The Impact of New Media Use and Communication on Rural Revitalization in Poverty-stricken Areas of China under Diffusion of Innovations

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Abstract: The proliferation of innovations offers a new opportunity to the development of poverty-striken areas. By analyzing the valid questionnaires, the study found that the use and dissemination of new media affect the audience's perceptions and also have some influence on the income of users. The more the audience use the new media, the more they know about the profit points of the products; the longer they sell the products through live streaming, the higher the income they get. This suggests that new media actually promotes rural revitalization in poor areas, which has positive significance in the current context of poverty alleviation in China.
Keywords: Diffusion of innovations; rural revitalization; poor areas; new media use

1 Introduction

Consolidating the results of poverty alleviation and broadly supporting rural revitalization are now officially on the agenda with the completion of the objective of constructing a moderately prosperous society by 2020. In this context, new media use and dissemination have developed into crucial instruments and strategies for fostering rural revitalization. More and more people in poor areas are using short video platforms like Douyin and Kuaishou to live broadcast and show themselves, which is boosting both their own and the local economy. In response to this occurrence, we found that the usage of new media has a greater positive impact on rural revitalization in underdeveloped areas. Therefore, questions are genreated: Whether new media has a greater impact on rural revitalization in underdeveloped areas? What impact does new media have on disadvantaged rural revitalization? What are the driving forces behind these influences?

2 Overview

2.1 Literature review of new media's impact on rural areas

The impact of new media on rural areas has attracted studies from multiple perspectives in academia. Foreign scholars Manisha Pathak-Shelat and Cathy DeShano studied the impact of new media technologies on rural youth in India and concluded that new media technologies have influenced the behavioral habits and mindsets of rural youth. Kenichiro Onitsuka in 2019 studied rural Japan from the perspective of the digital divide and concluded that new media can bring

innovation to rural areas.

Domestic researcher WanMashijie studied the case of Shangtamai village in the GongHe county of the northwest ethnic region in greater detail. His study shows that new media have driven rural economic development and promoted rural ecological management and cultural identity. Ding Chao studied the impact of the county-level media convergence center on rural revitalization, arguing that it helps build a firm position of public opinion and provide public services, while driving economic development. On the other hand, LiXiao reviewed the brief videos produced by the three-dimensional rural we-media and thought they may promote the spread of rural culture.

All these studies have been conducted from the perspective of new media and rural areas. However, the foreign studies neglected the impact of new media on rural revitalization. Although there are more studies on rural revitalization in China, they neglected the study of rural revitalization under the diffusion of innovations.

2.2 Literature Review of Diffusion of innovations

The diffusion of innovations has received much attention from scholars at home and abroad since it was proposed by American scholar E.M. Rogers in the 1960s. Joel R. Matthews has challenged the diffusion of innovations by studying rural West Africa, arguing that the creativity and intelligence of local people are not respected and the innovations that have already occurred in the homeland are ignored. Burbi, S and Hartless Rose, K have studied how the media affects farmers' knowledge level according to the diffusion of innovations, arguing that farmers acquire knowledge through the media and promote their innovative behavior.

Domestic scholar Guo Xiaoxue combined China's rural culture with the diffusion of innovations in 2021 and proposed countermeasures for rural cultural innovation and diffusion. Shen Feiwei and Ye Wenxin combined the diffusion of innovations with rural policy to study the dilemma and innovation path of policy diffusion. He Zhiwu and Chen Tianming study the diffusion of innovations of industrial transformation concepts brought by returnees, arguing that returnees play the role of "policy entrepreneurs" and that the diffusion of rural industrial innovation should seize the "key minority" such as village hotshots and opinion leaders.

However, none of these studies has studied the phenomenon of rural revitalization in poor areas from the perspective of the diffusion of innovations and therefore has not answered the question about the impact of the diffusion of innovations brought by new media on rural revitalization.

2.3 Problem formulation

This paper will attempt to answer the following questions from the perspective of diffusion of innovations: Does the chronological order of the use of new media affect the revitalization of rural industries? Does the way of using new media have an impact on the revitalization of rural industries? What other factors will enhance this impact of new media?

3 Research Hypothesis and Research Methodology

Based on the above, this study intends to use an audience survey method to study the above questions and seeks to deeply investigate the impact of new media use on rural revitalization in poor areas under the diffusion of innovations.

3.1 Research Hypothesis

Based on the questions above, the hypotheses are proposed:

H1:The more people use new media, the more ways of earning money people know

H2: The more new media are used, the more people know about the profitability of their own product

H3: Villagers who use live streaming first have higher growth in new media income than those who use it later

To prove the hypotheses, this study uses a questionnaire method to sample the total population and create a questionnaire.

