



Investigating Customer Satisfaction Of 5g Technology Impact On Mobile App Performance And User Experience In Coimbatore

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ABSTRACT

The rapid advancement of 5G technology promises to revolutionize the digital landscape through faster internet speeds, lower latency, and enhanced connectivity. This study investigates the impact of 5G technology on mobile application performance and user satisfaction in Coimbatore, a fast-developing tier-2 city in Tamil Nadu, India. As mobile apps become integral to everyday life—powering communication, entertainment, e-commerce, and gaming—the transition to 5G presents a critical opportunity to evaluate user experiences and expectations. The research utilizes a mixed-method approach comprising surveys, interviews, and app performance analysis to assess user satisfaction across key factors such as speed, reliability, and usability. The findings aim to provide valuable insights for developers, telecom providers, and digital businesses by highlighting how 5G enhances or challenges mobile app functionality in emerging markets. Ultimately, this study contributes to understanding how 5G technology is shaping digital engagement and customer satisfaction in India's evolving tech ecosystem.

Keyword: 5G Technology

I.INTRODUCTION

5G technology is set to revolutionize mobile app performance by offering faster speeds, lower latency, and improved connectivity. This will enhance user experiences in areas like streaming, gaming, and e-commerce. Coimbatore, a growing city in Tamil Nadu, is a perfect location to study how 5G impacts customer satisfaction and app performance, as it is still in the early stages of adopting the technology. The research will use surveys, interviews, and app analysis to assess improvements in speed, reliability, and usability. Key factors influencing satisfaction will include faster load times, fewer disruptions, and more intuitive app designs. The findings will help businesses and telecom companies optimize for 5G, offering insights into how users in smaller cities experience the transition from 4G to 5G. Ultimately, the study will contribute to a deeper understanding of 5G's role in reshaping India's digital future.

II. OBJECTIVES OF THE STUDY

- To assess the impact of 5G technology on mobile app performance in Coimbatore
- To evaluate customer satisfaction regarding app speed, responsiveness, and functionality after the adoption of 5G.
- To identify the challenges faced by users while using 5G-enabled apps in Coimbatore

III. RESEARCH METHODOLOGY

Research design

the convenient research design was applied in the research methodology of the study

Source of data

Primary & Secondary data were collected for this study

Sampling Size

The 130 respondents were collected for this study

Tools for analysis

It is carried out in the following ways.

- Simple percentages analysis
- Likert scale analysis

IV. REVIEW OF LITERATURE

Avus Hue (2024)¹, This paper examines why users switch from 4G to 5G, focusing on the role of factors like faster speeds, peer influence, and pricing. The research shows that users are happy with 4G, so the main reason they move to 5G is the pull effect, such as faster speeds and recommendations from others. Carrier promotions haven't been very successful, but peer influence and better pricing could help encourage the shift. It also suggests that slow 4G speeds or poor service might push users toward 5G. Improving network quality and customer service is key for carriers to retain their customers.

Mr. Aayush, A. Gandhi (2024)², Research shows that smartphones have evolved from basic communication tools to essential devices, with 5G technology offering faster speeds and better performance. Consumers expect improved features like camera quality, storage, and battery life, and 5G helps enhance these. Factors like age and income influence purchasing decisions, with younger or wealthier consumers more likely to adopt 5G. However, challenges like the high cost of 5G phones and limited network availability exist. Companies should educate consumers about the benefits of 5G to encourage faster adoption and meet expectations.

V. DATA ANALYSIS AND INTERPRETATION

Table no.1. Table showing age group of the respondents

PARTICULARS	NO OF RESPONDENTS	PERCENTAGE%
Below 25	55	42.3
26-35	41	31.5
36-45	26	20
46-55	7	5.3

55&above	1	0.9
TOTAL	130	100

(Source: Primary Data)

INTERPRETATION- According to table 4.1.1, 42.3% of the respondents are below 25 Age, 31.5% of respondents of the age group 26-35, 20% of respondents of the age group 36-45, 5.3% of respondents of the age group 46-55, 0.9% of respondents of the age group 55&above.

INFERENCE-Majority 42.3% of the respondents are belong to the age group below 25.

Table no .2. Table showing customer’s satisfaction with internet speed after switching to 5g

FACTORS	NO OF RESPONDENTS	LIKERT SCALE	TOTAL (FX)
Highly satisfied	59	5	295
Satisfied	40	4	160
Neutral	28	3	84
Dissatisfied	0	2	0
Highly Dissatisfied	2	1	2
TOTAL	130		100

(Source: Primary Data)

FORMULA- Likert Scale = $\Sigma(\text{FX})/\text{Total no of respondents}$

$$= 541/130$$

$$= 4.16$$

INFERENCE - Likert scale value is 4.16 is higher than the middle value (3), so the respondents are satisfied with 5G Technology

VI. FINDINGS

SIMPLE PERCENTAGE

The majority of respondents (42.3%) are under the age of 25.

LIKERT SCALE

Likert Scale value 4.16 is higher than the middle value (3), so the respondents are satisfied with 5G technology.

VII. SUGESSTIONS

- Affordable Price Plans on Data carries over to the minimum usability costs incurred for using a 5G plan.
- While using 5G, many users complained about draining their batteries. Device manufacturers and network providers should come up with technologies that boost battery efficiency.
- Some raised concerns over sharing data or computer hacking through spam calls/messages. Providing a security shield incorporating privacy issues has therefore been necessary by the providers.

VIII. CONCLUSION

The study reveals that most respondents in Coimbatore are satisfied with 5G technology, particularly appreciating its faster speeds, improved app performance, and smoother streaming experiences. The Likert scale average score of 4.2.6 confirms positive satisfaction levels. However, challenges such as network coverage limitations, battery consumption, and high costs need attention. Overall, 5G has significantly improved user experience, but addressing the identified concerns will further enhance customer satisfaction and encourage wider adoption

IX. REFERENCE

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