

A study on Challenges Faced by Millennial's in Using Public and Private Mobile Network Services: A Comparative Study in Bengaluru

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Abstract: The use of mobile has become an essential part of everyday life because of its growth, digitization of economy, social life and professional activities. Millennial's are active and technology oriented users, depending significantly on reliable and affordable network services. But users are experiencing various challenges related to network, quality of call internet speed, service reliability pricing, customer service and majorly with security. This study aims to analyse the challenges faced by millions while using public and private mobile network service providers in Bengaluru. The study focuses on identifying the major advantages and factors influencing the millennial's to select a particular network for their use. It identifies whether a significant difference exist between the users of public and private mobile network services. Primary data was collected in Bengaluru using a structured questionnaire while secondary data is obtained from various journals, reports and publications. Appropriate statistical techniques was employed to analyse users' perceptions, preferences, and levels of satisfaction. The findings are based on to provide insights into the major service-related challenges experienced by millennial and highlight areas where mobile network providers can improve service quality, customer support, affordability, network performance, and digital security. The study also tries to assist telecom service providers and policymakers in developing customer-centric strategies to enhance the overall quality and reliability of mobile network services in Bengaluru.

Keywords: Millennials, Public Sector Telecom, Private Sector Telecom, Customer Satisfaction, ServiceQuality, Network Performance, Consumer Behaviour, Bengaluru, Telecommunications.

1. INTRODUCTION

Today, mobile phones and mobile networks are ubiquitous and hard to live without, and have become integral to the lives of millennials, who are the most active and dependent users of mobile phones, smartphones, and Internet-based applications. The mobile network service provided has become a critical part of millennials' work and decision-making, as they depend more on their mobile phones and network services to perform everyday activities, professional activities, online learning, banking services, entertainment, networking in social areas, and communication.

Despite the availability of private and public telecommunication services, millennials face various challenges while selecting a proper, appropriate and reliable network. The growing competition among service providers has resulted in making the selection complicated. Consumers frequently need to evaluate multiple factors such as network coverage, internet speed, call quality, pricing, customer service, reliability, security and technological advancements before making a choice. However, obtaining complete and reliable information regarding these factors is still a significant challenge.



In selecting and utilising mobile network services, this generation of millennials is experiencing some issues and difficulties. Common issues are network connectivity, call dropouts and internet speed. Pricing is complex; there are hidden charges, and services are often altered, making it challenging to choose a network and provider. The uneven spread of 4G and 5G services also creates dissatisfaction among users. Customer support issues and slow response times to customer complaints continue to impact customers. When selecting a network provider, many millennials are influenced by advertisements, social media, influencers, and peer recommendations. Spam calls, phishing, and SIM fraud are examples of privacy and security issues that also impact their decisions. The need for consistent mobile availability or connection is more evident in Bengaluru, where these challenges are also more prominent. Choosing a provider is complicated due to some disparities in technology, service quality, price and coverage between private and public providers. Thus, the purpose of this study is to understand these challenges and provide insights for improving mobile network service and customer satisfaction.

2. REVIEW OF LITERATURE

The telecom sector over the last decade has undergone tremendous changes with the advent of smartphones, mobile internet services, digital payment methods and the proliferation of mobile phones. All of this has affected customers' expectations, from simply being able to talk to one another to the present demand for seamless connectivity, access to fast internet, customised service packages, and effective customer service. As a result, the telecom service industry has been the subject of numerous studies on factors that affect customer satisfaction, service quality, network performance, switching behaviour and customer loyalty.

Parasuraman et al. (1988) developed a widely accepted service quality assessment model called the SERVQUAL model. The model contains five constructs which impact customer satisfaction: reliability, responsiveness, assurance, empathy, and tangibles. The SERVQUAL framework was originally developed for the general service sector but has been extensively used in research for the telecommunications industry. Recent research has introduced additional features for the model, including network-specific metrics like internet speed, reliability of internet coverage, billing transparency, and digital customer support, to assess customer perceptions of mobile network services more accurately.

