. The telecommunication sector performs the function of networking and hence it is the engine of growth in the economy, service quality in the industry tends to impact on the customer satisfaction. Mobile Communication is the use of technology that allows us to communicate with others in different locations without the use of any physical connection (wires or cables). Mobile communication makes our life easier, and it saves time and effort. A mobile phone (also called mobile cellular network, cell phone or hand phone) is an example of mobile communication (wireless communication). It is an electric device used for full duplex two way radio telecommunication over a cellular network of base stations known as cell site. High capacity load balancing in each wired or wireless infrastructure must incorporate high capacity load balancing. High capacity load balancing means, when one access point is overloaded, the system will actively shift users from one access point to another depending on the capacity which is available. Scalability is the

growth in popularity of new wireless devices continuously increasing day by day. The wireless networks have the ability to start small if necessary, but expand in terms of coverage and capacity as needed - without having to overhaul or build an entirely new network. Network management system is now a day, wireless networks are much more complex and may consist of hundreds or even thousands of access points, firewalls, switches, managed power and various other components. The wireless networks have a smarter way of managing the entire network from a centralized point. The introduction of GSM services in country brought to the forefront critical issues and these tend to determine customer satisfaction. Eight variables of quality of service (quality of service, call drop, poor network, poor voice clarity, communication gaping, call divert) were used to determine their customer satisfaction regarding GSM Service. From the result, all the variables positively affect customer satisfaction. The development of mobile services will rely upon the turn of events and arrangement of empowering advances. These innovations incorporate, however not restricted to, network advancements, service advances, mobile middleware's, mobile business terminals, mobile area advances, mobile personalization advances, and substance conveyance and configuration. GSM (worldwide framework for mobile communication) is the common mobile norm in Europe and the greater part of the Asia-Pacific area. It additionally fills in as the reason for other organization advances, for example, HSCSD (rapid circuit exchanged information) and GPRS (general bundle radio service). The wide selection of the GSM standard makes it monetarily achievable to create imaginative mobile applications and services. Short message service (SMS) empowers the sending and accepting of instant messages to and from mobile telephones. As of now, up to 160 alphanumeric characters can be traded in every SMS message. Broadly utilized in Europe, SMS messages are chiefly phone message notice and straightforward individual to-individual informing. It additionally gives mobile data services, for example, news, stock statements, sports, and climate. SMS visit is the most recent element and is filling in popularity. Although 3G innovations are simply arising, research has initiated on 'fourth-age (4G)' advances. These activities envelop an assortment of radio interfaces and even a completely new remote access foundation. Better balance strategies and keen reception apparatus innovation are two of the primary exploration zones that will empower fourth-age remote frameworks to beat third-age remote organizations. Worldwide situating framework (GPS) is an arrangement of satelllites circling the earth. Since the satelllites are

consistently communicating their own position and bearing, GPS beneficiaries can compute the specific geographic area with extraordinary precision. Initially created in the USA for military use, GPS is presently likewise utilized for regular citizen purposes. For instance, GPS is utilized in vehicle route systems. Mobility makes numerous new open doors for the business world to grasp. Then, the current applications can be smoothed out by incorporating portability. Adding portability to services will make whenever/anyplace data access, encourage data sharing, and give area based and presence-based services. In view of the mobile foundation and mobile advances, mobile services can be characterized into different classifications. At mobile communication innovations and mobile services. Mobile business expands current web deals channels into more prompt and customized mobile conditions. It additionally enables clients to get to the web from any area whenever, the ability to pinpoint an individual mobile terminal client's area, and the usefulness to get to data at the purpose of need.

P. Gandotra et al.(2016), in a study gadget to gadget communication in cell networks talks about the engineering of gadget to gadget communication, numerical investigation and calculations which are the reason for asset assignment, challenges that are obstructing its usage. D2D communication permits communication between two gadgets, without the interest of the Base Station (BS), or the developed NodeB (eNB). Proximate gadgets can straightforwardly speak with one another by setting up direct connections. Because of the little separation between the D2D clients, it upholds power sparing inside the organization, which is unimaginable if there should be an occurrence of customary cell communication. It guarantees improvement in energy effectiveness, throughput and postponement. It can possibly successfully offload traffic from the organization center. Henceforth, it is an entirely adaptable strategy of communication, inside the cell organizations.

Suresh A.S. (2011), Highlight That the Mobile Phone Network service has been recognized throughout the world as an important tool for socio-economic development of a nation. As majority of people depend on mobile phone for communication, banking, internet and other activities, Mobile Phone service providers are offering various facilities to attract the customer along with updated technology. The challenge for the service providers is to find out the critical factors that influence the customer preference. A

Customer always tries to buy a product which has many attributes fulfilling their need. As perception towards quality is more, customers are becoming harder to please, smarter, more demanding, less forgiving and they are approached by many service providers with more or less equal offers. The fundamental goal of service providers is to increase customer satisfaction and to maintain long term customer relationship. Nowadays, the mobile phones are progressively becoming cheaper and affordable for the people, the service providers are also introducing new schemes, offers and technology advancement in their service. This has resulted in more and more consumers buying mobile phones and Network Portability.

S. Nithiya Gowri et. al (2020), in this study telecom industry services in India are a major contributor of national economy. A steadily growth industry has certain challenges and also opportunities. In that juncture, authors have revealed mobile phone (cellular) service providers challenges and opportunities in India. Using Meta analysis, the real challenges and opportunities persisted in the telecom industry has been identified. The challenges of mobile phone (cellular) service providers are competition, advertisement, sales, marketing, next generation of technology (5G), mobile phone manufacturers, net banking, and social media. The opportunities of mobile phone (cellular) service providers are next generation of technology (5G), technology updates, emerging new Social Medias depended with mobile phone that needs high speed data, mobile banking and green banking, corporate advertisement and marketing through mobile app, online educational services, and all type of payment related sales through mobile phone. Connecting people is a service for their needs through wireless transmission of data by the way of GSM, CDMA and VoLTE (Voice over Long Term Evolution) technology. The present moment in India service providers strategies have been entrusted to fetching large number of subscribers and also certain significant level of subscribers have been migrated to other service providers due to their desires of data speed, cost and coverage in respective localities. The impact of competition, advertisement strategies, sales target, marketing environment, next generation of mobile data transmission technology (5G), new inventions in mobile phone manufacturing, net banking facilities, and social media needs of the subscribers are urged the mobile phone (cellular) service providers in to challenging the business. They also expected their business to be extended their services as opportunities of mobile phone

(cellular) service providers are next generation of technology (5G), technology updates, emerging new Social Medias depended with mobile phone that needs high speed data, mobile banking and green banking, corporate advertisement and marketing through mobile app, online educational services, and all type of payment related sales through mobile phone. The people are accustomed with smart mobile phone data usage have been grown up day-by-days.

Chintan Shah (2012) in his study entitled "Consumer Preferences for Mobile Service Provider" researches the factor considered by the clients to shape their inclination for the mobile service provider. For the investigation 150 mobile clients of Bardoli city are studied. The scientist find that the service quality and brand picture, service charges and plan, and organization quality assumes a significant function in leaning toward mobile service provider. Each mobile organization is attempting to fulfil his clients. These days all the associations fulfil the clients to achieve an upper hand. Mobile networks companies are face the cut through competition from their rival companies. Every network is trying to recognize the preference of customer consider as the need of hour. So it turns out to be very indispensable factor for the organization to recognize the customer preferences not just by the services but by reaching beyond the expectations of the customers.

Moon-KooKima et. al (2004), explained the mobile telecommunication services are clearly exhibiting signs of an abrupt industry paradigm change and symptoms of a market in transition. Bolstered by the rapid development of information and communication technologies (ICT) and high demand from customers, the paradigm of mobile telecommunication services is now shifting from voice-centred communication to a combination of high-speed data communication and multimedia. Further, factors such as the growth of the wireless Internet, the introduction of IMT-2000, and the upcoming introduction of mobile number portability (MNP) all contribute to emphasize the appearance of a transition period in the mobile telecommunication services market. The impact of customer satisfaction and the switching barrier on customer loyalty, and the causal relationship between them, this study has provided a comprehensive foundation for future studies of customer loyalty in the mobile telecommunication services industry, and suggested directions for companies in the industry. The mobile telecommunication services market. While other studies have treated the switching barrier as a simple concept

without constitutive elements, or have used it as a concept identical to switching cost, this study subdivided the concept of switching barrier into several concepts, giving it a theoretical structure. Further, the mutual interaction between factors influencing customer loyalty has been systematized through an analysis examining the adjustment effect produced by the switching barrier.

2.5.1 Evolution in the Field of Communication Technology

The evolution of man on the earth has been marked by development through the history marked by milestone through ages. After the creation of societies the biggest step was evolution, growth and development of communication. Communication is as old as civilization. Man is a social animal, who wants to express himself. He needs to share his thoughts, feelings, experience to convey his happiness, joy, unhappiness and had a desire to extend his area of influence over large areas. The word “Communication” has been taken from Latin word “Communes” which means something common. Hence we communicate to establish some commonness of thoughts or feeling with the others. Communication is a tool through which we exercise our influence on others, bring out changes within ourselves and other attitudes, inspire the people around us and establish and retain relationships with them. Communication makes a major part of our active life and is a social activity. The social activity is pursued orally through speech, reading, writing or non-verbally through body language. Though communication exists even among some species of animals, birds and insects, it is limited to certain noises like chirping and crying, or movements and is related to their natural needs like hunting, preying and mating. Human communication is more complex, mixed and has several objectives. It is multifarious because of the use of language, a collection of previously accepted and agreed oral and written codes. It is varied because it ranges from simple gestures or facial expressions to the most advanced technologies. Communication skill is not language specific. It is not as though speakers of a particular language have refined communication skills whereas the speakers of some other language have unrefined communication skills. But communication skill is related to the culture of the group to which the individual belongs.

Communication describes an activity or process of transmission of information and messages. Information may travel from one point to another point, from a single point to

several points and vice versa, or from several points to other points. Communication takes place between all living organisms, including at the molecular and intercellular levels. In nature an infinite number of types of communication exists, ranging from those taking place in the living body, such as the transmission of genetic information by means of molecular structures, or transmission of messages in the brain through electric connections and chemical agents, through communication of sound such as bird song, or visual or 'aromatic' communication between flowers and insects, up to and including gestures and speech between humans. In humans, communication takes place between two or more people, and when we use technological means we use artificial signals, such as coded signals and digital messages, and the information is converted into electrical signals and then back again to information. Communication activity includes the sender, the content of the message, and the recipient, and necessitates cooperative communication between the sender and the recipient. Information may pass between the active collaborators in real time, as in conversation, or with a delay, such as in sending a letter by post or by e-mail, as a result of which the transmission of the message and its reception may occur at different points in time.

Technology has played a very big role in bridging the gap between people and has reduced the geographical distances to an unimaginable extent. The first strides in the field of communication with the help of technology were taken when messages were sent using the oldest form of telephone which made it possible for two or more users to conduct conversation even when they are far. Telecommunication is the exchange of information over significant distance by electronic means. A complete, single telecommunication circuit consists of two stations, each equipped with a transmitter and a receiver. It is common for multiple transmitting and receiving stations to exchange data among them. This type of arrangement is called telecommunication network. Internet is the largest example of telecommunication network in the present scenario telecommunication is not limited to telephones only but has taken the form of information technology and includes telephones, telegraph, radio, and microwave communication arrangements, fiber optics, satellites and the Internet. Telecommunication at present mostly takes places through digital signals by wired and wireless modules. A wireless communication network refers to any type of network that establishes connections without cables. Wireless

communications use electromagnetic (EM) waves that travel through the air. There are three main categories of wireless communication, based on how far the signal travels

2.5.2 Communication Systems

Inadequate CS capabilities can have catastrophic consequences on extreme events response efficiency, and data exchange during challenging conditions.⁵ Communications during extreme events require high performance, resilience, flexibility, message prioritization, fast delivery, and other capabilities that we will detail in this section. Depending on the type of extreme event, its context, and concerned individuals, weaknesses of CS can be quite different and actions taken to protect life and property can be different also; for example, a fire alarm's siren is not sufficient in a deaf school. However a CS that is able to operate during extreme conditions will be able to performed very well in normal conditions. The deployment of CS during HE must fulfil some specifications in order to offer and preserve reliable communications services. Generally, the best-known requirements for CS during hard conditions mentioned in the literature and that we can deduce in light of previous case studies are as follows:

- **Robustness and reliability:** This is the ability of CS to provide and maintain core functions and services just as it would perform in normal circumstances. To do so, CS must supply basic services in challenging environments and afford quick service restoration. Also, CS should be robust against certain node failures, since the reception of certain information in a timely and accurate manner can be critical to saving human lives. For example, data-driven communication, like the Internet, proved markedly robust against congestion.
- **Provided service:** Voice is the principal service of a traditional CS. However, individuals may also need to exchange maps, images, and other relevant data in addition to having an Internet connection and real-time transmission. Furthermore, in specific cases and for rescue purposes, it might be recommended to support video streaming.
- **Automation:** Automatic organization and optimization help decrease the human contribution in CS administration and enhance its reliability. Also, it may minimize the time needed for initial configuration or manual reconfiguration if environmental

conditions change. Furthermore, system topology can be adjustable, and bandwidth is allocated according to the need of users.

- **Mobility:** This condition concerns the mobility of users and the network itself. Mobile infrastructure may facilitate deployment, optimization, and installation of the CS. Also, system architecture can be adapted to the concerned area or in order to improve performance. User mobility also allows for emergency personnel to communicate while moving within the damaged zone, as disasters may affect wide geographical areas.
- **Interoperability:** The deployed CS should be compatible with various technologies in order to expand the covered zone and diversify available services when needed. This attribute is also very essential for information exchange between different organizations, as each one may have its own equipment. In this way, individuals may be able to transparently connect and exchange data through substituted infrastructure regardless of the technology they have. For example, IP networks can be used as a communication protocol between various emergency teams.⁶⁵
- **Rapid deployment:** As relief personnel are most concerned with reducing the number of victims, CS planning is mostly done on the fly and it is far from being formalized. Thus, the deployment process must be simple and easy with no need for specialized personnel or complex procedures. Equipment must be tolerant of the harsh environment and rapidly deployable, which involves rude manipulation due to the lack of time required for rescue operations.
- **Scalability:** This is the ability of CS to expand geographical coverage and the number of users supported efficiently. Therefore, CS must be automated to avoid service disruption in case of environmental change.
- **QoS:** This is the ability to prioritize and categorize traffic, such that high priority traffic gets priority to guarantee delivery of urgent messages in case of congestion. QoS also includes parameters such as availability, throughput, latency, jitter, and error rate. Depending on compatible services, the network may support video streams and live audio with adequate requirements. For example, VoIP calls may require a maximum packet delay of 100 ms, jitter of less than 30 ms, and packet loss of less than 1%.¹²

- **Security:** Multiple agencies and possibly military forces may be implied in the disaster response. Therefore, sensitive data crossing CS could be exposed and should be appropriately protected and encrypted.²⁸ This level of security guarantees that only authorized persons can access the information, and each entity receives the information intended for it only. For example, medical records should be available to the medical teams only. Security can also include data integrity, authentication, and access control.²
- **Cost:** CS cost should be reasonable for deployment, maintenance, and equipment. As resources are mostly used during basic and essential life-saving activities, low-cost CS can be easily deployed in low-resource developing countries.
- **Energy Efficiency:** CS should be designed to work as energy efficiently as possible in order to keep the system's infrastructure available for a long time. As we have already seen in our case studies, power outages are common in the majority of disasters due to infrastructure damage, fuel shortage, or simply battery discharge. An efficient energy system can last longer in such circumstances, most importantly during the golden first 72 h.
- **Localization:** The current location of a user can be required for emergency context; therefore, a CS must have the ability to automatically obtain the current location of its users.
- **Popularity:** Popular technologies such as cellular could be used because most people are accustomed to them. They have to be user-friendly as relief personnel and victims are more focused on life-saving activities. Furthermore, popularity allows for the possibility of deployment with less training or technical expertise, which is beneficial as human resources are less available in the damaged area in the immediate aftermath of a disaster.
- **Capacity:** The CS must support a sufficient number of users and overcome traffic congestion.
- **Coverage:** This is the ability of CS to cover a wide area without the need to deploy many points of presence. This property can be characterized by the maximum distance a user can reach while still connected. The coverage can reduce the cost and time of system deployment by reducing the amount of infrastructure required to cover the damaged area.

2.6 Cellular Communication Network Technologies

Cellular communication is a type of communication innovation that empowers the utilization of mobile telephones. A mobile telephone is a bidirectional radio that empowers synchronous transmission and gathering. Cellular communication depends on the geographic division of the communication inclusion territory into cells, and inside cells. Every cell is apportioned a given number of frequencies (or channels) that permit an enormous number of endorsers of direct discussions all the while. The basic component of all ages of cellular communication advancements is the utilization of characterized radiofrequencies (RF), just as frequency reuse. This empowers the arrangement of a service to countless endorsers while diminishing the quantity of channels (band width). It additionally empowers the formation of wide communication networks by completely incorporating the serious capacities of the mobile telephone. The expansion popular and utilization, just as the advancement of various kinds of services, quickened the fast mechanical improvement of cutting edge cellular communication organizations, along with endless improvement of the cellular gadgets themselves. The mobile unrest has really changed the financial scene of India and assumed a critical part in the development and advancement of the economy. As indicated by Cellular Operator Association of India (COAI), India positions between the best ten telecom network on the planet and the second biggest in Asia. India is additionally one of the quickest developing business sectors in mobile communications. Telecom Regulatory Authority of India's report on Telecom Services Performance (TRAI, 2010) shows cellular mobile endorser base contacting 635.71 million in June 2010. Development in India's mobile phone area has been completely fabulous in the previous few years, supported by higher endorser volumes, lower taxes and falling handset costs. India is home to various worldwide mobile administrators working with nearby organizations and mobile market has reliably experienced high yearly development rates with the ceaseless decrease in tariff or duty.

Assaari and Karia (2000) in their paper titled, "Churn Management towards Customer Satisfaction; A Case of Cellular operations in Malaysia" have seen that consumer loyalty and client assistance have been basic elements of the cellular business. Cellular service providers need to guarantee about the innovation that gives client care

best in the business. It is expressed that interest in individuals and in innovation helps in giving best client care to now and for what's to come. One shared belief that most transporters and clients concur on is that acceptable client care can keyly affect how a client sees association's services and company.

Anita Seth, K. Momaya, H. M. Gupta (2008) in their study on “Managing the Customer Perceived Service Quality for Cellular Mobile Telephony; An Empirical Investigation” has analysed that there is relative significance of service quality credits and present that responsiveness is the most significance estimation followed by dependability, client saw network quality, confirmation, comfort, sympathy and physical assets. This will empower the service providers to focus their assets in the zones of position. The examination brought about the improvement of a dependable and substantial apparatus for evaluating client saw service quality for cellular mobile services.

Sreekumar D Menon (2014) in his article entitled, “Customer Perception towards A Public Sector Telecom Company (BSNL) in Mobile Services” has expressed that telecommunication service providers are of foremost significance to both created and arising economies in India and the world. With firm rivalry between the providers, consumer loyalty is a vital for endurance on the lookout. Numerous telecommunication service providers are offering different items and services on the lookout. Client observation is an individual inclination of one or the other delight or dissatisfaction coming about because of the assessment of service gave by an association to a person corresponding to desires. Client recognition is exceptionally basic and unavoidable for the smooth working of an association having public managing and duties. It relies upon a few components like substance, dependability, affirmation, predominant service quality, compassion and such. Consumer loyalty is the principle objective of each association. Fulfillment level is an element of contrast between apparent execution and desires. On the off chance that the products“ exhibitions surpass desire, the client is exceptionally fulfilled or enchanted. On the off chance that the presentation coordinates the desire the client is fulfilled and if the item execution fall shorts of desire, the client is disappointed. It relies upon a few variables like substance, dependability, affirmation, prevalent service quality, etc.

Kapil Kumar (2017), All operators must aspire to take their pie in the overall data market space. In order to achieve this, operators have to face the following challenges: Availability of sufficient spectrum; Technology to enable faster connections and availability by new compression and other techniques; Making available more innovative and interesting applications for customer's usage; The government and the regulators (TRAI) must provide the right mix of policy to help in making all that happen and In the whole ecosystem all operators, phone manufacturers, software / application developers, infrastructure providers should remain agile and healthy.

Robin Mansell (2012), The complex challenge of enabling people to acquire the knowledge essential for developing innovative applications that are responsive to their local needs, however, is being neglected. The necessary digital skills include operational expertise and an understanding of information structures when the mobile phone is used as a medium for communication. They also include information search and selection skills, communication and content creation skills, and strategic skills needed to use mobile phones in ways that support individual or professional goals. The widespread failure to acquire these abilities is limiting opportunities for empowerment through the use of mobile phones.

Leo Franklin L. and Ambika S. (2015) conducted a comparative study on Customer Preference of Mobile Service Providers with Selected Service Providers. They have stated that there is a stiff competition prevailing among the service providers. Since there is a marginal difference between the services rendered by the cellular service providers there is more possibility for the subscriber to switch from one service provider to another based on convenience. They have realized that it is very essential for the mobile service provider to understand the customer preferences and the influence of various demographic variables behind that influence. They have compared the customer preference on mobile communication with reference to service provided by private and public sector.

T. SenthamilSelvi and Dr. S. Subadra (2017), nowadays the adoption of mobile phones has been remarkably increasing many parts of the world particularly in India, where almost mobile phones are common as wrist watches. This study was undertaken to

find out the Consumer Preference towards the Services Offered by Mobile Phone Service Providers in Salem District. The study mainly concentrates on the six popular mobile phone service providers i.e., BSNL, Airtel, Vodafone, Aircel, Idea and Reliance. Mobile, wireless or cellular phone - a portable, handheld communications device connected to a wireless network that allows users to make voice calls, send text messages and run applications. India is the fastest growing mobile phone market in the world. The booming telecom industry has been attracting large amount of investments in the country. A mobile service provider (MSP) is a company that offers transmission services to users of wireless devices (smart phones and tablet PCs) through radio frequency (RF) signals rather than through end-to-end wire communication. The Indian telecom market is regulated by Telecommunication Regulatory Authority of India (TRAI) which acts as an independent regulator was set up in 1997 by the Indian Government. The mobile service first operator in India is the state-owned incumbent BSNL. Subsequently, after the telecommunication policies were revised to allow private operators, companies such as Vodafone, Bharti Airtel, Tata Indicom, Reliance, Idea Cellular and Aircel have entered the space in India. Mobile service providers have their own plans, policies, packages and corresponding rates. Although they are offered by various companies, they have only one common purpose. And that is to provide people with telecommunication services so that they could maintain good conversations either for personal purposes or for business reasons. It is consumers' task to think about as to which company can provide him the best service. Consumers demand a mobile phone service provider who offers the widest selection of features and excellent customer service and avoids hidden charges.

2.7 Consumer Preferences Various Mobile Phone Service Providers

Consumer preferences is utilized fundamentally to intend to choose an alternative that has the best foreseen an incentive among various choices by the consumer to fulfill his/her necessities or wants. Preferences show decisions among nonpartisan or more esteemed choices accessible. The preference of the consumer is the consequence of their conduct they show during looking, buying and arranging the products. Exchange of data turns into the need of life to an average person. In the cutting edge world an individual will in general convey anything to everything directly from where he/she stands. Indeed, even while riding vehicle he/she needs communicate within a small amount of second at

snappy speed with intelligible voice, with no unsettling influence. Like line crossing, faulty, and so on the majority of which need the association given by the division of telecommunication. Mobile telephones arises as a help extinguish such a thirst, by giving offices, which an average person can't envision. In spite of the fact that cell telephone industry has its root in the ongoing past and the development has been excellent. These relative significance of service quality credits and demonstrated that responsiveness is the most significance measurement followed by dependability, client saw network quality, confirmation, comfort, sympathy and physical assets. The decision of a cellular telephone is described by two mentalities: disposition towards the mobile telephone brand on one hand and demeanor towards the organization on the other. The respondents think about size, quality, value, instrument overhauling are a significant variables for choosing the handset while larger part of the respondents are fulfilled over the installment framework, nature of services, inclusion territory and the way toward going to the grievances with respect to their mobile service provider. They have expressed that there is a solid rivalry winning among the service providers. Since there is a peripheral contrast between the services delivered by the cellular service providers there is greater opportunities for the supporter of change starting with one service provider then onto the next dependent on accommodation. They have understood that it is extremely basic for the mobile service provider to comprehend the client preferences and the impact of different segment factors behind that impact. They have thought about the client preference on mobile communication regarding service gave by private and public area. Consumer loyalty has been distinguished as basic achievement factors in any business association. One of the key difficulties facing the telecommunication organizations is the way they deal with their service and enhance quality, which holds a monstrous significance to consumer loyalty.

Kumar Ratnesh and AmitKansal (2013) have considered the Indian telecom industry by focusing on mobile service providers, and saw that there is high rivalry among the major parts in the business. All the players were giving uncommon offers and plans according to the economic situations to expand their supporter base. Rivalry in telecom industry was warming up, presently it's the ideal opportunity for Indian telecom players to adjust up in the new unique business climate. As indicated by the outcomes, the main determinants for consumers' fulfillment and their cultivate proposal (positive verbal) to others were Customized VASs, Convenience, Network Coverage and Call tax.

Richard Kipkemoi Ronoh (2014) conducted a study to discover the example of remote innovations' reception and use among University understudies in Kenya. The examination was meant to build up a comprehension of the utilization designs dependent on the reception of innovation point of view. The creator has given a significant commitment to the comprehension of college understudies and their mobile telephone use conduct. He has reasoned that the consequences of the examination would aid strategy improvement of remote telephone application among college understudies and consider particular position to reconsider of how to utilize the innovation to profit the young to learn.

Paulrajan Rajkumar & Rajkumar Harish (2011) This study makes attempts to study the Indian consumers' perception choice in selecting cellular mobile telecommunication service providers. Consumers' perception varies in accordance with the Communication quality, call service, facilities, price, customer care and service provider's attributes. The study indicates that communication and price were most influential and most preferential factors in selecting telecommunication service provider and product quality and availability has a significant impact on consumer perception choice in selecting cellular mobile service provider. The present research reveals a comprehensively integrated framework for people to understand the vibrant relationships among several dimensions of service quality, price, product quality and availability, and promotion to have handful ideas on the consumers' perception.

Alphonsa Smitha K.J et. al (2019) in his article entitled, "A Study on Customer satisfaction of BSNL Landline: Special Reference to Kerala" has expressed that BSNL is one of the main telecommunication service providers in Kerala. The vast majority of the examinations directed here demonstrate the investigating advancement of services gave by number telecommunication providers which opened new world to the client around the globe. This paper studies the consumer loyalty of BSNL services gave in Kerala. Nature of service and greatest network inclusion are the main factor which fulfill the clients comparable to telecommunication.

