Original Article
ISSN (Online): 2582-7472

ShodhKosh: Journal of Visual and Performing Arts
April 2024 5(4), 701–707

ESTABLISH THE RELATIONSHIP BETWEEN ECONOMIC GROWTH AND TELECOM GROWTH

Pramit Kumar[1], Dr. Ravindar Prasad Sharma[2]

[1]PhD Student, Kalinga University, Raipur, Chhattisgarh, India.
[2]PhD Guide, Department of Management, Kalinga University, Raipur, Chhattisgarh, India.

ABSTRACT

Although India's cities and metro areas are densely populated, they only account for 30% of the nation's total population. Data from 2012 indicates that India's overall tele-density reached 76.66%. Urban areas boasted a tele-density of 167.46%, while rural regions lagged behind at 32.52%. Trends in both developed and emerging countries reveal that younger generations are more frequent internet users compared to older ones. In emerging economies, 30% of individuals under 25 use the internet, compared to 23% of those aged 25 and above. There also lies a significant opportunity for developing nations to connect schools and increase enrollment rates, considering that 70% of the under-25 population amounting to 1.9 billion people have yet to transition to internet usage. Evaluations concerning whether mergers lower prices, influence competition, improve opportunities in rural areas, as well as long-term versus immediate development, have been examined. The results indicated that service providers shared similar perceptions about the telecom sector's impact on rural areas.

Keywords: Economic, Growth, Telecom, Technology and Communication

Corresponding Author

Pramit Kumar,
pramit.jaishwal@gmail.com

DOI
10.29121/shodhkosh.v5.i4.2024.2546

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

1. INTRODUCTION

All monetary transactions now depend on the constant, global availability of data, which has led to a shift in global economic systems towards information-based systems. The information can now be easily and cheaply exchanged thanks to recent developments in telecommunications technology. Countries and industries have been able to transition towards post-industrial information-based economic systems thanks to advancements in IT and telecoms. In today's interconnected world, developing nations must prioritize the development of their telecommunications infrastructure if they are to keep up with the demands of global markets and experience quicker economic growth. On the contrary, all nations now need sophisticated telecommunications infrastructure in order to prosper in the future. Most producer and consumer services rely on the rapid and extensive use of information, which has been made feasible by recent advances in communications technology. Alleman et al. (1997)

"Telecommunication has emerged as a crucial link in the chain of many communication channels, including television, computers, satellites, etc., and has therefore assumed a position of paramount significance. When it comes to

international trade, one of the key forces pushing globalization forward is advancements in information technology. Numerous causes, including liberalization, globalization, and technical breakthroughs within the realm of information technology, have had a role in the growth of the telecom business. The rise of many developing nations and transition economies has been accelerated by the increased possibilities brought about by the information technology revolution, liberalization, and globalization (Lam and Shiu: 2008). According to J.B. Goddard, " In the next "information economy," telecommunications will play a role similar to that of railroads during the 'industrial economy' era in shaping the distribution of economic opportunities. "and Gillespie (1986).

The importance of telecom services as a tool for a nation's socio-economic development has been acknowledged globally. It is a crucial service for many parts of the economy to modernize and develop quickly. There was a sea change in the Indian telecom business during the previous decade, spurred on by a number of government programmes. At now, the Indian telecom sector ranks second worldwide based on the number of subscribers and has shown to be the fastest-growing in the globe. The expansion of the cellular market is a major factor in the sector's success; monthly customer additions for carriers are about 10-15 million. Over the next five years, the telecom markets across the Asian continent, namely in India and China, are projected to expand at a pace of approximately 16%. In August 2012, 939.57 million people in India were subscribers overall. This brought India's total tele density up to 77.28%.

2. REVIEW OF LITERATURE

Mahmood and Siddiqui (2023) Geographical, economic, and political variations among nations cause scientific studies examining the link between telecommunications and economic growth to produce different conclusions. Using data from a number of Asian nations, he calculated the long-term correlation between telecommunications investment and GDP growth. Using yearly data from 1990–2010 for 23 Asian nations, the research used econometric techniques suggested by Pedroni (1997, 1999) and panel cointegration tests, for example. There seems to be a causal association between investment in telecommunications and economic development, according to the empirical data. Because the telecommunications industry can boost the economy in two ways: first, as a service provider in its own right, and second, by facilitating development in other parts of the economy. Results that are favorable in favor of growth driven by information and communication technologies are used to develop policy recommendations. The relationship between investment in telecom and GDP per capita is positively correlated, not the other way around, according to causality research. It conforms to conventional wisdom, which holds that a country's economy would benefit from investments on the subject of communication and information technologies. Not to mention, the study emphasizes that most Asian countries have been early information and communication technology users. Cointegration data strongly implies that the telecom industry is underutilizing its direct and indirect job-and income-creating and GDP-per-capita-boosting potential. The results show that GDP per capita is not significantly related to telecom investment as rising GDP does not always lead to more spending in that industry.