3.2 Audience survey method

This study uses a questionnaire to measure the relationship between the audience's new media usage, knowledge of monetization method, and revenue trends. These statements are downscaled to "new media usage", "knowledge of monetization method and profitability", and "income trends", and included in the subsequent data analysis.

3.2.1 Sample selection

The research object corresponding to the hypotheses is the group of farmers in poor areas. Firstly, we conducted a representative sampling of this group and selected households in Wangzhuangji and Caiyuan villages as the overall study population; secondly, we prepared a sampling frame for the overall population based on the door numbers in the two villages; finally, we conducted stratified multilevel sampling of the sampling frame with a 95% confidence interval and a 3% sampling error. 200 residents were selected as the sample, and 100 residents were selected from each village. If a refusal to visit was encountered, the next family was sought in turn for recurrence.

This study used a combination of online and offline distribution, including WeChat moment, QQ zone, Questionnaire Star sample bank,and offline distribution. The process of data collection, collation, and analysis was completed on February 7, 2023.

3.2.2 Questionnaire design

This questionnaire contains 16 questions, including 15 single-choice questions and 1 multiple-choice question. The first part of questions is about basic information, which is a survey of the demographic characteristics of the audience, including gender and age. The second part, questions 3-8, are about media usage, including frequency of use, length of use, personal preference, etc. The third part, question 9-16, is a survey of the audience's feedback after media use, including whether they make a profit through the media after use, how much they know about the profitability of the product after use, and whether the new media use has a positive impact on the economy.

4 Research findings and discussion points

4.1 Respondent characteristics analysis

The survey collected a total of 200 questionnaires, the female group accounts for about 80%. Most of them are middle-aged and elderly groups, and 45.77% of them are above 46. From the descriptive analysis, the frequency of using cell phones is high, the percentage of "watching when I have time" is more than 60%, and the viewing time is mainly 2-5 hours, accounting for 60.96%.

In order to detect the extent of audience use of new media, this study also set questions about personal software use preferences. More than 60% of people do not install many softwares, but 42.34% of them install softwares according their personal preference. In this study, for further precision, the questions about media exposure are also downscaled to questions about the audience's use of social software and sources of information access. Due to a large number of middle-aged and elderly people, more than 70% of them have fewer than five social apps. 88.59% of them use such apps for less than 4 hours, and 52.55% of them do not use them for more than 2 hours. The sources of information access are more evenly distributed, with more than 50% preferring platforms such as Weibo and WeChat, while the rest tend to access information through short videos platforms.

In terms of exposure to farming information, most people choose to pay attention to such information, but only 18% say they would learn to sell agricultural products online, and more than 70% say they do not want to participate in live streaming and were not interested in. Among those who participate in the live broadcast with goods, most of them are lack of experience. It is worth noting that most people choose "average" when it comes to the understanding level of product

profitability.

In the question about income growth and live streaming hours, the data shows that more than 60% of people believe income has increased compared to the past and the increase is significant. Those who believe that live streaming can boost income account for 78.82% of the total sample.

4.2 Correlation analysis of new media use and rural revitalization in poor areas

4.2.1 Correlation analysis of the frequency of new media use and the degree of understanding of the monetization method

The Pearson correlation analysis reveals that the frequency of new media use is not correlated with understanding the ways of cashing in, $p>0.05$, and H1 is not valid. This indicates that simply using new media does not increase the knowledge of deeper ways to make money. Compared with the rest of the variables, monetization method requires more difficult knowledge, and mere contact does not lead to more specialized knowledge. In addition to this, from the data, more than 70% of people say they do not want to sell goods through livestreaming nor are they interested in it, which also shows that people who do not have the demand for selling goods through livestreaming are not interested in the monetization method, so H1 is not valid.

4.2.3 Correlation analysis of new media usage time and knowledge of profit points

The correlation analysis between the time of new media use and the knowledge of product profitability points shows that the correlation coefficient is 0.015, $p<0.05^*$, and the two are significantly positive-correlated, so the more use of new media, the more they know about the product profitability, and H2 holds.

