

## ORIGINAL PAPER

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# Cross-Border E-Commerce as a Way of Alleviating and Reducing Poverty: The Case of China

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## ABSTRACT

This study **aims** to examine the impact of cross-border e-commerce on rural income in China. Economic reforms in China since 1978 have led to the emancipation of approximately 700 million individuals from poverty. Recent rural economic growth in China has been significantly influenced by the widespread adoption of e-commerce, which is being hailed as a potent tool for reducing poverty in rural regions. Through enhanced access to government services, banking facilities, healthcare, and other vital amenities, as well as the provision of global market opportunities for goods and services, e-commerce exhibits the potential to have a profound impact on poverty alleviation. The study leverages **data** from village-level surveys conducted in rural areas. The analysis is conducted using the Structural Equation Modeling (SEM) model. The **findings** indicate that cross-border e-commerce plays a pivotal role in boosting rural income levels, enabling local communities to participate in international trade, and expanding their market presence. The **conclusions** underscore the significance of e-commerce as a driving force in poverty alleviation initiatives in rural China.

**Keywords:** e-commerce; cross-border; poverty alleviation; structural equation modeling; SEM model; China

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## ОРИГИНАЛЬНАЯ СТАТЬЯ

# Трансграничная электронная торговля как способ смягчения и сокращения бедности на примере Китая

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## АННОТАЦИЯ

**Цель** данного исследования — изучить влияние трансграничной электронной торговли на доходы сельского населения в Китае. Экономические реформы, проводимые в Китае с 1978 г., привели к освобождению от нищеты около 700 млн человек. На экономический рост сельских районов Китая в последнее время существенное влияние оказало широкое распространение электронной коммерции, которую называют мощным инструментом снижения уровня бедности в сельских регионах. Благодаря расширению доступа к государственным службам, банковским учреждениям, здравоохранению и другим жизненно важным услугам, а также предоставлению возможностей для сбыта товаров и услуг на мировом рынке, электронная коммерция способна оказать существенное влияние на борьбу с бедностью. В исследовании использованы **данные** опросов на уровне деревень, проведенных в сельской местности. Анализ выполнен с использованием **модели** структурных уравнений (SEM). Полученные **результаты** свидетельствуют о том, что трансграничная электронная коммерция играет ключевую роль в повышении уровня доходов сельского населения, позволяя местным жителям участвовать в международной торговле и расширяя их

присутствие на рынке. **Выводы** авторов подчеркивают значение электронной коммерции как движущей силы инициатив по борьбе с бедностью в сельских районах Китая.

**Ключевые слова:** электронная коммерция; трансграничная торговля; борьба с бедностью; моделирование структурных уравнений; SEM-модель; Китай

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## Introduction

China's economic reforms of 1978 have accelerated the nation's economic growth to the point where, by 2018, the gross domestic product (GDP) per person in China had expanded by 168 times, from 384 RMB<sup>1</sup> in 1979 RMB to 65,644 RMB, according to the Bureau of National Statistics. During this time, the Chinese main economy grew at the fastest rate in the world [1–3]. However, it has now become apparent that this growth was unevenly distributed across the years. The nation's Gini coefficient<sup>2</sup> grew from 0.30 in 1979 to 0.40 in 1995, to 0.50 in 2005, and to 0.55 in 2012 [2, 3].

People's lives have been markedly improved by ongoing economic development and social welfare initiatives. Poverty reduction has been significantly aided by social welfare policies [4, 5]. For instance, [2] discovered that the social assistance system had lowered poverty levels by 30% using the China Health and Nutrition Surveys in 1989 and 2009 [2]. According to the criteria for eradicating poverty, which is 2300 yuan per person, 700 million individuals have escaped poverty [5, 6].

Despite the aforementioned measures, according to the 2011–2020 China Rural Poverty Alleviation and Development Outline, which was published in 2011, 17.2% of the rural population, or 166 million people, were still living in poverty in 2010 [6]. However, by the end of 2016, this figure had decreased to 43 million, or 4.5% [4]. The literature claims that impediments to China's poverty alleviation system include a lack of targeted initiatives, bad administration, inadequate money, and a dearth of research and assessment [3].

E-commerce penetration in the rural economy has increased recently due to the advancement of information technology and the rising usage of smartphones in rural regions. Cross-border e-commerce is a straightforward method of earning more from information technology. It adjusts to the needs of upgrading and transforming rural industries. In doing so, it offers fresh impetus for the revival of rural industries. Cross-border e-commerce players' "empowerment" in recent years has also received significant attention [7, 8]. In the literature, cross-border e-commerce was viewed as an effective instrument to help people build modern commerce and agriculture.