In 2023, Mphidi The term "e-governance" alludes to the process by which government data is disseminated via the use of ICT. Thanks to e-governance, citizens can see exactly what the government is up to. While in South Africa, Author looked at e-governance's growth and the correlation between e-governance and the digital divide. The data used in the research came from 31 different government websites in South Africa. Various parts of the government agencies' websites have had their content and degree of development examined using content analysis. The results show that many government agencies in South Africa are offering residents access to certain services via their websites. Government agencies are delivering information and services to residents over the Internet and other web facilities, according to the findings. It has been noted that all websites run by government agencies are published on authorized domains. According to the research, the majority of the websites have undergone redesigns and have a similar visual aesthetic. Websites in South Africa are well-designed, according to the survey, thus the country's government is striving to bridge the digital gap. The research suggests that the government should educate the public about the importance of these websites and how to use them to help those who lack the technical skills to access them. This would greatly enhance these efforts. Researchers concluded that in order to create and keep e-governance services running well, it is necessary to hire qualified people. It is also the responsibility of governments to lower the barriers to entry for these services. As a result, the government should provide more resources to e-governance initiatives if they are to realise their goals.
According to Parimalarani (2023), Services, and the banking industry in particular, were able to operate with greater leeway the wake of India's deregulation of its economy strategy of the 1990s. Banks in India have greatly improved the

quality of their services because to the adoption of modern technologies. Online banking, automated teller machines, and mobile banking are becoming more popular ways for clients to access their banks' services. Auther looked into how mobile banking is being used in Bangalore and how well Indian banks are doing in this space. The research spanned the years 2009 to 2012. In order to analyse the data, many statistical approaches were used, including as correlation analysis, average, percentage, growth rate, and conjoint analysis. Research methods include both primary and secondary sources. One hundred bank account holders in Bangalore were surveyed to get primary data. A basic random sample approach was used to choose the respondents. A total of 65 males and 35 females made up the study sample. Nearly half (48) of the respondents used private banks, while the remaining half (52%) used public ones. Out of a total of 100 respondents, 86 were familiar with the concept of mobile banking, while 14 were completely unaware of it. According to the survey, out of 86 respondents, only 62 were really using the mobile banking services. While 55% of Indians have a bank deposit account, Mobile phone prevalence in the nation is much greater, according to statistics data. The number of consumers signing up for mobile banking is rising substantially every month, according to the data. According to the research, some consumers are hesitant to utilise mobile banking services, and many individuals in cities like Bangalore still don't know much about them.

Sikka and Beniwal (2023) An increase in the flow of information and services to stakeholders, including residents and corporations, leads to better government service delivery and better interactions with industry and business. —made possible by information and communications technology, which is also used to reorganize government processes. Auther laid out the possible prospects and difficulties when considering Indian society through the lens of e-government. Research shows that some government agencies are moving towards electronic delivery of services, including MCA12, ACEST, the E-Office, and the Ministry of Corporate Affairs, and the digitization of property records. According to the research, E-governance is bringing about revolutionary changes to the way government works. The government, its people, and other interested parties may reap a plethora of advantages from it. According to the research, many issues in India might be addressed with e-government. including poor governance, poverty, and bureaucratic corruption. In addition, the research suggests that E-Government facilitates interactions between the government and its constituents (e-Citizens and e-Services), enhances the administration of public services (e-Administration), and fosters connections with the outside world (e-Society). Research shows that electronic innovations may increase public participation in policymaking, as well as responsive administration and responsive government. In addition, the research suggested that e-governance implementation faces a number of obstacles, such as cultural and social limits, technological and infrastructure constraints, economic constraints, and privacy and security issues. The research shows that when it comes to providing government services online using ICT, India is still behind the curve.