The analysis of the data shows that the use of new media has an innovative diffusion effect, which promotes the audience's understanding of the product profitability. Most of the poor areas lack educational, and media knowledge is even less popular. From the perspective of audience portrait, the sample subjects are mostly middle-aged and elderly people, lacking young labor force. Middle-aged and elderly people have difficulties in accepting new things and absorbing new knowledge slowly, which also brings difficulties for product marketing and rural revitalization. However, according to the research results, the more the new media are used, the more they know about the product profitability. This indicates that new media platform provides a channel for people in poor areas to learn about online sales, and the middle-aged and elderly people who are usually difficult to access new knowledge and technology can realize the effect of "cultivation" in the media contact, so that the knowledge can be spread. In this process, people in poor areas can learn from other people's marketing highlights by watching live broadcasts and short videos, and discovering the profitability of local products, so as to expand their advantages in live broadcasts, further optimize publicity, and ultimately promote the profitability of products.

4.2.4 Correlation Analysis of Live Streaming Usage Hours and Revenue Growth

Correlation analysis of the time spent on live streaming with income growth showed a correlation coefficient of 0.738**, $p<0.01$, indicating a significant positive correlation and H3 holds.

From this data, it can be analyzed that the use of new media can play a positive role in rural revitalization, which is evident in the positive correlation between the length of livestreaming and income growth. Most of the poor areas lack certain means of publicity and economic and transportation support, which makes it difficult to sell products in poor areas and stagnant. Live streaming, however, provides a convenient platform to showcase products. With a low threshold, easy operation, and low cost, live broadcasting can substantially increase sales by selling local products, thus achieving product profitability and playing a good role in local economic development and rural revitalization.

4.3 The impact of new media use on rural revitalization in poor areas

4.3.1 From audience to participant: the emergence of a sense of innovation among people in poor areas

This study theorizes the impact of new media use in poor areas on rural revitalization through the questionnaire method and finds that hypotheses H2 and H3 are valid, while H1 is not. This indicates that through the use of new media, people in poor areas have completed the process of the diffusion of innovations, increased their knowledge of product profitability, and tried to engage in profitable behavior through media technology, i.e., live streaming. Unlike in the past when people merely watched media content, the diffusion of new media is gradually bringing about a subtle influence on people, which is significantly reflected in this study in the emergence of people's innovative consciousness and the change of their behavior patterns. The validity of H2 and H3 proves that people in poor areas do develop an innovative mentality under the effect of new media, which in turn further contributes to the improvement of their individual economic situation.

4.3.2 From Individual to Local: New Possibilities for the Realization of Rural Revitalization

Research hypotheses H2 and H3 hold, confirming that new media use not only has an impact on individual awareness and behavior, but also positively affects the income situation of residents in poor areas. In the long run, the change of individuals will certainly promote the improvement of the whole region, which provides a new path for the realization of rural revitalization. The core of China's rural revitalization strategy is "to build rural areas with thriving businesses, pleasant living environments, social etiquette and civility, effective governance, and prosperity", which not only demands economic status, but also sets higher standards for population quality and management. The results of this study confirm that new media, as a mediator, can bring innovation

consciousness to the people and thus make money, which coincides with the goal of the rural revitalization strategy. Through the results of this study, we can further explore the innovative path of rural revitalization in poor areas and better drive the economic development of poor areas.

However, it is worth noting that there are some new findings in this study, for example, people in poor areas also prefer to sell online in the form of "micro-business". Micro-business is a new type of e0commerce based on the space of mobile internet, with the help of social software as a tool, people as the center and social contact as the link. This method has lower technical costs compared with live broadcasting. Therefore, in future research, researchers in the field of rural revitalization may need to pay more attention to the driving effect of "micro-business" on the economy and the research and practice of innovative paths of rural revitalization.

5 Summary and Reflection

Since the goal of eliminating poverty was achieved in 2020, the Communist Party of China's governance policy has been focused on poverty alleviation and rural revitalization, with an effort to develop rural areas. Relevant studies in the past have also been devoted to exploring the innovation path of rural revitalization. This study, based mainly on the framework of diffusion of innovations, tries to study the impact brought by media, especially new media, on rural revitalization, and the following insights are obtained through the audience survey method: the frequency of new media use is positively correlated with people's knowledge of product profitability; the length of using live broadcast is positively correlated with income growth. The study shows that the use of new media can diffuse innovative consciousness among the people, thus promoting the change of ideas, which in turn leads to economic development and contributes to the further implementation of rural revitalization strategy.

Due to the sample size, there are some shortcomings in this study, but in the domestic context, research on the impact of new media use on rural revitalization under the diffusion of innovation theory is bound to catch more attention in the future. It is worth reminding that while observing the positive effects of new media use on rural areas, we still need to pay attention to some "invasive" negative effects of new media on rural areas, for example, whether excessive addiction to the Internet affects the daily life of local people, and whether negative information on the Internet has a negative impact on local youth, thus affecting the quality of education. How to strike a balance between online communication and realistic development is still a topic that needs attention in such research.

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