International Journal of Trend in Research and Development, Volume 13(6), ISSN: 2394-9333
www.ijtrd.com

How Rural Characteristic Industries Achieve Inclusive Market Construction under Digital Empowerment: Evidence from Two Village Cases in China

[1]Tianyi Zhang, [2]Siying Yuan and [3]Shanshan Liu,
[1,2,3]Undergraduated Student, Beijing Wuzi University, Beijing, China

Abstract: Rural characteristic industries in China have long suffered from high market entry barriers, unbalanced resource allocation, distorted benefit distribution, and the marginalization of smallholder farmers. Anchored in the national strategies of rural revitalization, common prosperity, digital countryside, and the unified national market, this study examines how digital empowerment fosters inclusive market construction in rural characteristic industries. A mixed-methods design was adopted, combining questionnaire surveys, ten in-depth semi-structured interviews, analysis of more than 100,000 public e-commerce platform records, a comparative dual-case study of Wushi Village and Guzhu Village in Zhejiang Province, structural equation modeling, and a difference-in-differences estimation based on the rollout of a major platform assistance program. The study proposes a Digital Empowerment Co-creation Spiral Model, which describes the progressive development of inclusive rural markets through three stages: marketization of characteristic resources, marketization of industrial practice, and marketization of the village field. The results show that digital technology promotes market inclusiveness through four coupled mechanisms: information inclusiveness, trust building, capability empowerment, and benefit reconstruction. Based on these findings, an Inclusive Market Maturity Assessment Tool comprising six first-level and twenty-two second-level indicators, together with a Practical Toolkit, was developed and delivered. The study provides actionable guidance for governments, platforms, and smallholder farmers pursuing inclusive rural market development.

Keywords: *Rural Revitalization, Digital Empowerment, Inclusive Market, Smallholder Farmers, E-Commerce Platform, Value Co-Creation*

I. INTRODUCTION

Rural characteristic industries have become a core lever of county economies and rural revitalization in China. Under the national strategies of rural revitalization, common prosperity, digital countryside, and the unified national market, e-commerce platforms have driven the upstream flow of characteristic products from more than 2,000 counties, and agricultural product livestreaming, direct-from-origin supply, and agriculture-tourism integration are spreading rapidly. Early evidence suggests that e-commerce adoption can raise household incomes in rural China, yet its benefits are unevenly distributed[2].

Despite this progress, five structural pain points persist. First, high entry barriers and opaque market rules squeeze smallholders and micro-entities out of the market, reflecting the chronic exclusion of low-income producers from mainstream value chains[1]. Second, benefit distribution is unbalanced: farmers obtain only meager production-end income while channel providers and platforms capture most value-chain profits. Third, digital empowerment remains shallow, staying at the level of livestreaming and traffic subsidies without restructuring market mechanisms or value distribution. Fourth, grassroots governance lags, lacking standardized assessment tools and implementable pathways. Fifth, traditional assistance models emphasize external resource input over endogenous dynamism, so industrial performance often collapses once projects withdraw.

Against this background, this study asks how digital technology can construct inclusive markets for rural characteristic industries in which smallholder farmers universally participate, share value fairly, and develop sustainably. Based on a twelve-month university innovation training project, the study contributes (i) a Digital Empowerment Co-creation Spiral Model that theorizes the staged development of inclusive rural markets, (ii) empirical evidence on four coupled empowerment mechanisms, and (iii) a maturity assessment tool and practical toolkit designed for grassroots use.

II. LITERATURE REVIEW

1. Inclusive Development and the Bottom of the Pyramid

The inclusive development literature argues that markets should serve low-income groups not merely as consumers but as producers and entrepreneurs. The bottom-of-the-pyramid perspective initiated by Prahalad[1] reframed the poor as active market agents, while capability-based views emphasize expanding substantive freedoms rather than income alone[3]. Applied to rural China, inclusiveness requires lowering entry barriers, securing fair benefit distribution, and strengthening the endogenous capacity of smallholder farmers, which this study treats as the three constitutive dimensions of inclusive rural markets.

2. Digital Platforms and Rural E-Commerce

Platform economy research shows that digital infrastructure reshapes market access, transaction costs, and information asymmetry. Evidence from China indicates that e-commerce connecting the countryside generates measurable welfare gains but also reveals heterogeneous adoption and distributional outcomes[2]. Existing studies of rural e-commerce assistance, however, tend to focus on single e-commerce models or macro-level industrial planning, paying limited attention to how platform empowerment translates into sustained inclusiveness after external support withdraws.

