

# The Impact of New Media Use and Communication on Rural Revitalization in China's Poverty-stricken Mountainous Areas: A Diffusion of Innovations Perspective (Postprint)

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## Abstract

The proliferation of innovations offers new opportunities for the development of poverty-stricken areas. Through analysis of valid questionnaires, this study finds that the use and dissemination of new media affect audience perceptions and also influence user income. Greater use of new media correlates with increased understanding of product profitability; longer duration of live-streaming sales corresponds to higher income. This suggests that new media effectively promotes rural revitalization in poor areas, with significant implications for China's current poverty alleviation efforts.

## Full Text

### Preamble

#### The Impact of New Media Use and Communication on Rural Revitalization in Poverty-Stricken Areas of China under the Framework of Diffusion of Innovations

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**Abstract:** The proliferation of innovations offers new opportunities for the development of poverty-stricken areas. By analyzing valid questionnaires, this study found that the use and dissemination of new media affect audience perceptions and also influence users' income. The more audiences use new media, the better they understand product profitability; the longer they sell products through live streaming, the higher their income becomes. This suggests that

new media effectively promotes rural revitalization in poor areas, which holds positive significance in the current context of poverty alleviation in China.

**Keywords:** Diffusion of innovations; rural revitalization; poor areas; new media use

## 1 Introduction

With the completion of the goal to build a moderately prosperous society by 2020, consolidating poverty alleviation achievements and comprehensively promoting rural revitalization have officially been placed on the agenda. In this context, new media use and dissemination have developed into crucial instruments and strategies for fostering rural revitalization. Increasing numbers of people in poor areas are using short video platforms like Douyin and Kuaishou to broadcast live and showcase themselves, thereby boosting both their personal income and the local economy. In response to this phenomenon, we found that new media usage has a particularly significant positive impact on rural revitalization in underdeveloped areas. This generates several key questions: Does new media have a greater impact on rural revitalization in underdeveloped areas? What specific effects does new media have on rural revitalization in disadvantaged regions? And what are the driving forces behind these influences?

### 2.1 Literature Review of New Media's Impact on Rural Areas

The impact of new media on rural areas has attracted scholarly attention from multiple perspectives. Foreign scholars Manisha Pathak-Shelat and Cathy De-Shano examined the influence of new media technologies on rural youth in India, concluding that these technologies have shaped behavioral habits and mindsets. Kenichiro Onitsuka studied rural Japan from a digital divide perspective in 2019, arguing that new media can bring innovation to rural areas.

Domestic researcher Wan Mashijie conducted a detailed case study of Shangtaimai Village in Gonghe County within a northwestern ethnic minority region. His research demonstrates that new media has driven rural economic development while promoting ecological management and cultural identity. Ding Chao investigated the impact of county-level media convergence centers on rural revitalization, arguing that they help establish a firm position in public opinion, provide public services, and drive economic development. Meanwhile, Li Xiao examined short videos produced by three-dimensional rural self-media and concluded they may facilitate the spread of rural culture.

These studies have all approached the issue from the perspective of new media and rural areas. However, foreign studies have neglected the impact of new media on rural revitalization specifically. Although Chinese studies on rural revitalization are more abundant, they have overlooked research on rural revitalization through the lens of diffusion of innovations.

## 2.2 Literature Review of Diffusion of Innovations

Since American scholar E.M. Rogers proposed the diffusion of innovations theory in the 1960s, it has received considerable attention from scholars both domestically and internationally. Joel R. Matthews challenged the theory through his study of rural West Africa, arguing that it fails to respect the creativity and intelligence of local people and ignores innovations that have already emerged locally. Burbi, S and Hartless Rose, K studied how media affects farmers' knowledge levels according to diffusion of innovations theory, contending that farmers acquire knowledge through media and thereby promote their innovative behavior.

Domestic scholar Guo Xiaoxue combined China's rural culture with diffusion of innovations in 2021, proposing countermeasures for rural cultural innovation and diffusion. Shen Feiwei and Ye Wenxin integrated diffusion of innovations with rural policy to examine the dilemmas and innovative pathways of policy diffusion. He Zhiwu and Chen Tianming studied the diffusion 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 upon "key minorities" such as village leaders and opinion leaders.