D. Srinivasa Prasad and S. Gangadhara Rama Rao (2012) in their article entitled, "Land Line Consumer Problems and Perceptions on Telecom Services: A Study

on Bharat Sanchar Nigam Limited” have analyzed that the telecom services have been recognized the world-over as an important tool for socioeconomic development for a nation and hence telecom infrastructure is treated as a crucial factor to realize the socio-economic objectives. BSNL is a wholly a Government of India undertaking, which provides the largest share of telecom services on fixed line networks in the country. BSNL’s land lines which have been its main source of income have come down due to subscribers giving up land line connections in favour of mobile connections. Whereas in the rest of the world, land line has been able to find value addition through cordless telecommunication systems, the same has not been the case in India. This has affected BSNL’s fortunes vary adversely. This article attempts to analyse the BSNL consumer problems and their perceptions about services of the company. In majority of the cases consumers are adverse about the services offered by the BSNL.

M. Gurusamy, A. Velsamy and N. Rajasekar (2012) in their article entitled, “**A Study on Customers**” Satisfaction towards BSNL Landline Services in Salem City, Tamil Nadu” have noted that the customer influencing customer fulfillment is the fundamental objective of each business association. In this serious business situation every single action starts and finishes with the client. The telecommunication is backbone for each business exercises. Indeed, even in this industry there wins a solid rivalry between the service providers. It is seen that the greater part of the respondents are very little happy with the highlights of the telephone given by BSNL when contrasted with other private landline providers. The majority of the respondents don't know about different plans. BSNL should zero in on the limited time measures as equivalent to the private service providers to improve their service movement to fulfill their clients.

Paulrajan R, Harish R. (2011), The mobile area supporters India have developed from around 10 million endorsers in the year 2002 to 250.93 million before the finish of February 2008. As indicated by Telecom Regulatory Authority of India (TRAI), an aggregate of 8.49 million phone associations were added during February 2008. The yearly development of mobile cellular services recorded in India during the most recent couple of years has been almost 100%, yet at the same time, after longer than a time of beginning of mobile services in the nation, just 30% of the 600 million addressable

business sectors of mobile clients in the nation of more than one billion individuals have been reached. Today, around 8,000,000 new phone supporters are being included India consistently. This is generally in the mobile phone section.

W. W. Lu (2008), the article portrays a multilayer, open architecture stage to amplify framework adaptability and limit terminal force utilization, in order to give an incorporated and combined cutting edge remote and mobile communication terminal framework. The OWA stage is completely viable with the PC architecture, with interface-based as opposed to transmission-explicit framework architecture, for complete transparency and effortlessness. Second-age (2G) mobile frameworks were exceptionally fruitful in the earlier decade. Their prosperity incited the improvement of third-age (3G) mobile frameworks. Though 2G frameworks, for example, the worldwide framework for mobile communications (GSM), Interim Standard (IS)- 95, and code division numerous entrance (CDMA)One were intended to convey discourse and low-digit rate information, 3G frameworks were intended to give higher-information rate services. During the advancement from 2G to 3G, a scope of remote frameworks, including General Packet Radio Service (GPRS), International Mobile Telecommunications (IMT)- 2000, Bluetooth, the Wireless Local Area Network (WLAN), and Hiper LAN, have been created. Every one of these frameworks were planned autonomously, focusing on various service types, information rates, and clients. Since these frameworks all have benefits and deficiencies, there is no single framework that is adequate to supplant the entirety of different advances. Rather than investing energy into growing new radio interfaces and advancements for fourth era (4G) mobile frameworks, which a few scientists are doing, we think building up 4G frameworks that incorporate existing and recently formed remote frameworks into one open stage is a more plausible choice.

Goggin G., & Crawford, K. (2011), Highlight that the one of the most critical and clear instances of how mobile communication impacts our comprehension of existence is the means by which we arrange with each other. Mobile communication empowers us to call explicit people, not general spots. Despite area, we can connect with nearly anybody, anyplace. This progression has changed, and keeps on changing, human cooperation. Presently, rather than conceding to a specific time well previously, we can iteratively work out the most helpful time and spot to meet ultimately while in transit to the gathering or

once we show up at the objective. In the couple of brief a long time since their business sending, 5 billion individuals around 75% of all humankind, including kids have become mobile telephone clients. Impacts of this achievement are clear all over, going from mishap scenes and tremor salvage endeavours to manner in the study hall and at supper tables. With such gadgets spreading quicker than basically some other new innovation, inquiries regarding how these gadgets are being utilized (and manhandled) to catch and circulate humiliating or graceless pictures and content, and what should be done about it, are surfacing. This volume presents the primary itemized investigation of the utilization of these gadgets. This notable work will be a captivating perused for both interactive media gadget experts and regular clients both.

Ahmad Z, Ahmad J. (2014), PTA conducts periodical nature of service (QoS) overview all through the nation with the goal that the set quality benchmarks are followed and in the event that not, at that point lawful activities, punishments and Show Cause be taken against cellular service providers. PTA is to guarantee consumer loyalty no matter what particularly regarding QoS offered by the service providers. Thus, it has been tirelessly observing the exhibition of the five cellular service providers of Pakistan. QoS studies and Drive Tests; led by NEMO QoS robotized checking gear which gives modernized outcomes, are utilized to screen their exhibition. The accessibility of various mobile telecom administrators has become the explanation behind extraordinary disarray among individuals. Consumers' taste, preferences and buy conduct changes with time because of numerous components; some have been referenced. The shifting buy conduct of individuals living in Pakistan must be broke down in order to help the business climate and economy of Pakistan regarding the cellular service area. Items and services have experienced various times; creation time, item period, deals direction, advertising, and now relationship direction time. Consumers' information has expanded and now they are very much aware of their requirements and needs like never before which is the reason it's observational to dissect their conduct as indicated by their qualities and culture that wins in the advanced globalized world.

Otoo, B. K. (2015). Explained The mobile telecommunication industry has seen a major increase in competition in recent years. This as a result of similarity of service provided. In giving consumers all the more dealing power the, National Communication

Authority (NCA) has present Mobile Number Portability (MNP) which empowers endorers the occasion to switch or change providers. Without a doubt, the world has grasped mobile communication anyway the individual endorser is confronted with colossal situations concerning the genuine significance of the framework instead of its advantages. Endorsers may have felt that the fast change in communication innovation would have been the spring board for a more unrivalled service conveyance much to their dismay that they would have been compensated with inadmissible execution from the mobile communication providers. The client is burdened with enormous end cost, between availability challenges, and general bad services from these organizations. It is a typical sight to see clients of these organizations utilizing at least two SIM cards relying upon the accessibility and the sign strength of the remote provider at a specific time or area to stay in contact with colleagues, family members or companions. Clients are left with little choice of changing to an elective more productive mobile network on account of immediate and circuitous cost related change.

J. Hidayati, L Ginting and H. Nasution (2018), It is essential to think about client conduct by service provider to offer item or service. There are numerous investigates about client conduct while picking item or service. Presently days in Indonesia, there are many organization offer service of item telecommunication. To confronting rivalry, service provider must realize who is their client, how they choose, and what variable that impact the choice. The opposition additionally causes numerous items offering that makes rivalry more tight. Telecommunication business is in development stage. Then, Indonesia is open market to telecommunication service provider. Indonesia has numerous telecommunication provider organizations. The opposition makes service provider contend to gain client. Learning client conduct is one approach to gain client. By knowing client conduct, organization can know plan item or service that advertised.

Jegan, A. and Sudalaiyandi, S. (2012), The examination presumed that in the promoting time, the online media has prone to alter, the connections advertisers have with retailers, channels of conveyance, their definitive consumers. Their openness and straightforwardness that web-based media offers are the primary explanation that drove changes in the consumer's conduct. The examination likewise pointed toward discovering the consumer's observation about the web-based media in the dynamic cycle. The

investigation reasoned that showcasing by means of online media is tied in with making top notch substance that are consumer pertinent and construct great connections among consumer and organizations. Online media is a significant device for getting applicable data where as broad communications make consciousness of different advancement.

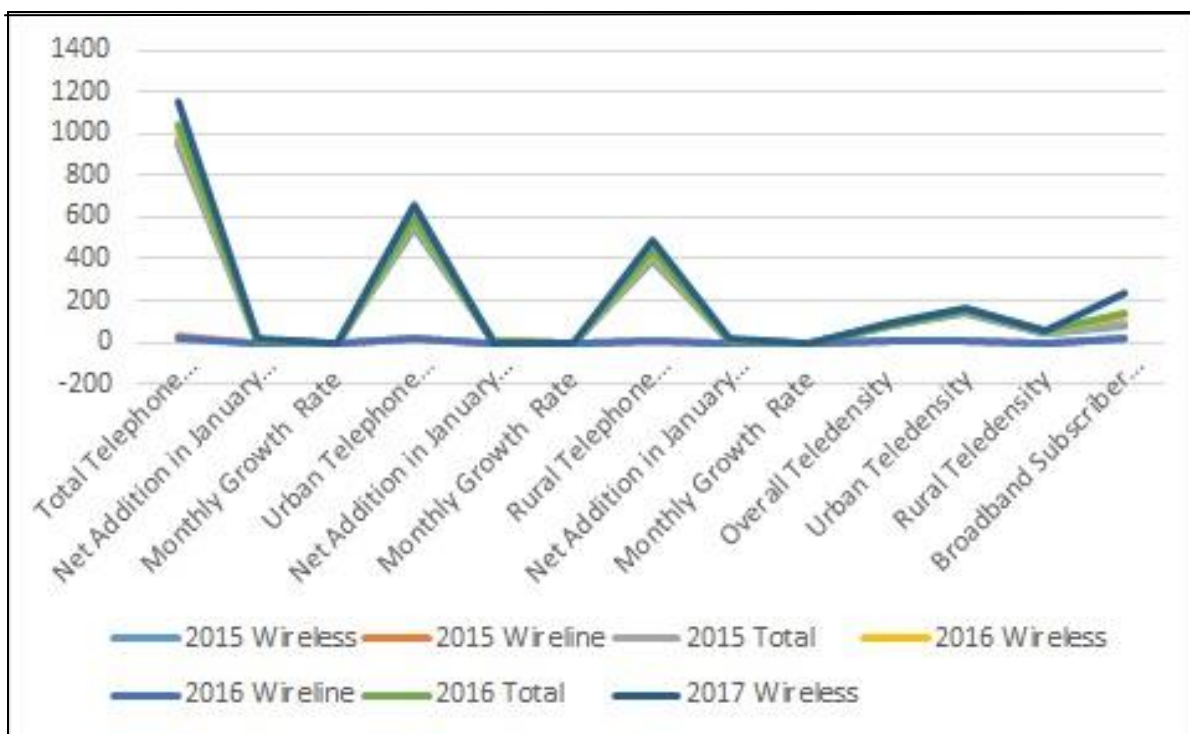
2.7.1 Customer in Mobile Services

Mobile service is one of the quickest developing enterprises in India. With opening up of economy, rivalry in this area is expanding. The passage of privately owned businesses advanced the utilization of cellular telephones in the nation. Today it is purchasers market if there should arise an occurrence of mobile services. Mobile service providers must comprehend the client's recognition about the organization and its different contributions. Mobile service provider must distinguish client needs and impacting factors prior to planning any service or offer. In this unique circumstance, research paper plans to conclude the variables that clients see generally significant while using the services of a mobile service provider. Mobile service is one of the quickest developing businesses in India. With opening up of economy, rivalry in this area is expanding. The passage of privately owned businesses advanced the utilization of cellular telephones in the nation. Today it is purchasers market if there should be an occurrence of mobile services. Presenting a scope of offers and plans may not generally guarantee a huge client base and greater piece of the overall industry. Mobile service providers must comprehend the client's discernment about the organization and its different contributions. Mobile service provider must recognize client needs and impacting factors prior to planning any service or offer.

2.8 Variations in India's telecommunication network

India's telecom network is the second greatest on earth by number of telephone customers (both fixed and wireless) with 1,174.80 million endorsers as on January 2017. It has one of the most decreased call demands on earth enabled by super telecom executives and hyper competition among them. Following table shows the growth of number of telephone users between 2015, 2016 and 2017.

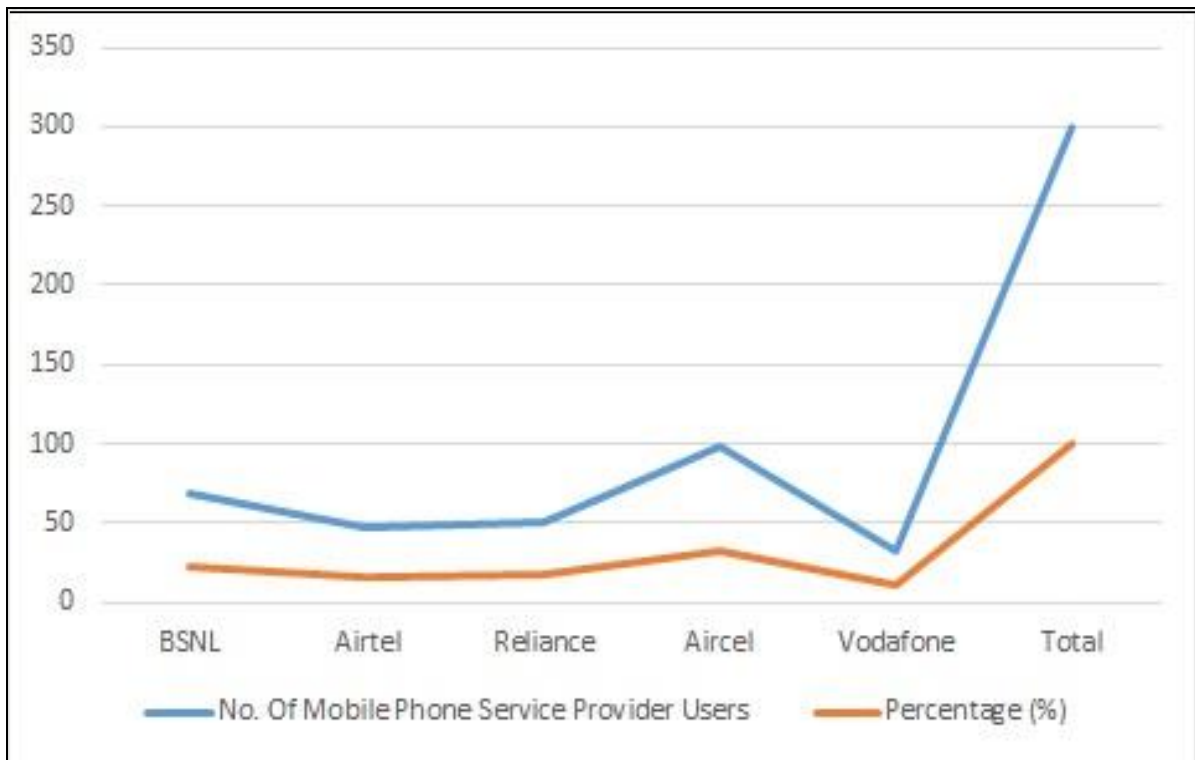
<i>Table No: 2.3 Increase in Number of Telephone Subscribers</i>									
Particular	2015			2016			2017		
	Wireless	Wireline	Total	Wireless	Wireline	Total	Wireless	Wireline	Total
Total Telephone Subscriber (Million)	952.34	26.87	979.21	1017.97	25.32	1043.29	1150.45	24.34	1174.80
Net Addition in January (Million)	8.37	-0.13	8.24	7.08	-0.2	6.88	23.08	-0.06	23.02
Monthly Growth Rate	0.89%	-0.49%	0.85%	0.70%	-0.78%	0.66%	2.05%	-0.25%	2.00%
Urban Telephone Subscriber (Million)	553.45	21.6	575.05	582.95	20.9	603.85	660.63	20.51	681.15
Net Addition in January (Million)	2.82	-0.06	2.76	3.28	-0.08	3.20	-1.96	-0.03	-2.00
Monthly Growth Rate	0.51%	-0.28%	0.48%	0.57%	-0.40%	0.53%	-0.30%	-0.16%	-0.29%
Rural Telephone Subscriber (Million)	398.89	5.27	404.16	435.02	4.42	439.44	489.82	3.83	493.65
Net Addition in January (Million)	5.56	-0.07	5.49	3.8	-0.11	3.69	25.04	-0.03	25.01
Monthly Growth Rate	1.41%	-1.36%	1.38%	0.88%	-2.52%	0.85%	5.39%	-0.72%	5.34%
Overall Teledensity	76.02	2.14	78.16	80.3	2	82.30	89.71	1.9	91.61
Urban Teledensity	142.96	5.58	148.54	147.72	5.3	153.02	164.29	5.1	169.39
Rural Teledensity	46.08	0.61	46.69	49.83	0.51	50.34	55.64	0.44	56.08
Broadband Subscriber (Million)	79.1	15.39	94.49	123.47	16.63	140.10	235.65	18.1	253.75



Graph 2 Increase in Number of Telephone Subscribers

As the table 1.3 shows that in India there is a continuous increase in the telephone connections. If we talk about the wireline phone there is a decrease in the number of their subscriber while there is a continuous increase in the mobile phone/ mobile phone subscribers.

Table No2.4: Current Mobile Phone Service Provider		
Mobile Service Providers	No. Of Mobile Phone Service Provider Users	Percentage (%)
BSNL	69	23
Airtel	48	16
Reliance	51	17
Aircel	99	33
Vodafone	33	11
Total	300	100



Graph 3 Mobile Phone Service Provider

The above table 1.4 uncovers that client are utilizing the current cell phone specialist organization. Out of 300 cell phone specialist organization clients, 33 percent of the cell phone specialist co-op clients are utilizing Ariel, 23 percent of the cell phone specialist co-op clients are utilizing BSNL, 17 percent of the cell phone specialist organization clients are utilizing Reliance, 16 percent of the cell phone specialist organization clients are utilizing Airtel, and staying 11 percent of them are utilizing Vodafone. Aircel as significant specialist co-op could be pulled in to the brand full-filament gave via Aircel administrations, as it demonstrated in an investigation that the cell phone specialist organization clients picks a brand contingent straightforwardly upon the limit of full-filament that the brand holds for the cell phone specialist co-op clients. Aircel is the predominant driving cell administrator followed by BSNL, Reliance, Airtel and Vodafone.

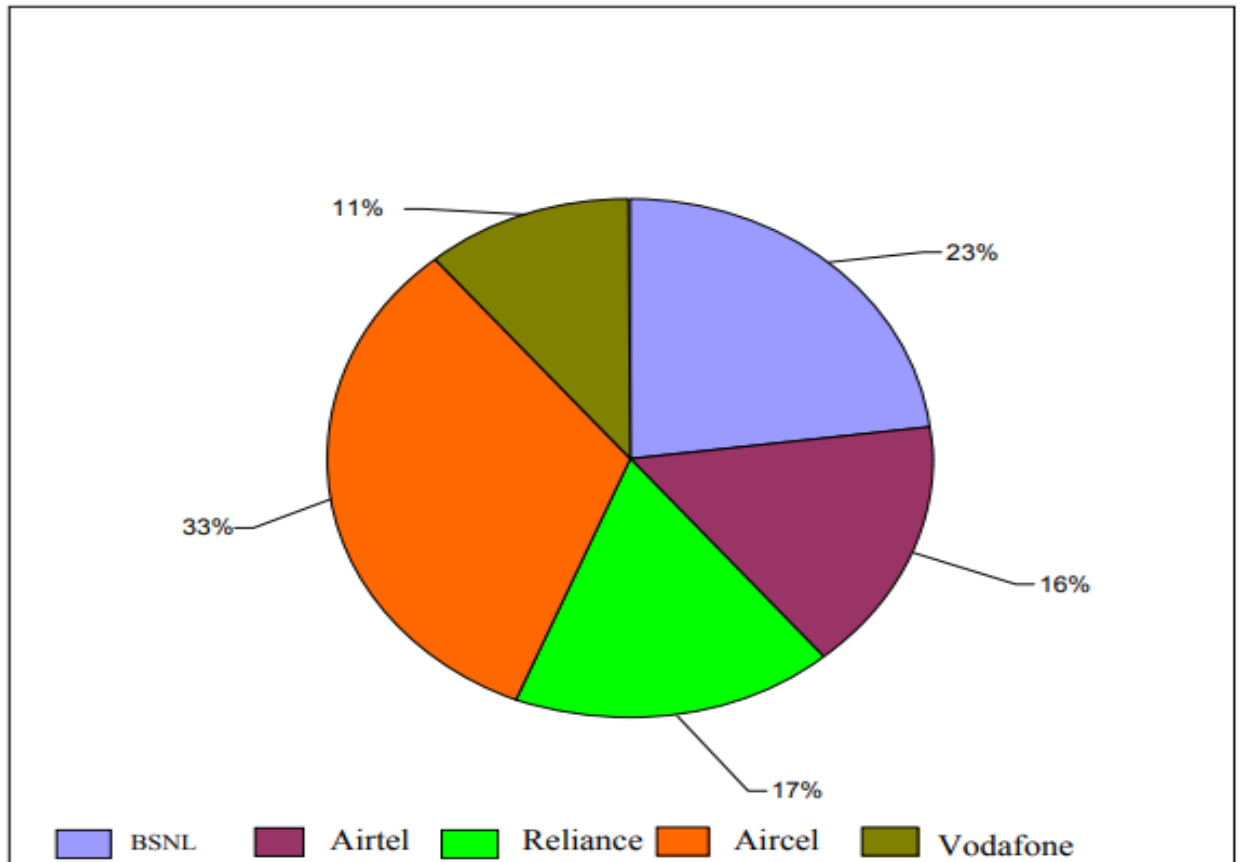
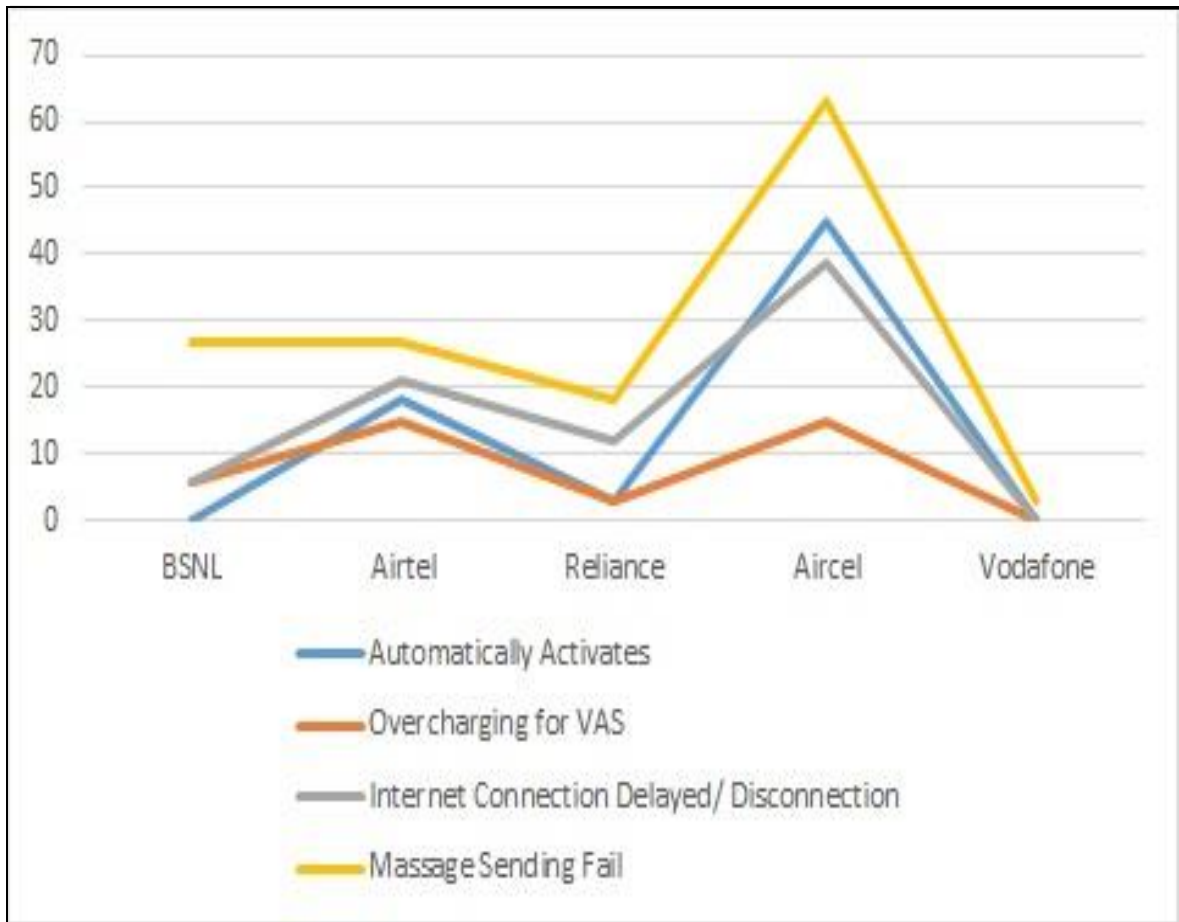


Fig2.1 current Mobile Phone Service Provider

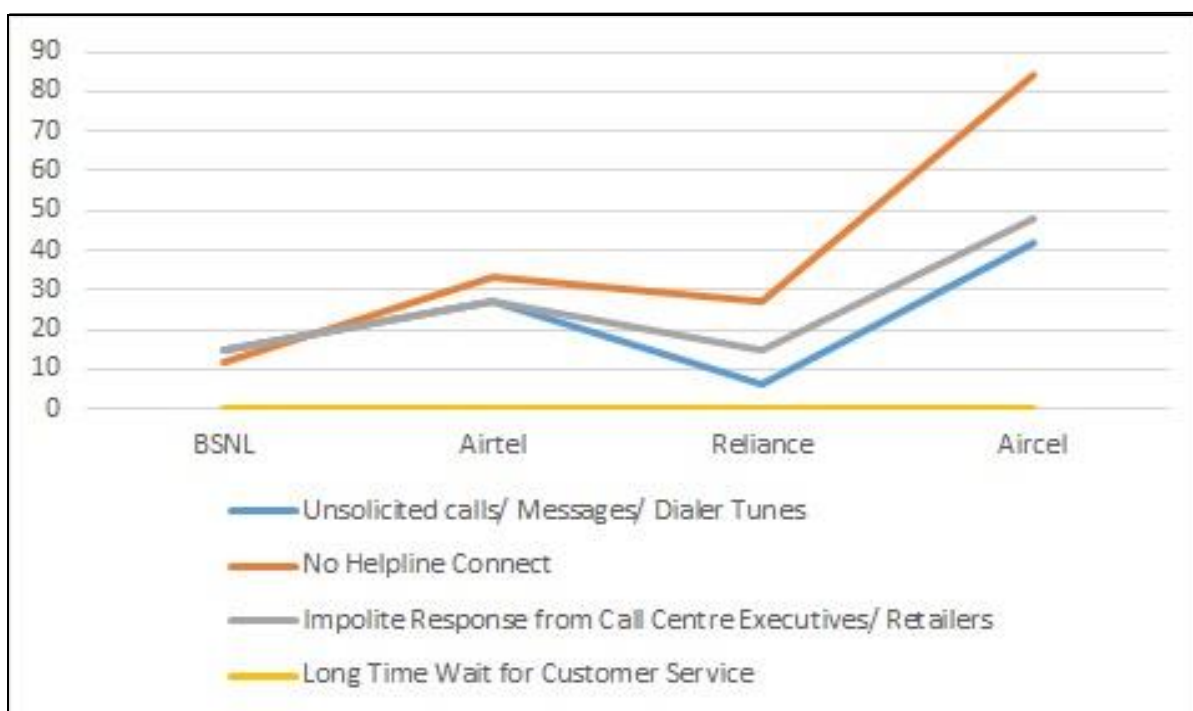
<i>Table No 2.5 Value Added Services</i>						
S.No.	Problems	BSNL	Airtel	Reliance	Aircel	Vodafone
1	Automatically Activates	0	18	3	45	0
2	Overcharging for VAS	6	15	3	15	0
3	Internet Connection Delayed/ Disconnection	6	21	12	39	0
4	Message Sending Fail	27	27	18	63	3



Graph 4 Value Added Service

It is seen from the above table 2.5 that worth included administrations issue looked by cell phone specialist co-op clients. A large portion of the Aircel clients 45 have revealed the issue consequently initiates VAS and deduct balance, trailed by the greater part of the Airtel and Aircel clients 15 have announced the issue Overcharging for VAS, the majority of the Aircel clients 39 have detailed the issue web association deferred/disengagement lastly the vast majority of the Aircel clients 63 have announced the difficult message sending fizzled. It is evident that greatest number from Aircel clients looked by esteem included administrations issue and followed via Airtel, Reliance and BSNL cell phone specialist co-op clients.

