

A STUDY ON TECHNOLOGICAL ASPECTS FOR RURAL DEVELOPMENT IN INDIA

*Bibhuti Bhusan Rath

**Dr. Navdeep

Paper Received: 14.12.2021 / **Paper Accepted:** 12.01.2022 / **Paper Published:** 15.01.2022

Corresponding Author: Bibhuti Bhusan Rath; doi:10.46360/cosmos.et.620212023

Abstract

The development of rural areas in India is a complex task that necessitates a comprehensive approach incorporating many technology solutions. This abstract examines the essential role that technology plays in improving the socio-economic conditions of rural India. The implementation of information and communication technology (ICT), digital banking, agricultural advances, renewable energy, and e-governance are crucial in the process of modernizing rural communities. Information and Communication Technology (ICT) enables improved accessibility to information, education, and healthcare services, hence reducing the gap between urban and rural areas. Digital banking facilitates financial inclusion by providing secure and efficient transactions, ultimately empowering rural populations economically. The implementation of agricultural technologies, such as precision farming and mobile-based advising services, improves both production and sustainability in the agricultural sector. Renewable energy options, such as solar and biogas, offer dependable sources of power, decreasing reliance on traditional fuels and advocating for environmental sustainability. E-governance efforts optimize administrative procedures, enhance transparency, and guarantee efficient implementation of government programs.

Keywords: Rural Development, Technological, ICT.

Introduction

Policymakers in India have prioritized rural development due to the substantial rural population residing in the country. Despite the implementation of multiple efforts throughout the years, rural regions frequently fall behind urban areas in terms of economic development, infrastructure, education, and healthcare. Nevertheless, the emergence of technology presents an opportunity to significantly reduce the gap between urban and rural areas and expedite the progress of rural development.

The application of advanced technology in several industries has the potential to completely transform rural areas by increasing efficiency, providing access to vital services, and promoting sustainable development. ICT plays a crucial part in this shift by granting rural populations access to information, educational resources, and telemedicine services, thus enhancing literacy rates and healthcare outcomes. The use of digital banking and fintech advancements is promoting financial inclusion, facilitating secure and streamlined transactions, and empowering rural people economically. Technology has greatly enhanced the agriculture sector by introducing precision farming, mobile-based advising services, and the utilization of drones for crop monitoring. These advancements contribute to the enhancement of agricultural output, guarantee the optimal utilization of resources, and foster the principles of the sustainability. Renewable energy

options, such as solar power and biogas, are meeting the energy requirements of rural communities, diminishing reliance on non-renewable sources, and promoting environmental sustainability.

In addition, e-governance projects are optimizing administrative procedures, improving transparency, and guaranteeing the efficient provision of government programs and services. These technological solutions enhance governance and empower rural residents by increasing accessibility to information and services.

Notwithstanding these progressions, there are still other obstacles, such as limited knowledge and skills in using digital technology, inadequate infrastructure, and socio-economic factors that impede the mainstream use of technology in rural regions. Tackling these difficulties necessitates a collaborative endeavor from the government, commercial sector, and civil society to establish a conducive atmosphere for the acceptance and advancement of technology.

Ultimately, technology is the crucial factor in fully realizing the potential of rural development in India. India may attain comprehensive and enduring development by utilizing the potential of technical breakthroughs, therefore guaranteeing that rural areas are not excluded from the path towards progress as well as wealth. Integrating technology

*Research Scholar, Kalinga University, Naya Raipur, Chhattisgarh, India.

** Supervisor, Kalinga University, Naya Raipur, Chhattisgarh, India.

strategically into rural development programs is crucial for narrowing developmental disparities and fostering a fair and prosperous rural India.

Literature Review

Satinder et al., (2015) Over the most recent couple of years, there had been tremendous development of remote innovation in India. This development has changed individuals to work together in versatile trade (M-Commerce). Step by step numerous people groups are exchanging to M-Commerce to accomplish great and quick exchange into advertise. M-Commerce end up recognized in Indian individuals, rapidly amid most recent couple of years. Because of vast number of versatile application, development rate in portable entrance in India is expanding step by step. The clients has strongly expanded on cell phone and devouring data transfer capacity of web suppliers. Albeit numerous individuals have begun E-Commerce yet at the same time they delay to utilize M-Commerce in light of security issues, installment issues and many-sided quality of portable applications. This study recognizes certainties about the achievability of M-Commerce in India today its development and the Strength and opportunity, shortcoming and dangers lying ahead [8, 9, 10].