Service quality and customer satisfaction have been identified as important factors in determining business success in the highly competitive business world. According to Kotler and Keller (2022), customer satisfaction is the degree to which customer expectations of service delivered are met or exceeded. The telecommunications sector is highly competitive, and mobile number portability has given consumers more options to change carriers with little effort. Therefore, telecom operators are constantly investing in network infrastructure, digital technology, customer relationship management, and innovative service delivery to ensure better customer retention.

Network quality has been a key factor consistently in explaining customer satisfaction. Hossain et al. (2023) found that network coverage, internet speed, call connectivity, network stability and uninterrupted service have a profound impact on customers' service quality perception. According to their research, although technology has advanced over the years, disruptions, weak connections and unreliable Internet service are still significant sources of customer dissatisfaction.

Inter-comparison analyses have revealed the gap between public and private telecom service providers. According to Sharma and Gupta (2024), private telecom companies perform better than public telecom companies in terms of internet speed, customer responsiveness, and digital service platforms. However, public telecoms were seen as providing 'reasonably cheap' tariff offers and wider network availability in rural areas. The study showed that competitive pricing is not enough to ensure customer satisfaction in the long term when network performance and service quality are not consistent.

Fifth-generation (5G) technology has also revolutionised consumer expectations. According to GSMA (2024), 5G technology has fueled the shift toward fast networks, low latency, and reliable connectivity, especially for younger generations that heavily depend on mobile networks for education, remote work, entertainment, and digital financial

services. But the implementation of 5G is still unevenly spread, leading to service quality and customer experiences that differ greatly, particularly in urban areas with high population density.

Millennials are one of the most technologically savvy consumer cohorts and have relatively higher expectations for mobile network services. According to Deloitte (2024), millennials consider telecom service providers based not only on pricing but also on digital experience, mobile application usability, cybersecurity, customer support efficiency and value-added services. Online reviews and social media, digital marketing campaigns and peer reviews are increasingly shaping their purchasing decisions.

There has been some research into the problems that users of mobile networks face. Singh and Verma (2023) pinpointed the most common root causes of customer dissatisfaction as frequent call drops, internet speed fluctuations, billing errors, slow complaint resolution and poor customer support. The authors noted that while investment in technology is important to secure customers, it is equally essential to have efficient customer service and responsive complaint management systems to ensure customers do not turn to alternative providers.

Another factor identified as an important determinant of customer satisfaction and loyalty is complaint management. Customer trust and loyalty can be significantly enhanced through effective grievance redressal mechanisms, real-time customer support, proactive communication, and digital complaint management systems, according to Kumar and Prasad (2022). On the other hand, when customer issues are not addressed soon enough, customers become more frustrated and are likely to switch to another provider as soon as the opportunity arises.

Customer demographics have also been shown to affect perceptions and expectations of services. Some research has indicated that customer satisfaction with telecommunication services is related to age, education, occupation, and income. The younger the consumer, the more important they find high internet speeds, application performance and digital customer service, while older consumers value reliability, low cost and voice communications performance. But the results of the influence of demographic variables have been inconclusive across geographical and service settings, suggesting that more empirical research is needed.

While there have been several studies on customer satisfaction, service quality, network performance, and competition, there have been limited studies that explicitly analysed the problems faced by millennials and compared mobile network services between the public and private sectors in the city of Bengaluru. The majority of the current studies have focused on the overall customer population rather than taking into account differences in customers' expectations and service behaviours across generations. In addition, there are a limited number of studies that have studied the demographic characteristics that impact the issues facing millennials and how those impact their satisfaction with their public and private telecom service providers.

This study aims to bridge the gaps existing in the above literature by making a comparative study of the problem of millennials in the context of public and private mobile network services in the city of Bengaluru. The study is a significant contribution to the prevailing body of knowledge in the field of telecommunications marketing, consumer behaviour, and service quality by offering empirical evidence regarding the factors affecting customers' preferences, satisfaction, and service selection. The results will help telecom service providers, policymakers, and regulators design strategies for service quality improvement, customer satisfaction enhancement, and long-term customer retention.

3. RESEARCH GAP

The telecommunication sector has been the subject of many research works conducted previously; the majority of them were based on Customer Satisfaction, Service Quality, Customer Loyalty, and the integration and adoption of technology. Some studies have also examined factors such as network coverage, pricing, internet speed, and customer service in influencing consumer preferences. However, most of these studies have been conducted on customers of the telecom sector as an entire customer population and not specifically on digital decadents and their overall service expectations as millennials.