<i>Table No 2.6 Customer Care Services</i>						
S.No.	Problems	BSNL	Airtel	Reliance	Aircel	Vodafone
1	Unsolicited calls/ Messages/ Dialer Tunes	15	27	6	42	12
2	No Helpline Connect	12	33	27	84	12
3	Impolite Response from Call Centre Executives/ Retailers	15	27	15	48	3
4	Long Time Wait for Customer Service	0	0	0	0	0



Graph 5 Customer Care Service

It is seen from the above **table 2.6** that customer care administrations issue looked by cell phone specialist co-op clients. The greater part of the Aircel clients 42 have detailed the issue spontaneous calls/Messages/Dialler tunes, trailed by the vast majority of the Aircel clients 84 have announced the issue helpline lastly a large portion of the Aircel clients 48 have revealed the issue discourteous reaction from call centre executives/retailers.

2.9 Market Environment, Customer Satisfaction and Customer Demand

Recently, with the constant developing and advancement of the purchasers' market, customer-situated promoting methodology has been broadly acknowledged by an ever increasing number of endeavors and completed in business practice. Under quite a quickly changing business sector environment, endeavors aggregate a lot of data over the span of business activity. Consequently, "data blast however information need" turns into a typical issue for practically all ventures. The biggest retailer Wal-Mart in America, for instance, has a customer information base that contains around 43 tera-bytes of information, which is significantly bigger than the data set utilized by the Internal Revenue Services for gathering personal assessments. It is pressing for ventures to discover how to successfully utilize the information. From one perspective, mass business activity information is pivotal for the dynamic of endeavors. Especially, customer data in Customer Service System assumes a significant part regarding developing the market knowledge, improving activity. This examination is upheld by the National Nature Scientific Fund key undertakings (NSFP) under contractNo.70431001 dynamic, and upgrading customer fulfillment. Then again, wild market rivalry empowers customers having more options, and brings more weight for endeavors. Therefore, to make a decent comprehension of customer demand and to set up a drawn out key partnership relationship with customers are pivotal for the advancement of undertakings. Appropriately, undertakings ought to precisely dominate customers' genuine need and preference, and afterward give reasonable showcasing plan. With the improvement and advancement of the market and the passageway of unfamiliar contenders, homegrown rivalry in mobile telecommunication market will turn out to be significantly fiercer. The most effective method to make accomplishment in the opposition is dire for every endeavor. Since the Mobile Telecommunication industry is of evident scale impact, which is the purported snowslip impact, the activity cost will be incredibly decreased with the expansion of its customer amount. In this way, customer is one of the key variables impacting the accomplishment of mobile telecommunication undertakings.

Mr. Alpesh A. Nasit (2011)In this study the existing marketing strategies adopted by telecom industries, to analyses the role of various marketing techniques in telecom sector and to suggest managerial implications to Indian Telecom Industry to build

effective marketing strategy. The research study makes an attempt to study the manner in which marketing strategy is developed and sustained over different target market in telecommunication sector. The future commitment of the customers to organization depends on perceived marketing element. The issue and challenges is therefore increasingly recognized as a critical success factor in the emerging scenario.

Bansal Vipin, Singh Harwinder, Bhatia Rakesh (2011), This study highlights the level of customer satisfaction of different cellular service provider operating in Bhatinda. The objective of the study is to find out the satisfaction level of the customer regarding current service provider, mobile phone instruments, analyze the level of awareness about number portability and 3G and make suggestions in the light of the finding of the study. The results revealed that there exist a healthy competition among the existing players in the telecommunication industry, lack or degradation in any of the services may affect the company badly. The authors were of the view that there is a huge market for 3G which can be captured by giving proper awareness to customers and by providing services according to their need. Findings of the study indicate that due to the poor wireline services in the district the subscribers are switching to mobile services.

2.9.1 Customer Service System

Figure 2.2 shows the working cycle of customer service system in mobile telecommunication endeavor. The service focal point of the system is answerable for gathering a wide range of data including customers' protests and enquiries from customers by calls or Internet. At the point when a protest is contribution to the system, the administrator concerned will look for arrangements through recovering in the customer information base through the looking through motor. Recommendations acquired under such conditions depend on the day by day working experience of administrator by and large. One viewpoint is that a great deal of issues has just been settled previously. At the end of the day, pace of rehashed protests is excessively high. Among the grumblings, some are really basic information about activity managing or utilizing. For instance, the incorrect methods of setting music rings lead to some unacceptable telecom of the melodies. This sort of issues keeps the customer from getting speedy assistance and direction, and henceforth wrecks the venture's standing and picture and brings down

customer's fulfillment. The other viewpoint is that similar customer grumblings may find various solutions from various administrators. The irregularity among administrator makes wrong direction for customers, which is likewise one of the principle purposes behind bringing down customer fulfillment or satisfaction.

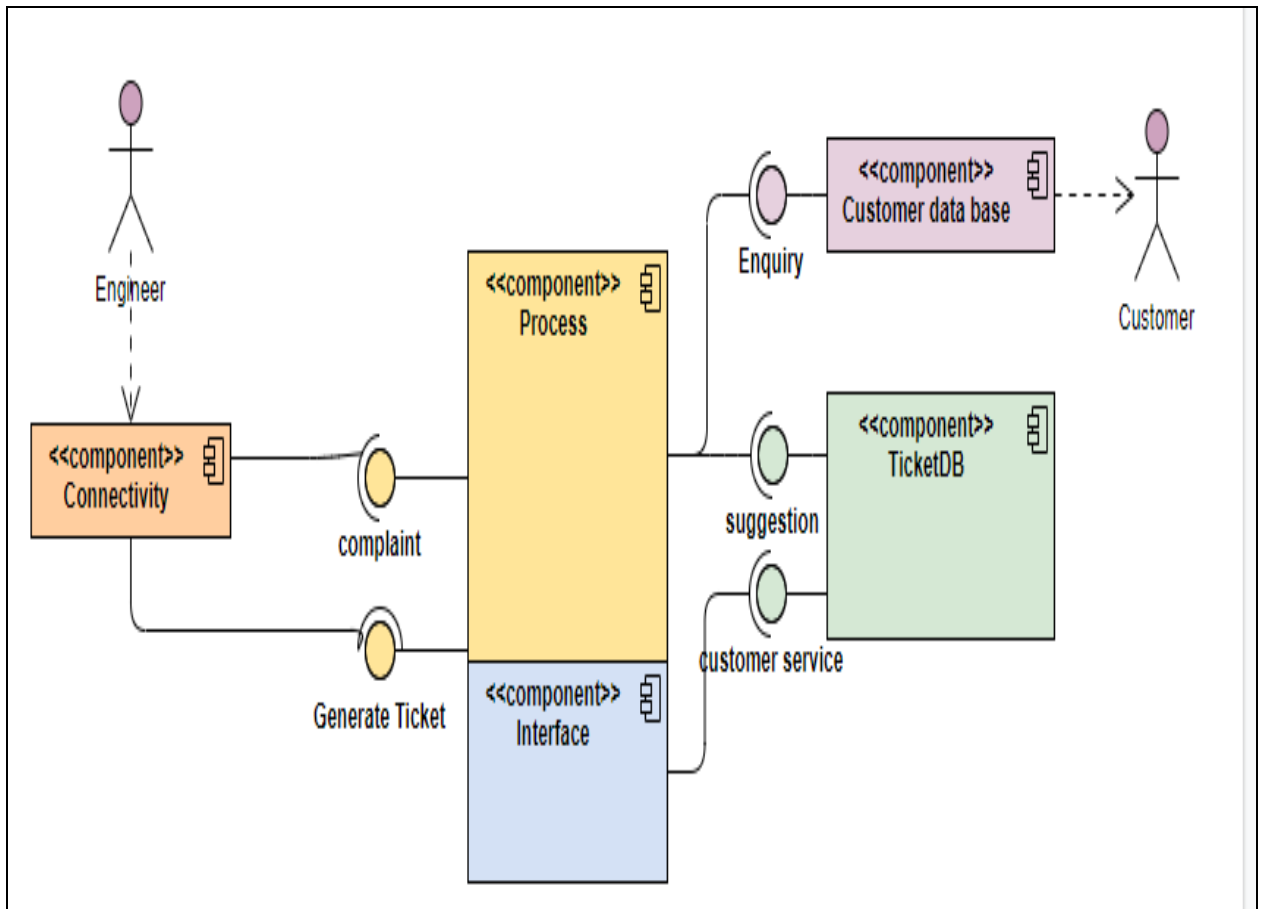


Fig 2.2 Process of customer services system

2.10 Drivers affecting customer satisfaction in mobile communication issue

Quality has become a piece of our everyday lives. It has gotten high consideration by numerous organizations and customers. While customers continue looking and communicating their cravings for quality items or services, firms think about quality as a critical procedure to create items and services to increase upper hands (Ali, 2013). Customer's apparent service quality fluctuates starting with one then onto the next because of various parts of service quality. Service quality is decided by the customers, and it relies

upon how the customers approach the service, in light of the fact that the beginning stage of utilizing a service is the premise of their discernments. Quality of a service is accomplished when a service provider fulfills or surpasses their consumers anticipated service, which thusly prompts customer fulfillment. (Seth, Deshmukh and Vrat, 2005) Early conceptualization of service quality was created and promoted by Christiaan Grönroos' (1982). Mobile Companies also talk about their customers being their most noteworthy assets, much the same as organizations in different business spaces. In the present aggressive versatile mobile service industry, customers have numerous alternatives accessible. Therefore, it is indispensable in the present market situation to interpret the way that the possibility of customer being an organization's most significant resources isn't only an administration hypothesis, yet is an extremely pivotal economic reality. Hence focus on customer satisfaction from all dimensions is extremely important. Customer is the point of convergence part of the country's financial cycle as other development exercises focus on him. In this competitive economy the consumers choose the achievement or disappointment of a business either by procure or not procure the cellular service. Customer has always been considered as the 'King' and its satisfaction is very important. Therefore, all companies try to put their best in front of the customers. In an extremely short period, mobile communications have become an undeniably required help with a high infiltration rate. With the broad versatile mobile communications utilization, the cellular services market is currently perceived as the most aggressive piece of the telecommunication segment. Customer Satisfaction has become an important research area specially for the organization, service provider, professional and researchers. Any organization/service provider aim to achieve high profits with high volume sales with the minimum cost. This aim of earning high profits can be achieved with high sales, High sales is possible only when a customer is happy. Consumer happiness is one of the most crucial components that can help organizations or service providers to expand financially, consumer happiness prompts client dedication which in turn prompts repeat buying and referrals. After the launch of 4G services, all mobile services providers are offering similar base plan of Free Internet and Free Calling. However, the question arises that is it only free internet or free calling which satisfy the customer or is there any other more drivers which satisfy them apart from free internet and free calling. cellular companies have occupied a strong market position with cut-throat competition. Gone are the days when

mobile customers satisfaction depends on the how much money a consumer is getting for a recharge. These days almost all the companies have the same base plan of giving free internet and unlimited calling and thus this research work exhibits the same. Competitive, Trustworthy and Network Coverage are driving all dimensions of Customer Satisfaction more than Market Image, Cellular Quality and Value Added Features. Thus, the three most differentiating factor for Indian Cellular user are Competitive, Trustworthy and Network Coverage. This may be because, the other three factors viz., Market Image, Cellular Quality and Added Features are provided more or less by all companies. Mobile service providers should begin to look for viable and innovative approaches to draw in, hold or cultivate a more grounded association with customers. As the Mobile Service business in India is one of the biggest developing divisions, it is significant and fascinating to investigate the drivers of consumer satisfaction in this industry especially when all are given Free Internet and calling. In his model, the general view of service quality is introduced as the end-product of an assessment cycle, in which the consumer analyzed their desires for quality and their encounters of quality. A commonly accepted parameters for service quality by authors in table 2.7.

Table 2.7 Commonly accepted essential parameters for Mobile communication network

Author Name	Year	Expected Services	Perceived Services	Quality Criteria	Technical Expect	Functional Aspect
Abideen et. al.	2011	√		√	√	√
Angelova et. al.	2011	√	√	√	√	√
Boshoff et. al.	2002	√	√	√	√	
Clulow et. al.	2009	√	√		√	√
Fong et. al.	2015		√	√	√	√
Gi-Du Kang et. al.	2006	√	√		√	√
M. J. Shaw et. al.	2001	√	√	√	√	√
S. C. Hui et. al.	2000	√	√	√	√	√
5G System et. al.	2018	√	√		√	√
A. Lara et. al.	2016		√	√	√	
F. Kalil et. al.	2018	√	√		√	√
D. Ibarra et. al.	2018	√		√	√	√
<u>Hammad Kabir</u> et. al.	2020	√		√		√

2.11Summary

The first research review that this research was intending to answer was: Which components influence customer satisfaction in mobile communication network system. There are different conclusive components influencing customer satisfaction that have been proposed and decided their effects on customer satisfaction. Likewise, the poll or questionnaire was led dependent on this review. Initially, great quality of service can have a constructive outcome on customer's satisfaction, since over 40% of respondents were happy with the utility and service. From the above the study of research keywords, we learned that some factors are affected to the consumer behaviour and helps to take decisions in various themes. While the substance examination led in this investigation gives helpful data to shopper conduct scientists and experts, a few restrictions of the examination must be demonstrated which are portrayed as? The level of contrasts and preferences among network is exceptionally dictated by the level of purchaser's association in decision making. Fluctuated factors prompt the shoppers perpetually to make brand preferences among the durables, for example, ad, past experience, retailer's suggestion and so on. Henceforth, an investigation on the buyer purchasing conduct, particularly of durables, turns out to be extremely basic. Such endeavors to illuminate how the customers select, buy, use and dispose of items, organizations, considerations, or experiences to satisfy their prerequisites and needs. Thus, the research will give hints to the organizations to grow new items, item includes, costs, channels, messages and other marketing blend components. As deduced from the current examination, dispatching of more solid outlets for the durables in the area will guarantee solace and comfort for making such profit benefits by guaranteeing preferences. Focus of this chapter is to study of relationship between consumer buying behaviour and product in specific environment.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter on research methodology establishes the logic of the research design for the primary data collection – including type of investigation; sampling decisions involving sampling unit, geographical area of study, time of study, sample size and sample design; independent and dependent variables, operational definitions and tools used, scales employed; the questionnaire design, data collection method; testing the reliability of the scales through pretesting of the structured questionnaire; the level of significance desired, and the data analytic techniques used. The Research methods used for analyzing the Consumer Behaviour and Purchase Decision are presented in this chapter. It deals with the choice of the study area. Sources of data Sampling Techniques, Collection of data and the Framework of analysis.

3.2 Importance of study

Studying Consumer Behaviour in Mobile Network Communication is possible through consumer survey.

Mobile Network Communication in India are spread across Uttar Pradesh in high and busy consumption. The present study will help to understand the consumer behavior in cellular network with a special reference to Uttar Pradesh region. It will also try to gauge the marketability of cellular network. The purpose of this research is to focus on the cellular network and community interaction aspects of Uttar Pradesh.

The Present research on Mobile Network Communication development and redevelopment can more comprehensively address the importance of cellular network to the communities in which they are located. Broadly, neglected areas of research are the community and economic contributions of cellular network. These are critical issues, given the age of cellular network worldwide, the need for adjacent area redevelopment and requirement of large public subsidies for infrastructure construction. The present study will also give suggestions to enhance the effectiveness of cellular networks.

The study attempts to provide recommendations and suggestions which can be used for effective management of cellular networks and induct revolution and continuously appreciate the dynamics change so as to have competitive edge in the

survival and growth of networks in Uttar Pradesh. The present study will be helpful in assessing the past performance of mobile network in various cellular network and research work have done through these steps (figure3.1).

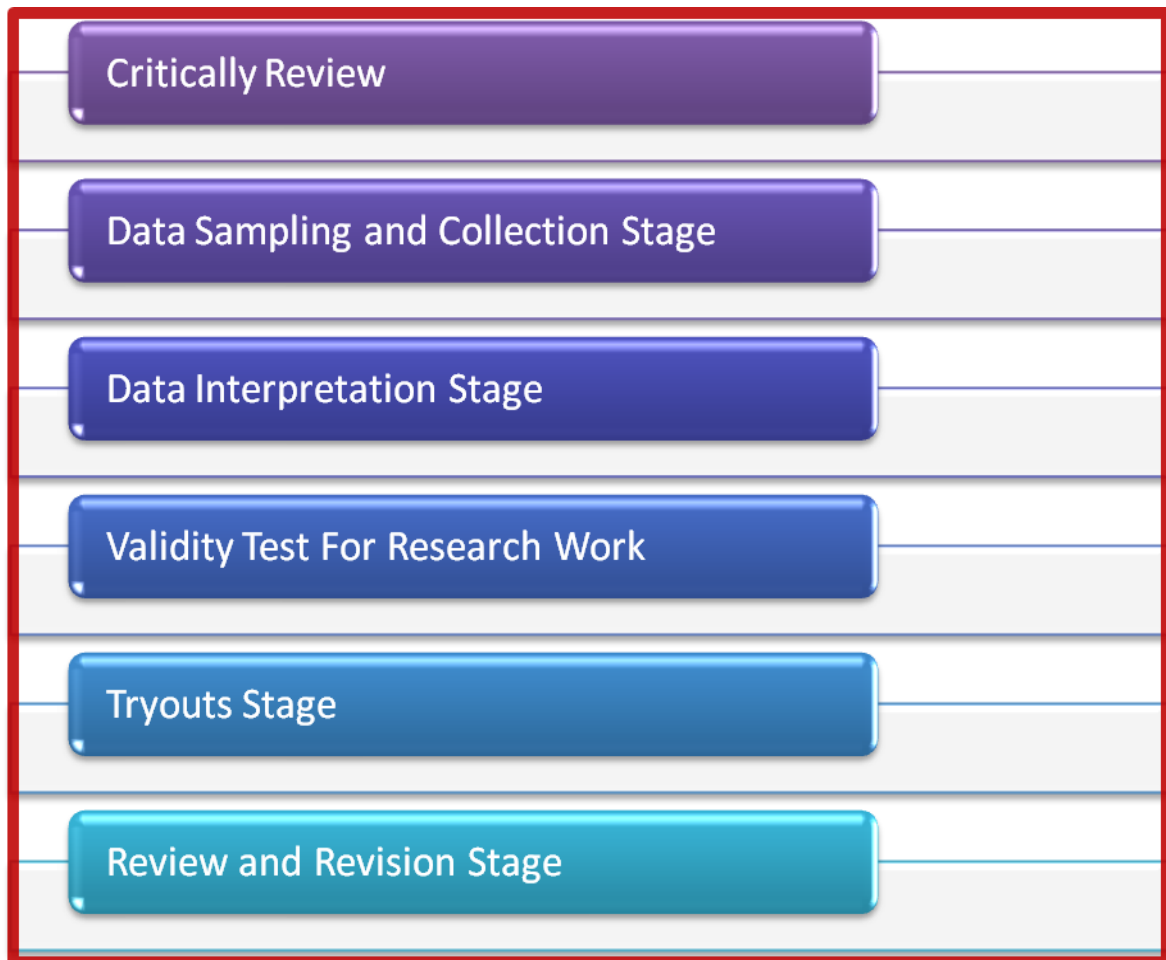


Fig 3.1 Research Framework

3.3 Research Design

Research design constitutes the blueprint for the collection, measurement and analysis of data. In this study the researcher adopted descriptive research design. Descriptive research studies are those studies which are concerned with describing the characteristics of a particular individual or of a group. Descriptive research includes surveys and fact-finding enquiries of different kinds.

3.3.1 Type of Examination

The literature review led to clear definition of the problem of study, identification of constructs (variables) as also hypotheses needed to be tested, hence a quantitative (descriptive study) and inferential (hypothesis testing) study has been chosen. The type of investigation undertaken is co-relational analysis to establish associations between various variables under study (independent and dependent) and regression analysis to test the various hypotheses explaining variance as also analysis of mean differences to test segmental differences. Since the investigation is a field study, conducted in the natural environment, the study setting is non-contrived with no interference by the researcher. Also, the study is a one shot or cross-sectional study.

3.3.2 Research Method

As the study is based on primary data, the scope of the study is limited to the objectives of the study. Following are the details relating to the objectives of the study, which the survey intended to reveal:

- 1 To investigate, identify, and classify the network features in the mobile network of international companies.
- 2 To study and classify cellular services features based on buying motives in the study area.
- 3 To investigate and identify buying motives which have more effects on purchase decision.
- 4 To study the buying behaviour of consumers in the said cellular network.
- 5 To analyze, identify, and compare logical
- 6 To analyze demographic characteristics of consumers and their effects on mobile communication network

3.4 The Sample and Sampling Design

It was considered to have a sample of 1800 consumers with different consumer. Hence the day-old consumer male and female, data from other consumer who are different in their buying behaviour are also studied. Consumer between age group of teen ager i.e less than or equal to twenty years to senior citizen i.e. ,sixty-six years and above, married

and unmarried, Education from less than or equal to tenth to post-graduate, student, salaried, professional and businessmen with average monthly family income of less than or equal Twenty. Twenty thousand to income above Rs. Eighty thousand are covered as respondent who availing the services. In the present study the consumers have been considered as unit of research. It was assumed that the size of the consumers would have different demographic status of the people living in Uttar Pradesh. Mobile Network Communication is chosen for the purpose of research study. The selection of Mobile Network Communication for this study has been based on facility, quality in Uttar Pradesh region only. Out of these networks are selected for the purposes of research study having walking crowd are as under.

3.5 Data Collection

The data for study were collected through interviewing selected respondents based on their demographic factors such as gender, age, occupation and average monthly family income of those visitors who resides in Uttar Pradesh with the help of questionnaire. It was structured questionnaire. To prepare a structured questionnaire, I reviewed literature on consumer behaviour and consulted the experts in the area of my study. The final questionnaire is given in appendix. The questionnaire includes questions relating to the demographic factors of consumer and consumer's perception about shopping mall. The questions were close ended with multiple choices. Some of the questions need to answer "yes" or "No" and also other option are available. To study different aspects of consumer behaviour, direct questioning technique has been more relied.

3.5.1 Questionnaire Design

Questionnaire Design refers to data preparation and analysis of the "Raw Data" for containing in the questionnaires. They must be converted into a form suitable for analysis. The quality of statistical results depends on the care exercised in the data preparation phase. The following points should be considered during the data preparation:

- ✓ Preparing preliminary questionnaire by using raw data which have been analyzed for containing in the questionnaire.
- ✓ Present the questionnaire for completeness.

- ✓ Editing of questions and provide guidelines for handling illegible, incomplete, inconsistent, ambiguous and unsatisfactory responses by respondents during the pretest of questionnaire.
- ✓ Selecting suitable scales and coding questionnaires for preparing suitable data and facilitate future analysis process.

3.6 Data Analysis and hypothesis testing:

To give scientific outlook to the study and to reach specific conclusions, the researcher has used various statistical tools like 2T test analysis and Regression logic Model. For simple comparisons and presentation various tabulation, charts, graphs are also used. To interpret and establish interdependence of collected and analyzed data various factors relating to consumer's behaviour with cellular network. I used to follow statistical tools and methodologies.

- 2T TEST ANALYSIS
- REGRESSION LOGIC MODEL.

3.6.1 T-Test

It is based on t-distribution and is considered as an appropriate test for judging the significance of a sample mean or for judging the significance of difference between the means of two samples in case of small sample when population variance is not known. The relevant test statistic's it is calculated from the sample data and then compared with the probable value based on t-distribution for accepting or rejecting the null hypothesis. It may be noted that t applies only in case of small sample(s) when population variance is unknown.

3.6.2 Regression Logic Mode

Use regression analysis to describe the relationships between a set of independent variables and the dependent variable. Regression analysis produces a regression equation where the coefficients represent the relationship between each independent variable and the dependent variable.

Variables used in the study

- Access to Mobile Network Communication
- Increase in Consumer Behavior
- Mobile Operators
- Mobile Service Providers
- Customers
- Buying Behavior
- Service Charges
- Mobile Users

3.7 Hypothesis

To develop a good theoretical frame work for the investigation, a review of literature on consumer behaviour has been done. The hypotheses for the purpose of studying consumer's behaviour are drawn partly on the basis of study and partly on the basis of self-interest. The research is done under the outline of following hypotheses:

Hypothesis-1

Null Hypothesis H0: There is no significant relationship between service quality of respondents and perception towards cellular services.

Alternate Hypothesis H1: There is significant relationship between service quality of respondents and perception towards cellular services.

Hypothesis-2

Null Hypothesis H0: There is no significant relationship between accessibility, availability of related services and other factors of cellular services.

Alternate Hypothesis H2: There is significant relationship between accessibility, availability of related services and other factors of cellular services.

Hypothesis-3

Null Hypothesis H0: There is no significant difference among consumers buying and cost effectiveness towards cellular services.

Alternate Hypothesis H3: There is significant difference among consumer's buying and cost effectiveness towards cellular services.

Hypothesis-4

Null Hypothesis H0: There is no impact of income on availing to cellular services.

Alternate Hypothesis H4: There is impact of income on availing to cellular services.