E-commerce, in particular, facilitated the growth of the value chain in agriculture and the circulation of commodities [3–6]. E-commerce allows its workforce to work from home, in contrast to traditional commerce, which requires employees to be present at the workplace. For individuals confined to rural regions owing to either agricultural production or care obligations, it is a very accessible type of off-farm labor. E-commerce has emerged as a possible source of economic development for farmers in some rural areas. E-commerce-based poverty alleviation has emerged as a novel approach to the problem.

A number of studies have shown that cross-border e-commerce has successfully established online commodity exchanges and increased incomes for rural families [5–8].

China's experience shows that cross-border e-commerce is boosting farmers' incomes. In 2018, despite the county's high poverty rate, online retail sales were 69.79 billion yuan, up 36.4% year-on-year. The advancement rate was 12.5% higher than the internal online retail upgrade rate and 7% higher than the overall online local retail growth rate.

In 2018, cross-border e-commerce employed more than 28 million people and assisted approximately three million "filed-on-card" low-income households [9].

<sup>1</sup> RMB — the Renminbi is the official name of China's currency. The principal unit of RMB is called the Chinese Yuan (CNY). URL: [www.Investopedia.com](http://www.Investopedia.com)

<sup>2</sup> The Gini coefficient is an index for the degree of inequality in the distribution of income or wealth.

In this study, the term “cross-border e-commerce” specifically refers to international trade conducted through online platforms and transactions between rural areas in China and other countries. It involves the exchange of goods and services across national borders, utilizing information technology and e-commerce platforms to facilitate economic activities. The focus of this research is on examining whether cross-border e-commerce, which encompasses international trade activities, contributes significantly to raising the income of low-income rural families and helps alleviate poverty in the region.

In rural locations, especially in impoverished villages, access to information can raise revenue [5, 8]. Theoretically, cross-border e-commerce might help reduce poverty by bringing in new sources of revenue.

## Literature review

### E-commerce in China

Three High (high additional value, high technical content, and high human capital content) and Three New (new commercial activities, new techniques, and new approaches) are characteristics of e-commerce, with the benefits of resource intensivism, ongoing transactions, decreased costs, and market globalization [6].

It is clear from the characteristics of the globalization of the e-commerce market that cross-border e-commerce, specifically transactions subject to several customs frontiers, will become a crucial part of global trade. Statistics show that between 2008 and 2016, China’s share of cross-border e-commerce accounting for the volume of imports and exports climbed from 5% to 20%, with a trend toward sustainable growth [6, 7].

In addition to favorable conditions for the growth of cross-border e-commerce, such as a mature e-commerce and service platform, a gradual increase in related talent, and more national policy support, there are also unfavorable conditions, such as an inadequate logistics system, a high frequency of low-value products, and a miscellaneous category. Threats include the RMB appreciation, increased transaction friction, and high transaction risk [7].

The secret to ending poverty is raising knowledge of progress and inspiring inner drive through informational poverty alleviation among

farmers [10]. E-commerce offers a new way to conduct targeted poverty alleviation that can influence how poor people behave in the market, boost their chances of starting their own business, and completely employ them, boost the chance for poverty-stricken individuals to start businesses and find jobs, and fully realize the potential for rural development [6].

According to [8], cross-border e-commerce has three levels that can be used to reduce poverty: boosting revenue, cutting costs, and empowering farmers. Through three indirect channels — the local business environment, local industries, and the e-commerce environment — the topic of poverty alleviation influences the target of poverty alleviation. The two channels of information and logistics, the three services of industrial, talent, and enterprise, and the three guarantees of planning, organizational, and assessment are all required for poverty alleviation activity.

In 1984, the International Telecommunication Union proposed that by building telecommunications infrastructure, poverty might be eradicated. Information and communication technology was utilized to promote poverty alleviation ideas at the 2003 international conference on “information and communication technology and poverty reduction”.

The Millennium Declaration’s development goal was confirmed at the two World Information Society Summit conferences (in 2003 and 2005), which also emphasized the importance of “unwaveringly endowing the ability to the poor, especially the poor living in remote and border areas, rural areas, and periphery urban areas, and use information and communication technology (ICT) to obtain information, in order to reduce poverty.” According to [4], the use of information and communication technology has high impacts on employment possibilities, poverty alleviation, and education. E-commerce poverty alleviation can enhance conditions for community information acquisition, gender equality, employment opportunities, and health, education, and human capital.

According to [11], inadequate market access, a lack of human capital, and a lack of government backing are the main reasons why ICT and e-commerce are difficult to implement as a practical framework for improving rural artisans’ livelihoods. According to their analysis

of 292 middle- and small-sized businesses in Indonesia, [12] found that businesses with a high acceptance of e-commerce earned more money. The primary functions of these businesses were marketing and procurement. They use e-commerce as their primary measure of income in order to expand market boundaries, raise sales volume, enhance external communication, promote company image, speed up manufacturing, and increase labor force productivity.

