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"A study of rural area towards the growth of Digital India in Post Covid 19 Pandemic"

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Abstract

PURPOSE The Covid-19 pandemic has led to use of digital technologies due to the social distancing norms and nationwide lockdowns. In all the sectors, corona virus propelled the use of digital technologies. Virtual collaboration applications like Zoom and Microsoft Teams have witnessed unprecedented growth in demand and valuations since Covid-19. Work from home and online classes retail accelerated post-Covid landscape suggest that digital companies in India are on the path of displacing their global peers. In this research paper, possible scenarios of the digital changes required and the research needed for the better internet connectivity is required in rural areas.

METHODOLOGY The research under study is a combination of both exploratory and descriptive research design. The exploratory will include techniques like reviewing available literature and data sources. In this research, the data is mainly collected through primary sources. Employees of the IT sector and educational institutions are the major sources of primary data collection. This data has been collected by sending online self-structured questionnaires to employees of five viable IT firms and educational institutions in India. Each sample was selected on the basis of a simple random sampling method.

FINDINGS According to the result, Indian companies as well educational institutes require digital infrastructure and services. have played a pivotal role in our fight against the pandemic, keeping us productive, entertained, educated, safe, informed and sane. However, sustaining and thriving in the 'new normal' will need shifting gears by the digital ecosystem and more infrastructure is required for rural areas for proper productivity like better internet connectivity.

SOCIAL/ PHYSICAL IMPLICATIONS OF STUDY This study can provide some insights to the policy makers that can be helpful for the society in terms of efficient use of our resources.

ORIGINALITY OF STUDY This study is an original research.

Introduction and Literature review

Nowadays, approximately every second citizen in urban people are connected to the Internet, because of the pandemic and work from home and online classes norms, but there are more who cannot connect on the web in the rural areas because of the internet connectivity issues. Basically, a large percentage of upcoming web users will come from rural areas, particularly from those areas which are very much in the interior parts of the country. India has over 10 billion people; approximately 750 million people live in 637,000 villages in rural India with no internet connectivity. From this we can say that the next billion web users could come from rural India. Internet connectivity would allow rural Indians the opportunity to properly work from home and students can conduct online classes.

Rural India's poor infrastructure results in frequent failure of electricity and very low bandwidth with disturbed internet connectivity which are the reasons for poor rural Internet penetration. Internet use, influence the ability of individuals, households and businesses to capitalize on the opportunities presented by the digital economy. Many efforts have been taken to offer better connectivity over the last decade, including setting up shared tele centers, butnone of these efforts has given significant results. Most of the rural India remains unconnected or poor connectivity due to so many reasons like proper wiring system, no proper pole system.

This purpose of this paper is to find the problem suffered by the rural people who have to work from home and students who have to attend the online classes. As a lot off efforts has been made by the internet companies like installed and trialed satellite broadband technology introduced to households in a remote, rural community. There is a lot of digital divide between rural India and urban India

The 'digital divide' has been defined as "the gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard to both their opportunities to access information and communication technologies (ICTs) and to their use of the internet for a wide variety of activities" (OECD, 2001, p5). Much of the digital divide can be seen during this pandemic a period when public and business use the Internet because of lockdown everywhere and people who are from rural areas have to come back to their homes and work from their houses in rural areas and same happened with the students ,they too have to suffer.

Internet Usage in India

Internet in India has driven huge change. Enabled rural people mostly used internet for entertainment, news, financial and academic material. But after covid-19 rural people are using the internet for office work, business work, for official communication through E-Mail, instant messaging, video conferencing and social networking. The internet has helped the rural people to do work but due to the poor connectivity, there is always an interruption in their work.

Broadband Internet Use in Rural India

One of the best usages of the Internet is its ability to provide information about anything in the world quickly and cheaply compared to other broadcasting methods [2]. More sophisticated accessibility may reduce the costs of communication, transaction and other source information. Individuals' insight of products and services would be more accurate when deal with improved information and knowledge.

Internet usage in Rural areas for business

The rural businesses in their study were mainly manufacturing and retailing businesses that would fell into one of a number of e-commerce classifications. Traditional local business that could increase their market range status and sales service through e-commerce, virtual businesses. The businesses that used e-commerce basically reduce marketing inputs and costs; Most of the businesses used e-commerce method because, this would provide an opportunity for better increased profits and improved sustainability. This would help businesses in its product developments, inventory managements, manufacturing methods, marketing and sales techniques, finally in the customer service and relationship. Most of the businesses felt that e-commerce helps to their each and every operation.

Connecting the Rural regions of the India to the Internet has been a topic of significant research, where focushas been enable internet communication technologies particularly in rural areas . It is to make rural people know about knowledge of upcoming trends, business methodologies, and educational information.