3.8 Summary

This study identified several consumer behaviors of Uttar Pradesh's consumers, the topic discussed in this study is still developing and it may have missed others. These behaviors need to be measured in detail in future research. A future research may be undertaken to make a comparison between the cellular consumer behaviors in different cities with different factors. Sample size can also be change. Further study can also be done on different culture and consumer's behaviour in cellular services. Study cannot restrict to particular cellular services, employment opportunities available in sector, cellular and development of allied sectors. The data were processed on SPSS Programme.

CHAPTER 4

**PROFILE OF MOBILE NETWORK
COMMUNICATION**

4.1 INTRODUCTION

The Mobile Phone Network service has been recognized throughout the world as an important tool for socio-economic development of a nation. As majority of people depend on mobile phone for communication, banking, internet and other activities, Mobile Phone service providers are offering various facilities to attract the customer along with updated technology. The challenge for the service providers is to find out the critical factors that influence the customer preference. A Customer always tries to buy a product which has many attributes fulfilling their need. As perception towards quality is more, customers are becoming harder to please, smarter, more demanding, less forgiving and they are approached by many service providers with more or less equal offers. The fundamental goal of service providers is to increase customer satisfaction and to maintain long term customer relationship. Nowadays, the mobile phones are progressively becoming cheaper and affordable for the people, the service providers are also introducing new schemes, offers and technology advancement in their service. This has resulted in more and more consumers buying mobile phones and Network Portability. India is the world's second-largest telecommunication market, with around 1.19 billion subscribers as on September 2018. The telecom market can be split into three segments – wireless, wire line and internet services. The wireless market domination comprises 98.14 per cent of the total subscriber base, as on September 2018. Wireless subscriptions witnessed a CAGR of 19.61 per cent to reach 1,183.41 million in 2018. India is the second largest country in terms of internet subscribers also with 512.26 million internet subscribers in June 2018. India became the world's fastest-growing market for mobile applications in the first quarter of 2018 and remained as the world's second fastest growing market for Google Play downloads in the third quarter of 2018. Strong policy support from the government has been crucial to the sector's development. Foreign Direct Investment (FDI) cap in the telecom sector has increased to 100 % from 74 %. The Government of India has launched the National Digital Communications Policy in 2018, which envisages attracting investments worth US\$ 100 billion in the telecommunication sector by 202. Network portability customer behaviour is based on customer satisfaction. It plays an important role, in bringing sales growth and market share.

According to Philip Kotler, Customer satisfaction is the level of a person's felt state resulting from comparing a product's perceived performance in relation to the person's expectation. Customer satisfaction includes quality, availability, after sales support etc., Technology advancement takes a prominent position in the marketing management literature; it is the customer expectation from the service providers. Now a days, as the average revenue per users is decreasing from voice drops, the mobile phone service providers are increasingly looking for providing quality service with an additional revenue stream. The customers have every chance to portage the mobile phone network service provider due to dissatisfaction. This is an imperative study since its outcome will contribute valuable learning about the field of Network Portability Behaviour. This research may serve as a highly useful input to Mobile phone network service providers, researchers and media futurists. The advantage of this study is to contribute previously unavailable data to this field. This study is easy to replicate and scale- up, by retrieving similar data from other regions in Uttar Pradesh. In India among many network service providers, the major players are Aircel, Airtel, BSNL, Reliance, TATA Docomo, Vodafone, Idea, Jio etc. Though they provide new schemes, offers and technology advancement in their services, customers are not satisfied and they try to portage to other service providers to satisfy their service need. In Uttar Pradesh, we find most of the people using mobiles, including male and female of different categories, i.e., professionals, business people, IT Company and other company workers, students and others. Every customer expects different service from mobile phone service provider to satisfy their wants, when they feel that their complaints are not responded, rejected and the service is not up to their expectation , immediately they portage to the another. The main reason for the dissatisfaction of a customer is that they expect Quality in service with advancement in technology. The customers expect various parameters like SMS pack, customer care, free talk time, festival offers, full talk time, free roaming etc., with good network coverage and technology advancement. The Portability behaviour may be more among the students and business people than among others, as the students expect advanced approaches in the option to access internet i.e., Wi-Fi using mobile phone. Customers expect immediate response during dissatisfaction. But some mobile phone network service providers do not respond immediately. The network service providers exploit the customers by activating offers which are not required by them (or) without their intimation; even unwanted

Messages and unnecessary advertisements create irritation among customers and make them move to portability behaviour. As, the portability behaviour plays an important role in the mobile phone network service sector, it is very much necessary to analyze the causes and reasons which make the people is portability behaviour. This study attempts to measure the pull and push factors which influence portage and identify the extent of portability action among different categories of customers in Uttar Pradesh.

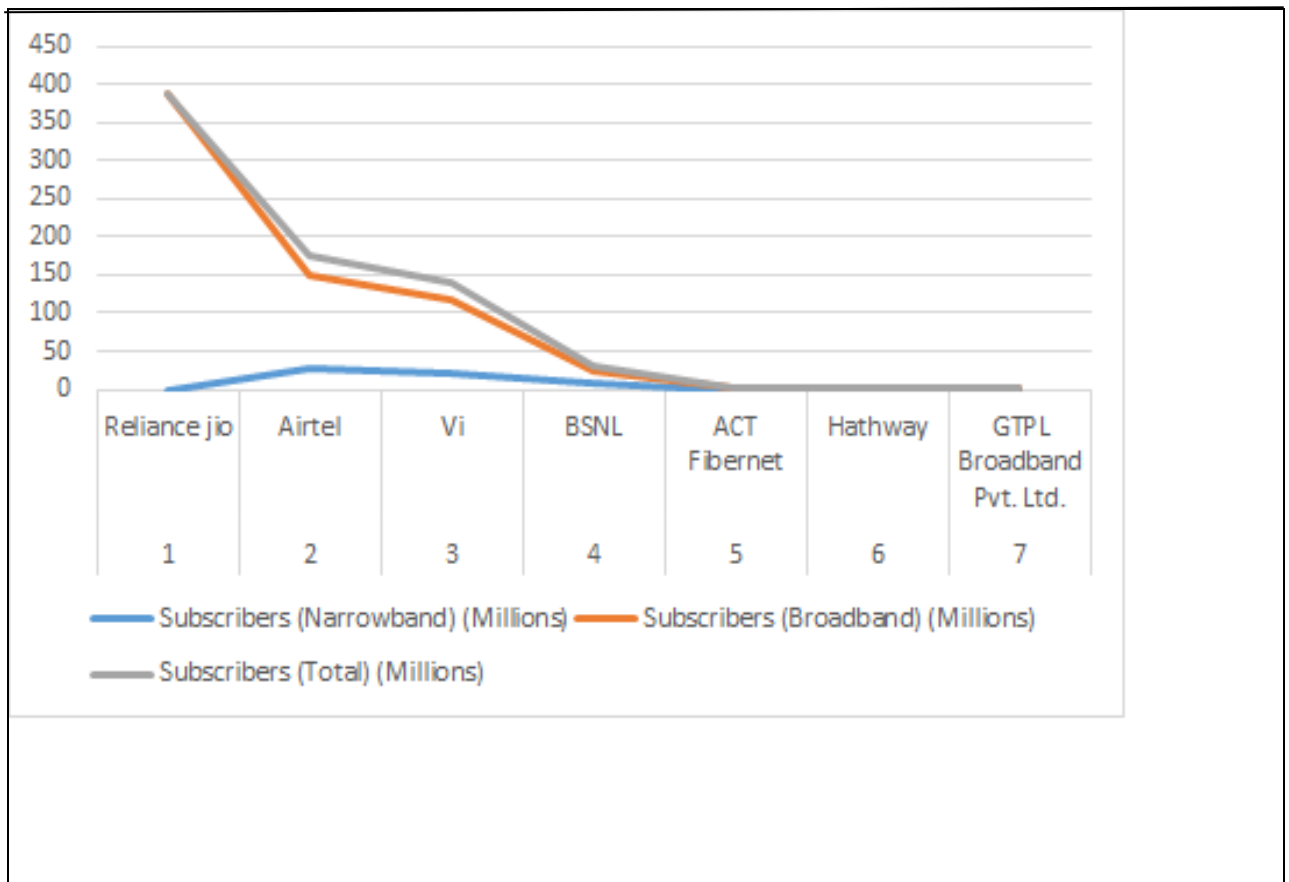
4.2 Emerging Trends in Mobile Phone Network Services In India

India's telecommunication network is the second largest within the world by vary of Mobile users (both mounted and mobile phone) with one.418 billion subscribers as on April 2018. During the year 2017-18, wireless subscribers in the country increased the CAGR of 19.2% to reach 1183.4 million followed by the urban wireless tele-density reached 151.78 percent while rural wireless tele-density which reached 56.31 per cent. It has one among the bottom call tariffs within the world enabled by mega telecommunication operators and hyper competition among them. As on 31 May 2018, India is now the world's second largest Smartphone user but China had 1.3 billion users in 2018 followed by India having 530 million smart phone users. The Smartphone market will have almost one billion unique mobile subscribers by 2020 in our country. Revenues from the telecommunication system sector area unit expected to grow to US\$ twenty six.38 billion by 2020. The upcoming National Telecom Policy of 2018 has envisaged telecommunication sector by 2022. Our country's telecommunication market is expected to experience further growth, fuelled by increased non-voice revenues and higher penetration in rural market. Telecom penetration in the nation's rural market reached 56.68 per cent in April 2018. The emergence of Associate in nursing affluent social class is triggering demand for the mobile and web segments. Government of India by increasing the policy in telecom industry developing for the Foreign Direct Investment (FDI) cap in the telecom sector has been increased to 100 % from 74%. Also, GOI is soon going to come out with a new National Telecom Policy 2018 in lieu of rapid technological advancement in the sector over the past few years. The following chart-1 shows the growth of wireless subscribers in India.

Mobile phone network providers in India Due to market liberalization, many international mobile network operators have established services in India. The biggest player in the market is Airtel, which even offers services and network coverage in remote areas. Other providers include Vodafone, state-run BSNL, MTNL, Spice Mobile, Reliance Telecom and Idea Cellular. Although these service providers are expanding their network coverage, they still only operate in some regions in India. Before you decide on a provider, make sure that it covers the area you are going to be working and living in. Check with individual providers for more information.

<i>Table-4.1 Mobile Phone Network Operators Subscribers</i>					
Rank	Provider	Subscribers (Narrowband) (Millions)	Subscribers (Broadband) (Millions)	Subscribers (Total) (Millions)	Ownership
1	Reliance jio	0	388.39	388.39	Jio Platform
2	Airtel	27.11	148.57	175.68	Bharti Airtel Limited
3	Vi	22.03	118.23	140.26	Vodafone Idea Limited
4	BSNL	6.57	25.36	31.93	Government Of India
5	ACT Fibernet	0	1.61	1.61	TA Associates
6	Hathway	0	0.97	0.97	Reliance Industries limited
7	GTPL Broadband Pvt. Ltd.	0	0.36	0.36	Reliance Industries limited

https://en.wikipedia.org/wiki/Mobile_network_operator



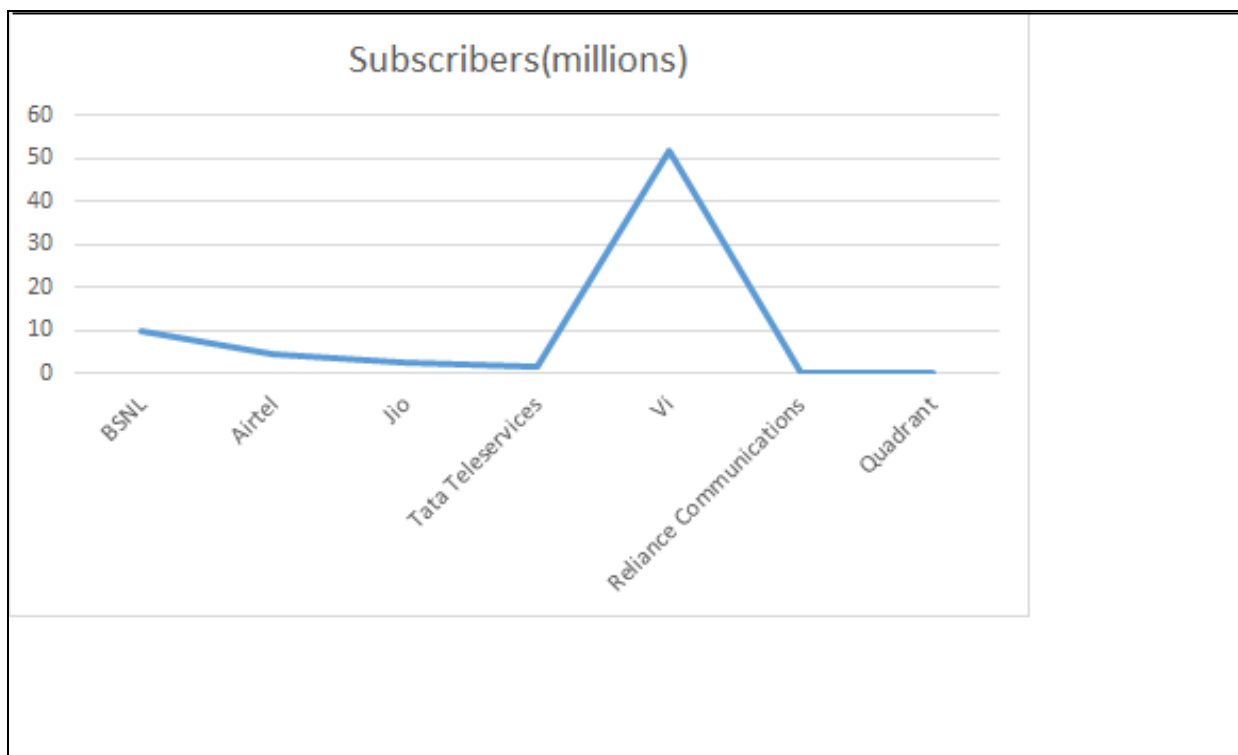
Graph 6 Mobile Phone Network Operators Subscribers

4.3 Mobile Phone Network Services in India

India's mobile telephony market is one of the fastest growing in the world. Signal strength in big cities is strong but weakens the further away you get from metropolitan areas. All across India, charges for national and international calls are among the lowest in the world. Even though Indian telecom companies make great efforts to expand their mobile network infrastructure, you may encounter problems making calls. Peak times around late afternoon regularly cause network overloads and sometimes you will be forced to postpone calls. Sometimes you may also have difficulties making international calls from your cell phone, regardless of which provider you have. In these situations, you have no option other than to wait.

<i>Table-4.2 Mobile phone Provider In India</i>			
Sr. No.	Operator	Subscribers (millions)	Ownership
1	BSNL	10.13	Government Of India
2	Airtel	4.57	Bharti Airtel
3	Jio	2.75	Jio Platform
4	Tata Teleservices	1.66	Tata Group
5	Vi	052	Vodafone Idea Limited
6	Reliance Communications	0.22	Reliance ADAG
7	Quadrant	0.20	Quadrant Infotech India Pvt. Ltd

There were 375 internet service providers (ISPs) offering broadband and narrow band internet services; top 5 services constituted 98.84% market share of the total 747.41 million Broadband and narrow band subscribers according to TRAI.



Graph 7 Mobile phone Provider in India

4.4 Mobile phone wireless service provider in India

Reliance Jio held the highest share of subscribers, at over 34 percent, in the wireless network market across India as of September 2020. The company had over 406 million subscribers during the same time period. The number of mobile subscribers across the south Asian country amounted to over a billion in 2020. The Indian telecom industry registered strong growth in the recent years and became the second-largest telecommunications industry in the world. The country also ranked second in terms of total internet users worldwide in 2019. The gross revenue from the industry amounted to around 1.2 trillion Indian rupees in fiscal year 2020.

<i>Table-4.3 Mobile Phone wireless subscribers networks provider</i>	
Share Of Wireless Subscribers	Networks Provider
34.76%	Reliance Jio
28.33%	Bharti Airtel
25.33%	Vodafone Idea
10.84%	BSNL
0.54%	MTNL
0.15%	Tata Teleservices
0.04%	Reliance Communications
0.02%	Quadrant

Source:-<https://www.statista.com/statistics/258797/market-share-of-the-mobile-telecom-industry-in-india-by-company/>

Government initiatives- Fast-tracked changes in the sector continue to be growth drivers for the industry. In 2020, a hundred percent FDI was allowed in Bharti Airtel. The investment cap was also increased to a hundred percent, previously at 74. The ‘Digital India’ program was also introduced in 2015, under which all sectors including healthcare, retail and others were planned to be digitalized.

4.4.1 Mobile No Portability

You can choose between taking out a mobile contract or buying a prepaid card. Usually, tariffs for contracts are better and there are special options available, such as free-minutes bundles. Some providers also offer reduced rates to international destinations. On the other hand, contracts usually stipulate a minimum length of 12 to 24 months. You can get the best mobile offers emailed to you by signing up to Expat Offers. To get a mobile phone contract you usually need to go to one of your provider's shops and fill out an application. You have to provide proof of identity (passport with visa, Indian driving license) and proof of address (residence permit, utility bill). Most providers require security payments, but that should usually not cost more than five US dollars. Your SIM card will be activated after your application has been processed. Usually, it takes about 24 to complete the entire process.

Consumer's Behaviour in Mobile Network Services

If you want to stay flexible, you will probably have to opt for a prepaid card. Be aware, however, that you may have difficulties charging up your prepaid card in some parts of India, even with your own provider! Many prepaid providers offer region-specific discounts in order to compete in certain local markets (mainly in big cities). These products might not be available in other parts of India, leaving you unable to use regular top-up cards as well. If you plan on traveling, politely refuse the regional discounts. Also keep in mind that in many cases your mobile phone will not be charged with the complete amount you have bought a top-up card for. Many providers charge a "top-up fee" for the recharge, which is deducted from your calling credit. There are also validity dates for charge ups. Your credit expires if you do not use it within one or two months. You might consider adding one large amount of credit in one go instead of adding various small amounts as needed: The more credit you add in one go, the longer it will remain valid. In addition, fees are proportionally less the more credit you add. Independent of whether you choose a contract or a prepaid card, you will have to get your mobile handset on your own. There are many shops in India offering new and used handsets and, due to the size of the Indian mobile phone market, even the newest phones are available in most shops. Renting cell phones used to be an option as well, but has become less popular as prices for new phones have dropped significantly in recent years. Indian mobile networks use GSM at 900 MHz. Recently, 1800 MHz networks have begun to appear, but they still only cover small parts

of India. If you want to have a reasonable chance of using your phone from home in India it should be able to handle 900 MHz. Since many Indian providers have roaming contracts with international companies, you should not have problems using your phone in India with a foreign contract – but remember that making frequent roaming calls will leave you with enormous phone bills. If you intend to stay in India for an extended period of time, it is definitely cheaper to get an Indian mobile connection. In many cases, this will be even more economical than getting a fixed line in India. The share of digital mobile phone recharges in India crossed 50% for the first time in 2020 as the pandemic led people to minimise stepping out to stores and instead opt for online transactions, a trend that experts said may continue. At Reliance Jio, the share of online recharges increased to 50% in the December quarter from 35% in the March quarter, after having touched 60% during the lockdown in the June-ended quarter, according to a senior company executive.

Profile of Uttar Pradesh

India is perhaps the most seasoned civilization on the planet with the rich social legacy. In sixty years has seen many changes in the condition of India. The nation is now the self-reliant nation in terms of the agricultural production. Moreover, the country ranks tenth in ranking of most industrialized nations of the world. Not only this, India has also made forays into the space science and technology and ranks sixth in tally of the nations who have done space explorations so far. India represents a 2.5 percent of global area of around 136 million sq. Km. however it bolsters and accommodates an incredible 16.7 percent of the total global populace. India is the union of States and comprised of 29 States and 7 Union territories.

Uttar Pradesh (U.P) is one of them and its heartland of India and its enriched by Ganga, Yamuna Rivers and plain area and some part of plateau of Bundelkhand. UP is the India's largest state with 7.32% of total area of the country and is the home to 16.4% of total Indian population. Uttar Pradesh played key role in the Independence movement. The State has found new name on 26 January 1950 and before this its name was United Province. In this Chapter we have describe the Socio-economic features of Uttar Pradesh to understand the context. Uttar Pradesh occupies the first place in India, in cereal production, milk production, animal wealth, sugarcane production, sugar production, potato production, rail line strength and the branch of commercial banks and post office.

Uttar Pradesh is the most crowded province of India. It lies in the north-central piece of the country. The state can be parceled into two physiographic locales: the central fields of the Ganges (Ganga) River and its feeders (part of the Indo-Gangetic Plain) and the southern uplands. By a long shot the majority of Uttar Pradesh exists in the Gangetic Plain, which is made out of alluvial soil brought down from the Himalayas northward by the colossal Ganges association. By far most of that zone is a featureless, anyway productive, plain fluctuating in range from around 1,000 feet (300 meters) in the northwest to around 190 feet (60 meters) in the Fareast.

The southern uplands constitute the part of the ancient and tough Vindhya Range, which rises by and large toward the southeast. The altitude of the mentioned area once in a while surpasses 1,000 feet. Uttar Pradesh has a tropical rainstorm type atmosphere, with varieties in elevations. The state of U.P. has three seasons. The colder time of year season is from October to February; the late spring season is from March to mid-June; the stormy season is from June to September. Precipitation in the fields is heaviest in the east with floods turning into a repetitive issue, causing harm to the harvests, property and life. Summers are sweltering and dry, with normal temperature of 45°C joined by dust loaded breezes. Rainstorm get around 85 percent of the normal yearly precipitation of 990 mm. There is slight fall in temperature on stormy days. Winters are cold with temperatures dropping down to 4 °C and haze upsets conditions in certain regions of the state. As per the Census of India 2011 (figure 4.1), the number of inhabitants in India remained at 2400000000. The percentage decadal growth during 2001-2011 was increasing day by day. The percentage decadal growth during 2001-2011 has registered cast wise (**figure4.2**) sharpest decline since independence.

The population density of Uttar Pradesh remained always higher than India. This population density can describe the high population pressure on land in Uttar Pradesh and this has affected socio economic development of the state. The high population pressure increases the problems of malnutrition, unemployment, poverty and providing education facility and better care of health facility and infrastructure. Thus we can say that population pressure disturbs the development process of Uttar Pradesh.



Map of Uttar Pradesh

The map shows that Uttar Pradesh touches 8 States, one union territory and international boundary with Nepal. The northern boundary of the Uttar Pradesh is with the Uttarakhand state. The north-west boundary of Uttar Pradesh is with the 41 states of Himachal Pradesh, Haryana, Rajasthan and Union territory of Delhi. The southern boundary of Uttar Pradesh is with the state of Madhya Pradesh, South-east boundary is with the state of Chhattisgarh and Jharkhand, and eastern boundary is with the state of Bihar.

Uttar Pradesh, is in northern part of India, with Lucknow as its capital. It is surrounded by Uttarakhand, Delhi, Haryana, Rajasthan and Madhya Pradesh as per Census 2011, Uttar Pradesh has population of 19.98 Crores. Total population of Uttar Pradesh as per 2011 census is 199,812,341 of which male and female are 104,480,510 and 95,331,831 respectively.⁶ The population of Uttar Pradesh forms 16.50 percent of India in 2011. Out of total population of Uttar Pradesh, 22.27% people live in urban regions. The total figure of population living in urban areas is 44,495,063 of which 23,487,515 are males and while remaining 21,007,548 are females. The urban population in the last 10 years has increased by 22.27 percent.⁷ Average Literacy rate in Uttar Pradesh for Urban regions was 75.14 percent in which males were 80.45% literate while female literacy stood at 60.96%. Total literates in urban region of Uttar Pradesh were 29,112,875

<i>Uttar Pradesh Data Table</i>	
2011	
Approximate Population	19.98 Crores
Actual Population	199,812,341
Male	104,480,510
Female	95,331,831
Population Growth	20.23%
Percentage of total Population	16.50%
Sex Ratio	912
Density/sq km	829
Area(Km2)	240,928
Literacy rate	67.68 %

4.5 Factors Influencing the Customers To Select A Mobile Network Service Provider.

The mobile phone industry has witnessed a wave of important structural changes in its competition, strategies, techniques, and even technological environment. It has been identified that the mobile phone market is one of the fastest-growing service segments in telecommunications. At the end of 2007, the total number of mobile phone subscriptions in the world had reached 2.844 billion, predicted that half the world would use cell phones by 2009, and there would be about two billion smart phone users by 2015. However, a large number of mobile service providers are currently facing great pressure regarding

existing customer loss. It has become clear that mobile phone operators face two main difficulties. Firstly, the issue of how mobile phone firms acquire new subscribers and then how to retain them. For example, noted that the major mobile network operators in UK lost over a third of their youth subscribers to rival providers. Secondly, operators must evaluate what types of mobile services should be provided, and then determine how to provide the suitable level of technology. As a result, to minimise subscriber's switching behaviour, mobile suppliers must understand factors which are important to customers. The mobile phone sector is rich of research. However, there have been few studies with published results that targeted the effect of mobile phone contract bundle of benefits on consumer choice. Investigating why and how mobile phone service providers design their offering so understanding how customers choose the best set of benefits in one mobile contract purchase in details is an added value for this study. To add more, it is important to study how mobile phones service providers design the mobile phone offerings and choose a set of benefits to target different market segments with full respect to the relative importance for each contract benefits offered from customers' perspectives. Studying the main mobile phone contract dimensions is essential, due to the fact that the majority of previous studies have been done to investigate just one or few of the mobile contract elements as the following: contract price, text messaging, mobile phone brand, switching costs, customer satisfaction, customer retention determinants, mobile application quality ethical practices effect on maintaining relationship with customers, promotion mix effects on choosing a mobile phone supplier.

However, this study is targeting the main mobile phone contract elements that mobile phone suppliers can offer to customers. This may in turn help in providing the right mobile packages for customers and minimizing consumers' confusion. Also, this study is important while it discusses the mobile service provider itself in addition to what they offer from mobile services. That is because it is not enough to study the service purchase object(s) and all its interrelated items while the mobile phone suppliers themselves are essential to be evaluated and studied.

4.6 Customer's Preference towards Mobile Network Service Provider

The mobile network service providers are ready to serve their subscribers anywhere at any time to retain the existing subscribers to earn a new subscribers. By knowing the preference and buying behaviour of the consumers the mobile network service providers can develop the promotional method to survive in the competitive

market. The healthy competition between the different mobile network service providers create the mobile number portability, value added service, voice message, MMS, SMS, unbreakable signals, scheme changes, easy to recharge, other comfortable and satisfactory service to the mobile network subscribers. Usage of the mobile network by the lower and middle class people increased by reducing the mobile network subscribing tariff from Rs 14 to Rs 1. The Indian government permits the spectrum operators clears signal clarity issue and develops the subscribers benefit. Everyone in the market is trying to satisfy his customers. Today all the organizations satisfy the customers to attain a competitive advantage. So the business faces the toughest competition from their competitor. It is the main problem faced by the organization. So it turns out to be very important for the organization to identify the customer preferences not just by the services but by reaching beyond the expectations of the customers. So the study attempts to observe the mobile network users preference towards the selected mobile service providers in Coimbatore city. The following service providers considered in the study BSNL, Airtel, Idea, Tata, Vodafone, Reliance, Aircel.