4. SIGNIFICANCE OF THE STUDY

The present study is important because it presents a comprehensive study of the problems faced by millennials in choosing and availing public/private mobile network services in Bengaluru city. As millennials are one of the biggest consumers of mobile and internet services, understanding what factors influence their preferences, satisfaction and switching behaviour will help telecom service providers enhance network quality, customer service, pricing and service delivery in general.

Multiple stakeholders will benefit from the findings of this study, such as telecom companies, researchers, regulatory authorities like TRAI, and policymakers. The findings can help telecom operators provide customer-centric services and boost customer retention, and policymakers design policies for better service and consumer protection. Finally, the study also adds to the body of literature pertaining to consumer behaviour and telecommunication services, using a comparative approach to public and private mobile network services as a basis for future studies in this field.

5. OBJECTIVE OF THE STUDY

1. To visually explain the challenges that millennials encounter with the use of public and private mobile network services.
2. To gain insight into the key constraints of mobile network service providers to public and private millennials
3. To take a look at how demographic traits affect the problems faced by millennials.
4. To propose ways to enhance mobile network services given the problems that were identified among millennials.

6. HYPOTHESIS

Null Hypothesis (H_{02}):

Millennials' satisfaction with the mobile network service is not significantly affected by service-related challenges.

Alternative Hypothesis (H_{12}):

Millennials' satisfaction with mobile network services is greatly affected by service-related challenges.

Null Hypothesis (H_{03}):

Demographic characteristics have no significant effect on the service challenges felt by the millennials.

Alternative Hypothesis (H_{13}):

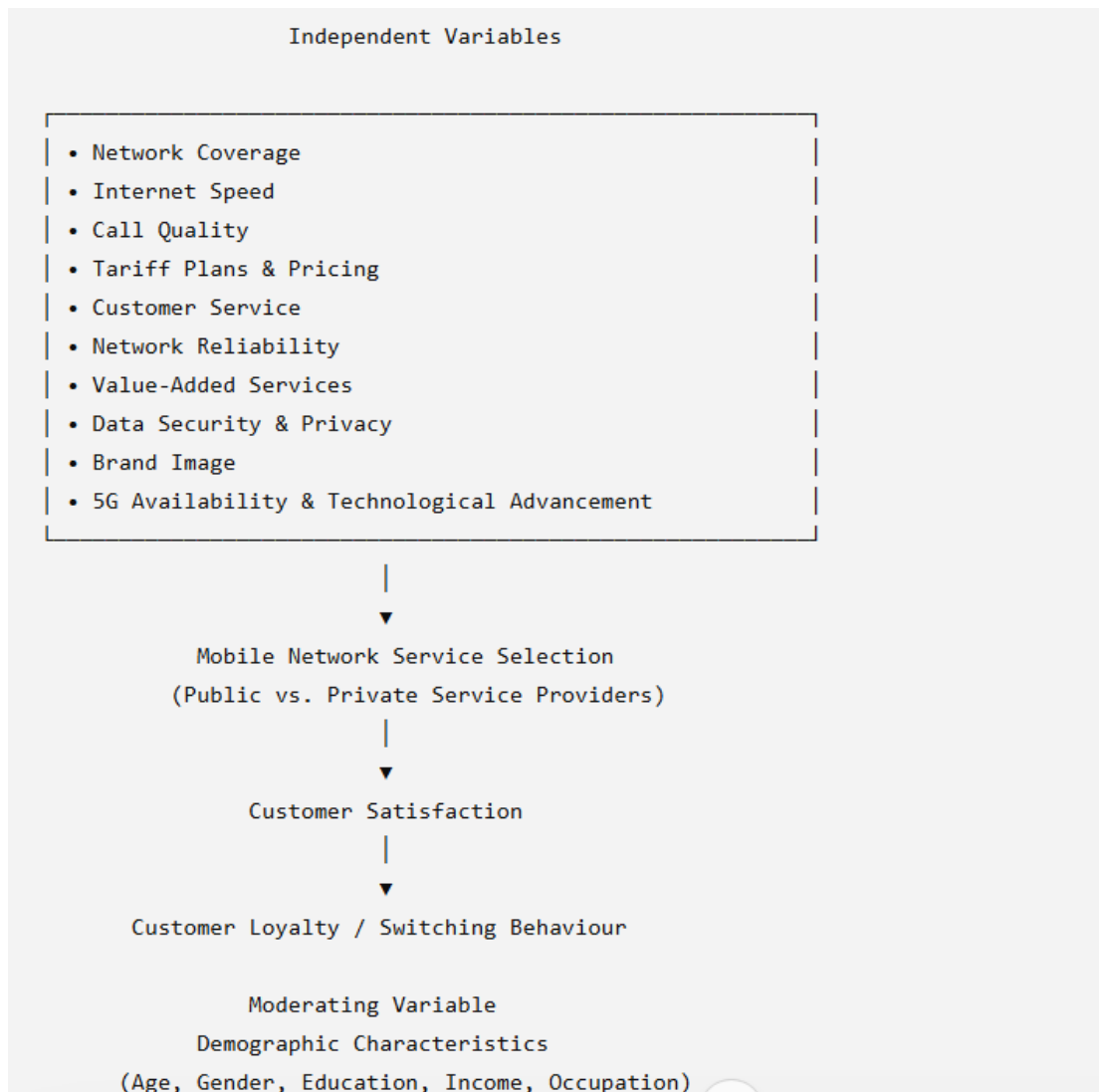
Millennials have different service challenges than other generations due to their demographic characteristics.

