



## A study on user's satisfaction of 5g network with special reference to Erode district

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### Abstract

Fifth-generation wireless (5G) is the latest repetition of cellular technology, planned to greatly increase the speed and responsiveness of wireless networks. With 5G, data communicated over wireless broadband connections can travel at multi gigabit speeds, with prospective highest speeds as high as 20 gigabits per second (Gbps) by some estimates. These speeds exceed wire line network speeds and offer latency of below 5 milliseconds (ms) or lower, which is useful for applications that require real-time feedback. 5G will enable a sharp increase in the amount of data transmitted over wireless systems due to more available bandwidth and advanced projection technology. This study is used to know the work and benefit of the network and analyse the usage of networks in India. It conclude that the Usage of network reach widely and it plays a vital role in India

**Keywords:** User's satisfaction, 5g network, Erode district, technology

### Introduction

Previous generations of wireless technology have used lower-frequency bands of spectrum. To offset the challenges relating to distance and snooping with mm Wave, the wireless industry is also seeing the use of a lower-frequency spectrum for 5G networks so network hands could use spectrum they already own to build out their new networks. Lower-frequency spectrum reaches greater distances but has lower speed and capacity than mm Wave. 5G networks and services will be deployed in stages over the next several years to accommodate the increasing reliance on mobile and internet-enabled devices. Overall, 5G is estimated to generate a variety of new applications, uses and business cases as the technology is rolled out.

### Works of 5G

Wireless networks are composed of cell sites divided into sectors that send data through radio waves. Fourth-generation (4G) Long-Term Evolution (LTE) wireless technology provides the foundation for 5G. Unlike 4G, which requires large, high-power cell towers to radiate signals over longer distances, 5G wireless signals are transmitted through large numbers of small cell stations located in places like light poles or building roofs. The use of multiple small cells is necessary because the millimetre wave (mm Wave) spectrum-- the band of spectrum between 30 and 300 gigahertz (Ghz) that 5G relies on to generate high speeds -- can only travel over short distances and is subject to interference from weather and physical obstacles, like buildings or trees.

### Review of literature

1. Kumar and Patil, Studied about the Literature Review of IoT & 5G, in that "The future of human life will be dependent on Internet of Things and 5G, which will transform the devices into intelligent machines. The

purpose of this paper is to give an overview of IoT and 5G. In this paper, all the basic information about IoT and 5G is provided and also that how these technologies can change the perspective of human towards digital world."

2. Nayana & Reka studied about the 5G Technology stands for 5th Generation Mobile technology, in that "5G mobile technology has changed the means to use cell phones within very high bandwidth. 5G technology including camera, MP3 recording, video player, large phone dialling speed, audio player and much more you never imagine. The advanced billing interfaces of 5G technology makes it more attractive and effective. 5G technology also providing subscriber supervision tools for fast action".

### Objectives of the study

- To study the usage of 5G network in India
- To understand the problems faced by the 5G network.
- To find out the factors influencing the customer.

### Source of data

Primary data is used in the study. It is original data for the purpose of collection of primary data, e-questionnaire were filled by the respondents. The e-questionnaire comprises of close ended. The secondary data was collected from various possible records like books, magazines, periodicals and websites.

### Sampling technique

The sampling technique used in this study was convenient sampling.

### Sample size

The study was conducted with a sample size of 50 respondents.

**Area of study**

The study was undertaken in Erode district.

**Research Tools for Analysis**

- Simple percentage method
- Likert scale analysis
- Ranking Analysis

**Limitations**

- Sample size restricted to 50 customers.
- The study was focused only in the Erode district.
- Findings of the study purely depends upon the responses given by respondents

**Data Analysis and Interpretation**

The chapter deals with analysis and interpretation of the study “A Study on Usage of 5G Networks in India”. Based on the data collected, the collected data have been analyzed using the following statistical tools.

**1. Simple Percentage Analysis**

**Table 1:** Factors influencing 5G network

Factors	No. of Respondents	Percentage
Speed	16	32
Greater Capacity	13	26
Price	8	16
Lower Latency	4	8
High Quality Videos	9	18
Total	50	100

Source: Primary Data

In the above table states that, 32% of the respondents are influenced in Speed for using 5G network, 26% of the respondents are influenced in Greater capacity, 16% of the respondents are influenced in Price, 8% of the respondents are influenced in Lower Latency and 18% of the respondents are influenced in High quality Videos. Majority 32% of the respondents are influenced in Speed for using 5G network.

**2. Likert Scale Analysis**

**Table 2:** Satisfaction level of using 5G network

Factors	No. of Respondents	Percentage
Highly Satisfied	14	28
Satisfied	15	30
Neutral	9	18
Dissatisfied	8	16
Highly Dissatisfied	4	8
Total	50	100

Source: Primary Data

With reference to the above table, 28% of respondents were Highly Satisfied for using 5G network, 30% of respondents were Satisfied, 18% of respondents are Neutral and only 16% of respondent are Dissatisfied and 8% of the respondents are Highly Dissatisfied.

Majority (31%) of respondents were Satisfied for using 5G network

**3. Ranking Analysis**

**Table 3:** Problem Faced by users using 5G network

Factors	Score of the Respondents	Rank
Cost	177	2
Security Concerns	93	5
Limited Coverage	135	3
Device Compatibility	226	1
Health concerns	119	4

Source: Primary Data

It is highlighted from the above table, the factor “Device Compatibility” was ranked first with a score of 226 points. It was followed by “Cost” which carries second rank with a score of 177 points. “Limited Coverage” occupies third rank with a score of 135 points. The factor “Health concerns” was ranked in fourth place with a score of 119 and the fifth factor “Security Concerns” with a score of 93 points. It is concluded that from the above analysis, majority of the respondents face Device Compatibility as their main problem.

**Conclusion**

5G is the next evolution in wireless technology. It will allow for high-speed internet, more reliable connections and better connectivity between devices. In India, 5G is expected to help create new jobs as it creates an ecosystem that enables faster adoption of IoT solutions. This can help businesses increase productivity by making it easier for employees to work remotely or work together from different locations around the world. But it is an unreasonably high spectrum pricing, It will result in a financial burden on some users and thus will contribute to challenges in its rollout.

**Reference**

1. International Journal of Engineering Research & Technology (IJERT), ISSN: 2278-0181 Published by, www.ijert.org ICSITS - 2020 Conference Proceedings.
2. International Journal of Current Engineering And Scientific Research (IJCESR), ISSN (PRINT): 2393-8374, (ONLINE): 2394-0697, VOLUME-5, ISSUE-2, 2018  
<https://www.techtarget.com/searchnetworking/definition/5G>