Table-4.4 Customer's preference towards mobile network service provider

Weights	7	6	5	4	3	2	1	Total	Weighted Average	Rank
Rank	I	II	III	IV	V	VI	VII			
Service Providers										
BSNL	70	68	82	52	83	72	73	500	70.78	V
	490	408	410	208	249	144	73	1982		
Airtel	90	80	72	55	63	58	82	500	74.17	I
	630	480	360	220	189	116	82	2077		
Idea	80	95	75	43	65	57	85	500	73.96	II
	560	570	375	172	195	114	85	2071		
Tata	82	63	81	73	65	74	62	500	71.21	IV
	574	378	405	292	195	148	62	1994		
Vodafone	75	73	65	77	38	81	91	500	70.10	VI
	525	438	325	308	114	162	91	1963		
Reliance	76	83	53	65	80	81	62	500	72.10	III
	532	498	265	260	240	162	62	2019		
Aircel	57	63	72	82	85	88	53	500	69.60	VII
	399	378	360	328	255	176	53	1949		

Source: Primary data

The above table shows the various mobile network service providers and the respondents are asked to rank the service providers. Based on the rankings given by the respondents, weights are given to ascertain of the mostly preferred mobile network service provider. It is seen that the Airtel ranked first by the respondents with the score of 74.17, Idea is ranked second with a score of 73.96, Reliance is ranked third with a score of 72.10, Tata is ranked fourth with a score of 71.21, BSNL is ranked fifth with a score of 70.78, Vodafone is ranked sixth with a score of 70.10, The lowest priority is given to Aircel and ranked seventh with a score of 69.60. It is concluded that the majority of the respondents have given top preference to Airtel, Idea and Reliance networks in preferring the network service providers. The following factors considered in the study Network Coverage, Tariff rates, Value added service, Reliability, Customer care service, Promotional offers, Service quality

<i>Table- 4.5 Factors influencing the customers to select to mobile network service provider</i>										
Weights	7	6	5	4	3	2	1	Total	Weighted Average	Rank
Rank	I	II	III	IV	V	VI	VII			
Factors										
Network	75	43	70	90	50	85	500	69.25	VI	
Coverage	525	258	350	360	100	85	1939			
Tariff Rates	80	56	76	65	64	81	500	70.67	IV	
	560	336	380	260	128	81	1979			
Value	73	72	83	50	68	70	500	72.00	II	
Added Service	511	432	415	200	136	70	2016			

Reliability	63	57	70	87	85	50	500	70.17	V
	441	342	350	348	170	50	1965		
Customer	62	82	75	80	64	74	500	71.85	III
Care Service	434	492	375	320	128	74	2012		
Promotional	65	75	40	85	76	72	500	68.92	VII
Offers	455	450	200	340	152	72	1930		
Service	80	90	75	52	61	82	500	73.82	I
Quality	560	540	375	208	122	82	2067		

Source: Primary data

The above table shows the various features and the respondents are asked to rank the features Network coverage, Tariff rates, Value added service, Reliability, Customer care service, Promotional offers, Service quality. Based on the rankings given by the respondents, weights are given to ascertain of the feature considered while preferring mobile network service. It is seen that service quality ranked first by the respondents with the score of 73.82, Value added service is ranked second with a score of 72.00, Customer care service is ranked third with a score of 71.85, Tariff rates is ranked fourth with a score of 70.67, Reliability is ranked fifth with a score of 70.17, Network coverage is ranked sixth with a score of 69.25, The lowest priority is given to the Promotional offers and ranked seventh with a score of 68.92. It is concluded that the majority of the respondents have given top preference to the Service quality, Value added service and Customer care service in preferring the network service providers.

Table-4.6 Telecom Development Indicators

S.No.	Title	At the end of March					
		2014	2015	2016	2017	2018	2019
1	Telephones and teledensity in the Country						
	i)Telephones (In Million)	933.02	996.13	1059.33	1194.99	1211.80	1183.41
	ii)Teledensity (Per 100Inhabitants)	75.23	79.36	83.40	93.01	93.27	90.10
2	No. of Subscribers (in Millions)						
	i)Landline	28.50	26.59	25.22	24.40	22.81	21.70
	ii) Mobile subscribers	904.52	969.54	1034.11	1170.59	1188.99	1161.71
3	Telephone Subscribers in India (inMillions)	933.02	996.13	1059.33	1194.99	1211.80	1183.41
	i)Rural	377.78	416.08	447.77	501.81	525.87	514.27
	ii)Urban	555.23	580.05	611.56	693.18	685.93	669.14
	iii)Public	120.05	100.34	108.65	122.18	131.66	133.51
	iv)Private	812.96	895.79	950.68	1072.81	1080.14	1049.90
4	Telephone Subscribers in India (%age share)						
	Wireline	3.05	2.67	2.38	2.04	1.88	1.83
	Wireless	96.95	97.33	97.62	97.96	98.12	98.17
	Rural	40.49	41.77	42.27	41.99	43.40	43.46
	Urban	59.51	58.23	57.73	58.01	56.60	56.54
	Public	12.87	10.07	10.26	10.22	10.86	11.28
	Private	87.13	89.93	89.74	89.78	89.14	88.72

5	Tele density (Per100 In habitants)	75.23	79.36	83.40	93.01	93.27	90.10
	Wire-line	2.30	2.12	1.99	1.90	1.76	1.65
	Wireless	72.94	77.24	81.41	91.11	91.51	88.45
	Rural	44.01	48.04	51.26	56.98	59.25	57.50
	Urban	145.46	149.04	154.18	171.52	166.64	159.66
	Public	9.68	7.99	8.55	9.51	10.13	10.16
	Private	65.55	71.36	74.85	83.50	83.14	79.94
6	No. of PCOs and VPTs in India (In lakhs)						
	PCO	9.57	7.37	5.89	4.52	3.60	2.55
	VPT	5.89	5.86	5.87	2.30	1.99	1.30

<https://dot.gov.in/sites/default/files/Telecom%20Statistics%20India-019.pdf?download=1>

4.7 Mobile Network Experience Report April 2020

With close to 1.15 billion unique wireless subscribers, India is one of the largest mobile markets globally. It is going through a rapid transition with accelerated migration to 4G services and smart phones, which has led to a sharp rise in mobile data consumption. This primarily was initiated by the disruptive entry of 4G-only operator, Jio. Over the years this change has transformed the dynamics of the Indian mobile market completely, especially in terms of mobile network experience. Over the last few reports we have seen that operators are now finding new ways to differentiate their services rather than undercutting each other, a strategy that was prevalent in the Indian mobile industry before 2016. The operators are now focused on growing their 4G subscriber bases by building up coverage and capacity. The two incumbent operators Airtel and Vodafone Idea have been deploying technologies such as Dynamic Spectrum Re-farming (DSR), spectrum re-farming from 3G to 4G, M-MIMO, L900, TDD and small cells to close the existing 4G gap with Jio. We can see some notable changes in our measurements as a result of these initiatives. For this report, we continue to treat Vodafone

and Idea as individual operators, as they are still operating as separate consumer brands, and we have included BSNL as a 3G-only operator. We have examined the mobile network experience of the five main mobile network operators in India: Airtel, BSNL, Idea, Jio and Vodafone, over a period of 90 days beginning December 1, 2019 to see how they fared, and further delved deeper into 48 of India's largest cities, comparing the experience users received on these five operators.

The means of communication not until recently has been only voice and text. Voice and SMS services were given top priority by telecom networks. But, the Internet has provided many other services like electronic file sharing, online gaming, e-commerce and getting access to any information by just goggling which appeal to people as these services are cost effective and also reduces burden on the human part. Making these services available on mobile devices has far more benefits and interesting situations. However, today's internet through cables and wireless limits connectivity only to a small region called Local Area Network (LAN) and Wireless Local Area Network (WLAN) hot spot respectively. Also getting an advanced service support to today's voice dominated telecom mobile networks is not an easy task either. Globally there is a perception that IP is the protocol that will enable new possibilities for telecom sector in future. 4G fourth-generation wireless defines the stage of broadband mobile communications that supersede the third generation 3G, 4G used orthogonal frequency-division multiplexing - OFDM instead of time division multiple access - TDMA or code division multiple access - CDMA are increasingly marketing their services as being 4G, even when their data speeds are not as fast as the International Telecommunication Union (ITU) specifies. Ultra Wideband technology is an advanced transmission technology that can be used in the implementation of a 4G network. Out of sight detection of noise is a typical activity of UWB. This high specific kind of noise does not cause interference with current radio frequency gadgets, but can be decoded by another device that recognizes UWB and can reassemble it back into a signal. Since the signal is disguised as noise, it can use any part of the frequency spectrum, i.e. it can use frequencies that are currently in use by other radio frequency gadgets. An Ultra Wideband device works by emitting a series of short, low powered electrical pulses that are not directed at one particular frequency other than spread across the entire spectrum. Frequencies between 3.1 to 10.6 GHz are used by Ultra Wideband. These pulse can be called "shaped noise" since they are not flat, but curves across the spectrum. On the other side, actual noise would look the same across a range of frequencies. Increasing consumers demand for most up-to-date technologies, whether it is

a television, mobile, or shaving set, the latest technology whatever purchase must have new features. With the evolution of the Internet, the most of the features transform themselves to-ward faster access to information. Mobile SIM or devise subscribed customers pay extra on top of their basic bills for such features as instant messaging, stock quotes, and even Internet access right on their phones. However it is far from the limit of features; manufacturers magnetize customers to buy new phones with photo and even enhanced video capability. It is no longer a quantum leap to envision a time when access to all necessary information the power of a personal computer sits in the palm of one's hand. To maintain such a powerful system, we need such very high-speed pervasive wireless connectivity.

Mobile Experience Awards, India

April 2020, India Report

V

Vodafone

A

Airtel

I

Idea

J

Jio

B

BSNL

▶ Video Experience		WINNER			
🎤 Voice App Experience		WINNER			
⬇️ Download Speed Experience		WINNER			
⬆️ Upload Speed Experience	WINNER				
🕒 Latency Experience		WINNER			
📶 4G Availability				WINNER	
📶 4G Coverage Experience				WINNER	

Fig-4.1 Mobile Experience

Source: Mobile Network Experience Report April2020

4.7.1 .Download Speed Experience

Airtel once again won our Download Speed Experience award, but rivals Vodafone and Idea have begun whittling away at its sizable lead. Vodafone and Idea's overall download speeds grew by a little more than 1.5 Mbps to 9.5 Mbps and 9.2 Mbps, respectively, since our last report, while Airtel's Download Speed Experience grew by almost half a megabit. Airtel still has a slight lead in Download Speed Experience with speeds averaging 10.1 Mbps, but if this trend in download speed growth continues, Airtel will soon be challenged by one of its rivals for this metric. On the other hand, Jio was relatively far behind at 7.3 Mbps, and BSNL took the last spot with 2.9 Mbps due to its 3G-only capabilities.

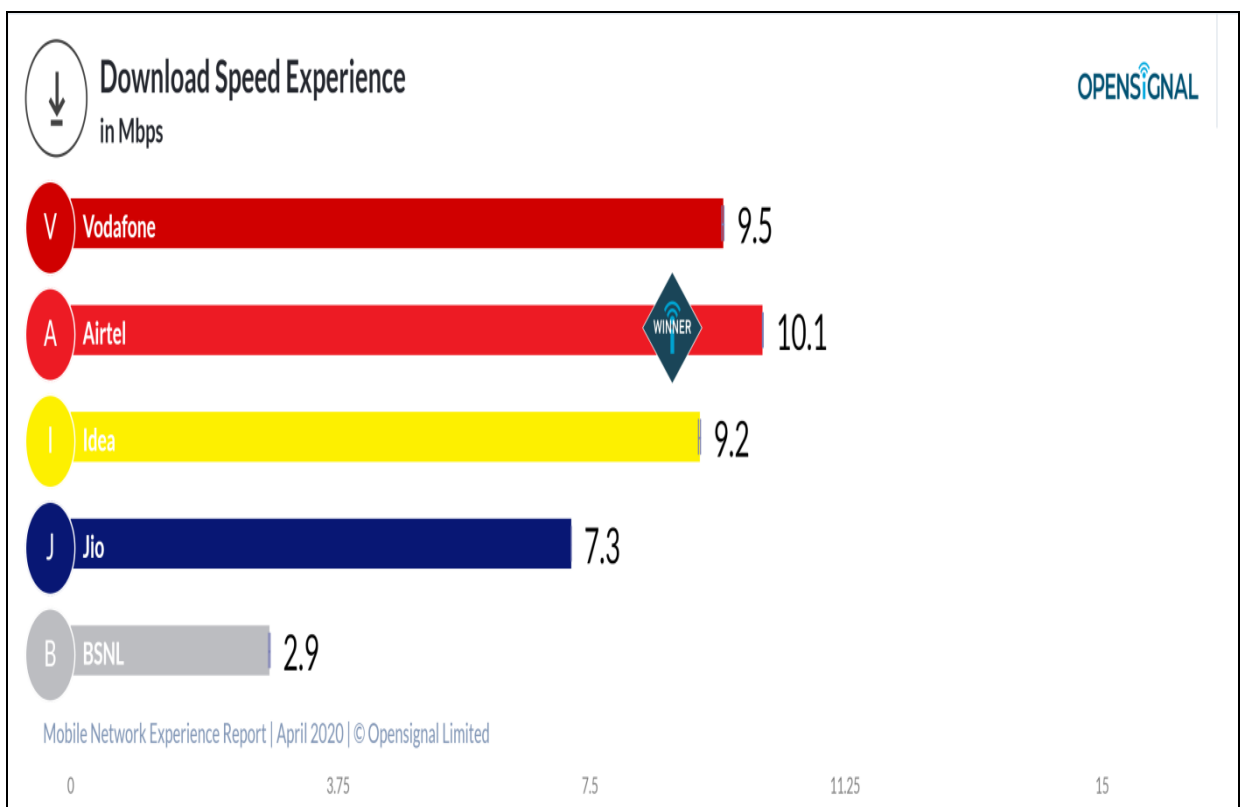


Fig 4.2 Downloading Speed Experience

<i>Table 4.7 Mobile Network Experience Report April 2020</i>					
Download Speed Experience Supporting Metrics	Vodafone	Airtel	Idea	Jio	BSNL
In Mbps					
4G Download Speed	10.8 (± 0.03)	10.3 (± 0.02)	10.3 (± 0.03)	7.3 (± 0.01)	—
3G Download Speed	3.1 (± 0.02)	2.8 (± 0.03)	3.1 (± 0.02)	—	2.9 (± 0.02)

Source: Mobile Network Experience Report April 2020

When we look at Download Speed Experience by technology, the 4G Download Speeds of users on three operators Airtel, Vodafone and Idea were on par with one another. We also saw the same trend in 3G Download Speed, where Airtel, BSNL, Idea, and Vodafone were on par with one another.

4.7.2 Upload Speed Experience

Vodafone won the award in this category with an overall Upload Speed Experience score of 3.9 Mbps. Both Vodafone and Idea continue to have a fairly comfortable lead nearly 24% faster than Airtel, 42% faster than Jio, and three times faster than BSNL. We saw Upload Speed Experience grow across the board, with BSNL being the only exception. Our users saw the largest increase on Vodafone's network (25.1%), followed by Airtel (24.1%), Jio (23.7%) and Idea (13.4%) since the last report.

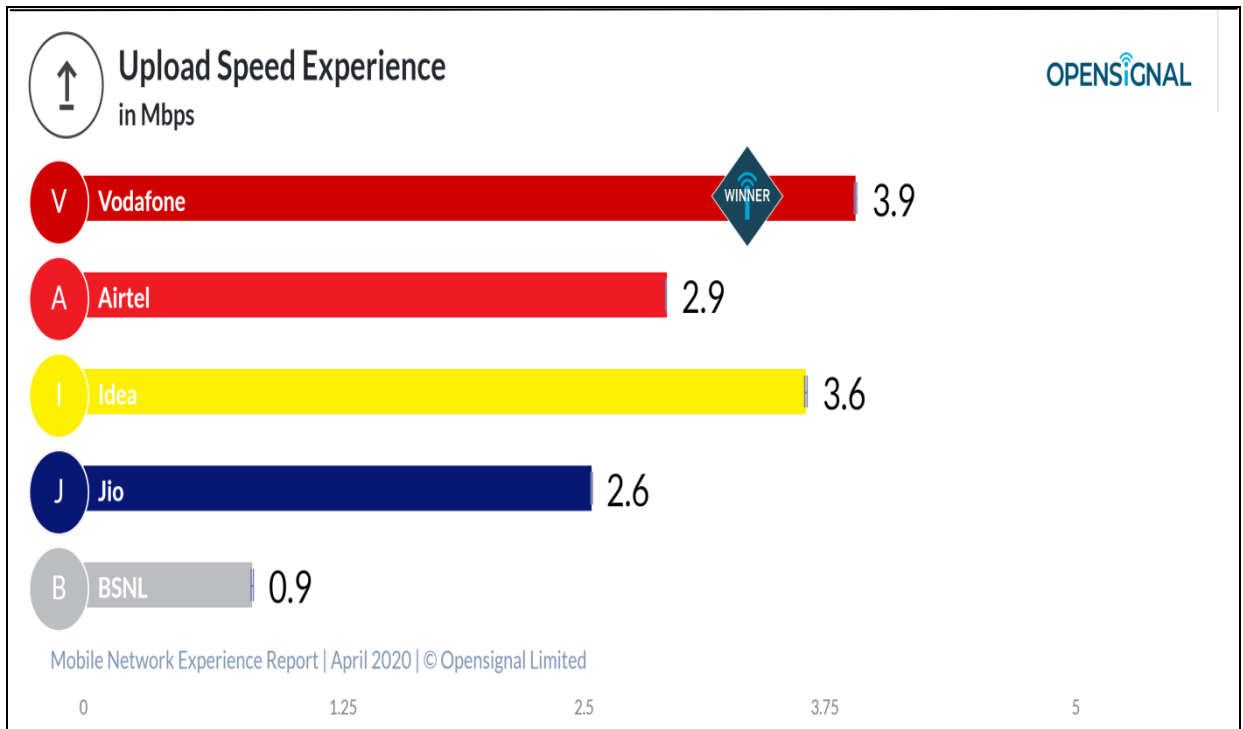


Fig 4.3 Uploading Speed Experience

<i>Table 4.8 Mobile Network Experience Report April 2020</i>					
Upload Speed Experience Supporting Metrics	Vodafone	Airtel	Idea	Jio	BSNL
In Mbps					
4G Upload Speed	4.5 (± 0.02)	3.0 (± 0.01)	4.2 (± 0.02)	2.6 (± 0.01)	—
3G Upload speed	1.0 (± 0.01)	0.7 (± 0.01)	1.0 (± 0.01)	—	0.9 (± 0.01)

Source: Mobile Network Experience Report April 2020

The national results were also reflected in our 4G Upload Speed sub-metric unlike in the 3G Upload Speed category, where Vodafone, Idea and BSNL were statistically tied. Upload speed is becoming increasingly important in mobile services, as social media, social sharing and video chat apps become more widely used. Mobile users are moving away from content consumption to content creation, which gives operators with the fastest upload speeds a distinct advantage.

4.7.3 Latency Experience

We have a new winner in this category: Airtel won our Latency Experience award with an average response time of 54.1 milliseconds 3.1ms quicker than in the last report while our ex-winner in this category, Jio, trailed closely behind at 56.3ms, but its users' average response time worsened by 2.1ms since our last report. That said, our Vodafone users observed the highest improvement of 3.6ms to score 60.6ms.

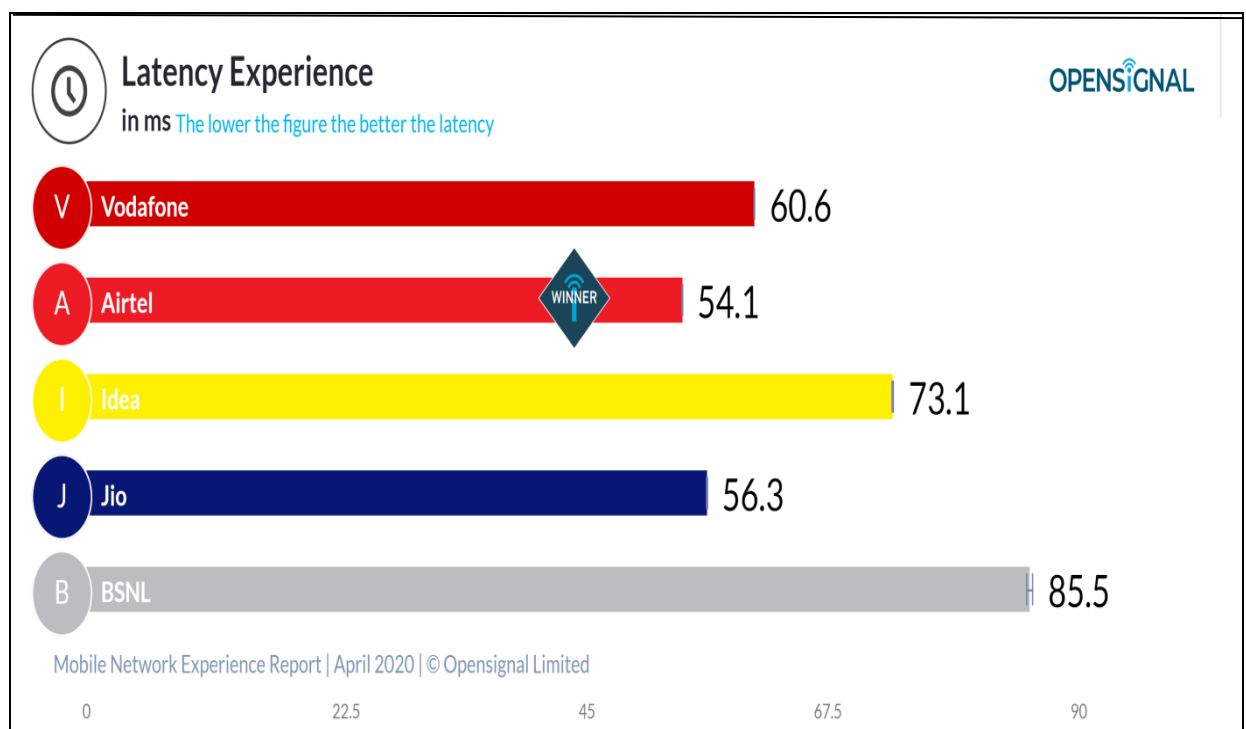


Fig 4.4 Latency Experience

Table 4.9 Mobile Network Experience Report April 2020					
Latency Experience Supporting Metrics	Vodafone	Airtel	Idea	Jio	BSNL
In Ms					
4G Latency	57.5 (± 0.08)	53.4 (± 0.04)	70.5 (± 0.11)	56.3 (± 0.03)	—
3G Latency	75.2 (± 0.27)	79.1 (± 0.42)	86.7 (± 0.34)	—	85.5 (± 0.35)

Source: Mobile Network Experience Report April 2020

Latency Experience measures the response time of a network (the lower the score the better), and it is a key factor in determining how real-time communications and gaming applications perform on mobile connections. As seen from the real-world data, Indian operators have room for improvement, especially Idea and BSNL, whose Latency Experience scores are above 70ms.

4.7.4 Availability 4G

Jio continues to dominate 4G Availability in India. The operator once again won the award with a commendable score of 98.2%, and considering there is a limited head space for improvement it is remarkable that Jio's score grew by 0.4 percentage points in the last six months. Having said that, all three of its rivals are making big strides to close the gap with the leader since our last report. While Airtel's 4G Availability score has jumped by six percentage points to reach an impressive 94.5%, our users saw the highest growth of 6.4 percentage points on Idea's network, followed by 5.8 percentage points on Vodafone's network. Both Idea and Vodafone surpassed the 80% milestone with 83.8% and 82.6% 4G Availability, respectively.

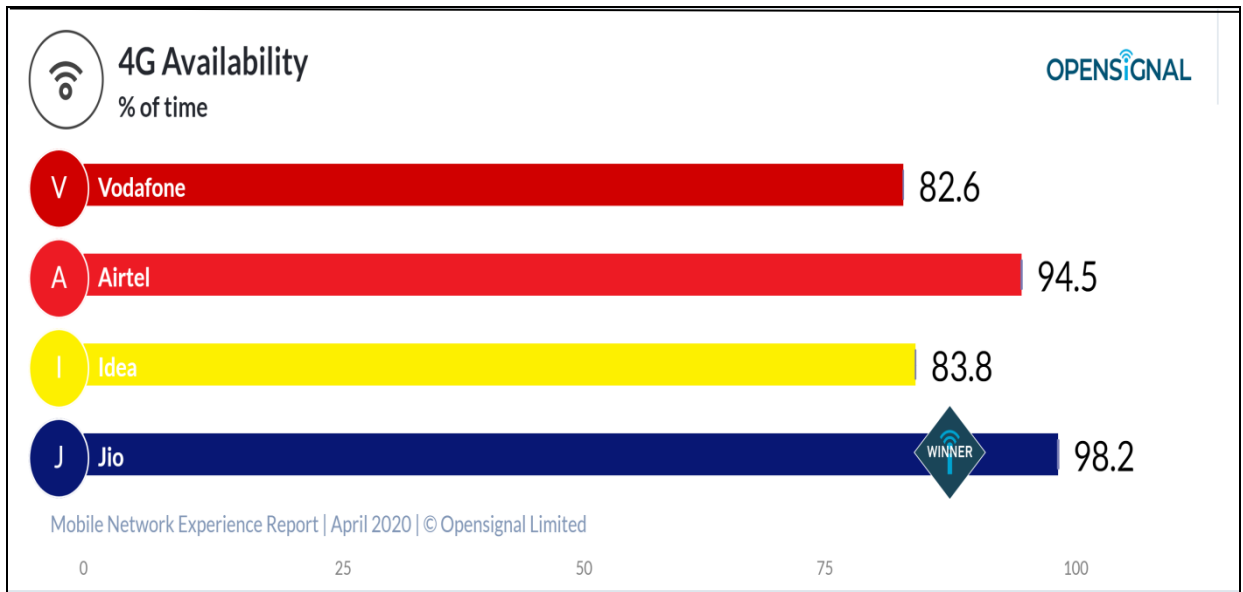


Fig 4.5 Availability of 4 G

Source: Mobile Network Experience Report April 2020

4.7.5 Coverage Experience5G

Jio also won our inaugural 4G Coverage Experience award in India, with a score of 9.2 points (on a scale of 0-10), while Airtel finished second with 6.8 points. Both Idea and Vodafone were further behind with 4.5 and 4 points, respectively.

