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Application of E-Commerce in Rural India: A Case Study of Rural Entrepreneurs From Palghar District.

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ABSTRACT: Rural areas often have limited access to various goods and services due to geographical constraints and distance from urban centres. E-commerce platforms can be used to market and sell agricultural products and rural goods, connecting farmers and artisans directly to consumers. This can eliminate intermediaries and increase farmers' income. A parametric one-sample Wilcoxon signed rank test is used. The purpose of conducting this research is to evaluate the application of e-commerce in rural India with special reference to Palghar district. The study's outcome indicated that Access to a wide range of products has low application. In contrast, Access to a wider market, Diversification of products, overcoming geographic barriers, Employment opportunities, Empowering women entrepreneurs, Empowering women entrepreneurs, Support for agriculture and local products, Community Development, Digital Skills Development, evolving infrastructure, Skill development and tourism promotion have high application.

KEYWORDS: E-commerce, quantitative study, one sample Wilcoxon signed rank test.

I. INTRODUCTION

They were long regarded as the foundation of economic development and entrepreneurship. It is widely acknowledged that an area's economic growth rate is significantly influenced by the degree of entrepreneurship. It is no longer true that business owners are born; it is now widely accepted that business owners can be fostered and developed with the correct courses, including entrepreneurship development programmes. Entrepreneurship is a massive worldwide phenomenon that draws millions of experts, politicians, and social workers. Over the past century, entrepreneurship has been more common in industrialised nations and has long been regarded as the foundation of economic development, entrepreneurship. It is widely acknowledged that an area's economic growth rate is significantly influenced by the degree of entrepreneurship. It is no longer true that business owners are born; it is now widely accepted that business owners can be fostered and developed with the correct courses, including entrepreneurship development programmes. Entrepreneurship is a massive worldwide phenomenon that draws millions of experts, politicians, and social workers. Over the past century, entrepreneurship has been more common in industrialised nations. Additionally, both individuals and organisations agree that supporting rural businesses is crucial. Development organisations see rural entrepreneurship as having a large employment potential; politicians see it as the main strategy to quell rural unrest; farmers see it as a way to boost farm income; and women see it as a nearby job option that offers autonomy, independence, and a reduced need for social support. However, entrepreneurship offers each group a means of improving living standards for people, families, and communities while sustaining a sound economy and environment. (Aggarwal, 2018). Rural enterprise and rural entrepreneurial development (RED), as a unique framework and conceptualisation of development in rural areas in the Indian context, have not been a priority area in contrast to the fight against poverty, which has been an ongoing national goal of the government and growth-oriented institutions ever since India gained independence (Sanjeev Kumar, 2005). Several development programmes have been put in place to boost employment and income for those living in rural areas (Maheshwari, 1994). As the primary sector that employs most rural people, agriculture was given great attention in the planning (Sharma et al., 2004). The authorities have



focused on the associated industries, according to Rao (1984), since they, too, offer good potential for producing more income. (Aggarwal, 2018).

Due to its unequalled access to a wide variety of products and services, e-commerce has the potential to alter how business is conducted in rural India fundamentally. With the ease of internet buying, people in remote areas may get around geographic restrictions and browse a huge market without physically driving there. This saves time and effort and gives small enterprises and rural entrepreneurs a chance to reach new markets and increase their clientele. E-commerce platforms also allow farmers to sell directly to consumers, avoiding intermediaries and securing fair pricing for their agricultural products. This enhances the agricultural value chain, reduces post-harvest losses, ensures stronger market integration, and gives farmers greater economic leverage. E-commerce has the potential to significantly alter rural India, spurring economic growth, creating jobs, and enhancing the general standard of living for rural populations. This is possible by promoting digital literacy, enhancing logistical infrastructure, and addressing connection issues. The goal of this study on the use of e-commerce in rural India, with an emphasis on rural business owners in the Palghar district, is to understand how e-commerce is used in rural regions and its effects on rural business owners.

