





# An Empirical Study on the Users' Satisfaction with Various Services of the Mobile Phone Service Providers

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**Abstract.** User satisfaction with various services offered by mobile phone service providers is a critical aspect in the telecommunications industry. It directly influences customer loyalty and the overall success of the providers. Customers today expect seamless and reliable connectivity, high-speed data services, excellent customer support, and competitive pricing. Mobile phone service providers are constantly striving to meet and exceed these expectations to enhance user satisfaction. The quality of network coverage and call reception is a fundamental determinant of user satisfaction. A reliable network ensures that users can make and receive calls, send texts, and access the internet without disruptions or dropped calls. Fast and consistent data services, including 4G and 5G connectivity, are also pivotal in meeting the demands of modern smartphone users. User satisfaction is not limited to network performance alone. Excellent customer support is crucial. When customers encounter issues or have inquiries, they expect prompt and effective assistance from their mobile service provider. This is a descriptive study to be carried out in Krishnagiri District of Tamil Nadu. The present study is mainly based on primary data collected from the mobile phone using customers located in Krishnagiri district. The researcher concluded that users' satisfaction with mobile phone service providers is a multifaceted concept that encompasses network quality, customer support, and pricing. To stay competitive in this industry, providers must continually enhance their services to meet and exceed the evolving expectations of their customers.

**Keywords:** Satisfaction, mobile phone, data services, communication quality, network availability, service providers, customer care, call rates, network connectivity.

## 1 Introduction

The mobile telecommunications industry in India has undergone substantial expansion and has been characterized by notable developments [7]. India has always maintained its position as one of the global leaders in terms of both size and growth rate within the mobile phone industry. The proliferation of 4G networks, along with the imminent arrival of 5G technology, has facilitated the widespread availability of high-speed internet connectivity, hence promoting digital inclusivity across a wider demographic. The widespread availability of cost-effective smartphones has led to an expansion in

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smartphone usage among the Indian population, facilitating more access to a diverse range of mobile services such as digital payments, e-commerce, telemedicine, and online education. The proliferation of mobile wallet applications and digital payment systems has experienced a notable surge in popularity, hence revolutionising the manner in which individuals engage in financial transactions [9]. The advent of the digital revolution has witnessed a notable upsurge in the proliferation of online services and electronic commerce, mostly propelled by the inherent ease offered by mobile applications. The local production of smartphones has been stimulated by government programmes targeting the reduction of the digital gap, in conjunction with the 'Make in India' campaign. In India, the mobile phone services sector is undergoing continuous evolution in order to meet the evolving demands and expectations of consumers. This dynamic environment offers chances for both existing and developing firms in the market [11]. To have a thorough picture of the present situation and future possibilities of the industry, it is recommended to refer to more recent sources and publications for the latest developments.

### **1.1 The research background**

These organizations will offer the highest quality services available. Mobile number portability is offered by the majority of growing telecoms markets. The company has just joined the rapidly growing telecoms markets in South Asia. Every mobile service provider endeavor to expand its client base by providing greater goods and services compared to its competitors. Mobile Number Portability (MNP) enables customers to switch mobile service providers while retaining their existing phone number [5]. Consumers are only able to utilize the Mobile Number Portability (MNP) service provided that the business furnishes them with the necessary information required for its usage. In order for mobile number portability to function effectively, it is imperative that all types of mobile sessions, including voice, SMS, and MMS, may be appropriately directed to the transferred network for the respective contacted subscriber number [1]. The IETF has defined three types of number portability, namely service provider number portability (SPNP), location portability (LP), and service portability (SP). The Service operator Number Portability (SPNP) system enables clients to switch their mobile network operator while retaining their current phone number. The broad use of the technology is impeded by many complexities pertaining to number administration, network signaling functions, call routing, billing, and service management. The potential impact of Mobile Number Portability (MNP) on attrition rates is expected to necessitate service providers to adopt strategies that distinguish their products, enabling them to sustain competitiveness in the market. Despite the existing level of competition in India's mobile industry, officials contend that an even greater degree of competition is necessary in order to maximize the advantages for customers. Mobile Number Portability (MNP) presents an opportunity for the five emerging players and the four incumbent operators, who have obtained authorization to provide services in untapped regions, to gain a competitive edge in the fiercer mobile sector [4].