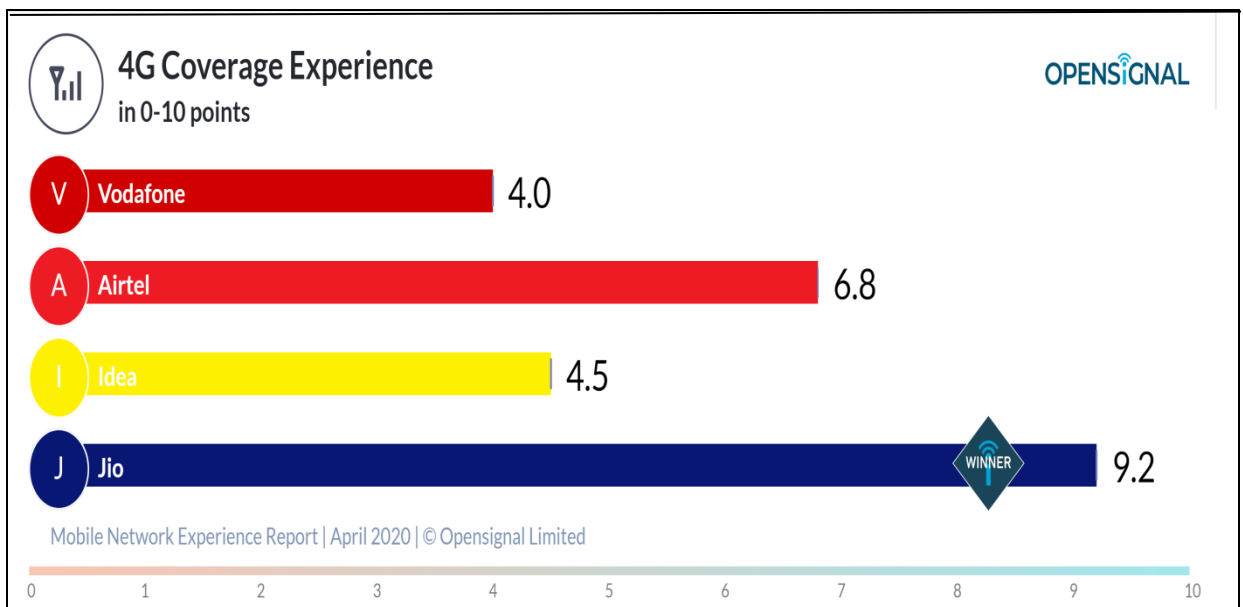


Fig 4.6 Coverage Experience 4G

Source: Mobile Network Experience Report April 2020

Open signal's 4G Coverage Experience metric is a measure of how our mobile subscribers experience 4G coverage on an operator's network. Measured on a scale of 0-10, it analyzes the locations where customers of a network operator received a 4G signal relative to the locations visited by Open signal users of all network operators.

4.8 Variations in India's Telecommunication Network Uttar Pradesh Telecom Subscribers

India's telecom network is the second greatest on earth by number of telephone customers (both fixed and wireless) with million endorsers as on March 2019. It has one of the most decreased call demands on earth enabled by super telecom executives and hyper competition among them. Following table shows the growth of number of telephone users& subscribers between 2008to 2019.

Table 4.10 Uttar Pradesh Telecom Subscribers							
Telecom Subscribers(Millions)							
At the end of March	Total	Wire line	Wireless	Rural	Urban	Public	Private
2008	31.86	2.81	29.05	9.74	22.12	9.51	22.35
2009	49.45	2.81	46.64	15.98	33.47	11.44	38.02
2010	77.50	2.82	74.68	29.45	48.05	14.41	63.10
2011	111.77	2.32	109.45	43.59	68.18	16.66	95.11
2012	130.78	2.07	128.71	53.27	77.51	16.84	113.94
2013	124.04	1.82	122.22	56.39	67.65	17.01	107.03
2014	127.08	1.34	125.74	61.02	66.06	16.11	110.97
2015	136.42	1.00	135.42	67.71	68.71	11.84	124.58
2016	150.77	0.93	149.84	74.53	76.24	13.95	136.81
2017	172.13	0.89	171.24	82.44	89.69	17.66	154.46
2018	168.40	0.81	167.59	84.76	83.65	18.32	150.09
2019	164.34	0.75	163.59	90.42	73.92	18.41	145.93

<i>Percentage Share to Total Subscribers in India(%)</i>							
At the end of March	Total	Wire line	Wireless	Rural	Urban	Public	Private
2008	10.60	7.14	11.13	12.73	9.88	11.96	10.12
2009	11.51	7.40	11.91	12.94	10.93	12.77	11.18
2010	12.47	7.64	12.78	14.67	11.43	13.61	12.24
2011	13.21	6.69	13.49	15.44	12.09	13.22	13.20
2012	13.75	6.43	14.00	16.10	12.49	12.93	13.88
2013	13.81	6.01	14.08	16.15	12.33	13.07	13.94
2014	13.62	4.71	13.90	16.15	11.90	13.42	13.65
2015	13.69	3.75	13.97	16.27	11.85	11.80	13.91
2016	14.23	3.69	14.49	16.64	12.47	12.84	14.39
2017	14.40	3.65	14.63	16.43	12.94	14.46	14.40
2018	13.90	3.56	14.10	16.12	12.20	13.91	13.90
2019	13.89	3.47	14.08	17.58	11.05	13.79	13.90

<i>Tele density (per 100Inhabitants)</i>							
At the end of March	Total	Wireline	Wireless	Rural	Urban	Public	Private
2008	15.93	1.41	14.52	6.23	50.53	4.75	11.17
2009	24.28	1.38	22.90	10.06	74.65	5.61	18.66
2010	37.37	1.36	36.01	18.24	104.68	6.95	30.43
2011	52.97	1.10	51.87	26.57	145.15	7.90	45.07
2012	60.93	0.96	59.97	31.98	161.32	7.85	53.08
2013	56.83	0.83	56.00	33.34	137.69	7.79	49.04
2014	57.27	0.61	56.67	35.55	131.53	7.26	50.01
2015	60.51	0.44	60.06	38.88	133.87	5.25	55.25
2016	65.83	0.41	65.43	42.20	145.42	6.09	59.74
2017	74.03	0.38	73.64	46.06	167.56	7.60	66.43
2018	44.33	0.34	71.01	31.08	88.31	7.76	63.60
2019	41.53	0.31	68.32	31.93	73.20	7.69	60.94
*UP(East)andUP(West)combined							
Source-DOTcompiledData							

4.9 Summary

In this chapter, researchers study the functioning of Mobile phone telecommunication network in India. In which efforts are made to demonstrate Mobile network communication in Uttar Pradesh through research. Consumer behavior is created with a basic role of bringing the telecommunication changes of mobile network in India. Mobile network and telecommunication are not just centering in the zone of evaluation of consumer behavior towards the mobile network system. This chapter gives a brief about the observation and purchasing conduct of customers towards different versatile brands, customer preference level related with various cell phones, significant highlights which a customer searches for in a portable before making a buy and factors that impact dynamic in buying a cell phone and Mobile network communication.

CHAPTER 5

Evaluation of Effecting Factors on the Consumer Behaviour and Verification and Testing of Proposed Study

5.1 Introduction

The Indian telecom sector, seen as providing the most affordable services in the world, has grown by leaps and bounds in the last decade. This remarkable journey to 100 million consumers is a testament to the vision and commitment of a company that benchmarks itself with the best in the world. The growth and development in information technology and mobile devices has made the Indian mobile phone service market highly competitive.

Indian mobile market is one of the fastest growing markets in the world and is expected to reach 868.47 million users by 2013 (source). In the last decade, India has seen a number of companies coming up in this sector with all-time low tariff rates. Hyper competition, availability of number of subscriber options for consumers, diverse tariff rates offered by each player, led consumers to switch the services providers. In today's era, people are exposed to advanced technologies like accessing mails, social networking sites, WhatsApp, video conferencing, gaming, video blogging, music on demand etc through mobile phones.

This has led to increase in the demand of hi-tech mobile services and so the telecommunication service providers are putting on their best to satisfy their customers' needs. The increase and retention of loyal customers has become a key factor for long-term success of the telecommunication companies. Nowadays, the companies emphasize not only on winning new customers but also on retaining the existing ones. Switching costs are costs that are incurred by buyers for terminating transaction relationships and initiating a new relation. Experts defined Switching cost as a onetime cost facing a buyer wishing to switch from one service provider to another. **Jackson (1985)**, however, defined switching cost as the psychological, physical and economic costs a customer faces in changing a supplier. Jackson's definition reflects the multi-dimensional nature of switching cost, especially in relation to the telecommunication industry. In the telecommunication sector there are a number of critical costs that must be considered when switching.

Digital media technology convergence model refers to, after content has been digitized, users can access it through the Internet on electronic devices. The concept of media convergence originally belonged to a coming together of different types of media. The simple definition of media convergence refers to the trend towards a single multifunctional media.

Wireless communication technology, particularly cellular networks have spread rapidly throughout Saudi Arabia within the past decades making it the main form of telecommunication in the area. One manifestation of this is the move from analog to cellular system phones whereby, the proportion of analog versus digital users has steadily decreased. Additionally, the number of mobile telephone service providers has increased dramatically.

The existence of these three main players has given way to high competition in a wide range of areas in pursuit of attracting customers and keeping present ones. Consequently, these companies were forced to develop aggressive marketing strategies aimed at improving service quality, price, product offerings, etc.

5.2 Conceptual Development

This evaluation the influence of the impulsive personality of consumers on buying behavior during telecommunication service transactions.

With this strong competition, it would be interesting to examine the effect of these strategies on customer decision making of mobile service providers. Thus, this study aims to analyze factors (price, quality, promotion and social factors) which affect customer loyalty for a particular service provider. Furthermore, an analysis of the relationships of the factors affecting the loyalty of the mobile service industry, namely; price and service quality will be analyzed.

However, despite the tremendous growth in the mobile communication market in Uttar Pradesh, very broad number of studies have be conducted in this area. The scope of this study which focuses on the customer's perspective will provide better insight regarding the relationship between the variables investigated.

5.2.1 Factors Influencing on the Consumer behaviour

This research evaluates factors affecting customer loyalty in the telecommunications sector. Although other factors exist, the literature and preliminary interviews, mentioned above, revealed that the significant variables of concern are, price, service quality, brand image and trends.

These variables will be reviewed in more detail below

- **Price**

Price competition in the mobile phone sector is becoming very intense, whereby it plays a vital role particularly for mobile phone service providers. Price is determined by various factors including, willingness of the buyer to pay and accept markups, the legal environment, intensity of competition, etc. Due to the importance of cost and service charges, customers are most likely to commit to a company that provides cheaper services.

Haque et al. (2007) also suggest that, generally, a price dominated mass market leads to customers having more choice and the chance to compare price packages of different providers. It noted that the income of the total minutes of calls made will determine the success of the commercial basis for network providers. It should be noted that the success of the telecommunication provider does not depend only on sales but rather on actual total minutes used by subscriber's mobile phone. This indicates that there are two potential subscriber decisions. One is the decision to accept and buy the telecommunication device (e.g., mobile phone) and the other is to accept the charges for using the product (service from a provider).

- **Service Quality**

Throughout the past few decades, many studies and practitioners have paid close attention to service quality due to its strong impact on business performance, customer satisfaction, and customer loyalty. Service quality has been found to have an influence on customer loyalty and benefit companies as it improves customer retention rate (Nsiah and Mensah, 2014).

It greatly influences a customer's perception of a brand as he/she makes an assessment of overall quality of a brand as compared to its competitors (Aaker, 2004; Yousif, 2012; Jain et al., 2012). As Zeithaml et al. (2003) suggests that the two dimensions of service quality; namely, technical quality and functional quality, are what a customer receives and how a service is provided or delivered, consecutively.

- **Promotion**

Sales promotion is the techniques mainly are used by marketer in order to influence and encourage consumers and end users to purchase certain product in a certain time period. Sales promotion has a short term influence on sales; hence it is mainly offered for a short term. In case that certain brand launched a new product mainly consumers do not have information or experience regarding this new product, therefore sales promotion is recommended to encourage this consumer to try and purchase this product. Promotion is a tool that is used by the retailers or manufacturer to invite consumers to purchase more. The results which we get by the sales promotion is the use of high amount of reserve, inviting a lot of new customers and additional increase in sales. Although all the marketing activities are linked with sales promotions that gives outcome in growing consumer purchases and improving intermediaries or retailer's efficiency and co-operation.

- **Social factors**

Social factors that influence consumer purchasing include family, peers, roles and status. Family members such as a spouse, children and parents can exert strong influence on the consumer's purchasing behavior. Peer pressure is also a strong factor that determines a consumer's purchasing choices. Everyone belongs to a group of some sort, from friends to neighbors and coworkers. Rather than get left out, people purchase products that make them fit in.

5.3 Measurement

The questionnaire for this study is divided into four parts. The first part is "Price", the second is "Quality", third is "Promotion", and fourth is "Social factors". Firstly, the main objective of the first part is to understand users' attention to price information. The second part, Convergence in Quality of Technology, refers to the transmission of digital

content through a network allowing users to access the content on a high efficiency. A total 1700 person were selected to make sure that items of the questionnaire were understandable without difficulty by the person who answers that questionnaire. Throughout this study the researcher self-assurance has developed and he make sure that questionnaire that was used was healthy for this research. About 1700 respondents were asked to participate in self-administrative study in order to gather the data for understanding the condition about the consumer buying behavior. The people for the current research are common people, students or any customers who have experience in buying some kind of products. First, is that all respondents were well educated and secondly, they were purchasing different telecom services and we have observed their experiences.

5.3.1 Data Analysis

Here in this study various independent variables are perceived price value, service quality and promotion and social factors, where the dependent. To establish a relationship between customer variables are customer satisfaction and behavioral intentions. To cater the need of the research, the researchers have used. The following Hypotheses were formulated as primary data through self-constructed structured questionnaire as follows. It is designed in such a manner to explore the satisfaction in telecom sector services and general opinion of various customers using telecom behavioral intentions of customers.

Here research is needed to evaluate a structured scientific approach to ensure that consumer behaviour affected to price, quality, promotion and social factors. Consolidated charts for affect in factors identified by various experts are concluded in self structured research paper. It is visibly evident from this chapter that price, quality, promotion and social factors are common accepted factors at telecommunication network.

This section of work proves that how significant proposed study, where factors values and approaches are able to estimate the influencing factors of Consumer behaviour at telecommunication level. The empirical validation is important phase of research to evaluate the proposed study for high level acceptability and appropriate execution. Statistical analysis is the best practice for claiming the contribution acceptance. To justify

claiming approach for acceptance of research, an experimental validation of the proposed study through affecting factors at consumer behaviour has been carried out using samples.

In order to, results showed that both the factors have significantly contributed towards customer behaviour but comparatively factors fairness had the larger impact on customer behaviour. It is essential to test the validity of proposed research for acceptance. 2 sample t tests apply for check the impact between two stages. 2t-test is handy hypothesis1 to 4 tests in statistics when compare means.

In this study as data collection method questionnaire was preferred to obtain objective data and to interpret the first order, that person is the source or first hand. Questionnaire has been prepared according to the 'funnel 'technique that means from general to special. Assumption of this technique, went the special questions are asked at first place to the surveys, they will be probably avoided.

This study aims to detect which variables in the research have the most significant effect on the dependent variable using complete value. The contribution of each independent variable in the evaluation process has been compared and the hypothesis of this study is related to the individual relationship of four factors on customer behaviour. The hypothesis testing led to the achievement of the research goals. So we conclude the number of hypothesis have used in this scenario.

Hypothesis 1

H (0): Consumers do not attention to product information when purchasing a specific telecommunication network.

H (1): Consumers attention to product information regarding the purchase of a specific telecommunication network.

<i>Table 5.1 Data Table</i>		
Age Group	Do not attention to product information for purchasing¹ (Sample Type_1)	Attention to product information for purchasing² (Sample Type_2)
15-20	50.0	20.0
20- 25	30.0	70.0
25-30	10.0	90.0
30-40	40.0	46.0
40-50	38.0	98.0
50-55	40.0	80.0
55-60	16.0	36.0
60-65	25.0	65.0
65-70	55.0	40.0
70 above	23.0	113.0

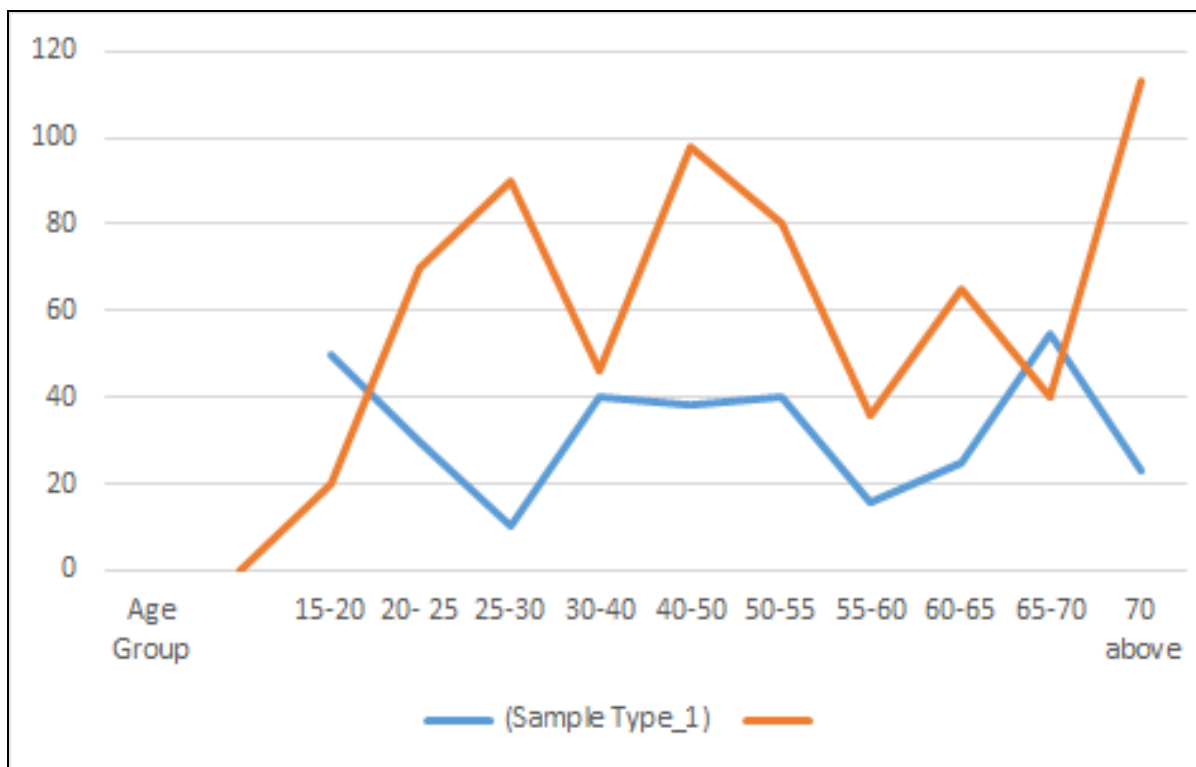


Fig 5.1 Graphical Structure of data table

Table 5.2 Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Product information for purchasing ¹ ((Sample Type_1)	32.70	10	14.476	4.578
	product information for purchasing ² (Sample Type_2)	65.80	10	30.025	9.495

Table 5.3 Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	product information for purchasing ¹ &product information for purchasing ²	10	.448	.194

Table 5.4 Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	a — b	33.100	38.737	12.250	60.811	5.389	2.702	9	.024

The major evaluation of hypothesis was to study the impact of different attention issues, which can affect the consumer buying behaviour, and it can also be used by the telecom company to increase their sales and improve their business. For this purpose, we have taken various age group data and one situational factor (product information), which can affect the consumer buying behaviour. These analyses (table 5.1) are used the highest age group (**70 above**). Age group between (**55-60**) is a given to no attention the product information for buying behaviour of the consumer. The result of this learning gave some knowledge about impact of product information for purchasing on consumer buying behaviour. With respect to customer proneness to product information, research found that alternate hypothesis accepted due to p value is greater than 0.05 segment. In table 5.2 and 5.3, we have illustrated the complete statistics with one-by-one factors evaluation for various age group of persons which have used to telecommunication network.

“Product information is an important key factors of a specific telecommunication network” Regression and Curve fitting Analysis of table 5.1

Regression analysis is a mathematical function or technique which investigates the relationship between a target (**Do not attention to product information for purchasing¹**) and predictors **Attention to product information for purchasing²**). In the study of regression analysis, variables can be categorized into two types dependent variable and independent variables. The values of the dependent variable have resulted from the changes in the values of dependent variables in ANOVA table 5.7. Dependent variables, also known as target variable, regressed variable, or study variable, while the independent variables are called repressor variable or explanatory variables. According to the number of available impendent variable, regression analysis divided into two categories, e.g., simple linear regression and multiple linear regression. A simple linear regression model describes the linear relationship between two variables; however, the multiple linear regression model describes the linear relationship between one dependent variable with multiple independent variables.

Data **table 5.5** has two quantitative variables, test score, and sales value. The variable value depends upon variable test score so that sales variable treated as a dependent variable and test score variable treated as the independent variable.

A descriptive analysis was studying (**table 5.5**) process expects the yield to be affected by the levels of two factors, a and b. Observations recorded for various levels of the two factors are shown in the following **table 5.6**. The **table 5.6** wants represents to fit a regression model to the data interaction between x1 and x2

<i>Table 5.5 Descriptive Statistics</i>			
	Mean	Std. Deviation	N
A	32.7000	14.47642	10
B	65.8000	30.02517	10

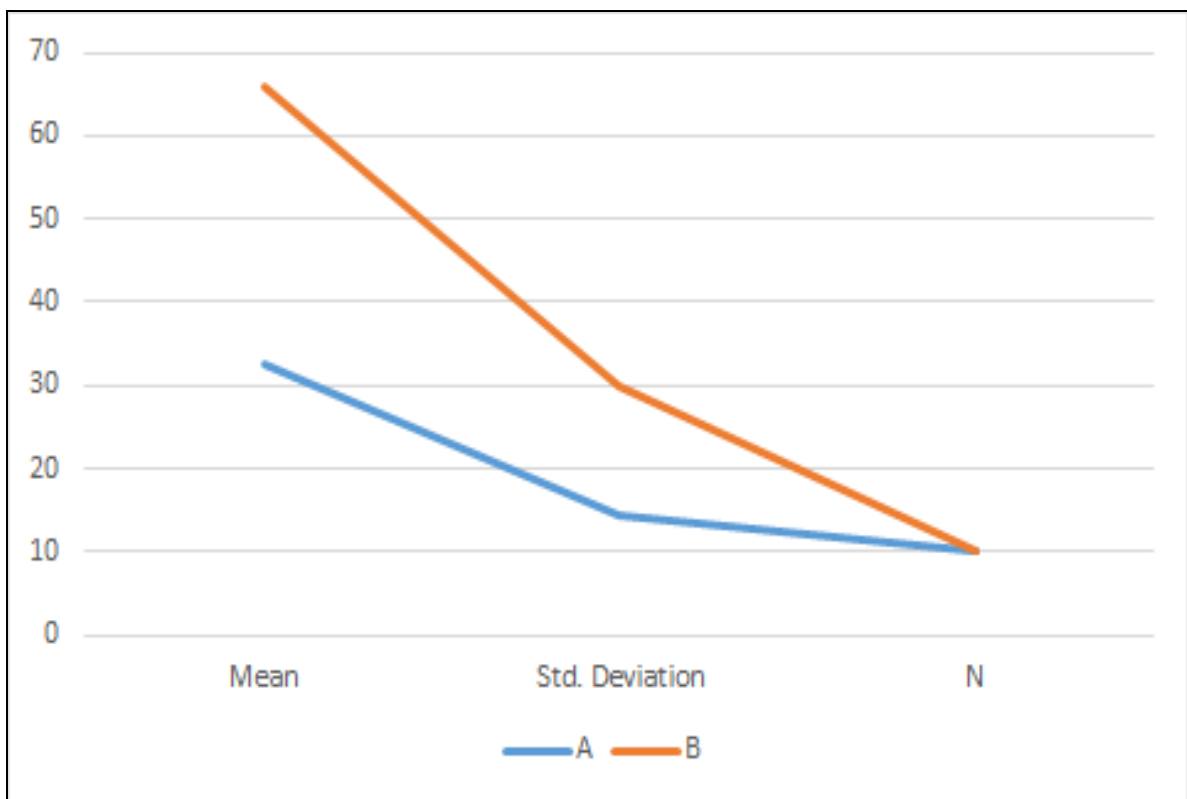


Fig 5.2 Graphical Structure of Statistical Structure

<i>Table 5.6 Model Summary</i>										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.448 ^a	.201	.101	13.72737	.201	2.009	1	8	.194	2.032
a. Predictors: (Constant), b										
b. Dependent Variable: a										

<i>Table 5.7 ANOVA^a</i>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	378.575	1	378.575	2.009	.194 ^b
	Residual	1507.525	8	188.441		
	Total	1886.100	9			
a. Dependent Variable: a						
b. Predictors: (Constant), b						

Variance inflation factors measure the inflation in the variances of the parameter estimates due to collinear ties (**Table 5.9**) that exist among the predictors. It is a measure of how much the variance of the estimated regression coefficient β_k is “inflated” by the existence of correlation among the predictor variables in the model which depicted to

table 5.8. A VIF of 1 means that there is no correlation among the k th predictor and the remaining predictor variables, and hence the variance of β_k is not inflated at all.

<i>Table 5.8 Coefficients^a</i>												
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	46.913	10.927	4.293	.003	21.715	72.111					
	B	-.216	.152	-.448	.194	-.567	.135	-.448	-.448	-.448	1.000	1.000
a. Dependent Variable: a												

<i>Table 5.9 Collinearity Diagnostics^a</i>					
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	b
1	1	1.918	1.000	.04	.04
	2	.082	4.827	.96	.96
a. Dependent Variable: a					

Because a linear regression model is not always appropriate for the data, we should assess the appropriateness of the model by defining residuals statistics in table 5.10 and examining residual plots.