In a 2016 study, C. Leong and S.L. Pan examined how institutional supporters, grassroots leaders, e-retailers, e-supply chain partners, and third-party e-commerce service providers use ICT to create, expand, and update e-commerce in the two villages of Suichang and Jinyun. It is possible to draw the conclusion that the rise of e-commerce was likely to lead to peasant migration for employment or self-employment, degradation of rural environments, and fierce rivalry.

There is a lack of empirical analysis based on e-commerce enterprises, so this paper focuses on the role and impact of cross-border electronic commerce as a way of reducing or eliminating poverty. Recent e-commerce poverty alleviation research has mostly focused on the current situation, the development advantages of e-commerce, and the challenges.

### **Poverty reduction in China**

China has significantly advanced in achieving its objectives for eradicating poverty during the past 40 years. Most rural households have made slow but steady progress out of complete poverty.

Rural poverty has decreased by 739.9 million individuals under the existing poverty line [13]. China has made substantial advancements toward inclusive and sustainable growth that reduces poverty, according to the World Bank. Below is a detailed analysis of China's outstanding contributions to the fight against poverty.

China's poor population peaked in 1978 at roughly 250 million people. Low rural production was the primary cause of widespread poverty. Rural productivity has significantly increased as a result of the reformulation of the fundamental local systems of management and the commodity system of circulation in pastoral areas. Both agricultural output and farmer income have

grown rapidly. As a result, the number of rural poor people has significantly dropped. The old, small, border, and poor areas are typically where the remaining people with low income live, as shown in *Fig. 1–3*.

Without significant economic growth, it is challenging for the impoverished residents in those areas to effectively escape poverty. Since 1986, the Chinese government has launched numerous large-scale initiatives to reduce rural poverty. These initiatives formed 331 significant national aid-the-poor counties and developed a "county-level targeting" framework. Following [14], the Chinese economy began a new phase of rapid expansion. During this stage of economic development, economic expansion became the primary driver behind the reduction of poverty. However, unbalanced regional development was necessarily spurred by rapid economic growth, and the underprivileged population continued to congregate there.

To address these issues, China launched its Alleviating Poverty Program (1994–2000) in 1994, making the supply of food and clothes to the poor a priority. China now has 32 million (relatively few) people living in extreme poverty than it had seven years after the project's launch. Despite these outstanding successes, a new problem has arisen: a significant portion of the surviving poor is concentrated in rural regions, which were unaffected by the earlier counterpoverty initiatives.

The government responded to the new issue by releasing the Chinese Rural Reduce Poverty and Development Project (2001–2010), which lifted the constraints on the use of the poverty elimination fund and expanded coverage to impoverished individuals not residing in the official poverty boundary counties.

The Plan for Development-Oriented Poverty Alleviation for China's Rural Areas (2011–2020) was released by the government in 2011. The southern Xinjiang region, Tibet, the Tibetan region in four provinces, and the Outline for Development-Oriented Poverty Alleviation for China's Rural Areas were chosen as the three important areas for combating poverty.

The national information network for reducing poverty has a system for unified administration that the government started using in 2014 to identify the poorest communities.



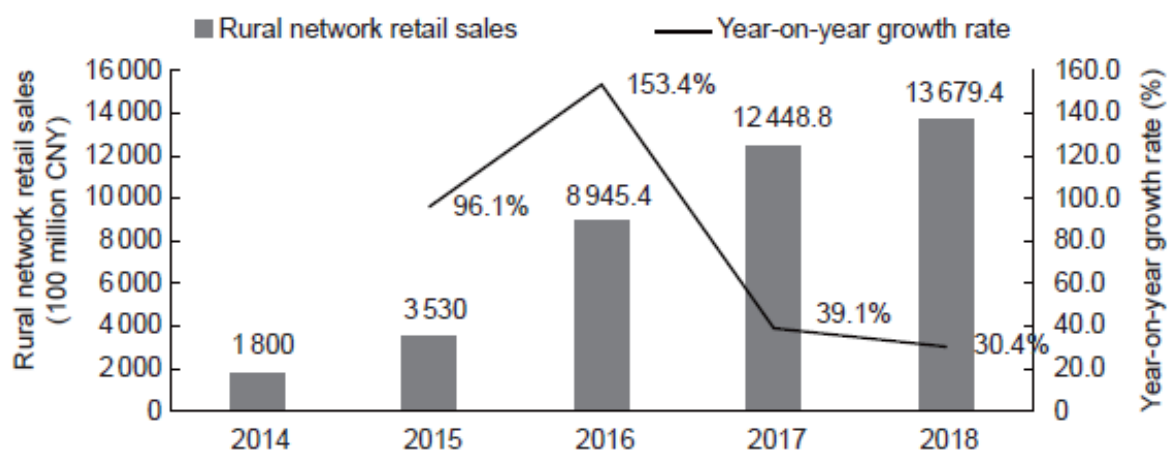


Fig. 1. National rural online retail sales, 2014–2018

Source: Chinese Ministry of Commerce, 2019.