It is hypothesized that the introduction of Mobile Number Portability (MNP) in India is imminent, presenting an opportune occasion to strategically position and enhance the

subscriber count, given the projected growth of the mobile market to surpass 500 million users. This anticipated expansion would place India as one of the largest mobile markets globally, second only to China. As per the regulations stipulated by the Telecom Regulatory Authority of India (TRAI), it is incumbent upon network service providers in India to furnish every client with a unique porting code. The term 'porting' is used to describe the act of transitioning from one service provider to another. The receiving operator refers to the telecommunications service provider that the consumer wants to transfer their mobile phone number to [7].

The phrase "Donor Operator" pertains to the previous mobile network operator of the consumer. Customers are subject to limitations when it comes to changing service providers, since they are only allowed to do so within the geographical area covered by their current provider [9]. In the event that a post-paid customer possesses unsettled financial obligations with the Donor Operator and thereafter expresses a desire to switch to the Recipient Operator, the Recipient Operator retains the prerogative to discontinue the provision of services to said consumer. Upon the completion of a porting process, all remaining unused prepaid time will become invalid. Customers have the option to obtain their own porting code by initiating an SMS request to the designated number 1900. The documentation sent to the Recipient Operator must encompass the designated porting code. With the exception of the service regions of Jammu & Kashmir, Assam, and the North 23rd East, the Telecom Regulatory Authority of India (TRAI) allows a maximum porting period of seven business days. In the event that a client initiates the activation of a new SIM card and then opts to change their service provider via the Mobile Number Portability system, it is imperative for the consumer to observe a mandatory waiting period of 90 days prior to effectuating the transfer. The consumer has the option to change service providers once again, but only after a period of 90 days has elapsed. It is required that any request for transferring a subscriber port must have a minimum interval of 90 days between them.

Once Mobile Number Portability is adopted, evaluating service providers based on number prefixes would become very difficult. Prior to the implementation of Mobile Number Portability (MNP), BSNL Cell One's mobile numbers were assigned with a prefix of 94, Reliance's with a prefix of 93, Airtel's with a prefix of 98, Tata Indicom's with a prefix of 92, and so on. Mobile number portability is now provided in several countries, including the European Union, South Korea, Argentina, Colombia, and Taiwan. The implementation of mobile number portability took place in 2007 in Singapore, Hong Kong, and Australia (Chak). Mobile number portability was established by the United Kingdom, Hong Kong, and the Netherlands in 1999. Australia adopted this practice in September 2001, followed by South Korea in January 2004, and Taiwan in October 2005 [5]. The implementation of mobile phone number portability in the United States commenced in May 2004. The process of transferring landline phone numbers to mobile phones is also applicable throughout the United States.

In the year 2000, mobile number portability was introduced in both Spain and Switzerland. Subsequently, in 2001, Australia, Sweden, Denmark, and Norway also implemented this feature. Similarly, in 2002, Belgium, Italy, Portugal, and Germany followed suit. In the year 2003, Ireland, France, Finland, and Luxembourg adopted mobile

number portability as well. Finally, in 2004, Austria, Greece, and Hungary joined the aforementioned countries in implementing this feature (Stefan and Justus, 2004). The initial introduction of this product in Japan took place in October 2006. A smaller number of consumers in Germany and France opted to transfer their mobile phone numbers. The practise of porting was found to be more prevalent in the countries of the Netherlands, Finland, and Denmark.

## 1.2 Telecommunication at a Glance

The discipline of communications possesses a substantial and pioneering historical background. Smoke signals were among the earliest methods of long-range communication. The utilisation of this particular mode of communication had significant importance throughout ancient times, characterised by a scarcity of cities and towns that were geographically dispersed. In previous eras, musical instruments such as drums and horns were employed as a method of communication. Optical and visual communication were achieved by the utilisation of flags, lights, and customised towers. The telegraph, radio, television, telephone, and internet are technological advancements that emerged subsequent to the development of civilization and industrial society. The first operational wire-line telephone was built in 1876 by Alexander Bell Graham and Elisha Grey. Commercial telephone networks were developed in New Haven and London in the years 1878 and 1879, respectively. The emergence of cellular technology, pioneered at AT&T's Bell Laboratories during the late 1960s, constituted a significant breakthrough within the realm of telecommunications. Cellular/mobile services were initially launched in the United States, employing AMPS technology over a span of less than two years thereafter. In 1983, the Federal Communications Commission (FCC) granted approval for the introduction of the initial commercially accessible cellular phone.