Sciala and Manenti (2020) Important telecom market regulation is necessary to prevent monopolisation or other forms of market domination by dominant telecom companies that engage in unfair conduct. analysed, via the use of a theoretical classic example of competitiveness, the dynamic between long-standing companies and new entrants providing advanced computer networks. Research shows that access control affects both existing and new business investments and entrance. According to the research, existing businesses often charge new entrants an entrance fee, which forces them to spend more money up front and may have negative effects on society. This is done to discourage entry based on resale without regulation. There may be social inefficiency as a consequence of access control discouraging investments that might increase wellbeing. According to the research, regulating access fees after the fact can be a regulatory failure. Access fee ax-ante regulation, on the other hand, may lessen regulatory failures. In the conclusion, they describe how the operators debate the arrangement conditions in the event of interconnection by extending the model. When compared to the Bill and Keep interconnection regime—in which, for facility-based entrants, the incumbent and entrant join their infrastructure—the research finds that access restriction is less harmful to social welfare.

3. RESEARCH METHODOLOGY

Various telecom business platforms in India are mapped out in this study, which also includes the tactics of telecom businesses operating in the country. How much money companies put in, what rules they followed, and which market niches they served. In order to gather data, researchers used a standardized questionnaire to survey adult household heads and other household members in rural communities chosen at random from the aforementioned villages. Telephone users in rural areas (both landline and mobile) made up the sample unit. More than 1200 people were

approached in different places to fill out the survey, but only 568 really did so. We have used the t-test and to test our theories, we used analysis of variance (ANOVA) on continuous data and the chi-square test on categorical variables.

4. DATA ANALYSIS

ANALYSIS AND INTERPRETATION OF SECONDARY DATA

Although there are many sources, we encountered small variables in the recordings when scanning and comparing similar compilations. Whenever possible, we used submissions from more serious sources, such as those offered for review by parliament, to ensure that the data for the movement of progress in this area was accurate. The topic of communication reach and spread to rural areas has been a frontrunner in many government "TO DO" programmes. Primary sources for secondary data include the TRAI website; for GDP growth, the databook for DCH from affiliated with the Indian government's Ministry of Agriculture and the Central Statistical Organisation (CSO), is a good resource (page 33 out of 189, 1st November 2011).

When feasible, we check and evaluate data from many sources to ensure its correctness.

5. DESCRIPTIVE ANALYSIS OF SECONDARY DATA

Significant changes to the telecommunications industry have taken place under the new economic framework, starting with the NTP-1994 and continuing through the NTP-1999. Due to a multitude of government programmes, the Indian telecom industry saw significant changes in the recent decade, luring private operators and a large amount of investment from outside the country. Injecting much-needed capital from outside, or FDI, strengthened the foundational telecom network and infrastructure; this was especially important for rural India's uncharted regions, where telecommunications services had not yet reached. Reduced telecommunications service prices were one of the advantages made available by the funding's development of infrastructure and acquisition of modern technologies, which in turn enabled data transmission, market access, and improved Organizational abilities, among others

Consumers reaped the benefits of more competition in the market, lower prices for telecommunications services, and better data quality, thanks to investment from outside the country and the decision to put the sector up to privatization. Although the appeal of developed and densely populated urban areas, which are prone to lap up new goodies as the business matures and becomes more viable, the magic of enormous scaling in a country with a huge human resource and an affordable business model swiftly gathered the momentum of growth required. Figure 1 and Figure 2 show the FDI and private network growth rates, respectively.

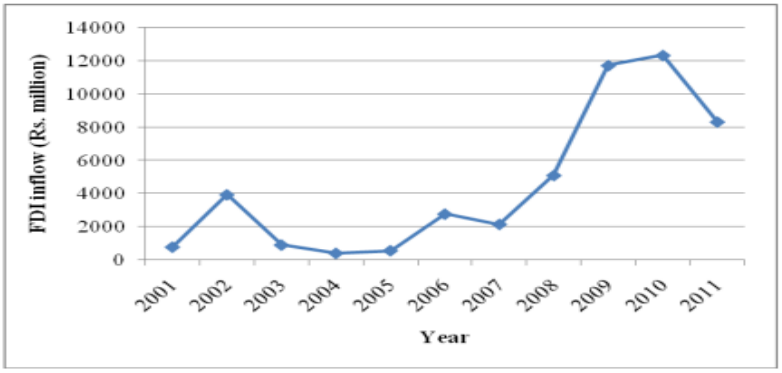

Figure 1 Pattern of FDI inflow in telecom sector (in millions)

