Proceedings of ICEIPI 2025 Symposium: Understanding Religious Identity in Educational Contexts
DOI: 10.54254/2753-7048/2025.ND23980

Operating Model and Social Interaction of a Sharing Platform in the Urban–Rural Sharing Economy: A Case Study of the Shared Fish Pond in Village W

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Abstract. The sharing economy uses internet technology to match resources and needs more efficiently. It also offers new ideas for developing traditional agriculture. This paper focuses on a business model called "sharing + platform-based agriculture." Using the shared fish pond in Village W as a case, it examines how farm products are supplied and demanded, and how people interact with each other, under the trend of urban–rural integration. The shared fish pond builds an online community based on shared interests. With this community, it connects urban and rural resources more effectively. It also creates a "closed loop" from production to sales, which helps solve common problems in traditional agriculture such as producing, supplying, and selling separately. In this way, the model reshapes urban–rural social relationships. This model expands sales channels for farm products, increases farmers' income, and supports rural revitalization. However, in real operation it still faces problems such as weak management, low digital capability, and poor infrastructure. Therefore, institutional innovation and technical support are urgently needed to improve and scale up the model.

Keywords: shared fish pond, urban–rural sharing economy, farm product sales, social interaction

1. Introduction

As a traditional industry, agriculture faces many obstacles in its development. Reviving the primary sector has become an important goal of rural revitalization. Introducing the sharing economy is an effective way to address problems in rural industries. In Village W, a new form of agricultural production and sales has appeared: the shared fish pond. This shared fish pond breaks away from the usual pattern of "farmers produce, then try to sell." It reallocates fish-pond resources, so that urban consumers can also join the process of agricultural production and consumption. This model not only boosts rural industries, but also creates a new space and new opportunities for social interaction between urban and rural areas. Through the shared fish pond, urban residents can understand farming more deeply and experience rural life. Rural residents, in turn, can rely on the urban consumer market and resources to sell farm products and increase their income. Taking the shared fish pond in Village W as a typical case, this paper describes its operating model and social foundations. From a sociological perspective, it analyzes the social interactions created by this platform-based economy and their significance. It also examines existing problems and tries to offer suggestions, with the aim

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of providing useful insights for developing the agricultural sharing economy and improving the production-to-sales model in agriculture.

2. Literature review

The sharing economy refers to a market platform built by a third party and supported by information technology. Suppliers can earn extra income by giving others the right to use their idle resources. Consumers can meet their needs by paying a reasonable price [1]. In the sharing economy, what is traded is not ownership of a product, but the right to use it. This can maximize the practical value of goods and create a win–win relationship through cooperation between both sides.

The concept of the "sharing economy" first appeared in 1978. In China, it has developed along with the "Internet Plus" strategy and related policies such as bringing agricultural products into cities and sending industrial products to rural areas. This agriculture platform model based on "sharing" has gradually attracted attention from Chinese scholars. However, current research is still at an early stage, and there are relatively few research outcomes.

Ding Linlin, based on the idea that information can flow without barriers, built a platform-based agriculture system with an information-sharing function. This system integrates scattered agriculture-related information technologies to create economies of scale. Through the platform's intermediary role, it connects the supply and demand sides of agricultural resources such as farming technology and land [2].

Lu Qianwen and colleagues provided a theoretical discussion of agricultural development models on sharing platforms. They argue that platform-based agriculture can achieve "zero marginal cost" through platform technology. As the platform grows, it can accumulate a huge amount of agriculture-related data. Reusing and matching these data does not require extra cost, so it can help activate the rural economy, increase the use of rural resources, extend rural industrial chains, optimize rural value chains, and improve rural and farmers' income [3].

Zhao Liling, under the "Internet Plus" strategy, proposed three information-sharing strategies for agriculture-related platforms: information sharing among producers/participants, information sharing between operators and producers, and information sharing for consumers [4]. Producers should notice changes in market demand in time. Operators should continuously adjust and improve products based on market trends. Consumers should keep improving transparency in the agricultural market and supervise the production quality of agriculture-related enterprises.

Existing studies mainly discuss the nature of the sharing economy, business models, and sustainability. Many studies examine how to shorten industrial chains and increase value chains. The goal is usually to reduce costs and increase revenue. The sharing economy separates the right to use an asset from ownership. Under this new way of allocating resources, consumers become more like business operators. This encourages multiple parties to collaborate to complete transactions.