3. Value Co-Creation and the Research Gap

The service-dominant logic tradition holds that value is co-created through the interaction of multiple actors[4], which fits the multi-party chain of government, platform, village collective, business entity, and smallholder farmer in rural industries. Nevertheless, three gaps remain: existing research

leans toward macro policy analysis rather than mechanism-level evidence; single-case designs limit comparability; and few studies deliver operational tools for assessing market inclusiveness at the county or village level. This study addresses these gaps through dual-case comparison, mechanism verification, and tool development.

III. RESEARCH METHODOLOGY

1. Research Design

The project was implemented over twelve months in four stages: preparation, investigation, analysis, and summarization. A comparative dual-case design was adopted following established case study methodology[5], selecting Wushi Village and Guzhu Village in Zhejiang Province as contrasting cases of platform-empowered rural industries. The comparison was uniformly conducted along five dimensions: market access, benefit distribution mechanisms, degree of digital empowerment, smallholder participation, and endogenous hematopoietic capacity, with item-by-item evidence collection to ensure that model distillation is well grounded (Table 1).

Table 1. Dimensions and analysis points of the dual-case comparison (Wushi Village and Guzhu Village, Zhejiang, China)

Dimension	Analysis Points	Evidence Sources
Market access	Entry thresholds, qualification requirements, channel restrictions and hidden exclusion for smallholders	Government and farmer interviews, policy documents
Benefit distribution	Purchase prices, rebates, dividends; farmers' share of value-added income	Cooperative interviews, accessible ledgers
Digital empowerment	Actual depth of digital tool use in transactions, settlement, traceability and marketing	Public cases, operator interviews
Smallholder participation	Stages of participation, degree of organization, voice in decision-making	Questionnaires, in-depth interviews
Endogenous capacity	Autonomous operation after external support withdraws; local talent and organizations formed	Longitudinal tracking, village collective interviews

2. Data Collection

Four data sources were triangulated. First, valid questionnaires were collected from rural business entities and farmers. Second, ten in-depth semi-structured interviews were conducted with government officials, cooperative managers, platform operators, and farmers. Third, more than 100,000 records of public platform data were crawled, cleaned, and consolidated into a research database. Fourth, policy documents and industry reports were compiled for cross-validation. Investigation partnerships were established with county agricultural departments, combining nearby field visits with remote online engagement.

3. Analytical Methods

Qualitative interview transcripts were coded thematically. Quantitative analysis combined structural equation modeling (SEM) to test the causal chain of technology empowerment, subject capacity improvement, and market inclusiveness, with a difference-in-differences (DID) estimation that exploits the staggered rollout of a major platform assistance program as a quasi-natural experiment, following standard DID reliability practice[6]. All procedures complied with data ethics requirements and used only public or consented data.

IV. RESULTS AND CASE ANALYSIS

1. The Co-Creation Spiral Model

Cross-case analysis distills a Digital Empowerment Co-creation Spiral Model for inclusive rural markets, which divides development into three progressive stages: marketization of characteristic resources, in which governments select and support pillar industries and platforms open initial channels; marketization of industrial practice, in which business entities scale standardized operations and village collectives organize farmers; and marketization of the village field, in which self-organized progressive embedding enables farmers to participate across the full value chain. The model clarifies the functional positioning of governments, platforms, village collectives, business entities, and smallholder farmers at each stage, and reveals the transmission among technology empowerment, subject empowerment, and market inclusiveness.

2. Empirical Evidence on Four Mechanisms

Empirical analysis identifies four coupled pathways through which digital technology empowers inclusive markets. The information inclusiveness mechanism: e-commerce platforms and short-video tools compress information asymmetry and lower entry barriers. The trust-building mechanism: personalized livestreaming endorsement and process transparency via traceability systems reconstruct production-sales trust. The capability empowerment mechanism: platform training continuously improves smallholders' digital marketing and negotiation capabilities, in contrast to traditional assistance whose withdrawal causes sharp sales declines. The benefit reconstruction mechanism: shortened circulation links benefit farmers, and institutional designs such as a social value points system promote the marketization of ecological, cultural, and labor value. SEM results support the causal chain from technology empowerment to subject capacity improvement to market inclusiveness, and the DID estimation indicates that platform support policies have a statistically robust positive effect on the upstream flow of county-level agricultural products.