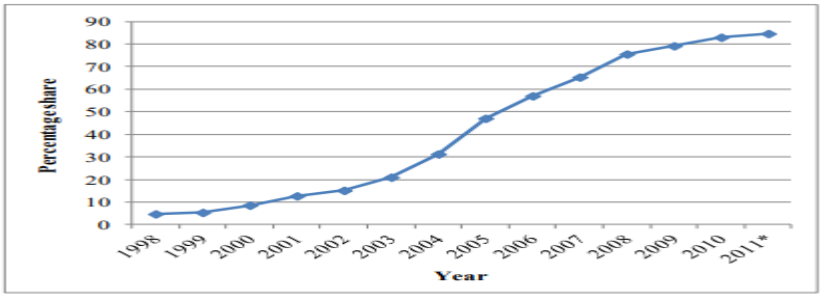

Figure 2 Growth of private telecom network (1998-2011)

A dramatic expand the pool of those who can afford a telephone occurred as a result of technological advancements that allowed for the provision of wireless connections with significantly less investment in infrastructure. This tremendous surge in population with telephones ushered in new competition within the phone industry, which in turn reduced the cost of call charges and mobile sets, further expanding the subscriber base. Figure 3 shows the increase of subscribers over the last ten years (2000–2010).

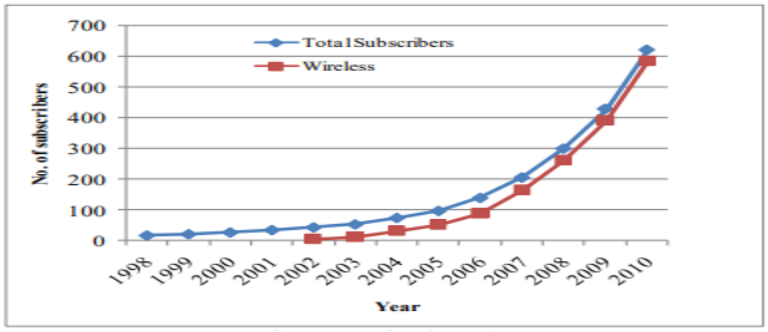

Figure 3 Growth of Subscribers from 1998 to 2010 (in millions)

The Drop in call charges due to increased business and stiffer competition has brought about significant increase in the subscriber base this make for the cycle to thin operatingmargins in exchange for scale.

The increase in Subscribers base with drop in call charges is depicted in Figure 4

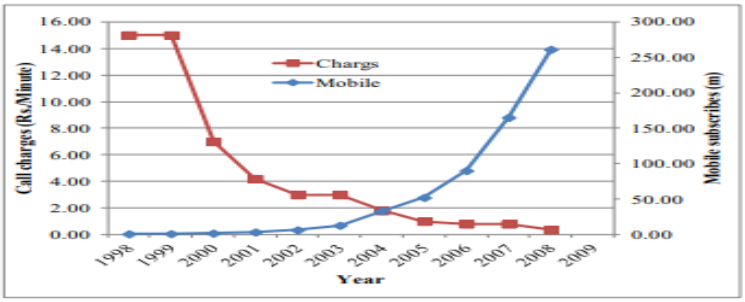

Figure 4 Growth of mobile subscribers Vs call charges

When India first gained its freedom, tele-density was low and only metropolitan regions had access to telecommunication services. Limited resources and inadequate infrastructure were to blame. Despite almost nonexistent density in rural regions, tele-density was 0.37 in 1980, 0.80 in 1990, and 2.89 in 2000. With the expansion of the market and the saturation of cities, the trend ought to have improved. Regardless of the saturation in urban regions, the growth graphs below show that private firms are hesitant to join the rural sector.

The graph shows that rural regions' teledensity has been steadily rising, but urban areas' comparative growth has been much quicker, which has exacerbated the digital divide and made rural areas less equipped to expand economically at the same pace as urban ones.

The comparative growth of tele-density is given in Figure 5.