RESEARCH METHODOLOGY

Research methodology can be defined as a particular procedure or technique used to identify, select, process and analyses information about a topic. Research methodology helps to evaluate the validity and reliability of the study

A. RESEARCH PROBLEMS

The foremost step in research is formulation of the research problem. A research problem can be defined as a specific issue, contradiction that will be addressed in the research. It will provide a clear purpose and justification to the research. Under this research the main problem is associated with the internet connectivity in rural areas.
1)To what extent employee and students face the problems in accomplishment of work?

2)What are the measures taken by the government and private players for providing connectivity in rural area?

B. TARGET POPULATION

Target population refers to the entire group of individuals who are helpful in achieving the effective results for this study. Employees and students who are living in the rural areas and have to work from home and attend online classes respectively are considered, both male and female are included and 200 employees and 200 students from five viable companies and academic institutes were selected based on the provided selected criterion.

C. RESEARCH DESIGN

The research under study is a combination of both exploratory and descriptive research design. The exploratory will include techniques like reviewing available literature and data sources.
Description design will be used to study the problems faced by employees and students, experience and type of the job and academic course associated with the respondent and draw inference and gain new
insights in research work.

D. DATA COLLECTION TECHNIQUES

In this research, the data is mainly collected through primary sources. Employees of the companies and academic institutes are the major sources of primary data collection. This data has been collected by sending online self-structured questionnaires to employees of five viable companies and academic institutes in India. Each sample was selected on the basis of a simple random sampling method.

Hypotheses

H1: Rural Internet growth is not related to Urban Internet growth.

H2: As Rural Subscriber rate increases, the rural Internet growth also increases.

H3: Rural Internet users mostly face more internet issues than urban area people.
Details of experimentation, analysis, modeling, etc.
Total rural subscribers for internet connection is 302 million in 2019 as per report.
Testing the values in Statistical way

$$r_{xy} = \frac{\sum\limits_{i=1}^{n}(x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum\limits_{i=1}^{n}(x_i - \bar{x})^2 \sum\limits_{i=1}^{n}(y_i - \bar{y})^2}}$$

- Correlation method, Correlation coefficient

Here xi is Rural Subscribers, yi is Urban Subscribers. If we apply our observed values in this formula, we will get -0.50601.

The calculated correlation value of -0.50601 shows us low negative correlation between Rural and Urban suubscribers. That means there is no correlation between them.

•   Similarly correlation between connectivity problem suffered by rural areas and urban area people. Here we get correlationvalue of -0.903.

Results & discussion

Testing Hypotheses

H1: Rural Internet growth is not related to Urban Internet growth.
Correlation value of -0.50601 shows a weak correlation. Hence proving the above, stating that
Rural growthrate is independent of Urban.
H2: As Rural Subscriber rate increases, the rural Internet growth also increases.
Correlation value of 0.884, strongly suggests that Rural internet rate increases with more rural peoplesubscribing to wired connections.
H3: Rural area people faces more problem in connectivity than urban area people.

Based on the correlation analysis done above, we have observed significance between certain variables. This analysis results shows that rural users showing more importance on Internet. As we discussed before in introduction,the internet facility can improve their wealth and health in a proper way. Anyway, there is some lacking in internet development in rural areas. there are various reasons behind not using the internet services rural people. the reasons are lack of knowledge of Internet, lack of infrastructure and beliefs (personal opinions) . Majority of rural people cannot access internet because they do not have an internet connection or a PC at home. Improper   electricity supply
is also a main reason people are unable to access internet? Also if signal strength is improved, more rural people can access through wireless devices.

Conclusion

Rural India is a huge market for the latest technology offerings as India is becoming technologically so developed. India is one of those countries having maximum number of IT Experts. During the pandemic it has been seen that rural India has also face a lot of problems in doing work from home. Bringing the web to rural India could be a driver of immense growth. India's digital advances over the past few years have gained momentum as both the public and private sectors have propelled the country into the forefront of the world's consumers of internet and digital applications. Indian business, too, has embraced digital, albeit unevenly, with adoption   varying   widely   among   companies   and   sectors. Navigating the emerging digital landscape is not easy, but it is one of the golden keys to India's future growth and prosperity. Unlocking the opportunities will be

a challenge for the government, for businesses large and small, and for individual Indians across the subcontinent, and some pain will accompany the gains. But if India can continue its digital growth trajectory and accelerate further, the rewards will be helpful to millions of businesses and hundreds of millions of rural people. As we have analyzed the upward trend in the growth of rural internet access rate, creating rural specific applications will enable greater growth of rural India. Getting the Web to rural India is not just necessary; Internet could be a driver for immense business growth. Indian government as well as IT researchers should recognize this as potential and they should take effort to build applications and good infrastructure to rural India.

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