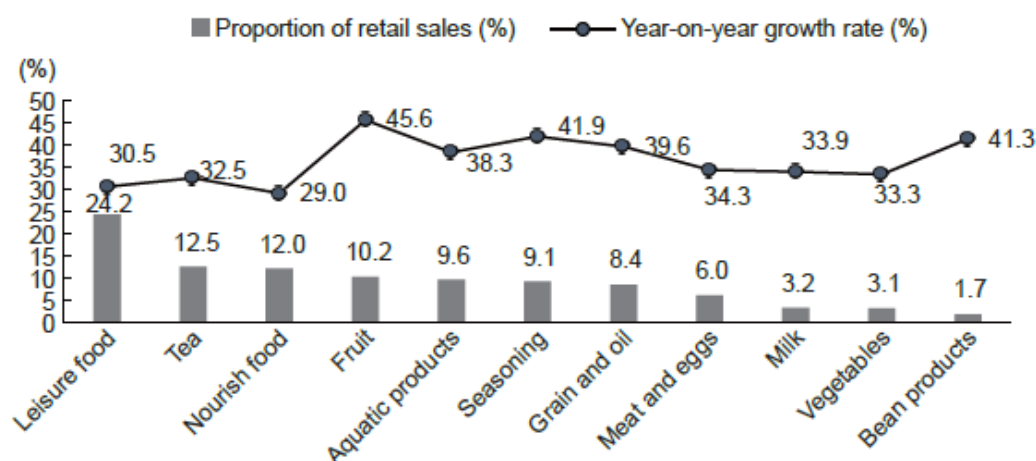


Fig. 2. 2018 retail sales percentage for agricultural items and yearly growth rate

Source: Chinese Ministry of Commerce, 2019.

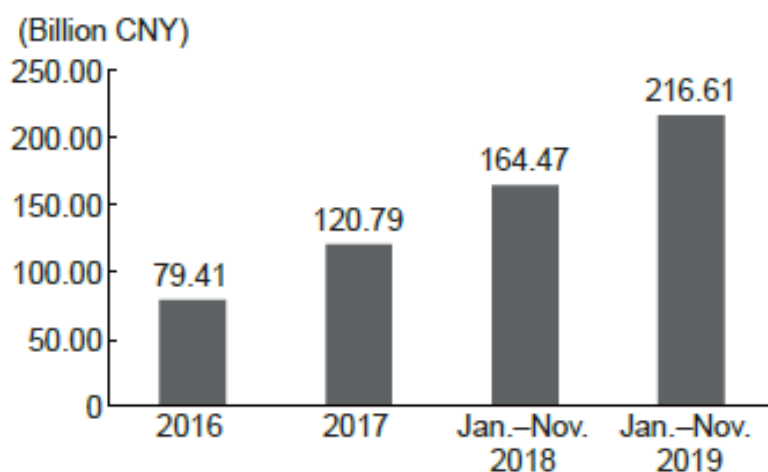


Fig. 3. Nationwide online sales from counties with extreme poverty

Source: Chinese Ministry of Commerce, 2019.

Table 1  
E-commerce in rural areas from 2014 to 2019

Year	Number of demonstration counties	Number of national poverty-stricken counties	Proportion of national poverty-stricken counties (%)
2014	56	14	25.00
2015	200	90	45.00
2016	240	158	65.83
2017	260	237	91.15
2018	260	238	91.54
2019	215	138	64.19

Source: China Electronic Commerce Report (2014–2019), Ministry of Commerce of China. URL: <http://www.mofcom.gov.cn/index.shtml>

According to the 2010 poverty standard, 16.6 million more individuals lived in rural poverty in 2018 than in 1985 (661.0 million), while the prevalence of poverty decreased from 78.3% to 1.6%.

By the end of 2020, China should have completely eradicated extreme poverty.

E-commerce might now alleviate poverty in three key ways. For the purpose of eradicating poverty through e-commerce, which has grown quickly in urban areas and expanded to rural regions in certain impoverished zones, infrastructure and business models are ready.

The agricultural products from the targeted areas of severe poverty can be standardized by e-commerce platforms, which can subsequently convert them into in-demand purchases. This contributes to the resolution of poverty issues that are concentrated in particular locations.

The idea of development-oriented poverty reduction is the foundation of the new approach to fighting poverty, which aims to switch from “blood transfusion” to “hematopoiesis.”

Thus, e-commerce is viewed as a modern sector that may foster human capital and stimulate hematopoiesis.