However, none of these studies have examined the phenomenon of rural revitalization in poor areas from the perspective of diffusion of innovations, and therefore have not addressed the question of how innovation diffusion brought by new media impacts rural revitalization.

## 2.3 Problem Formulation

This paper attempts to answer the following questions from the perspective of diffusion of innovations: Does the chronological order of new media use affect the revitalization of rural industries? Does the manner of using new media impact 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 discussion, this study employs an audience survey method to investigate these questions and seeks to deeply examine the impact of new media use on rural revitalization in poor areas under the framework of diffusion of innovations.

### 3.1 Research Hypothesis

Based on the aforementioned questions, the following hypotheses are proposed:

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

H2: The more new media are used, the more people know about the profitability

of their own products.

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

To test these hypotheses, this study employs a questionnaire method to sample the population and create a survey instrument.

## 3.2 Audience Survey Method

This study uses a questionnaire to measure the relationship between audience members' new media usage, knowledge of monetization methods, and revenue trends. These concepts are operationalized as “new media usage,” “knowledge of monetization methods and profitability,” and “income trends,” which are included in subsequent data analysis.

### 3.2.1 Sample Selection

The research subjects corresponding to the hypotheses are farmers in poor areas. First, we conducted representative sampling of this group and selected households in Wangzhuangji and Caiyuan villages as the overall study population. Second, we prepared a sampling frame for the population based on house 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. Two hundred residents were selected as the sample, with 100 residents from each village. If a refusal was encountered, the next household was approached sequentially as a replacement.

This study employed a combination of online and offline distribution methods, including WeChat Moments, QQ Zones, the 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

The questionnaire contains 16 questions, including 15 single-choice questions and 1 multiple-choice question. The first section addresses basic information, surveying the demographic characteristics of the audience, including gender and age. The second section, questions 3-8, addresses media usage, including frequency of use, duration of use, and personal preferences. The third section, questions 9-16, surveys audience feedback after media use, including whether they profit through media after use, their understanding of product profitability after use, and whether new media use has a positive economic impact.

## 4.1 Respondent Characteristics Analysis

The survey collected a total of 200 questionnaires, with the female group accounting for approximately 80%. Most respondents belong to middle-aged and

elderly groups, with 45.77% aged 46 or above. Descriptive analysis shows high frequency of mobile phone use, with over 60% reporting they “watch when I have time,” and viewing time primarily ranging from 2-5 hours, accounting for 60.96%.

To detect the extent of audience new media usage, this study also included questions about personal software preferences. More than 60% of respondents do not install many software applications, but 42.34% install software according to their personal preferences. For further precision, questions about media exposure were also operationalized as questions about audience use of social software and information sources. Due to the large number of middle-aged and elderly respondents, more than 70% have fewer than five social apps, 88.59% use such apps for less than 4 hours, and 52.55% use them for no more than 2 hours. Information sources are more evenly distributed, with over 50% preferring platforms such as Weibo and WeChat, while the remainder tend to access information through short video platforms.

Regarding exposure to agricultural 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% express no interest in participating in live streaming. Among those who do participate in live broadcast sales, most lack experience. Notably, most respondents select “average” when asked about their level of understanding of product profitability.

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

#### **4.2.1 Correlation Analysis of New Media Use Frequency and Understanding of Monetization Methods**

Pearson correlation analysis reveals that the frequency of new media use is not correlated with understanding monetization methods ( $p > 0.05$ ), rendering H1 invalid. This indicates that simply using new media does not increase knowledge of more sophisticated ways to make money. Compared with other variables, monetization methods require more difficult knowledge, and mere exposure does not lead to more specialized understanding. Additionally, the data shows that more than 70% of people say they do not want to sell goods through livestreaming nor are they interested in it, which demonstrates that people without demand for livestreaming sales are not interested in monetization methods. Therefore, H1 is not supported.

### 4.2.3 Correlation Analysis of New Media Usage Time and Knowledge of Profit Points

Correlation analysis between the duration of new media use and knowledge of product profitability shows a correlation coefficient of 0.015,  $p < 0.05^*$ , indicating a significant positive correlation. Thus, the more new media are used, the greater the knowledge of product profitability, and H2 is supported.