II. REVIEW OF LITERATURE

1. **Gupta, R., & Sharma, P. K. (2018).** This study examines the possibilities and barriers for online consumers to access the rural agricultural market in India and the potential of online shopping (or e-commerce) to address these fundamental problems and support rural Indian agribusinesses. The scope, potential, challenges, benefits, and uptake of online shopping in Indian agriculture are also discussed. Using Internet technologies, businesses may boost output, cut costs and cycle times, and provide customers with more information, choices, and value. In India's agriculture industry, e-commerce has just lately gained traction. Farmers are not given enough or fast credit, guidance, or assistance from the agricultural department about agri input costs. Lack of knowledge of government subsidy programmes for agricultural supplies among rural poor people, especially among farmers who lack literacy. A lack of sufficient agribusiness and agriclinc facilities across the country prevents farmers from having timely access to agricultural input at reasonable prices. Inputs for farmers, such as biofertilisers, superior seeds, organic certificates, etc. are not offered. Inadequate transportation infrastructure and high costs. The insecurity of inputs, the lack of storage space, and the changing cost of agricultural inputs.
2. **Delima, R. et al. (2018).** Agriculture e-Commerce is a platform for purchasing and selling some agricultural goods. To support market expansion and economic progress, agriculture e-commerce is essential for rural inhabitants in general and farmers in particular. There are few possibilities for buying and selling agricultural products for farmers and the people representing them. This study has led to the development of specialist agricultural internet commerce. The two essential elements of farm e-commerce are the buying and purchasing modules. We know that this post's initial module will be the buying module. The purchase module was developed using a "Dynamic System Development Method (DSDM)" technique. Models are iterated during the development process in the following ways: "design and construct, functional, business, and feasibility studies". The study's outcome is a prototype for an agricultural e-commerce product with specified features. In the system's purchasing component, farmers can buy supplies and machinery. This system's two primary functions are the management of the reporting system and the buying system. In order to assess the system, system testing was also carried out.
3. **Shemi, A.P. and Procter, C. (2018).** The adoption of e-commerce by small and medium-sized businesses (SMEs) has been extensively researched in developed and developing countries. The introduction of mobile devices and social media networks (SMNs), such as Facebook, has drastically changed how SMEs adopt e-commerce. Research in this area is still in its early stages, and little is known about how SMEs in poor countries apply and utilise this phenomenon. This study aims to define SMN-based e-commerce entrepreneurship in SMEs and elucidate the conception and application of this e-commerce innovation. The



company manager was surveyed face-to-face in partially structured and unstructured interviews as the primary technique for obtaining comprehensive data for the study. The research reveals a socially constructed feature of e-commerce entrepreneurship that depends on myBot's management's inventive use of Facebook and email to increase sales through its target audience. Entrepreneurship in e-commerce on Facebook was fueled by trust, commitment, and creativity.

4. **Aggarwal, A. K. (2018).** The paper emphasises the significance of understanding the theoretical framework for rural entrepreneurship development, the expanding entrepreneur eco-system, rural entrepreneurs, and the growth of micro and small village companies. Rural businesses work in a sector that is undergoing rapid and intensive transformation. Even though it is considered one of the major factors promoting rural economic growth, there is little empirical research on rural entrepreneurship, and it is mostly unexplored. Governments and several organisations that support and grow industries are making much effort to promote the emergence of new entrepreneurs who will start small businesses. These efforts involved creating alluring strategies for the accessibility of funding and several other tools, including technical know-how, training, earnings, purchasing, etc. The growth of these small- and micro-scale firms in the State and its surroundings is seen to have benefited from these initiatives. The authors also hold that India might generate further economic growth by fostering entrepreneurship inside its rural borders, particularly within its growing rural middle class. It has been demonstrated that entrepreneurship brings significant economic benefits in various nations. India, in particular has reached a developmental level where it can obtain comparable results through entrepreneurial endeavours.

Objective of the Study: To evaluate the application of e-commerce among entrepreneurs in rural areas with special reference to Palghar district.

Hypothesis:

Ho: The application of e-commerce in rural areas (Palghar district) is insignificant. (Mean score ≤ 3)

H1: The application of e-commerce in rural areas (Palghar district) is significant. (Mean score > 3)

Research Methodology:

Descriptive research design is used for the current study. The sample size selected for the study is 65 rural entrepreneurs. The sampling technique used for the current study is non-probability purposive sampling. Both primary and secondary data collection sources have been used. Non - parametric one-sample Wilcoxon signed ranked test has been used using R studio software.

Demographic Profile of Palghar District:

On August 1st, 2014, a portion of Thane District's largest urban sea-hill was divided, creating Palghar, Maharashtra's 36th new district. The population of Palghar District is around 29,95,428 people. Jawhar, Mokhada, Talasari, Vasai, Vikramgad, Palghar, Dahanu, and Wada are the district's eight talukas in total. Palghar District contains 467 gram panchayats, 1007 villages, and 4,69,699 hectares of the total geographical area. The literacy rate in District is 66.65%. The literacy rate for men is 72.23% and for women it is 59.28%. Palghar has a 112 KM long coastline. Palghar is graced by the stunning Arabian Sea beaches on the west and the Sahyadri Hills on the east, both of which draw tourists. The forts of Vasai, Arnala, Gambhirgad, Tarapur, Kaldurg, Kelva, Kamandurg, and Shirgaon are located in the Palghar district. The district's spiritual treasures include the Jivdani Temple in Vasai and the Mahalaxmi Temple in Dahanu. The Palghar district is tri-ethnic. The tribal cultural legacy includes Tarpa dance and Varali paintings. In the Dahanu tahsil, Gholwad is well known for producing chiku. (<https://palghar.gov.in/en/>)