### E-commerce as a toolset to fight poverty

Cross-border e-commerce has been encouraged by the Chinese government as a key tool for reducing poverty. Cross-border e-commerce has recently pushed the rural industrial value

chain forward. The best route for the distribution of rural goods is e-commerce. As was mentioned, cross-border e-commerce gives residents in those areas access to new career opportunities. Poor counties are the main geographic areas supported by e-commerce poverty alleviation, according to numerous policy documents. Since the National Rural E-commerce Comprehensive Demonstration Project (NRECDP) was jointly launched by the Ministries of Finance and Commerce in 2014, 875 counties in impoverished states are NRECDP member counties. The NRECDP will be implemented in all state-level impoverished counties by 2019.

The NRECDP initially focused on selling agricultural goods. The potential role of online shopping in eradicating poverty was not mentioned expressly. However, the project’s pilot stage resulted in the development of a local e-commerce infrastructure and enhancement of service. A number of cross-border e-commerce executives received training in the NRECDP regions. Legislation governing the NRECDP was established in 2016 by the State Council Leading Group Directorate of Development and Poverty Alleviation, the Ministers of Finance and Commerce, as well as other ministries. According to this rule, at least 50 percent of the areas that are registered must be those that fall under the category of being nationally destitute.

The integrated e-commerce demonstration project in rural regions from 2014 to 2019 is shown in *Table 1*. Since 2017, financing for cross-border e-commerce has steadily increased.

A particular demand by governments at the local level that are being asked to “promote the rise of cross-border e-commerce”. That was written in 2017’s No. 1 Central Document, which prompted the creation of e-commerce business parks in nearby towns.

The goal of the program is to increase rural families’ power to create e-commerce, according to papers published in 2018 by the Ministry of Finance, the State Council’s Poverty Alleviation Office, and the Ministries of Commerce and Finance. Transferring funds from the central government will benefit all areas, especially those that are very impoverished. Increasing the marketing channels for rural goods and enticing more rural inhabitants to engage in cross-border e-commerce are two more targeted initiatives that assist impoverished communities in using the potential of their resource endowment. For communities extremely stricken by poverty, e-commerce service coverage level must achieve more than 50% as one of NRECDP’s quantifiable goals. To do this, general administrative villages are also necessary. The Ministry of Finance would provide 20 million CNY to each county participating in the NRECDP. The transfer payment should go toward particular initiatives that advance rural e-commerce, such as upgrading the local public utility system, expanding rural product marketing, and training the workforce participating in international e-commerce.

The NRECDP promotes the production, grading, packaging, and advertising of rural products to move them into metropolitan areas. NRECDP advertises public service facilities and online stores. By concentrating on logistics, training, and measures for combating poverty in rural regions, the clustering effect may be realized. With assistance from the NRECDP, farmers would receive training in order to engage in e-commerce.

The following are some ways in which e-commerce helps to reduce poverty, according to a text analysis of official documents. First, e-commerce is a powerful instrument in the fight against poverty. Rural products can be produced and sold in underdeveloped regions by overcom-

ing spatial barriers that prevent conventional agricultural products from being uplinked.

The government is also becoming more aware of how e-commerce may be used as a new tool for public services such as healthcare and education in rural areas. E-commerce is expected to change the focus of poverty reduction from the distribution of goods to social and livelihood services. Additionally, it is believed that e-commerce poverty alleviation is a crucial component of the nation’s “Internet Plus” initiative.

China’s “Internet Plus” service has established a reputation in urban areas. E-commerce should provide rural citizens, especially the disadvantaged ones, with more leverage. “Make it feasible for the rural poor to benefit from the “digital dividend” and lifestyle comforts supplied by the internet” is an objective of the e-commerce poverty alleviation plan. Last but not least, e-commerce may help fight poverty by upgrading agricultural and rural regions.

The expansion of the information infrastructure into China’s vast rural areas is an essential component of the attempt to reduce poverty through e-commerce, since doing so will help provide the groundwork for the country’s broad adoption of advanced information technology.

### **Methodology, conceptual model, and research hypotheses**

The hypothetical-deductive technique was employed, which entails building a systematic relationship between the theoretical corpus of concepts and the observable reality in the field via indicators to determine the causal relationships between the various ideas. In other words, the approach includes associating each concept with measurement items capable of operationalizing the conceptual changes seen in reality. As a result of these findings, we created a conceptual model (see *Fig. 4*) that links cross-border e-commerce with the reduction of poverty [13, 15].

Recently, the “empowerment” of participants in cross-border e-commerce has received much attention [13, 14, 17]. In this literature, cross-border e-commerce has been seen as a useful tool for assisting people in establishing modern agriculture and trade.