Right now, research on sharing platforms often looks at online platforms, such as virtual communities and e-commerce. It pays less attention to offline, physical platforms. Earlier studies mostly used case studies or data-based (empirical) studies to find what affects how customers and business owners interact. But research on interaction behavior from the sharing-economy view is still limited. Also, many studies look more at interactions between customers and companies, and pay less attention to interactions between users [5].

In agriculture, platform-based models use sharing ideas to help sell farm products more efficiently. However, there are still many problems to solve. For example, Ding Cunzheng said there are issues like unclear platform goals, real and fake platforms existing at the same time, slow regulation systems, and business models that are too similar. These problems limit the further growth of platform-based agriculture [6].

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Hu Yongsheng and colleagues also noted several problems in the development of agricultural platforms: policies and institutions cannot keep up; innovation may conflict with laws; the boundaries of shared agriculture are unclear, leaving many regulatory "blank areas"; there is a contradiction between activating idle resources and consuming new resources; and the basic rights and interests of small and medium farmers are hard to protect [7].

3. Operating model of the shared fish pond in Village W

The shared fish pond in Village W started in 2018. It brought together fish ponds that were previously spread out across the village.

The fish pond uses a mixed model: "online booking + offline experience." The online platform is very important. It is not only a place to buy services, but also a place to show information. People can see the service items, the prices, and the activity schedule. This helps customers choose what they want and book in advance.

The offline part is the main experience. It gives fishing lovers a good fishing experience. It also offers friendly extra services, such as eating at the site. After customers catch fish, they can eat the fresh fish right there. This makes the whole experience better.

Another key part is the "adoption" model. Customers "adopt" a pond area or young fish that they treat as "their own." The pond owner then provides personal services based on what the adopter needs. The owner charges a basic adoption fee and also offers extra paid packages.

In this way, the model creates a modern cooperation system of "sharing risks and sharing returns."

Also, the pond offers different experience programs. For example: only fishing; adoption + fishing; a leisure program with more activities.

These options try to create a "third social space," meaning a place that is not home and not work. Through a deep, hands-on experience, this model can change the daily life of urban consumers.

4. Urban–rural interaction on the sharing platform

4.1. Resource reciprocity

The shared fish pond uses a sharing-economy platform to share the right to use fish-pond resources. It also provides related services, so it can earn more money.

The most important point is that it connects people from cities and villages. With internet technology, the platform lets resources move between the two sides. It meets needs on both sides and creates benefits for both.

A deeper idea here is a changing exchange of social capital. City people use money (they pay fees). In return, they gain something non-money: the meaning, identity, and status of "having a rural-life experience." Villagers use their farming and fish-breeding skills. In return, they earn more money.

In this process, the platform works like a bridge. It helps change one kind of resource into another kind. It also breaks the old relationship where cities only take resources from villages. Through the platform, the city side and the village side support each other with different resources.

As a result, villagers earn more, unused village resources are used better, and related industries like food services and tourism also grow. This creates a good economic cycle.

4.2. Role transformation

In the shared fish pond system, resource reciprocity is not only about money. It creates a complex situation where people from the city and people from the countryside often travel between the two places. When they are in the fish pond setting, they also take on new social roles. The platform changes the normal limits of time and space in traditional production relationships. Because of this,

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city consumers and rural participants form a changing system where they "play" different roles. For example, high-income city residents come to the rural site as "experience-based producers." They come on weekends or holidays. Through ritual-like activities—such as fishing and simple farm work—they shift their identity from "workplace elites" to "rural farmers," at least temporarily. This role shift meets their demand for green food and eco-healing, and it also reshapes how they understand the value of the countryside. Local farmers also change roles. They move from being pure producers to becoming "eco-stewards" and "cultural guides." By organizing fishing activities and teaching traditional breeding skills, they turn production knowledge into a kind of cultural value. These two groups keep communicating both in the physical space of the shared fish pond and on digital tools such as cloud-based interaction in the "adoption" system. Their role interactions create new forms of labor collaboration. For example, urban consumers may join decisions on fish-fry stocking through crowdfunding, while farmers expand sales channels through e-commerce platforms. The platform also reshapes the ethics of social interaction between urban and rural areas: modern contract-based business relations and traditional place-based personal networks are coordinated here in a relatively balanced way.

4.3. Symbolic interaction

The shared fish pond is not only a place to buy and sell. It also has cultural meaning. Through activities like fishing, city users see the fish pond as a symbol of "getting away from city life." It lets them change places for a short time and feel more relaxed.