The Motorola Dyna TAC 8000X phone, weighing around 2 pounds and need frequent charging, was priced at \$3995. It had a limited talking duration of only 30 minutes before requiring another charge. The two predominant services provided by telecommunications providers are Fixed/Land Line Services and Cellular Services. Within the realm of telecommunications, the term "fixed/wire line service" pertains to a physical and unchanging connection established between two distinct endpoints. In contrast to cellular phone service, which utilises radio waves, the phrase "traditional" pertains to the utilisation of subterranean and telephone pole cables for the transmission of speech and data. The principal providers of fixed/wire line service in India are Bharat Sanchar Nigam Ltd. (BSNL), Mahanagar Telephone Nigam Ltd. (MTNL), as well as other private sector enterprises such as Reliance, Airtel, and Tata Indicom. The wireline network has undergone advancements in order to accommodate the growing requirements of mobile phone usage. These resources may now be readily collected in various locales, even some that were previously unreachable. Mobile/wireless services refer to the utilisation of short-wave analogue or digital telephony, wherein a mobile phone belonging to a subscriber establishes a wireless connection with a transmitter located in close proximity. The term "cell" refers to the spatial extent of a transmitter's signal. The process of transitioning between cellular or service areas involves the transfer of the phone connection to a neighbouring cell transmitter [3]. Customers are increasingly shifting

their preference from landline telephone service to wireless and mobile networks. The implementation of a liberalisation plan has facilitated the entry of commercial mobile service providers into the Indian telecom market. Consequently, advancements were achieved in the realm of wireless technology. The nation is currently undergoing the development of broadband internet access, hence expanding the scope of telecommunications services beyond voice calls [2]. This is the rationale for the development of technologies such as 2G, 3G, and Broadband Wireless Services (BWA). Second-generation (2G) technology, such as Global System for Mobile Communications (GSM), enables a significantly greater level of market penetration. The provision of various services, such as short message service (SMS), picture message service (MMS), and multimedia messaging service (MMS), is facilitated by the utilisation of 2G technology inside mobile phone networks. The digital encryption employed in this process ensures that the sent data can only be decrypted by the intended receiver. The advancement of 3G and BWA (Broadband Wireless Services) has significantly enhanced multimedia applications on mobile phones. Due to the progress made in 3G and BWA mobile telephony, service providers now have the capability to offer their customers premium and distinct value-added services.

### **1.3 The Evaluation of Service Quality in Cellular Mobile Networks**

The telecoms sector's existence relies upon the implementation of prudent work practices and the allocation of capital in a rational manner. In a competitive market, service providers have the dual task of engaging in price competition while effectively meeting client requests and expectations in both aspects. The academic literature presents a substantial body of research that establishes a strong correlation between service quality and positive outcomes, such as customer satisfaction, customer loyalty, financial profitability, and competitive advantage. According to data provided by the Department of Telecommunications, both BSNL and MTNL are seeing a decline in market share within India's mobile phone industry, while private operators continue to gain prominence. The collective market share of BSNL and MTNL experienced a decline from 17% in March 2008 to 13.6% by August 2009.

Nevertheless, there was an increase in the proportion attributed to the private sector, which grew from 83 percent to 86.4 percent during the identical year. It is imperative for mobile service providers operating in India to discern the factors that significantly impact their clients. Furthermore, scholarly investigations have demonstrated that customer satisfaction may be examined from several perspectives, emphasising the extent to which a customer is content with their diverse engagements with the service provider in its whole. In broad terms, the happiness of a client is often influenced by their prior experiences and interactions with the supplier of a service. In contemporary society, mobile phones have become an indispensable component of our daily routines. The availability of instant messaging and other services provided by manufacturers constitutes significant factors that attract potential consumers. The efficacy of a service is contingent upon several factors, and consumers frequently seek products that fulfil multiple criteria. The significance of satisfied consumers has been extensively debated in

recent times. Consumers within the cellular mobile market exhibit elevated expectations regarding the quality of communication services provided by their service providers. In the event that these service providers fail to meet these expectations, consumers are inclined to seek alternative options.