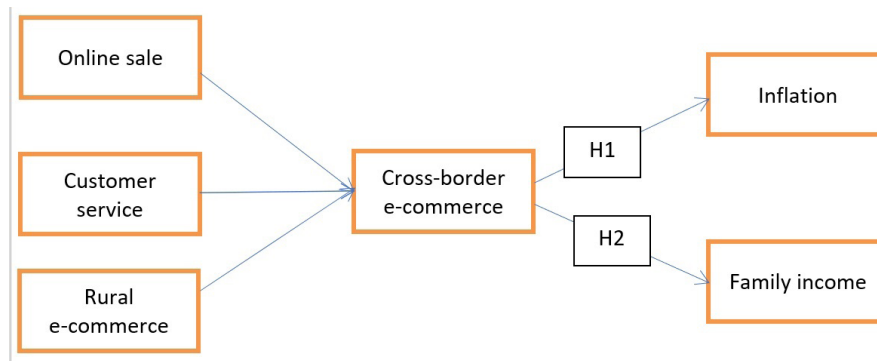


Fig. 4. Research Model

Source: Developed by the authors.

The expansion of the agricultural value chain and commodity circulation was made possible in part by e-commerce [8, 16, 19, 20]. Unlike traditional commerce, where personnel must be present in shops, e-commerce permits its workforce to work from home. For people who are forced to live in rural areas because of agricultural production or care duties, it is a very accessible type of off-farm labor. E-commerce has emerged as a possible source of revenue development in some rural communities. E-commerce-based poverty alleviation has emerged as a novel approach to the problem.

The study's hypotheses were established in the following way:

H1: Cross-border e-commerce contributes positively to poverty reduction.

H2: Online services, customer service and rural e-commerce help alleviate poverty.

## Modeling and results discussion

### Analysis of the data

By completing an empirical investigation with a sample of villages within our resources using a questionnaire survey, causal links are confirmed. Eleven villages' residents participated in the study in person. The subjects comprised both farmers and those working for small companies. Although we conducted in-person interviews with every subject who was accessible, not all members of the population were able to participate for various reasons. Approximately 55% of the population, or 62 people, were successfully interviewed by us. The study gathered data on participants' work skills, family income, and spending in 2020 and 2022 to provide a comparative method for assessing changes before and after working with cross-border e-

commerce, in addition to details on their age, gender, marital status, and level of education.

T-tests were employed to examine how work skills, income, and expenditure changed before and after the CP platform was established. using the Consumer Price Index (CPI) as a measure of inflation. Due to the small sample size, multiple regression analysis was not performed. Further studies must be conducted with a larger, more representative sample from each of the four counties. The analyses were performed using SmartPLS Software 4.0.

To assess the study model and offer support for the research topic, extrapolation of the survey sample data was performed. A graphical representation of the complete model's measurement system serves as the foundation for the model specification. At this stage, the model's numerous components are specified along with their connections, as shown in the picture below (Fig. 5).

The evaluation of the order requirement by the number of degrees of freedom must be greater than zero, according to [16]. Our model successfully validates the order requirement, and the degree of freedom is positive ( $ddl = 62$ ).

The estimate of the model on all statistical units using the PLS technique, in this example, 62 Chinese villagers. The figure below was created in this manner.

With the exception of the items connected to rural e-commerce and customer service, which had comparatively insufficient correlation coefficients, we found that the measuring scales had a variety of correlation coefficients in the model estimate.

A crucial phase in the methodological modeling approach is the assessment of the quality of the



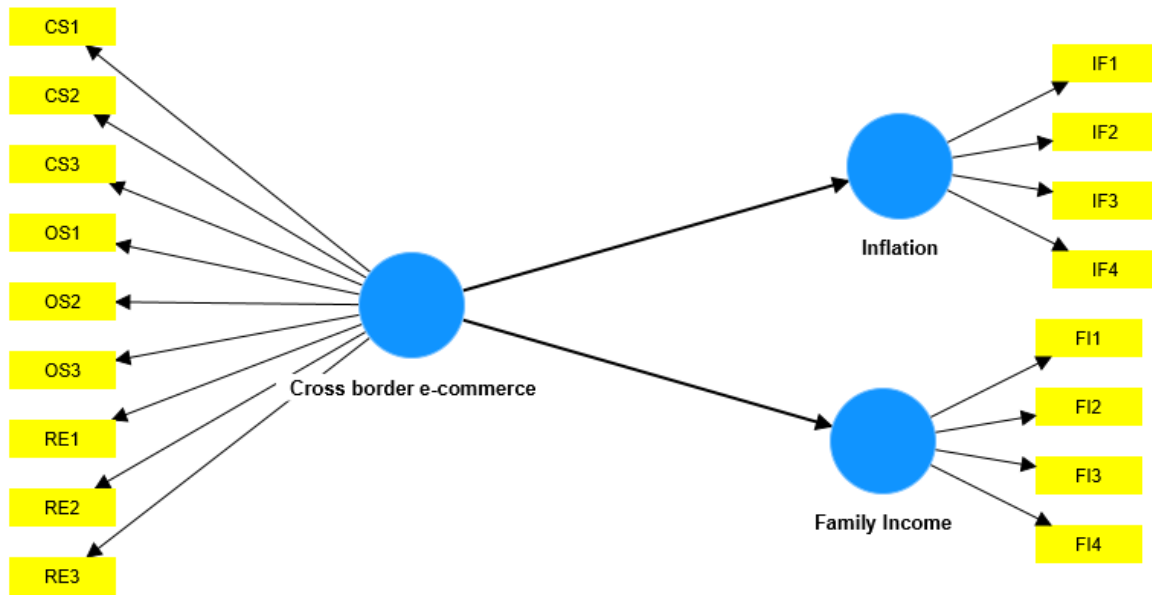


Fig. 5. SEM model specification

Source: SmartPLS v.4.