To suggest action points to enhance Mobile Network Services in accordance with the problems encountered by the millennials.

This objective is based on recommendations, and no hypothesis is needed. It is tackled by describing and interpreting.

7. CONCEPTUAL FRAMEWORK

The conceptual framework of this study is grounded in the fact that multiple factors related to service quality and consumers' impact on the choice of mobile network service providers, which consequently impacts their satisfaction and switching behaviour. The study puts these relations between public and private mobile network service providers in Bengaluru city in comparison.



The framework suggests that network coverage, internet speed, call quality, tariff plans, customer service, network reliability, value-added services, data security, brand image and technological advancement are the key factors which affect the choice of mobile network services by millennials. These factors are considered independently.

The central comparative dimension is the choice between public/private mobile network service providers. Millennials gain various degrees of customer satisfaction from these providers, and this satisfaction in turn drives whether they are loyal or will switch providers. Also, there are some demographic characteristics that can moderate consumers' preferences and perceptions, such as age, gender, education, occupation and income

Variable Type	Variable
Independent Variables	Customer Satisfaction, Market share, Network Usage, Customer Retention, Competitive Edge, Switching Costs, Customer Satisfaction Score, Customer Loyalty, and Customer Engagement
Comparative Variable	Public vs. Private Mobile Network Service Providers
Dependent Variables	Customer Satisfaction, Customer Loyalty, Switching Behaviour
Moderating Variables	Variables included to account for variation in the phenomenon. Age, Gender, Education, Occupation, Income

8. RESEARCH METHODOLOGY

This study has a descriptive and comparative design to analyse the problems in choice and use of mobile network services of public and private mobile network providers among millennials in Bengaluru City. A quantitative research approach was used, and primary data were obtained using a structured questionnaire, which was answered on a five-point Likert scale. The target population was millennial mobile network users in Bengaluru, and a convenience sampling of 90 respondents was carried out. Secondary data were collected from research articles, books, TRAI reports, Govt. reports, and telecom company reports in support of the study. The collected data were analysed using SPSS, and various statistical tools like descriptive statistics, Cronbach's Alpha, Chi-square test, Independent Sample t-test, Pearson correlation, Multiple regression analysis and Exploratory Factor Analysis (EFA) were used for reliability, examining the relationship between variables, comparing public and private mobile network users and testing the proposed hypothesis. The results offer insights into some of the factors that affect millennials' choice of mobile network, satisfaction and switching, which are relevant to the existing literature on telecommunication and consumer behaviour.

9. DATA ANALYSIS AND INTERPRETATION

Hypothesis Set 1 considering objective 2

H0: Service-related challenges have no significant impact on millennials' satisfaction with mobile network services.