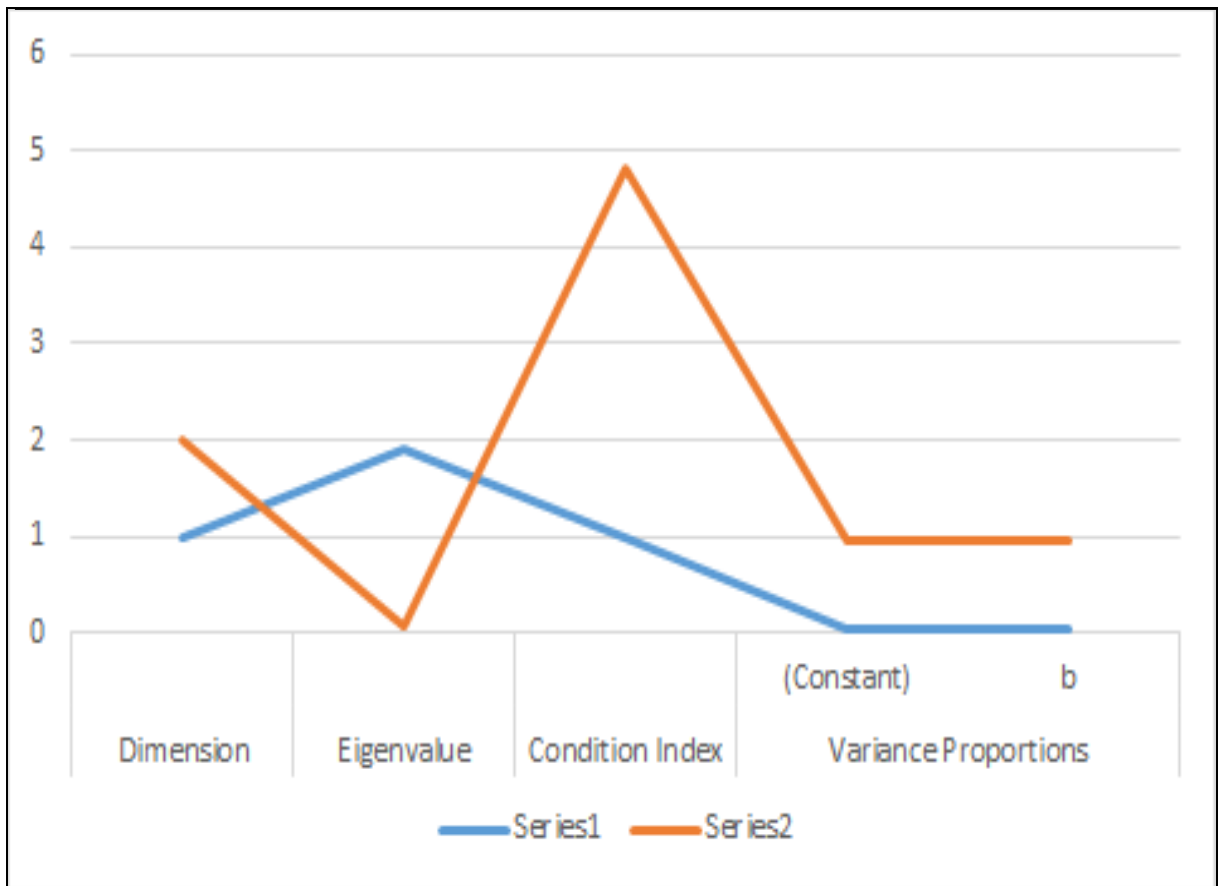
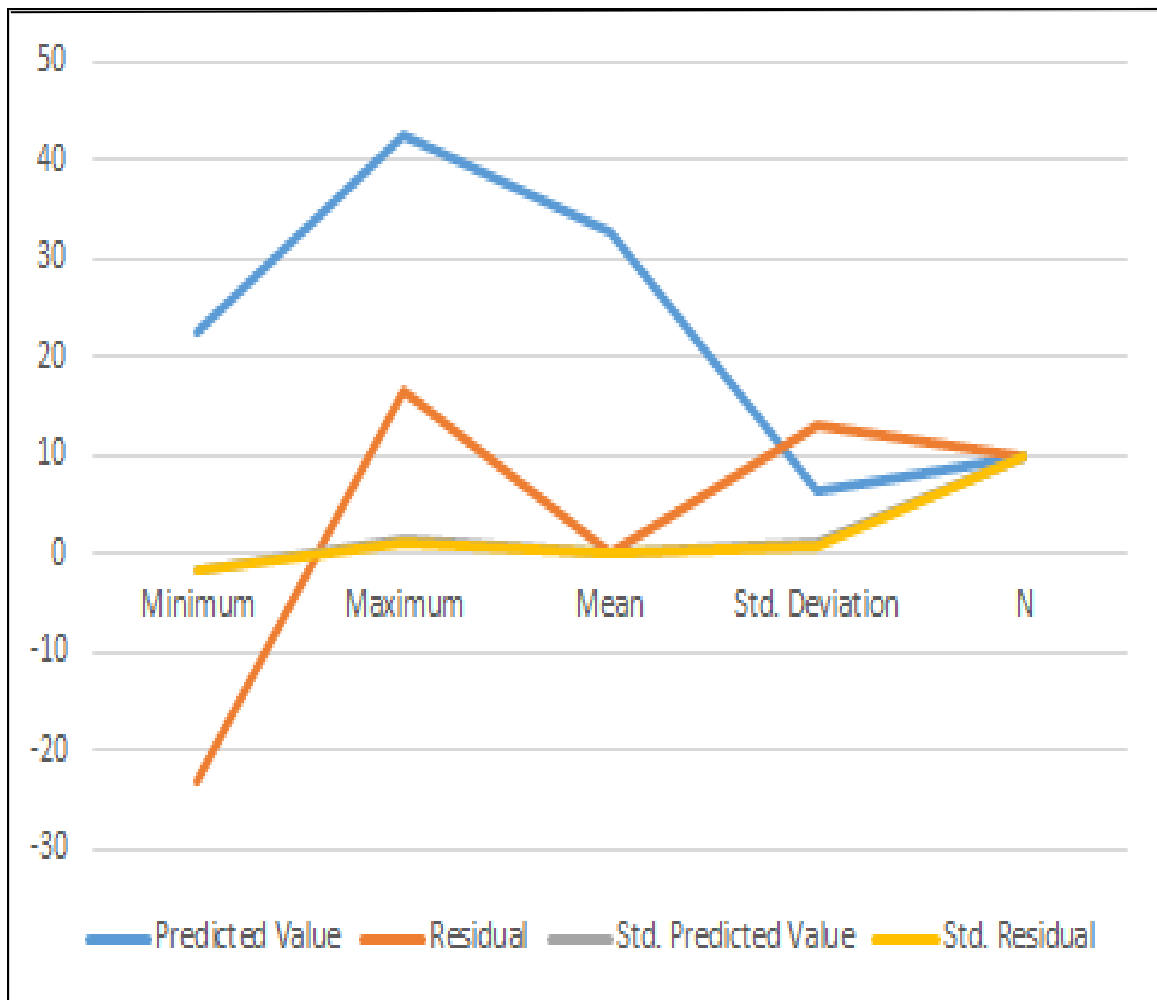


Table 5.10 Residuals Statistics ^a					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	22.5044	42.5932	32.7000	6.48567	10
Residual	-23.13703	16.72700	.00000	12.94229	10
Std. Predicted Value	-1.572	1.525	.000	1.000	10
Std. Residual	-1.685	1.219	.000	.943	10
a. Dependent Variable: a					



Below **table 5.11**, curve-fitting is discussed with respect to the SPSS curve estimation module, obtained by selecting steps **Analyse > Regression > Curve Estimation**. This module can compare linear, logarithmic, inverse, quadratic, cubic, power, compound, S-curve, logistic, growth, and exponential models based on their relative goodness of fit where a single dependent variable is predicted by a single independent variable or by a time variable in **figure 5.3**. As such it is a useful exploratory tool preliminary to selecting multivariate models in generalized linear modelling, which supports nonlinear link functions.

<i>Table 5.11 Model Summary and Parameter Estimates</i>									
Dependent Variable: a									
Equation	Model Summary					Parameter Estimates			
	R Square	F	df1	df2	Sig.	Constant	b1	b2	b3
Linear	.201	2.009	1	8	.194	46.913	-.216		
Logarithmic	.222	2.289	1	8	.169	84.259	-12.664		
Inverse	.224	2.304	1	8	.168	21.885	549.407		
Cubic	.222	.571	3	6	.654	65.129	-1.119	.012	-5.002E-005
Compound	.137	1.273	1	8	.292	45.090	.993		
Power	.149	1.402	1	8	.270	138.198	-.381		
S	.148	1.393	1	8	.272	3.053	16.453		
Growth	.137	1.273	1	8	.292	3.809	-.007		
Exponential	.137	1.273	1	8	.292	45.090	-.007		
Logistic	.137	1.273	1	8	.292	.022	1.007		
The independent variable is b.									

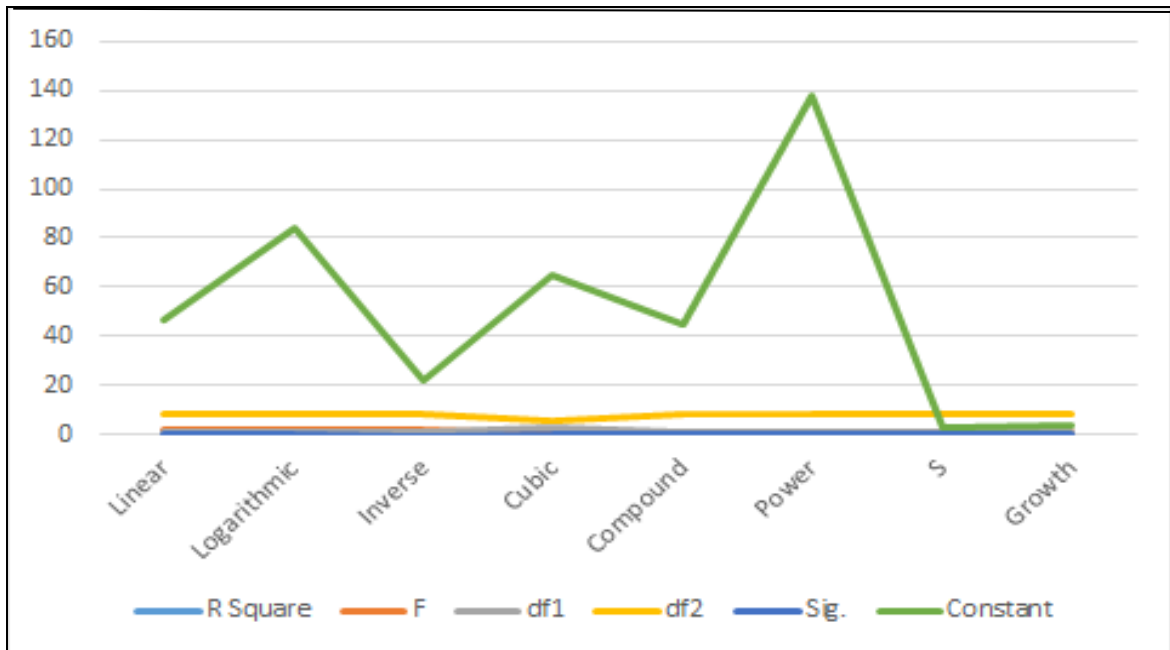


Fig 5.3 Compare through graph

Hypothesis-2

H (0): There is no significant impact of Price-Value and quality on the Purchase Intention of consumers for the Telecommunication network.

H (1): There is a significant impact of Price-Value and quality on the Purchase Intention of consumers for the Telecommunication network.

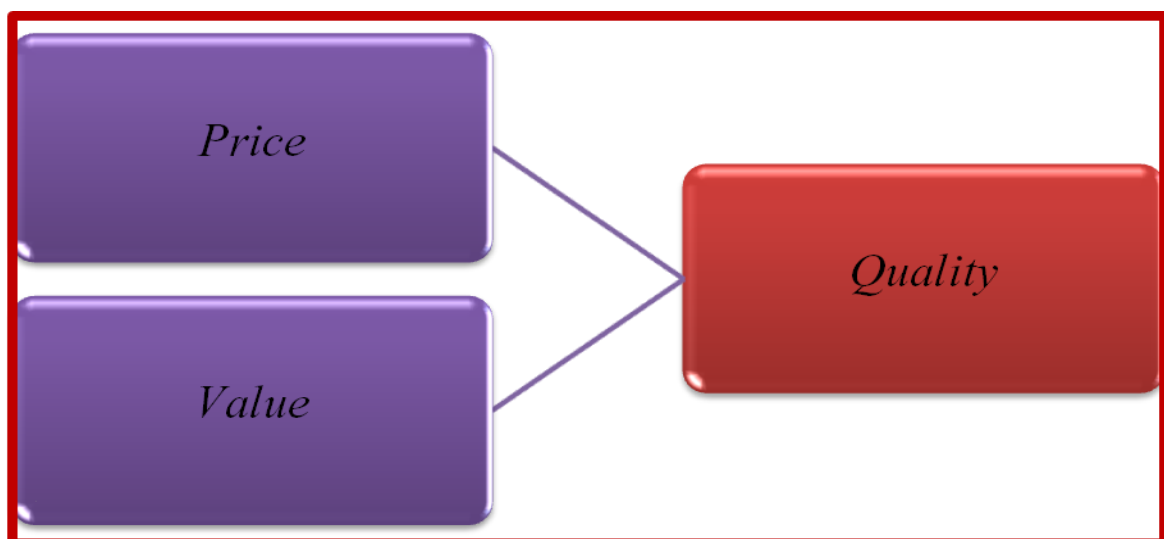


Fig 5.4 Correlation establishment

<i>Table 5.12 Data Table</i>			
Income Criteria	No significant impact of Price-Value and quality¹ (Sample Data_1)	A significant impact of Price-Value and quality² (Sample Data_2)	Mean Value
5000-15000	70.0	20.0	45
15000- 25000	40.0	80.0	60
25000-35000	10.0	90.0	40
35000-45000	45.0	56.0	50.5
45000-55000	45.0	110.0	77.5
55000-65000	40.0	80.0	60
65000-70000	56.0	60.0	58
7000-8000	20.0	70.0	45
80000-90000	60.0	50.0	55
90000 above	20.0	110.0	65

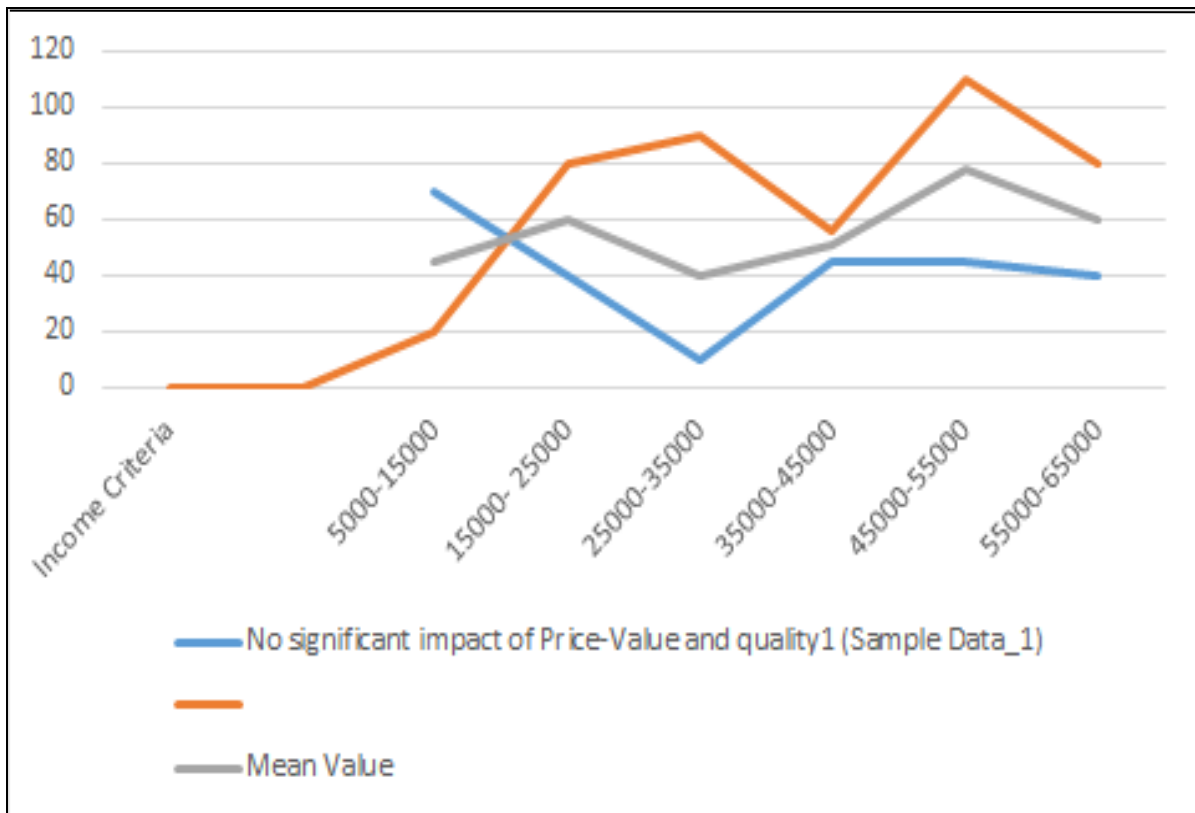


Fig 5.5 Graphical Structure of data table

<i>Table 5.13 Paired Samples Statistics</i>					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	a	72.60	10	27.746	8.774
	b	40.60	10	19.156	6.058

<i>Table 5.14 Paired Samples Correlations</i>				
		<i>N</i>	<i>Correlation</i>	<i>Sig.</i>
Pair 1	a & b	10	.699	.024

Table 5.15 Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	a – b	32.000	43.362	13.712	.981	63.019	2.334	9	.044

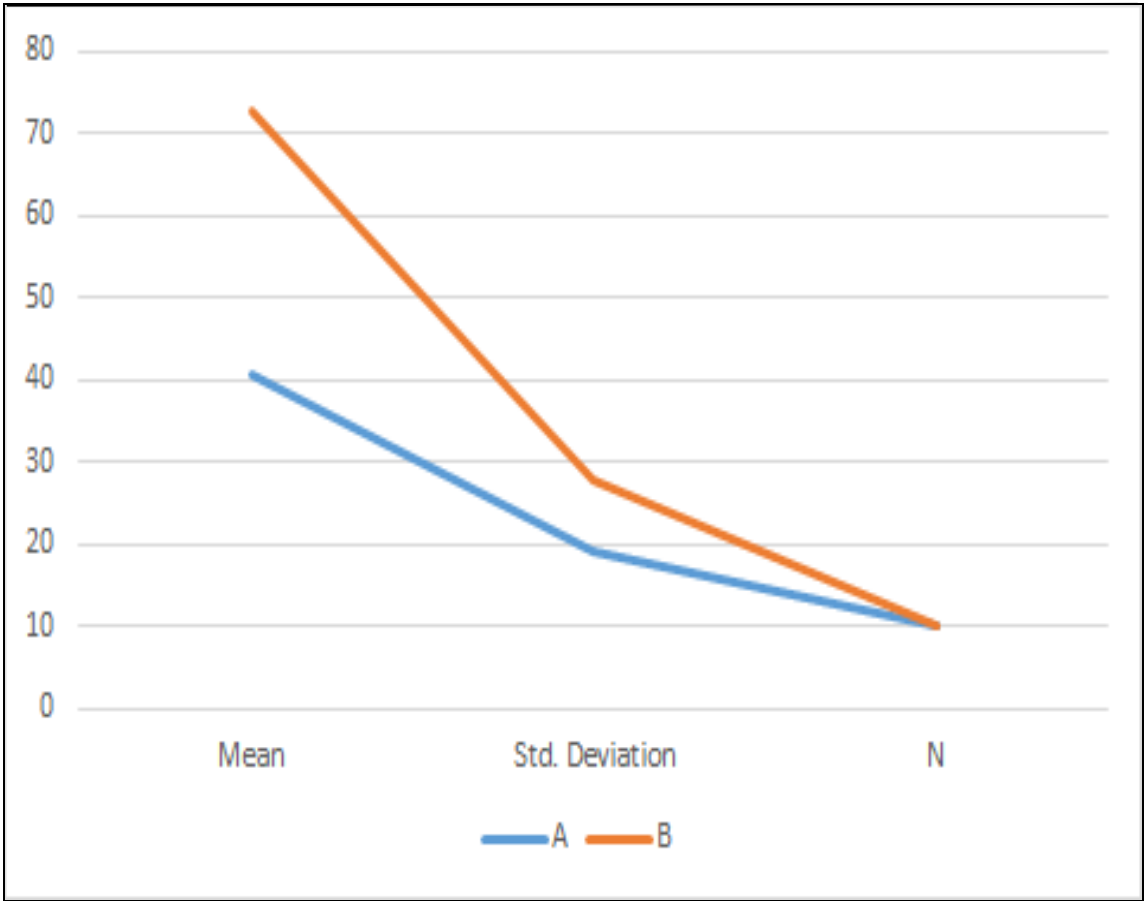
In data **table 5.12**, result of this study also explained that price-value and quality-free is significantly linked with consumer buying behavior, therefore the more the product has included at no extra cost, than it can influence customers to purchase products for test. It revealed that price and quality such as important appeal can customer's favourable attitude on buying behaviour. Therefore, it can be statistical analysis explained that (**table 5.13, 5.14**) is one of the essential elements persuading customers' buying behaviour, particularly in the repurchase of technology. This research showed that there is major association at **5%** significance level among impact and no impact results, awareness with significant positive effects on customer efficiency. With respect to customer proneness to product information, research found that alternate hypothesis (**table 5.15**) accepted due to p value is greater than 0.05 segment.

“Price-Value and Quality is an important key factors of a specific telecommunication network” Regression and Curve fitting Analysis of table 5.12

Linear regression is a statistical analysis which depends on modelling a relationship between two kinds of variables, dependent (**No significant impact of Price-Value and quality¹**) and independent (**A significant impact of Price-Value and quality²**). The main purpose of regression is to examine if the independent variables are successful in predicting the outcome variable and which independent variables are significant predictors of the outcome. Regression analysis is an important statistical method for the analysis of telecom data and presents the complete statistics in **table 5.16**. It enables the identification and characterization of errors among multiple factors in **table 5.18**. It also enables the

identification of prognostically relevant risk factors and the calculation of risk scores for individual prognostication depend on model summary and prediction are based on R value in table 5.17.

Table 5.16 Descriptive Statistics			
	Mean	Std. Deviation	N
A	40.6000	19.15550	10
B	72.6000	27.74567	10



<i>Table 5.17 Model Summary^b</i>										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.699 ^a	.489	.425	14.52098	.489	7.662	1	8	.024	2.427
a. Predictors: (Constant), b										
b. Dependent Variable: a										

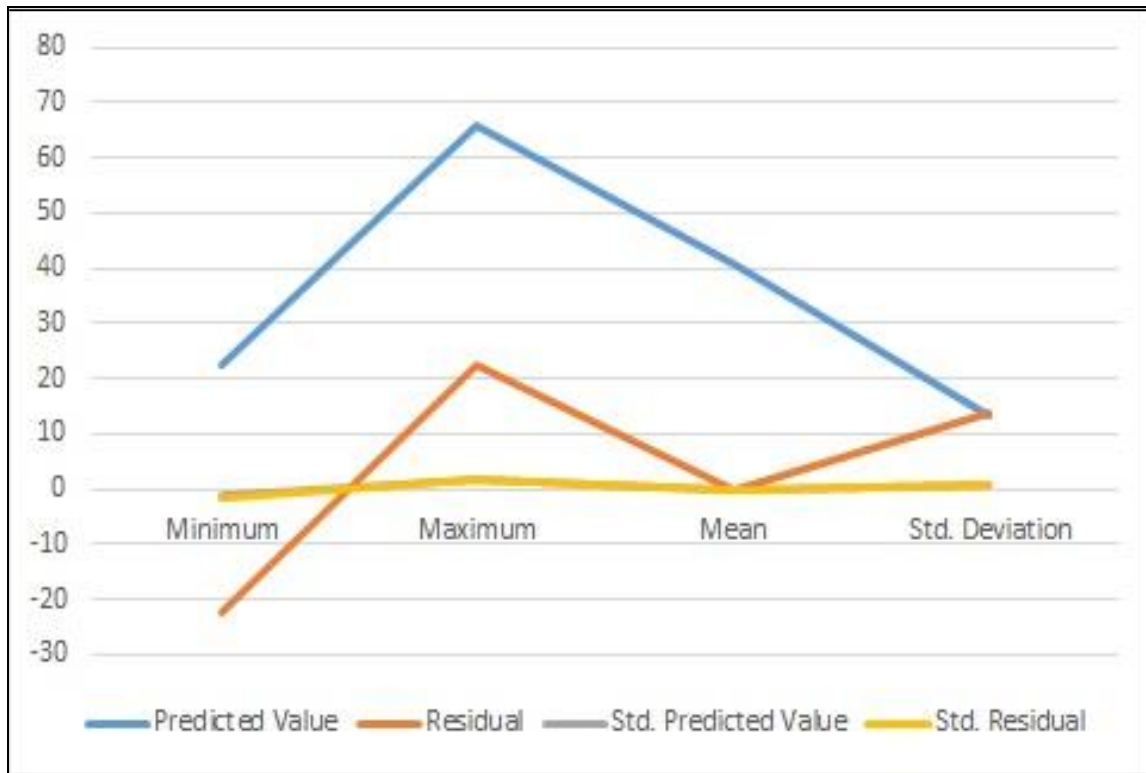
After a brief introduction of the Residual and Sum of Squares, illustrative examples are given to explain(**table 5.18**) what the important considerations are before a regression analysis is performed, and how the results should be interpreted in term of significance (**table 5.18**). The reader should then be able to judge whether the method has been used correctly and interpret the results appropriately.

<i>Table 5.18 ANOVA^a</i>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1615.530	1	1615.530	7.662	.024 ^b
	Residual	1686.870	8	210.859		
	Total	3302.400	9			
a. Dependent Variable: a						
b. Predictors: (Constant), b						

The purpose of statistical evaluation of telecom data is often to describe relationships between two variables or among several variables. For example, one would like to know not just customer have high portable, but also company the likelihood of having high facility is influenced by factors such as some issues which is depend on table 4.19. In table 4.20, we have calculated to residuals, which are the difference between any data point and the regression line, they are sometimes called “**errors.**” Error in this context doesn’t mean that there’s something wrong with the analysis; it just means that there is some unexplained difference. In other words, the residual is the error that isn’t explained by the regression line in terms of Co-linearity Statistics, Unstandardized Coefficients, Standardized Coefficients and Correlations.

Table 5.19 Coefficients ^a													
Model		Unstandardized Coefficients		0	t	Sig.	95.0% Confidence Interval for B		Correlations			Co-linearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	75.657	13.472		5.616	.001	44.591	106.724					
	B	-.483	.174	-.699	-2.768	.024	-.885	-.081	-.699	-.699	-.699	1.000	1.000
a. Dependent Variable: a													

Table 5.20 Residuals Statistics^a					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	22.5402	65.9996	40.6000	13.39789	10
Residual	-22.19785	22.45979	.00000	13.69051	10
Std. Predicted Value	-1.348	1.896	.000	1.000	10
Std. Residual	-1.529	1.547	.000	.943	10
a. Dependent Variable: a					



We apply to one or more curve estimation regression models. To determine which model to use, plot effective data. If your variables appear to be related linearly, use a simple linear regression model. When variables are not linearly related, try transforming data. When a transformation does not help, we may need a more complicated model. So, need to compare more model in a single platform and justify own research work in **table 5.21** and also present the graphical view in figure 5.6.