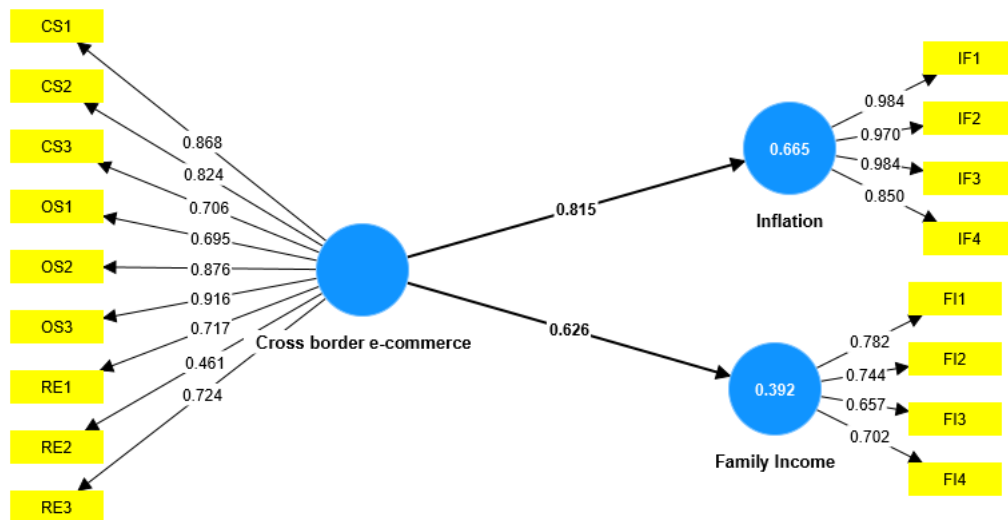


Fig. 6. SEM model estimation using the PLS algorithm

Source: SmartPLS v.3.

model modification. Since the indices' values are above the threshold values necessary for acceptable adjustment quality, the findings demonstrate a very successful model adjustment in this respect. It should be emphasized that, at present, Cronbach's alpha and Dillon-rho Goldstein's must both be greater than or equal to 0.07 in order for the construct to be considered reliable and legitimate.

Composite reliability is the examination of the correlations between the items and their latent variables. As previously mentioned,  $\rho$  must be greater than 0.7. Additionally, each latent

variable must have a stronger relationship with its indicators than with the other latent variables in the model in order for discriminant validity to be achieved. This suggests that each latent variable's extracted average variance (AVE) must be greater than 0.5. These findings will enable us to offer specific solutions to the issues raised throughout the debatable talks.

### Discussion of the results

Information on the effects of each aspect of inflation and family income is provided by

Table 2  
Reliability and construct validity

Dimensions	Alpha of Cronbach	Rho_A	Reliability composite	Average variance extracted (AVE)
Cross border e-commerce	0.910	0.920	0.925	0.586
Inflation	0.962	0.981	0.973	0.900
Family income	0.694	0.704	0.813	0.522

Source: SmartPLS 3.

the modeling results. According to this theory, cross-border e-commerce significantly and favorably adds to the higher end of both inflation and family income, with coefficients of 0.815 and 0.626, respectively. In this way, we can support our two study hypotheses, H1 (cross-border e-commerce helps to reduce poverty) and H2 (online services, customer service and rural e-commerce help alleviate poverty).

This conclusion can be supported by the Chinese government's national objective to reduce regional poverty overall by 2020. As a result, China has deployed an enormous number of various social innovations to provide efficient and long-lasting solutions to the ongoing poverty on the rural side that we witness.

Depending on the circumstances and resources in diverse locations stricken by poverty, one potential path would be to build market-oriented enterprises that specifically tackle the causes of poverty. It is necessary to create and enforce the work of businesses in assisting counter-poverty initiatives through digitalization in light of the significant role that cross-border e-commerce played in the current study. Capital and technological advantages of businesses can be used in market-based attempts to reduce poverty.

### Conclusion

Studies that examine the broader effects of e-commerce on decreasing poverty are few and far between. This study fills a gap in the literature by investigating how international e-commerce affects the income of poor populations. For data at the village level gathered by Chinese provinces, townships, and autono-

mous areas, we used cross-sectional analysis. To account for any potential sample bias arising from both observed and unobserved variables, the SEM model was applied.