Data Analysis and Interpretation:

Table No 1 - One sample Wilcoxon signed ranked

Application of e-commerce in rural areas among the entrepreneur	Null hypothesis	Obs Median	P – value	Results
Access to a wider market	The median of Access to a wider market equals 3	4	0.000	Rejected (High application)
Diversification of product	The median Diversification of the product equals 3	4	0.000	Rejected (High application)
Overcoming geographic barriers	The median of Overcoming geographic barriers equals 3	4	0.000	Rejected (High application)
Employment opportunities	The median of Employment opportunities equals 3	4	0.013	Rejected (High Application)
Empowering women entrepreneur	The median of Empowering women entrepreneurs equals 3	4	0.000	Rejected (High application)
Economic Growth and Poverty Reduction	The median of Economic Growth and Poverty Reduction equals 3	4	0.000	Rejected (High application)
Support for agriculture and local product	The median of Support for agriculture and local product equals 3	4	0.000	Rejected (High application)
Community Development	The median of Community Development equals 3	4	0.000	Rejected (High application)
Digital Skills Development	The median of Digital Skills Development equals 3	4	0.000	Rejected (High application)



Evolving infrastructure	The median of Evolving infrastructure equals 3	3	0.061	Accepted (Low Application)
Access to a wide range of product	The median of Access to a wide range of product equals 3	4	0.000	Rejected (High application)
Skill development	The median of Skill development equals 3	4	0.000	Rejected (High application)
Tourism promotion	The median of Tourism promotion equals 3	4	0.000	Rejected (High application)

Non - parametric one sample Wilcoxon signed ranked test is applied to evaluate the application of E-commerce in rural areas with special reference to Palghar District extracted through the exploratory research. It is seen that p-value < 0.05 and t-test statistics > 1.96 for Access to a wide range of products has low application. In contrast, Access to a wider market, Diversification of products, overcoming geographic barriers, Employment opportunities, Empowering women entrepreneurs, Empowering women entrepreneur, Support for agriculture and local products, Community Development, Digital Skills Development, evolving infrastructure, Skill development and tourism promotion have high application.

Findings and Recommendation:

- Access to a large variety of items shows poor application in rural locations. However, several crucial features of e-commerce show significant application in rural areas such as Access to a larger market., Product variety., Removal of geographical restrictions, Job possibilities., Empowerment of female entrepreneurs.
- E-commerce plays a vital role in promoting and maintaining local industries, supporting agricultural and locally produced goods, which can strengthen rural economies.
- E-commerce fosters stronger ties between rural areas and the digital world through community development.
- E-commerce contributes to overall infrastructure development and digital skills development in rural communities, leading to general growth and creating opportunities for local talent and enterprise.
- E-commerce has a positive effect on tourism marketing by providing better market access and exposure for rural goods and services, thus promoting rural tourism development and strengthening local economies.

The following recommendations can be taken into consideration towards application of e-commerce among entrepreneurs in rural areas.

- Encouraging rural entrepreneurs to diversify their products to access a broader market through e-commerce.
- Providing ongoing training in digital skills to empower entrepreneurs to utilize e-commerce effectively.
- Investing in continuous improvements in internet connectivity and logistics to support e-commerce in rural areas.
- Creating and maintaining platforms to promote and sell local agricultural and handmade products online.
- Continuously offering targeted programs and support for women entrepreneurs to participate in e-commerce.
- Utilizing e-commerce as an ongoing strategy to promote rural tourism and related businesses.



- Encouraging continuous collaboration among rural entrepreneurs to collectively engage in e-commerce ventures.
- Continuously providing incentives like tax breaks or grants to encourage e-commerce adoption in rural areas.
- Ensuring that e-commerce platforms consistently respect local language and culture to bridge the digital divide.
- Continuously educating entrepreneurs about data security and privacy best practices.

By implementing these recommendations, rural entrepreneurs can overcome barriers and benefit from the opportunities that e-commerce offers for economic growth and community development.

III. CONCLUSION

In conclusion, there is no one-size-fits-all approach to applying e-commerce to rural communities. While certain elements, like easy access to a variety of goods, might only be useful in particular situations, the many beneficial effects, including encouraging skill development and entrepreneurship, show its potential as a rural development catalyst. In order to assist the adoption of E-commerce in rural regions while resolving any obstacles that could stand in the way of its implementation, policymakers, stakeholders, and communities must be aware of and seize these opportunities. By doing this, we may fully utilise e-commerce to promote sustainable growth and prosperity in rural areas.

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