<i>Table 5.21 Model Summary and Parameter Estimates</i>									
Dependent Variable: a									
Equation	Model Summary					Parameter Estimates			
	R Square	F	df1	df2	Sig.	Constant	b1	b2	b3
Linear	.489	7.662	1	8	.024	75.657	-.483		
Logarithmic	.519	8.637	1	8	.019	156.787	-27.703		
Inverse	.452	6.611	1	8	.033	22.081	1069.812		
Cubic	.644	3.622	3	6	.084	42.781	2.382	-.057	.000

Compound	.339	4.096	1	8	.078	89.485	.987		
Power	.339	4.094	1	8	.078	701.277	-.712		
S	.275	3.029	1	8	.120	3.106	26.542		
Growth	.339	4.096	1	8	.078	4.494	-.013		
Exponential	.339	4.096	1	8	.078	89.485	-.013		
Logistic	.339	4.096	1	8	.078	.011	1.013		
The independent variable is b.									

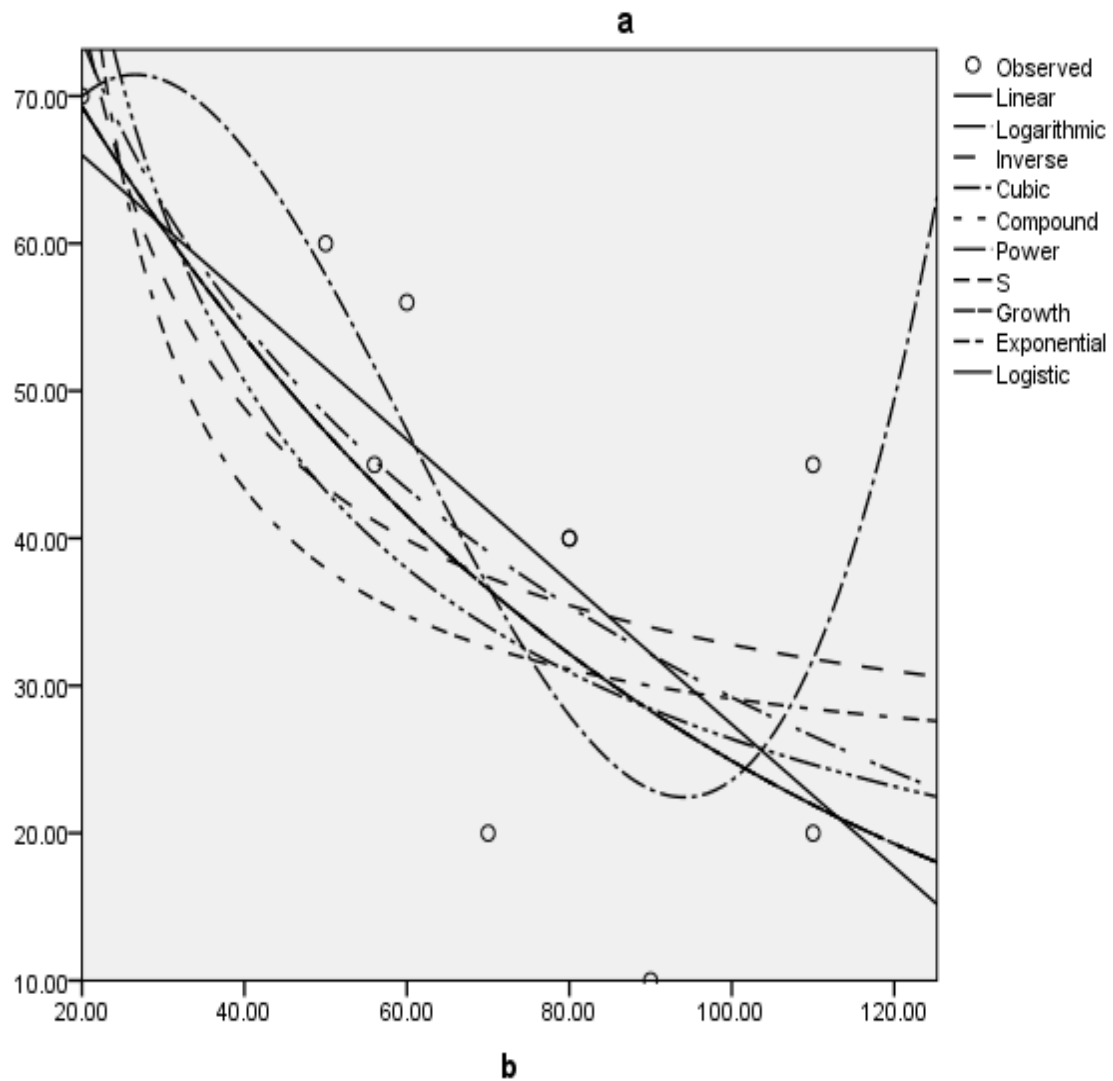


Fig 5.6 Graphical view of Curve estimation model

Hypothesis 3

H (0): There is no significant impact of Promotion and Social Factors on the Purchase Intention of consumers for Telecommunication network.

H (1): There is a significant impact of Promotion and Social Factors on the Purchase Intention of consumers for Telecommunication network.

<i>Table 5.22 Data table</i>			
Enterprises	No significant impact of Promotion and Social Factors(Sample Data_1)	A significant impact of Promotion and Social Factors (Sample Data_2)	Mean value
VI Telecomm	68	22	45
Airtel Telecomm	42	78	60
BSNL Telecomm	20	80	50
JIO Telecomm	40	50	45
Telenor Telecomm	45	110	77.5
<u>Aircel</u>	41	79	60
<u>Idea Cellular</u>	54	58	56
<u>MTS India</u>	22	68	45
<u>Videocon Telecom</u>	60	52	56
MTNL	20	109	64.5

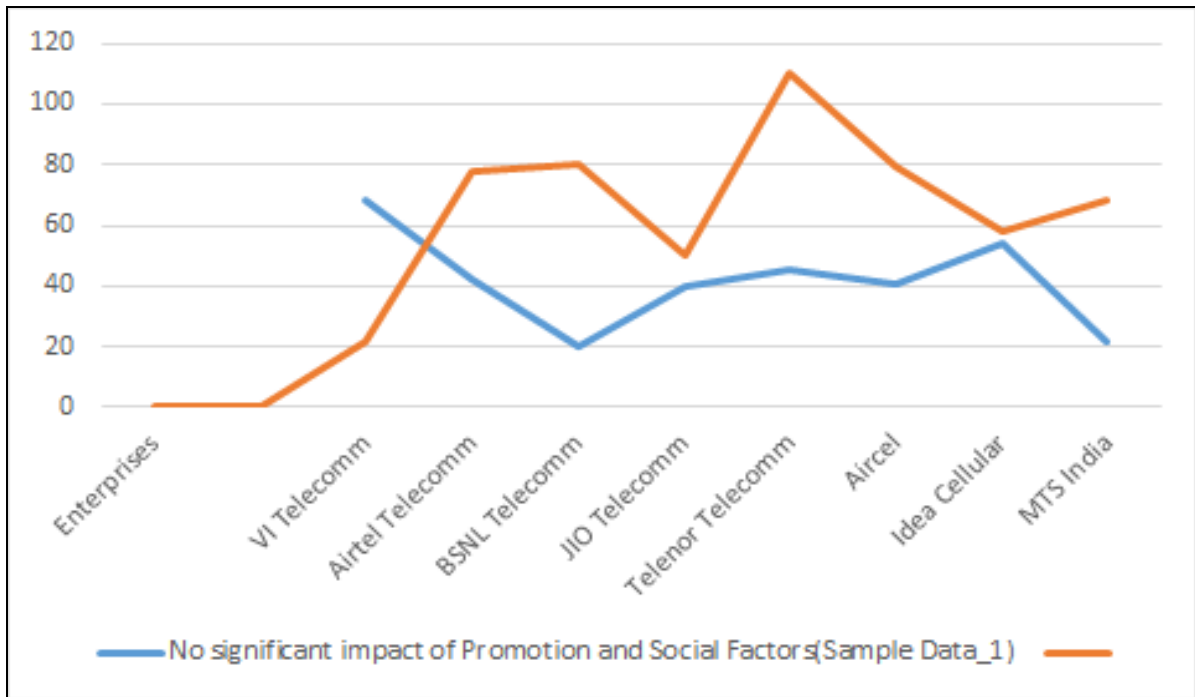


Fig 5.7 Graphical structure of Table 5.22

<i>Table 5.23 Paired Samples Statistics</i>					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	A	70.60	10	26.953	8.523
	B	41.20	10	16.732	5.291

<i>Table 5.24 Paired Samples Correlations</i>				
		N	Correlation	Sig.
Pair 1	a & b	10	.640	.046

Table 5.25 Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	a – b	29.400	39.797	12.585	.931	57.869	2.336	9	.044

According to this result approval (**table 5.22**) of the industry group is most important factor for more than half of the respondents (approximately % 43). Approximately more than half of the consumers, approval of family is an important factor for majority of the participants in buying services (about % 55.5). While buying products the most important thing is not approval of the affecting parameters (approximately % 43). Here is the demographic structure of the telecommunication company (**table 5.22**); Most of the participants are 40 to 50 ages. As a statistical result (**table 5.23, 5.24**) of the developments in the technology and communication world, it is really important for businesses to know, understand and guess consumer's needs and behaviors in order to increase their power in competition. Therefore, continuity of businesses seeking profit depends on a good analysis of the consumer behaviours. With respect to customer proneness to Promotion and Social Factors, research found that alternate hypothesis (**table 5.25**) accepted due to p value is greater than 0.05 segments.

Regression and Curve fitting Analysis of table 5.22

The regression results comprise three tables in addition to the 'Coefficients' table(**table 5.29**), but we limit our interest to the 'Model summary' **table 5.27**, which provides information about the regression line's ability to account for the total variation in the dependent variable.

<i>Table 5.26 Descriptive Statistics</i>			
	Mean	Std. Deviation	N
A	41.2000	16.73187	10
B	70.6000	26.95346	10

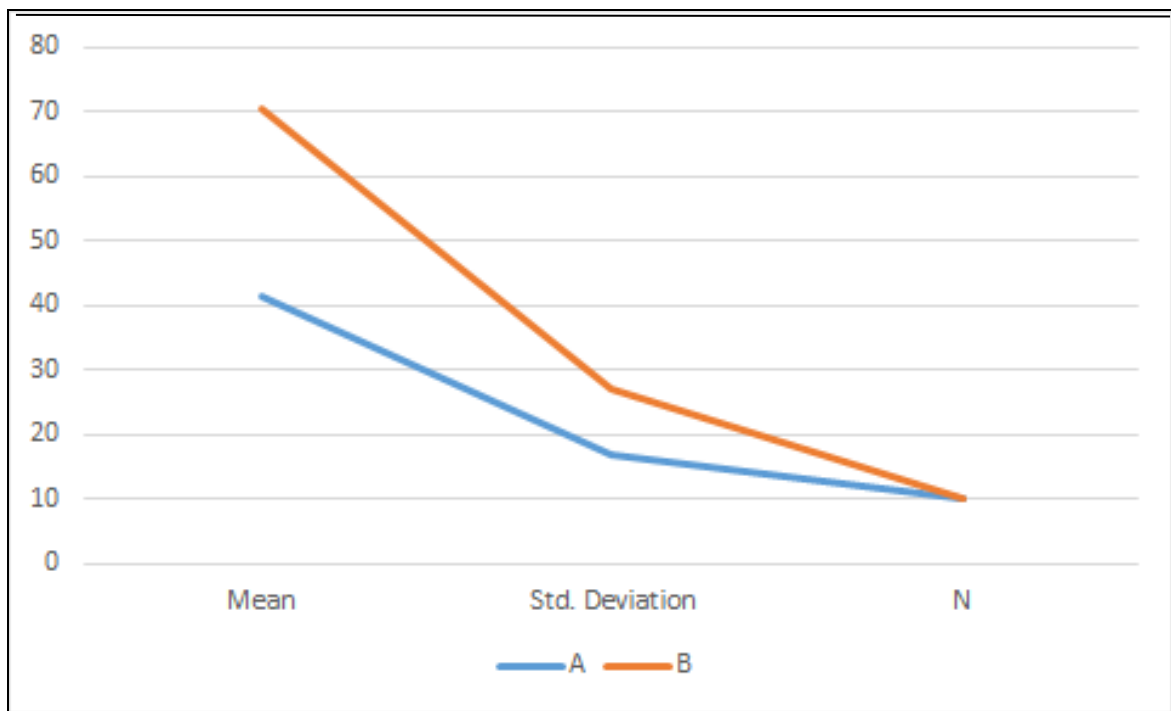


Fig 5.8 Graphical structure of Statical structure

The descriptive statistics we requested are displayed in the first table of the output file (table 4.26). The mean, median and mode of **table 5.22**. These three measures of central value are in close agreement, indicating that the middle of the distribution happens to be the midpoint of our 10-point scale of task skills. Thus, the typical customer was about average on port to other network at the beginning of the evaluations. The standard deviation (**16.73187**) indicates there is variability.

<i>Table 5.27 Model Summary^b</i>										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.640 ^a	.410	.336	13.63424	.410	5.554	1	8	.046	2.513
a. Predictors: (Constant), b										
b. Dependent Variable: a										

We must know experimental design in order to run the appropriate statistical test. In this chapter we introduce a one-way ANOVA (**table 5.28**) which combines one independent samples factor. These types of designs are called model ANOVA's, since they involve a mixture of one factor and one within-subjects factor.

<i>Table 5.28 ANOVA^a</i>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1032.461	1	1032.461	5.554	.046 ^b
	Residual	1487.139	8	185.892		
	Total	2519.600	9			
a. Dependent Variable: a						
b. Predictors: (Constant), b						

A coefficient (**table 5.29**) describes the size of the contribution of that predictor; a near-zero coefficient indicates that variable has little influence on the response. The sign of the coefficient indicates the direction of the relationship, although the sign can change if more terms are added to the model, so the interpretation is not particularly useful. A confidence interval (95.0% Confidence Interval for B) expresses the uncertainty in the estimate, under the assumption of normally distributed errors. Due to the central limit theorem, violation of the normality assumption is not a problem if the sample size is moderate.

Table 5.29 Coefficients													
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	69.255	12.661		5.470	.001	40.059	98.451					
	B	-.397	.169	-.640	-2.357	.046	-.786	-.009	-.640	-.640	-.640	1.000	1.000
a. Dependent Variable: a													

The main purpose of **Collinearity Diagnostics^a** is to examine if the independent variables are successful in predicting the outcome Eigen value and which independent variables are significant predictors of the outcome. **Collinearity Diagnostics^a** is an important statistical analysis for the variances of telecom data and presents the complete statistics in **table 5.30**. It also enables the identification of prognostic ally relevant risk factors and the calculation of risk scores for individual prognostication depend on model summary and prediction are based on R value in **table 5.27**.

Table 5.30 Collinearity Diagnostics^a					
Model	Dimension	Eigen value	Condition Index	Variance Proportions	
				(Constant)	b
1	1	1.940	1.000	.03	.03
	2	.060	5.698	.97	.97
a. Dependent Variable: a					

The choice of a fit method determines the line or curve that SPSS superimposes on the scatter plot (figure 5.9). Simple analyses may require only a table 5.31 to visually indicate the significance of all a value. A linear fit produces a least-squares regression line. Loess, quadratic, and cubic fits refer to curvilinear relationships. Select the appropriate Fit Method from the options are used in equation (0.46, 0.28, 0.32, 0.177, 0.80, 0.63, 0.80, 0.80, 0.80, 0.80). Equation analyses values require a linear fit value from them.

Table 5.31 Model Summary and Parameter Estimates									
Dependent Variable: a									
Equation	Model Summary					Parameter Estimates			
	R Square	F	df1	df2	Sig.	Constant	b1	b2	b3
Linear	.410	5.554	1	8	.046	69.255	-.397		
Logarithmic	.475	7.233	1	8	.028	144.159	-24.670		
Inverse	.456	6.715	1	8	.032	22.741	1067.761		
Cubic	.535	2.303	3	6	.177	64.299	.674	-.027	.000
Compound	.335	4.029	1	8	.080	75.088	.990		
Power	.368	4.656	1	8	.063	438.112	-.587		
S	.334	4.017	1	8	.080	3.206	24.698		
Growth	.335	4.029	1	8	.080	4.319	-.010		
Exponential	.335	4.029	1	8	.080	75.088	-.010		
Logistic	.335	4.029	1	8	.080	.013	1.010		
The independent variable is b.									

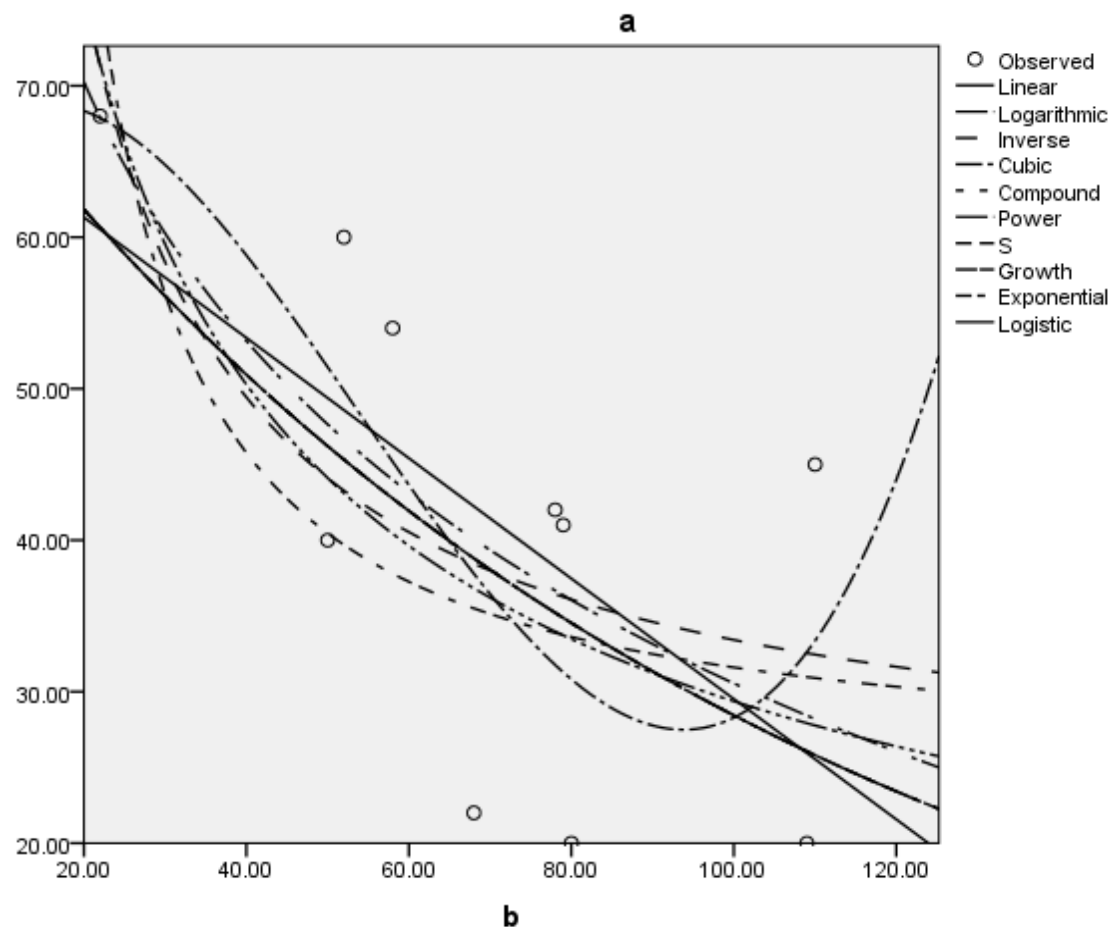


Fig 5.9 Comparative graphical Structure

5.4 Summary

This study validates this research work to explore each of the key constructs regarding convergence in technology, flow experience, and consumer impulsivity for understanding the key to consumers' impulse buying behaviour while on telecommunication. The results provide strong support for the research model, and further indicate that a higher level of impulsivity reduces the effect of enjoyment on irresistible urge to buy. The data also show that emotional conflict, positive buying emotion, mood management, cognitive deliberation, disregard the future and price buying are important to impulsivity formation and thus relevant within the context of impulse buying intention. There are four contributions. First, the perspective of product information in telecommunication. “Product information” refers to an attitude activity that relies on

public attention for telecommunication. This study found, from the viewpoint of convergence in telecommunication and development needs to take into account a combination of these factors. Second, Price value and Quality can induce impulse buying by consumers on telecommunication platforms. This study expects that when consumers experience telecommunication service after convergence in technology, they can receive a high degree of intentional involvement and then enjoyment that will influence consumers buying intent. To summarize the above, in the future enterprises can design applications that induce consumers to lure consumers into impulse buying, and thus lead the development of telecommunication. Third, the results of this study provide promotion and social factors with a guide basis for the development of telecommunication. In addition, studies aimed at the concept of convergence in telecommunication are rare. Future studies should be able to this study's results as a basis to further explore other convergence in telecommunication related applications such as learning.

CHAPTER 6

CONCLUSIONS, SUGGESTIONS AND FUTURE SCOPE

6.1 Conclusions

Based on the interpretations and discussions of results in the earlier chapter, this chapter draws interesting conclusions which then forms the basis for making recommendations to Mobile Network Service Providers. The level of telecommunication services adoption among the customers is measured with the help of 5 to 6 variables. The highly viewed variable in telecommunication services adoption by the male and female customers is quality of service. Regarding the level of telecommunication services adoption, the significant difference among the customers satisfaction level (low and high) have been noticed in 5 to 6 variables. In Uttar Pradesh region, current top players are telecommunication for followed by Vodafone and BSNL. Subscribers at Uttar-Pradesh customers are willing to switch Service provider if they are given an option to switch with same mobile number. Mobile number portability System can modify the situation of the telecommunication industry. Earlier the sole means of a service provider was able to hold their customer was by the mobile number. But now with the advent of mobile number portability comes in to action customer will have freedom to switch with same number so customer will rule the market. In this battle between customers and service providers, service provider can have to be compelled to surrender against customers conditions.

The findings and suggestions are presented into four parts which are as follows:

- A) Analysis of Product Information
- B) Analysis on the basis of Price-Value
- C) Analysis on the basis of Quality
- D) Analysis on the basis of Promotion and Social Factors

This research was aimed to ascertain the impact of way antecedent factor that influence consumer behaviour in telecom services provided by various service providers. These factors affect marketing strategies of service provides. The research draws some model and tested hypotheses.

- Indian Cellular mobile service customers have a number of switching cost barriers which will continue to exert influence on customers' behavior (though the biggest

barrier of all-number portability concerns is no longer existing as number portability has been allowed from November 2010). Factors exerting higher influence are the convenience/comfort of remaining with current service provider, followed by customers perceiving sameness of offerings, then time and effort involved in gathering information and then fear of new operator's service not working. It is important to note that learning, indifference (non-involvement), employee's relationship, confusion, financial cost of switching and difficult formalities / process are lesser switching barriers(**Ref chapter 2**).

- Network Quality is nearly twice as important as Price Competitiveness to Indian cellular mobile service customers.
- The important ages among the users are 65-70age group and 25-30age group. Among the known and unknown of product information, they most important age is 65-70 years and 25-30 years. The dominant level of age among the known and unknown of product information users the most important. Among the 65-70age group and 25-30age group users, the most important level of consumer is effective for consumer behaviour in Uttar Pradesh.
- It is clear from the results that among all reasons only consumer uses are influencing Price-Value and quality. All other reasons do not have significant effect on consumer behaviour. Hence, it is advisable for telecom companies to build their marketing strategies keeping in view on business uses of Price-Value and quality of mobile communication system.
- The Service quality (SQ) and Price-Value dimensions positively and significantly contribute to purchase decision to the extent of nearly 66% indicating good acceptance power. However, nearly 44 % is unsatisfied and leads to conclusion that there are additional factors that may be important in explaining purchasing factors perceptions (**table 5.12, Chapter 5**).

- From the results (**table 5.12, Chapter 5**) it is clear that Price-Value and quality is influencing users and people use to prefer electronic media to get themselves aware of mobile services and offerings. Therefore, consumer should be given on low price to target telecommunication services.
- Marketers are always interested knowing to basis of purchase decision. This helps to designing strategies related to those factors (Price-Value and quality) which affect the buying decision in case of mobile services. It was found that respondent (5000-15000 income) and (90000 above) decide upon Price-Value and quality (**Ref Table No. 5.12, Chapter 5**). The factor analysis identifies the important factors leading to purchase the telecom services are product quality, service support, and information services.
- The previous **chapter 5 analysis**, leads to conclusion that, Indian Cellular Mobile Service Providers should concentrate on those Service Quality (SQ), price value and product information dimensions mentioned in chapter 5, depending on which Behavioral Intentions dimension is the desirable outcome /goal for the service providers.
- The highly perceived promotion and social factors (**Table 5.22**) among the various telecommunication company and knowing customer needs whereas among the VI telnet users (no impact) and Telenor (impact), these are willingness to help customers, dependability and convenient operating hours. Regarding the perception on promotion and social factors variables, the significant difference uses have been found in the perception on equipment, ability to inspire, individual attention, trust, service performance, needs, adequate support dependability right at first time and timely service.
- The important promotion and social factors influencing to choose the service providers among the companies are wide coverage, whereas among the users, these are festival offer, brand image and reasonable charges for ongoing calls. Regarding the perception on the variables influencing to choose the service providers., the significant difference among the two group of users have been identified in the case of large number of promotional schemes and frequent schemes.

6.2 Suggestions

Demographic and Socio-economic factors influencing consumer behaviour cannot be ignored. These variables provide a holistic view of the consumer and also helps prepone and predict the churn or loyal behaviour.

- It is mostly difficult to revert a decision which has already been created in the minds of the consumer so the idea should be to intervene before the consumers mind has already evaluated options.
- Among all the significant variables, from our result, Price is the most important among our respondents followed by Service quality, product quality and promotion.
- It is hoped that the findings of this study may assist mobile industry in Uttar Pradesh about their services and promotion of their services.
- Moreover, it is also needed to extend full-scale behavioral intensions of consumers upon mobile telecommunication service providers in order to match consumers' overall behavioral patterns with the decision-making criteria of the mobile telecommunication services providers.

6.3 Scope of Future Research

The present study is about customer behaviour in purchasing telecommunication area in Uttar- Pradesh. The study focuses mainly on examining the behaviour of telecommunication area, factors influencing the portability, satisfaction of telecommunication service. It is recommended for future that Indian Cellular mobile service providers should concentrate on improving their perceived performance ratings which at an improved to present score is currently far below ideal/excellence level of customer satisfaction which indicates that customers are not truly satisfied completely. In order to attract more customers as per age, income and family size mobile companies should develop the internet facility on mobile phone by developing coverage (range) in rural area with high speed. The present study concludes only four essential factors that the important leading to buy the services are quality, service support, price, service personnel and product distribution and information sources. The important factors are missing for leading to choose the service providers are facility, services, economy, coverage, additional features, schemes and image. Future study should delve into other lines of Telecom business like Post-paid, Enterprise and landline. It will be an interesting study to see if the different product lines throwback different customer behaviour.

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