To the best of the authors' knowledge, this study is the first to employ village-level data to establish a statistical link between cross-border e-commerce and family income. In addition, it is extensive, original, and well-researched. Our research shows that global e-commerce significantly boosts individual income.

In addition, in communities with relative poverty, this influence is U-shaped inverted.

We concluded that global e-commerce may really boost rural development and income.

Giving low-income communities the resources, they need to keep growing is the most effective way to combat poverty. Through e-commerce, particularly the skill training opportunities sometimes provided by government-sponsored e-commerce businesses, certain underprivileged people are granted additional power.

Our field study revealed that e-commerce professional skills training helps boost revenue. E-commerce might be used in conjunction with other strategies for reducing poverty and providing intellectual assistance. E-commerce poverty alleviation would make it possible for underprivileged individuals to access knowledge online, allowing underprivileged families to "open their vision" and "absorb more understanding". This type of "vision" and "understanding" immediately influences the initiative of the impoverished to end their poverty. Some impoverished people are now able to actively participate in contemporary society and benefit from modernity thanks to the expansion

of e-commerce into rural regions. E-commerce can effectively disseminate anti-poverty stories online, which might foster a societal climate of concern for underdeveloped regions.

Our study has significant policy implications. First, recent e-commerce investments have been essential for increasing income and lowering poverty. Increasing access to both hard (the internet) and soft (education) infrastructure in undeveloped areas should be the aim of policy design. Bringing digital technology and business models to poor nations will be the focus of future initiatives to eliminate poverty through e-commerce.

Along with the employment of e-commerce in rural production and administration, the digitalization of all business organizations must be accelerated. To achieve the resuscitation of rural talent on the e-commerce platform, human resources may be reinforced. In places of poverty, information infrastructure must be established. Projects to speed up the network and lower fees should be modified to better serve the poorer communities. Rural regions should see the rollout of the 5G network earlier than expected. There should be more e-commerce establishments in impoverished regions. These channels ought to incorporate multiple forms of social capital, including express, logistics, commerce, and finance.

On the internet, successful and inspiring examples of eradicating poverty in rural regions may be shared.

The development of regional brands may place a special emphasis on e-commerce. In conclusion, the “digital dividend” would only enhance rural income if the digital gap were closed.

### **Mitigations and solutions to the e-commerce poverty alleviation problem**

Infrastructure requirements exist for cross-border e-information commerce’s communication, transportation, and other components. If governments in areas of extreme poverty want to properly use e-commerce to decrease poverty, they must aggressively improve e-commerce infrastructure and further increase investment in Internet infrastructure construction. The authority is required to ac-

tively develop e-commerce services at the town (city), municipality, and village levels, use the Internet, set up an online shop for e-commerce, and help e-commerce businesses negotiate deals to provide food to undeveloped areas. The government must also look at the last-kilometer issue of rural logistics and distribution and find a solution.

### **Promote the impact of agricultural goods on brands**

The authorities of underdeveloped areas must openly encourage the growth of unique and favorable industry sectors in rural communities, expand the scope of the advancement of beneficial industries, establish a quantity of advantageous manufacturing bases, and move toward specialization, refinement, and uniformity. The state should also continue supporting local brand businesses like “geographical indication goods” and boost the attractiveness of agricultural goods. Additionally, it must improve brand development, packaging, the consumer experience, and tracing systems for online items.

### **Educating e-commerce industry leaders**

The growth of local e-commerce has recently benefited from the increasing number of young individuals who have relocated from cities to establish enterprises.

Poverty-relief agencies in impoverished communities should establish training programs for e-commerce professionals in the neighborhood and actively promote e-commerce businesses, professionals, management firms, and intermediate organizations. E-commerce business offering can be created in this way to offer unrestricted e-commerce technical training skills and entrepreneurial coaching for reworked migrant peasantworkers, town authorities with college educations, rich and powerful commanders for youths, and underemployed people with money troubles.

### **Enlarge the e-commerce development sector**

Local groups working to reduce poverty should actively encourage the comprehensive integration of regional environmental recreation, tourism, and agro-based traceability by making

full use of the advantages of modern information technology.

Visitors who partake in “country tourism” in impoverished places where the conditions are favorable for planting, breeding, and processing areas could feel the allure of “unique ecological agricultural commodities.” Using the strategy of “Net + e-commerce + tourist,” we will encourage the improvement and transformation of tourism activity in rural areas, including happy farm-

houses, wonderful countryside, scenic county places, etc.

We will establish a multitude of organizations based on blood, family, and rural kinship in the interim. Who doesn’t believe my hometown is fantastic? should be a strong breakthrough that inspires additional migrant peasant-workers and university students to start businesses, as well as more rural youth to actively participate in mobile data business.

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