Saurabh Anand et al., (2015) In India, Agriculture is thought to be an essential occupation for a most portion of populace. We mean to center around key components found for powerful usage of Information Communication Technology for agrarian lift up, at any rate at first glance, with steady of confirmation thus. E-Agriculture is a rising field concentrating on the change of country and farming improvement through cutting edge data and correspondence forms. Some current issues talked about with farming and country improvement. The advancement of agribusiness has been on being worked on for as far back as couple of years because of absence of Agriculture information and ecological changes. The primary point of this study is to achieve ranchers for their mindfulness, utilization and recognition in e-Agriculture. E-Agriculture is a stage for supporting promoting of farming items. The degree related to recovery of credit stream as farming during about 2000s had far less great without a sharp development in roundabout back to horticulture. Around 33% of the expansion in credit stream to agribusiness somewhere in the range of 2000 and 2006 was by virtue of the expansion in roundabout fund [4, 5, 6].

Analysis

Administration of experimental investigation and Innovation accepts a huge occupation in progression of science and advancement in the country. The divide has wide expanding practices running from advancing top of the line essential innovative work

of front-line advancements on only one hand to service the mechanical essentials of the fundamental man through progress of fitting capacities and advances on the other. Legitimate country innovation centers fundamentally around those advancements which are basic and inside the span of the normal individuals for their very own advantage and the advantage of their locale and saddle the neighborhood or local ability to address nearby issues without expanding reliance on outside variables. An extensive numeral of governments, unlocked and personal non-government affiliations are engaged with creating advances for rural areas. Be that as it may, these innovations have barely contacted the existences of the provincial people. Evidently, the issue lies not simply in the age, dispersal and apportionment of headways yet moreover in helpless documentation. As of late, endeavors have been made by a couple of affiliations like NRDC, CAPART, TRCS, NIRD, DST, DBT, CSIR, ICAR, KVKs and another deliberate association and so on to draw out an abridgment of innovations for country regions for wider information dispersing and unlocked mindfulness. A small record of developments which are ease, vitality productive and condition agreeable just as suitable and manageable for request in rural areas is gotten.

Government plans zeroing in on science and machinery are:

S&T Application for Rural Development (STARD): Targets working with improvement of promising S&T based field gatherings and imaginative advances identified with rustic turn of events.

S&T for Women: To advance exploration, improvement and variation of innovation, progress the living, employed control and openings for profitable work of ladies particularly in country regions.

S&T Application for Weaker Sections (STAWS): Focused on the advancement of monetarily more fragile segments of the general public in provincial and metropolitan regions.

Tribal Sub-Plan: Targets progress day to day environments of planned clan's dependent on supportable science and innovation exercises.

Special Component Plan (SCP): Targets progress the parcel of the helpless segments of SC people group through intercession of science and innovation.

The incorporation of technology into rural development facilitates the establishment of fresh employment prospects, promoting the growth of entrepreneurship and the enhancement of skills among young individuals residing in rural areas. Additionally, it supports the enhancement of rural infrastructure, encompassing transportation, water

supply, and sanitation. In order to fully capitalize on the advantages of technology breakthroughs, it is crucial to tackle obstacles such as digital literacy, inadequate infrastructure, and socio-economic barriers, despite the progress made so far.

Utilizing technology for rural development in India presents significant opportunities for economic expansion, reduction of poverty, and enhancement of living standards. Strategic allocation of resources in technological advancements, along with favorable policies and active involvement of the community, are crucial for promoting sustainable development in rural areas. By fully embracing technological solutions, we may effectively address developmental disparities and promote inclusivity and progress in rural India.

Conclusion

The incorporation of technology into rural development in India has great potential to revolutionize the socio-economic structure of rural areas. Technological progress in various fields like agriculture, finance, healthcare, education, and governance plays a crucial role in reducing the gap between urban and rural areas and promoting inclusive economic development.