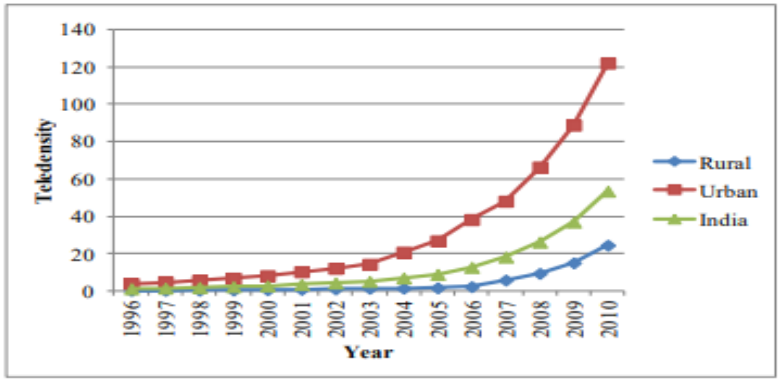

Figure 5 Comparative growth of Tele-density* in India

6. CONCLUSIONS

Despite rapid advancements in mobile communication technology, several strategies for expanding this industry in rural regions have failed to materialize. Because private companies are seeing a return on their investments, they now make up a large portion of the service providers, and this has led to much faster sector development in metropolitan regions. While city markets are almost saturated, rural regions are seeing rapid expansion and offer vast untapped economic opportunities. Thus, the research limited the parameters of mobile spending based on customer demographics, economic indicators, and use characteristics. The telecom budget was unrelated to factors including gender, education level, and employment.

CONFLICT OF INTERESTS

None.

ACKNOWLEDGMENTS

None.

REFERENCES

Mahmood, B. and W. Siddiqui (2023). "What Causes What? Panel Cointegration Approach on Investment in Telecommunication and Economic Growth: Case of Asian Countries, *The Romanian Economic Journal*, XVI no. 47

Mphidi, H. (2023). "Digital Divide and e-governance in South Africa" *Research, Innovation and Partnerships*, Tshwane University of Technology, RSA.

Parimalarani, G. (2023). "Digital Inclusion in India: A case of Mobile Banking", *International Conference on Technology and Business Management*, March 18-20, Business Academy, Bangalore.

Sikka, K. and V. S. Beniwal. (2023). "E-Governance in India: Prospects and Challenges", *International Journal of Computer & Communication Technology*, Volume-4, Issue-3.

Manenti, F. M. (2021). "The Demand for International Telecommunications in Italy, *Department of Economics*, University ofPadua, Italy.

Nair, P. (2017). "Information and Communication Technology for Improving Quality of Health Practices", *Ethno-Med*., vol.1, Uttar Pradesh

Nagar, A. L., S. R. Basu (2022).'Weighting Socio-Economic Indicators of Human Development: A Latent Variable Approach', Handbook of Applied Econometrics and Statistical Inference, Ullah A. et al. (eds.), Marcel Dekker, New York.

Narayna (2020). "Substitutability between Mobile and Fixed Telephones: Evidence and Implications for India", *Review Of Urban and Regional Development Studies*, Vol. 22, No. 1, March.

Norton, S. (2012). "Transactions Costs, Telecommunications, and the Microeconomics of Macroeconomic Growth" *Economic Development and Cultural Change*, 41:1, pp. 175–196.

Obricom(2013). "Monitoring the Digital Divide and Beyond".

Ogbaji, E.O. and S. H. Chia (2023). "Impact of Foreign Direct Investment on Telecommunication Sector on Nigerian Economy, *International Journal of Modern Social Sciences*, 2(3), pp. 195-215.

Oji-Okoro, Izuchukwu (2018). "Relationship between FDI and Telecommunication Growth in Nigeria, *Proceedings of the 7th International Conference on Innovation & Management.* China.

Olalekan, O. D. (2022). "Investment in Telecommunication and Economic Growth in Nigeria: The Granger Causality Approach", *Advances in Arts, Social Sciences and Education research*, Volume: 2(9), September, Science and Education Development Institute, pp.309-321.

Olatokun, W. (2022). "Determinants of Users Choice of Mobile Service Providers: Evidence from Nigerian Telecommunications Market. *Africa Journal of Computer and ICT*, Vol. 5, No. 4 1-14.

Osotimehin, K.O., E.Y. Akinkoye, O.O. Olasanmi, (2020).The Effects of Investment in Telecommunications Infrastructure on Economic Growth in Nigeria, *Oxford Business and Economics Conference Program.*