On this platform, users may change from being only consumers to being partly producers. New roles, such as "pond owner" and "fish manager," weaken the old two-role idea of "consumer vs. producer." As people keep interacting again and again, these new roles start to feel normal and become more like a stable rule in the system. In this way, the platform creates its own language and shared meanings, which support more equal cooperation.

Because it is based on internet technology, the shared fish pond also creates a new kind of social connection. It brings together people who share the same interests and forms short-term communities. People still keep their personal, individual style (common in city life), but shared activities also help them feel some group connection. This kind of interaction weakens the hard "city vs. countryside" divide. The short emotional bonds formed during these activities can go beyond older social ties that were more fixed and tightly structured.

In addition, the shared fish pond is an attempt at business innovation. More importantly, it has become a key platform for reshaping urban–rural social relations today.

5. Challenges and development suggestions

At present, the shared fish pond economy in Village W has achieved early success, but it still faces several problems during further development. One major issue is the shortage of professional staff and a digital operations team. The current team does not have enough digital knowledge, yet the platform will inevitably require more complex digital operations in the future. This may create a bottleneck for long-term sustainability. The village could organize digital training courses and provide free support for villagers on digital operations, so as to improve their digital skills. In addition, the village could introduce talent-attraction policies to encourage more young people to return home and start businesses, which would support rural development.

Another factor that limits the growth of the village's sharing economy is weak infrastructure. The density of rural logistics networks is only one-fifth of that in urban areas, and the coverage rate of 5G base stations is below 40%. As a result, the loss rate during the circulation of agricultural products reaches 18%. This paper suggests launching a "new infrastructure strengthening plan." Through

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cooperation between the government and enterprises, cold-chain logistics centers could be built. At the same time, a "digital village" network project should be promoted to create a multi-level logistics system with "county-level hubs + village-level service stations." In addition, a technology transfer mechanism should be established, encouraging urban research institutions and rural cooperatives to set up joint laboratories.

In terms of value creation, there is a tension between "traffic dependence" and "insufficient value mining." Currently, 70% of the platform's GMV (gross merchandise value) comes from promotional campaigns, but the products do not have strong pricing power or premium capability. This paper suggests building a "quality premium" system. For example, blockchain-based traceability could be used to make the production process visible and verifiable. The platform could also offer customized breeding services, such as member-only fish ponds, to build a high value-added product line. In addition, a benefit-sharing mechanism should be created: sales data should be fed back to producers, forming a "data–production–consumption" value loop.

6. Conclusion

This study analyzes the operating model, social foundations, social interactions, and existing problems of the shared fish pond in Village W. Fieldwork shows that the platform adopts a hybrid model of "online booking + offline experience."

Customers can book farm products through the online platform. They can also choose the offline "adoption" model and participatory experience activities. In the adoption model, customers "adopt" a pond area or fish fry that is considered "theirs." The pond owner provides personalized services based on the adopter's needs, charges a basic adoption fee, and offers value-added package options. In this way, the model forms a modern cooperative mechanism of "sharing risks and sharing returns." The experience programs include a pure fishing option, a combined option of adoption + fishing, and a leisure-oriented comprehensive option.

By combining a digital platform with fish farming, this model strongly activates rural resources and increases farmers' income. Guided by the idea of the sharing economy, underused rural resources—such as fish ponds and labor—are matched more precisely with urban demand, which greatly improves the efficiency of resource allocation. Fish ponds that might otherwise be left unused become valuable resources for urban residents to relax and to obtain green, high-quality farm products. As a result, the value of these resources is fully developed and enhanced.

Field visits also show that the village can expand the shared fish pond economy partly because of traditional networks based on family ties and local relationships. These networks create natural trust, which helps the platform run smoothly.

Also, Village W builds a three-part trust system: trust built by technology, trust protected by institutions, and trust supported by emotions. In this way, the village upgrades the old trust style of an "acquaintance society" into a more formal and institutional kind of trust in a market economy. This creates a new type of social connection.

The platform also creates a new space for social interaction. City residents and villagers have more chances to talk directly. City residents go to the countryside to experience rural life and understand how agricultural production works. Villagers, in return, get closer to urban culture and consumer ideas. This interaction increases mutual understanding and trust, supports cultural mixing, and reduces old barriers between cities and the countryside.

Overall, the platform is not only a new model for farming production and sales. It is also an important place for reshaping urban–rural relations. With help from technology, it creates new two-way links: cities bring money, technology, and market demand to the countryside, while the countryside provides high-quality ecological resources and farm products to cities. This two-way relationship breaks the earlier one-way flow and makes shared benefits possible for both sides.

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