## **2 Literature review**

As consumer preferences and expectations are subject to continuous evolution, individuals consistently establish elevated benchmarks for their own satisfaction [13]. In order to priorities client satisfaction, it is important to initially ascertain the target demography, subsequently acquire knowledge on their wants, objectives, and expectations, and ultimately evaluate their perception of the firm. The current era is witnessing a significant rise in customers' demands for service of exceptional quality, necessitating that service providers not only meet but even beyond these expectations. The primary objective of any service company should be to prosper and effectively compete within the contemporary global market. Customers are seeking enhanced service quality. The private sector commonly regards profit and/or cost reduction as crucial elements for survival and growth, hence prioritizing economic efficiency as its major objective [6]. The attitude of customer service significantly impacts customers' decision-making process and their likelihood of making repeat purchases. When all other variables affecting the cost of a service are held constant, purchasers exhibit a greater inclination towards the quality of the service itself. It has undergone a transformation, emerging as an independent and integral component of the organization's portfolio. [12] asserted that superior service quality possesses the potential to serve as a significant differentiating factor, hence providing enterprises with a competitive advantage within the marketplace. Price is a significant determinant in the telecommunications sector, particularly for mobile telecommunication service providers. The cost of acquisition and the accompanying charges for making phone calls are encompassed within the stated amount. In a mass market characterised by price-driven dynamics, customers often possess a wider array of choices and have a greater capacity to engage in comparative shopping [10]. If a firm were to lower its pricing and attract a larger number of consumers to subscribe to its telephone networks, it is likely that there would be a significant increase in the total number of call minutes.

## **3 Statement of the Problem**

The Indian telecommunications industry is now experiencing rapid growth and plays a crucial role in servicing the nation. There is significant rivalry among telecommunication firms throughout the business. There exist several challenges pertaining to the sector, government policies, technological advancements, shifts in customer behaviour, price reductions, and the globalised market. In the present context, telecommunication firms are implementing many strategies to allure and maintain their current consumer base. Within the realm of marketing, there exist several unresolved concerns that are given careful consideration within the sector. The number of consumers or users of

mobile phones has experienced rapid rise. A significant proportion of individuals in India, regardless of their economic, educational, or vocational backgrounds, utilise mobile phones. Comprehending the perspective and behaviour of these individuals is a significant challenge. Within this particular situation, a series of inquiries emerge.

### **3.1 Objectives of the study and Research Design**

The perception of a product's quality by consumers plays a pivotal role in determining its commercial success. Consumers frequently face the difficulty of evaluating product quality when confronted with limited information on the underlying attributes of the many product options. In such instances, individuals rely on their personal, subjective criteria for assessing quality. With the intensification of competition among businesses, it has become increasingly imperative for them to acquire a comprehensive understanding of customers' perceptions regarding their telecommunications service providers. This understanding encompasses various aspects such as the quality of communication, call services, facility, price, customer care, service provider capabilities, and other pertinent factors. Hence, the principal objective of this study is to comprehensively examine the factors that have influenced the views and choices of Indian consumers in relation to mobile telecommunications service providers. The non-probability convenience sampling technique is the appropriate technique when information from every individual in the sample population is not available.

## **4 Analysis, findings and Results**

Presentations of services provided by mobile phone service providers and the male and female employees: In the rapidly changing mobile sector, the task of predicting customer demands and effectively delivering mobile content offers poses significant challenges. Individuals often have difficulties in effectively expressing their preferences and needs when it comes to services that are foreign to them. Mobile services have historically targeted innovators, domain experts, and those seeking to remain informed about emerging technologies and novel approaches to various tasks. The desires and goals of customers, however, vary, and information that is appealing to one segment may not be appealing to another. In order to effectively reach a wide range of client markets, it is imperative for services to possess distinctiveness and cater to certain consumer groups who actively engage with mobile content for particular purposes, hence perceiving the service as valuable. Numerous scholars have posited that in the realm of enhancing service quality and promoting novel services, loyal clients represent a key resource for acquiring insights into the potential value that these services might offer to their clientele.