H1: Service-related challenges have a significant impact on millennials' satisfaction with mobile network services.

Hypothesis Set 2 Considering Objective 3

H0: There is no significant influence of demographic characteristics on the service challenges perceived by millennials.

H1: Demographic characteristics significantly influence the service challenges perceived by millennials.

10. Methodology & Instrument Reliability

The data were collected from 80 respondents who are mobile network users in the age group of 22-37 years (millennials) from Bengaluru using a structured questionnaire based on a 5-point Likert scale (1=Strongly Disagree, 5=Strongly Agree). The study administered a questionnaire that had five dimensions of challenge (Network Quality (NQ), Data/Internet Speed (DS), Pricing (PR), Customer Care Service (CS) and Technical Aspects (TC), with 5 items each and a 5-item Satisfaction (SAT) scale. Cronbach's alpha was used for internal consistency.

Construct	No. of Items	Cronbach's Alpha	Reliability
Network Quality (NQ)	5	0.668	Acceptable
Data/Internet Speed (DS)	5	0.770	Good
Pricing (PR)	5	0.655	Acceptable
Customer Care Service (CS)	5	0.781	Good
Technical Aspects (TC)	5	0.682	Acceptable
Satisfaction (SAT)	5	0.885	Excellent

The alpha values for all constructs were greater than the acceptable range of 0.60, which meant that the constructs were internally consistent and could be analysed.

Objective 1: Major Challenges Faced by Millennials (Descriptive Analysis)

The mean scores for each challenge dimension were calculated. The higher the mean, the more the students perceived the task to be challenging.

Rank	Challenge Dimension	Mean	Std. Dev.	Interpretation
1	Network Quality (NQ)	3.330	0.771	Highest perceived challenge
2	Pricing (PR)	3.308	0.767	High
3	Customer Care Service (CS)	3.250	0.918	High
4	Technical Aspects (TC)	3.175	0.793	Moderate-High
5	Data/Internet Speed (DS)	3.170	0.886	Moderate-High

Overall Challenge Score: Mean = 3.25, SD = 0.74 | Overall Satisfaction Score: Mean = 3.02, SD = 1.08

Interpretation: Network Quality (poor coverage, call drop, weak coverage indoors, congestion during peak hours) comes in as the biggest pain point for millennials, followed by Pricing concerns (expensive plans, inadequate data benefits, hidden charges) and Customer Care Service issues (slow resolution, difficult to reach support). This directly meets Objective 1.

Objective 2 & Hypothesis Testing 1: Impact of Challenges on Satisfaction

Correlation Analysis

Pearson correlations were calculated for each challenge dimension and satisfaction. All of the correlations were negative and high, indicating that higher perceived challenges were correlated with lower levels of satisfaction.

Dimension	NQ	DS	PR	CS	TC	SAT
NQ	1.000	0.769	0.718	0.749	0.741	-0.834
DS	0.769	1.000	0.736	0.746	0.734	-0.798
PR	0.718	0.736	1.000	0.742	0.731	-0.822
CS	0.749	0.746	0.742	1.000	0.754	-0.836
TC	0.741	0.734	0.731	0.754	1.000	-0.841

Multiple Regression Analysis (SAT regressed on NQ, DS, PR, CS, TC)

Model Statistic		Value			
R		0.931			
R Square		0.866			
Adjusted R Square		0.857			
F (5, 74)		95.45			
Sig. (p-value)		< 0.001			
Predictor	Unstd. Coeff. (B)	Std. Error	t	Sig. (p)	Result
(Constant)	7.535	0.222	33.91	< 0.001	-
Network Quality (NQ)	-0.342	0.108	-3.18	0.002	Significant
Data/Internet Speed (DS)	-0.100	0.094	-1.06	0.292	Not Significant

Pricing (PR)	-0.319	0.103	-3.09	0.003	Significant
Customer Care Service (CS)	-0.265	0.091	-2.91	0.005	Significant
Technical Aspects (TC)	-0.360	0.102	-3.52	0.001	Significant

Decision: The overall regression model is statistically significant ($F = 95.45$, $p < 0.001$) and explains 86.6% of the variance in satisfaction ($R^2 = 0.866$), so the null hypothesis (H_0) is REJECTED and the alternative hypothesis (H_1) is ACCEPTED. There is a statistically significant relationship between millennials' satisfaction with mobile network services and service-related challenges. Compared with the other dimensions, Network Quality, Pricing, Customer Care, and Technical Aspects are important individual predictors ($p < 0.05$), while Data/Internet Speed is not an important predictor once other dimensions are controlled for, but it is strongly correlated with satisfaction.