3. Tools and Deliverables

Two grassroots-oriented tools were developed and delivered. The Inclusive Market Maturity Assessment Tool V1.0, a low-code web prototype, operationalizes six first-level indicators with twenty-two second-level quantitative indicators and realizes online submission, automatic scoring, and brief diagnostic conclusions (Table 2). The Practical Toolkit V1.0 (document version) integrates six categories of directly applicable materials, including assessment indicators, mechanism templates, operational procedures, and typical

cases, and is distributed free of charge as open resources. Additional deliverables include a research master report of more than 30,000 words, three county-level diagnostic reports, and two policy recommendation drafts with clear submission channels.

Table 2. First-level indicators of the Inclusive Market Maturity Assessment Tool

First-Level Indicator	Assessment Focus
Market inclusiveness	Entry barriers, rule transparency, and breadth of participation of micro-entities
Digital empowerment level	Depth of digital tool use in transactions, settlement, traceability and marketing
Benefit distribution rationality	Fairness of value-chain income allocation and strength of farmer-linking mechanisms
Subject participation	Coverage and organization of farmers, cooperatives and collectives in governance
Endogenous motivation	Local talent formation and autonomous operation capacity
Sustainability	Industrial resilience after external support withdraws

V. DISCUSSION

1. Theoretical Implications

The findings extend the bottom-of-the-pyramid[1] and co-creation[4] perspectives to the rural Chinese context in three ways. First, the staged spiral model shows that market inclusiveness is not a static attribute but a progressive construction process in which the roles of governments, platforms, and local actors shift across stages. Second, the four coupled mechanisms specify how platform capabilities convert into farmer-level inclusiveness, complementing macro-level e-commerce studies[2]. Third, the contrast between capability empowerment and the fragility of transfusion-style assistance explains why sales collapse after traditional projects exit.

2. Practical Implications

For county governments, the maturity assessment tool provides a lightweight, quantifiable instrument for diagnosis and policy targeting. For platforms, the results suggest that social responsibility programs should shift from traffic subsidies toward capability building and benefit-sharing institutional design. For cooperatives and farmers, the open toolkit lowers the cost of adopting inclusive mechanisms, supporting the shift from external blood transfusion to internal blood generation.

3. Limitations

The study has three limitations. The dual cases are drawn from a single economically developed province, so cross-regional generalization requires caution. Platform data were restricted to public sources, excluding internal backend records. Medium- and long-term social value estimates are directional extrapolations based on public industry reports rather than longitudinal observation.

CONCLUSION

This study examined how digital empowerment constructs inclusive markets for rural characteristic industries through a twelve-month mixed-methods project combining dual village cases, questionnaire surveys, interviews, large-scale platform data, SEM, and DID analysis. It proposed the Digital Empowerment Co-creation Spiral Model with three progressive stages, verified four coupled empowerment mechanisms covering information inclusiveness, trust building, capability empowerment, and benefit reconstruction, and delivered an open maturity assessment tool and practical toolkit for grassroots use. The evidence indicates that digital technology systematically lowers market entry barriers, enhances smallholder capacity, and reshapes benefit distribution, provided that institutional designs keep farmers at the center of value co-creation. Future research should extend the framework to less developed regions, incorporate platform internal data under cooperation agreements, and track inclusiveness outcomes longitudinally after assistance programs withdraw.

Acknowledgements

This work was supported by the University Student Innovation and Entrepreneurship Training Program (University Innovation Training Program) of Beijing Wuzi University. The author thanks Professor Gu Yu for academic supervision and the village collectives, cooperatives, and platform operators who participated in the investigation.

References

[1] Prahalad C K. The Fortune at the Bottom of the Pyramid [M]. Wharton School Publishing, 2004.
[2] Couture V, Faber B, Gu Y, Liu L. Connecting the Countryside via E-Commerce: Evidence from China [J]. American Economic Review: Insights, 2021, 3(1): 35-50.
[3] Sen A. Development as Freedom [M]. Oxford University Press, 1999.
[4] Vargo S L, Lusch R F. Evolving to a New Dominant Logic for Marketing [J]. Journal of Marketing, 2004, 68(1): 1-17.
[5] Yin R K. Case Study Research: Design and Methods [M]. 6th ed. Sage Publications, 2018.
[6] Bertrand M, Duflo E, Mullainathan S. How Much Should We Trust Differences-in-Differences Estimates? [J]. Quarterly Journal of Economics, 2004, 119(1): 249-275.