**Table 1.** Results of Z- test for various services provided by mobile phone service providers and the male and female employees

Dimension	Gender	N	Mean Rank	Test	Result
Voice Calling	Male	136	218.90	Z	-2.198
	Female	164	210.21	Sig.	0.029*
	Total	300			
Text Messaging (SMS)	Male	136	217.09	Z	0.897
	Female	164	341.26	Sig.	0.298
	Total	300			
Mobile Internet Plans	Male	136	331.11	Z	-0.447
	Female	164	225.19	Sig.	0.587
	Total	300			
Mobile Hotspot	Male	136	217.05	Z	-0.301
	Female	164	312.15	Sig.	0.389
	Total	300			
Mobile App Integration	Male	136	206.14	Z	1.879
	Female	164	289.58	Sig.	0.082
	Total	300			
Device Financing and Trade-Ins	Male	136	211.02	Z	-3.598
	Female	164	296.87	Sig.	0.000* *
	Total	300			
International Roaming Package	Male	136	318.81	Z	-1.786
	Female	164	299.62	Sig.	0.054
	Total	300			



Table 1 describes the results of Z- the test for the various services provided by mobile phone service providers and the male and female in the study area. The study inferred that the Z & p-value for applying mobile phone service providers among the male and female employees is -2.198 & 0.029. The p-value is  $<0.05$ . Therefore, the study confirmed a significant difference between male and female employees concerning mobile phone service providers. Mobile Internet plans are a fundamental component of modern telecommunications services, offering users access to the vast world of online information, communication, and entertainment through their mobile devices. These plans typically include varying data allowances, which determine the amount of data users can consume for activities like web browsing, video streaming, social media use, and app downloads. They come in a variety of packages, catering to different data usage needs, from light users who primarily use their smartphones for occasional emails and messaging to heavy users who rely on their devices for streaming, gaming, and extensive online activities. Mobile Internet plans are critical for staying connected on the go and providing access to real-time information. As mobile networks continue to evolve with the rollout of 4G and the anticipation of 5G, mobile Internet plans are becoming faster and more reliable, offering a seamless online experience for users. With the increasing demand for connectivity and the proliferation of smartphones, these plans have become an integral part of our daily lives, allowing us to access a world of content and services in the palm of our hands. The flexibility and choice in mobile Internet plans empower users to tailor their mobile data usage to their specific preferences and needs, making them an essential feature of the modern digital age.

## 5 Discussion

Furthermore, today's market for mobile services is very homogenous, with multiple companies offering comparable services. As a result, clients use many providers' services at the same time and are thus less loyal to a brand or provider [11]. As a result, providers face reduced profit margins and greater competition. In the drive to reach the correct client segments, marketing communication plays a critical role in enticing individuals who are most likely to become regular users of the services in the future, resulting in more revenue per user [6]. When the proper value propositions are communicated to the right clients, it should result in a dedicated, loyal customer base that uses a service provider's mobile services on a regular basis. Furthermore, customers' perceptions of the value of mobile services are largely determined on their level of pleasure with such services [1]. Customer satisfaction, in other words, is a favorable emotional and logical state resulting from a customer's assessment of the service they utilize.

## 6 Conclusion

Mobile phone service providers play a pivotal role in the modern telecommunications landscape, connecting individuals and businesses in an ever-evolving digital

world. It discusses the dynamic nature of the industry, the competitive environment, and the factors that influence consumer preferences [9]. Furthermore, it emphasizes the critical aspects of user satisfaction, including network quality, customer support, pricing, and the ongoing quest for innovation. The abstract also touches upon the importance of addressing issues like security, privacy, and sustainability to meet the evolving needs and expectations of mobile phone users [7]. In a world where connectivity is paramount, mobile phone service providers continue to shape and adapt to the communication needs of the global population. Efficient and friendly customer service can greatly influence users' overall perception of a provider [2]. Competitive pricing and the flexibility to choose from various plans and options are additional factors that impact user satisfaction. Customers appreciate providers that offer cost-effective packages that cater to their specific needs and preferences.

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