Objective 3 & Hypothesis Testing 2: Influence of Demographics on Challenges

Overall Challenge Score was analysed using an independent-samples t-test (for Gender, 2 groups) and one-way ANOVA (for Age, Education, Occupation, Income, Provider, Network Type and Years of Usage).

Gender (Independent Samples t-test)

Gender	n	Mean	t	Sig. (p)	Result
Male	35	3.235	-0.119	0.906	Not Significant
Female	45	3.255			

One-Way ANOVA – Demographic Variables

Demographic Variable	Groups (k)	F	Sig. (p)	Result
Age	3	0.266	0.767	Not Significant
Education	3	0.610	0.546	Not Significant
Occupation	4	1.843	0.147	Not Significant
Income	5	0.780	0.541	Not Significant
Years of Usage	4	0.145	0.933	Not Significant
Service Provider	5	406.08	< 0.001	Significant
Network Type (Public/Private)	2	73.59	< 0.001	Significant

Group Means for Significant Variables

Service Provider	n	Mean Challenge Score	Std. Dev.
Airtel	9	2.511	0.224
Jio	12	2.593	0.126
Vi	19	2.501	0.168
BSNL	27	3.961	0.149
Aircel	13	3.963	0.139

Network Type	n	Mean Score	Challenge	Std. Dev.	Eta ²
Private (Airtel, Jio, Vi)	53	2.882		0.643	0.485
Public (BSNL, Airtel)	27	3.961		0.149	-

Decision: The null hypothesis is partially rejected. Results indicate that demographic variables (Age, Gender, Education, Occupation, Income, Years of Usage) do NOT have a statistically significant effect on perceived service challenges (all $p > 0.05$). However, Service Provider ($F = 406.08$, $p < 0.001$) and Network Type ($F = 73.59$, $p < 0.001$, $Eta^2 = 0.485$) show a highly significant influence – users of public-sector providers (BSNL, Airtel) perceive substantially greater challenges (Mean = 3.96) than users of private providers (Airtel, Jio, Vi; Mean = 2.88). This means one of the demographics/organizational dimensions tested, the type of provider/network (public vs private) – rather than personal demographic features – is the distinguishing factor to be considered in the context of the comparative (public vs private) aspect of the study.

11. FINDINGS, SUGGESTIONS AND CONCLUSION

Based on the results outlined above, the following strategies are recommended:

- Infrastructure development – public providers (BSNL, Airtel) should focus on infrastructure improvements, such as improving indoor coverage, lowering call drops and increasing capacity during peak hours, which is the top-ranked challenge.
- Pricing: Make charging easier, cheaper, and more flexible using custom data bundles in line with millennial habits.
- Develop the grievance-redressal process to run faster, train customer service personnel to handle customer concerns, and create digital self-service and chat support options.
- Technical Reliability: Speed up the rollout of 4G/5G and smoothen out the process of switching networks and provisioning SIMs, particularly for public operators.
- Targeted Improvement: Public-network users' concerns are significantly greater than those of private-network users, so the quality of the public service should be benchmarked against private service, and efforts should be made to close the gap.
- The service-improvement strategies need not be demographically customised; challenges do not meaningfully differ by age, gender, education, occupation, income or years of usage.

The study finds that (1) the most significant challenges perceived by the millennial users of the mobile network services are Network Quality, Pricing, and Customer Care; (2) service-related challenges have a statistically significant impact on satisfaction, accounting for 86.6% of the variance in satisfaction; and (3) that none of the individual demographic attributes affect perceived challenges, but that the public-private distinction of the service provider does public service providers are associated with significantly higher perceived challenges. The findings provide direct evidence for service improvement strategies which are specific to providers and are not based on demographic segmentation.

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