The data analysis demonstrates that new media use has an innovation diffusion effect that promotes audience understanding of product profitability. Most poor areas lack educational resources, and media knowledge is even less widespread. From the perspective of audience demographics, the sample subjects are mostly middle-aged and elderly people, lacking a young labor force. Middle-aged and elderly people have difficulty accepting new things and absorb new knowledge slowly, which also creates challenges for product marketing and rural revitalization. However, according to the research results, the more new media are used, the more people know about product profitability.

This indicates that new media platforms provide a channel for people in poor areas to learn about online sales, and middle-aged and elderly people who normally have difficulty accessing new knowledge and technology can achieve a “cultivation” effect through media contact, enabling knowledge dissemination. In this process, people in poor areas can learn marketing highlights from others by watching live broadcasts and short videos, discover the profitability of local products, expand their advantages in live broadcasts, further optimize publicity, and ultimately promote product profitability.

### 4.2.4 Correlation Analysis of Live Streaming Usage Hours and Revenue Growth

Correlation analysis of time spent on live streaming with income growth shows a correlation coefficient of 0.738\*\*,  $p < 0.01$ , indicating a significant positive correlation, and H3 is supported.

From this data, it can be analyzed that new media use can play a positive role in rural revitalization, which is evident in the positive correlation between the length of livestreaming and income growth. Most poor areas lack adequate publicity channels and economic and transportation support, which makes product sales difficult 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 of local products, thus achieving product profitability and playing a positive 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 Innovation Consciousness 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 new media use, people in poor areas have undergone the process of innovation diffusion, increased their knowledge of product profitability, and attempted to engage in profitable behavior through media technology—that is, live streaming. Unlike in the past when people merely watched media content, the diffusion of new media is gradually exerting subtle influence on people, which is significantly reflected in this study through the emergence of innovative consciousness and changes in behavior patterns. The validity of H2 and H3 proves that people in poor areas do develop an innovative mentality under the influence of new media, which in turn contributes to the improvement of their individual economic situations.

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

Research hypotheses H2 and H3 are supported, confirming that new media use not only impacts individual awareness and behavior but also positively affects the income situation of residents in poor areas. In the long run, individual changes will certainly promote improvement across the entire region, which provides a new path for realizing 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 demands not only economic development but also sets higher standards for population quality and management. The results of this study confirm that new media, as a mediator, can bring innovative consciousness to people and thereby generate income, which coincides with the goals of the rural revitalization strategy. Through these findings, we can further explore innovative pathways for rural revitalization in poor areas and better drive economic development in these regions.

However, it is worth noting that this study also reveals some new findings. For example, people in poor areas also prefer to sell online through “micro-business” models. Micro-business is a new type of e-commerce based on mobile internet space, using social software as a tool, centered on people, and linked through social connections. This method has lower technical costs compared with live broadcasting. Therefore, in future research, scholars in the field of rural revitalization may need to pay more attention to the economic driving effect of “micro-business” and the research and practice of innovative rural revitalization pathways.

## 5 Summary and Reflection

Since achieving the goal of poverty elimination in 2020, the Communist Party of China's governance policy has focused on poverty alleviation and rural revitalization, with concerted efforts to develop rural areas. Previous relevant studies have also been devoted to exploring innovative pathways for rural revitalization. Based primarily on the framework of diffusion of innovations, this study examines the impact of media—especially new media—on rural revitalization, yielding the following insights through the audience survey method: the frequency of new media use is positively correlated with people's knowledge of product profitability, and the duration of live broadcast use is positively correlated with income growth. The study demonstrates that new media use can diffuse innovative consciousness among the people, thereby promoting ideological change, which in turn leads to economic development and contributes to the further implementation of the rural revitalization strategy.

Due to sample size limitations, this study has certain shortcomings. However, within the domestic context, research on the impact of new media use on rural revitalization under diffusion of innovations theory is bound to attract greater attention in the future. It is worth noting that while observing the positive effects of new media use on rural areas, we must also remain attentive to certain “invasive” negative effects of new media on rural communities. For example, whether excessive internet addiction affects the daily lives of local people, and whether negative online information impacts local youth, thereby affecting education quality. How to strike a balance between online communication and real-world development remains a topic requiring attention in such research.

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