ICT has become an essential instrument for granting rural populations access to crucial information, educational resources, and healthcare services, thereby greatly enhancing their quality of life. Technological advancements in banking are promoting financial inclusivity by facilitating secure and efficient financial transactions for rural populations, thereby empowering them economically.

Agricultural technologies such as precision farming, mobile-based advice services, and drone technology are improving production and encouraging the use of sustainable farming methods. Renewable energy options, such as solar and biogas, are effectively meeting the energy requirements of rural regions, diminishing reliance on traditional fuels, and actively promoting environmental sustainability.

E-governance projects are optimizing administrative procedures, promoting transparency, and guaranteeing the efficient provision of government programs and services, ultimately strengthening governance and empowering rural residents.

Nevertheless, in order to fully use the capabilities of these technical breakthroughs, it is imperative to tackle various problems. These factors encompass the enhancement of digital literacy, the improvement of infrastructure, and the resolution of socio-economic obstacles that hinder the adoption of technology in rural regions. The establishment of an

enabling environment for technological innovation and adoption necessitates a collaborative endeavor among the government, corporate sector, and civil society.

The deliberate incorporation of technology into rural development is essential for attaining sustained and all-encompassing progress in India. By using technology innovations, India can ensure that rural areas are not marginalized, hence fostering a more equal and successful society. The key to the future of rural development in India lies in the efficient utilization of technology to propel advancement, narrow developmental disparities, and empower rural communities.

Conflict of Interest

There is no conflict of interest by the authors in this manuscript.

References

1. Jayant, K. P. (2018). Impact of agriculture and FDI inflows in different sectors. *Globus: An International Journal of Management & IT*, 10(1), 1-3.
2. Darshine (2018). Long-run relationship between education and economic growth: Evidence from Nigeria. *International Journal of Humanities and Social Science*, 1(14), 123-128.
3. Bhatt, K. N. (2018). Industrial disparities in India: A test of convergence India. *Journal of Regional Science*, 31(1), 90-100.
4. Biswas (2017). Regional development in Andhra Pradesh: A district level analysis. *Indian Journal of Regional Science*, 31(2), 90-112.
5. Singh, S. (2017). Indebtedness among farmers in Punjab. *Economic and Political Weekly*, 43(26), 130-136.
6. Mishra, S. K. (2017). Income distribution, development and foreign trade: A cross sectional analysis. *European Economic Review*, 34(7), 90-102.
7. Kumar, P. (2009). Convergence of rural marketing strategies and trends in developing economies. *Globus: An International Journal of Management & IT*, 1(1), 61-66.
8. Krishna, A. R., & Kumar, S. (2017). Location information leaks from apps and web browsing. *Cosmos Journal of Engineering & Technology*, 7(1), 1-4.
9. Agarwal, N., Kumar, P., & Mishra, S. (2010). Need to acquire democratic competency by teacher educators in global scenario. *Maa Omwati Journal of Education Research & Development*, 1(1), 0976-1365.
10. Naveen, & Agarwal, N. (2016). Social media & academic performances: An empirical analysis. *Cosmos: An International Journal of Art & Higher Education*, 5(2), 5-7.

11. Yadav, A., & Dwivedi, P. K. (2016). Model based on the utilization of utilitarian documentation. *Cosmos: An International Journal of Management*, 5(2), 1-3.
12. Kaila, R. P., & Singhal, S. (2014). A study on the Indian mutual fund industry. *Globus: An International Journal of Management & IT*, 6(1), 12-14.
13. Agarwal, N. (2018). A Study of Innovations in Instructional Strategies and Designs for Quality Enrichment in Higher Education. *Cosmos An International Journal of Art & Higher Education*, 7(2), 01-23.
14. Praveen, M. (2011). Learning as a generative process. *Globus Journal of Progressive Education*, 1(1), 1-7.
15. Rao, C. R. K., & Raja, C. (2018). Mutual fund industry and market scenario of India. *Globus: An International Journal of Management & IT*, 9(2), 1-3.
16. Agarwal, N. (2008). *Enterprises Information Systems & Technology*. Excel Publishers.
17. Nautiyal, A. (2015). Role of life insurance in India. *Cosmos: An International Journal of Management*, 5(1), 1-3.