Research on the Model of E-commerce of China's Urban Informatization Community

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Abstract: Urban informatization e-commerce is a business model of the combination of e-commerce operators and organizational forms of community property management, and the import of people management and property management into e-commerce. This paper analyzes the current situation of Chinese urban community e-commerce and informatization community building. It puts forward the model of community e-commerce based on informatization, and its feasibility was verified by PIECE method. Finally, focusing on the application, the model of community e-commerce based on informatization community is analyzed in detail from the perspective of the role and value, supply chain and collaborative management works. Information services are most likely to succeed in the entry point of e-commerce. The study has shown that the establishment of community e-commerce on the basis of urban informatization community can be regarded as a solution of e-commerce development.

Key words: informatization community; e-commerce model; shopping

1. Urban Informatization Community E-commerce Review

1.1. Social Background

Urban communities are the relatively independent geographical area of existence according to the division of geography. Meanwhile, communities can ensure that persons and resources within the region are relatively stable, not easy to flow and keeping in touch with the outside world by some public interface. The most obvious feature of city community is that the individual of community reflects almost no difference and the activities of community are relatively fixed. In addition to common residential districts, community forms include the industrial park of industrious gatherings, the education park of educational organization gatherings, university towns, integrated business district, etc. In recent years, the regional economy becomes the significant force to promote the development of economy, and the community-the smaller economic regionalization- is regarded as the new growing point of economic development. The characteristics of community determine that the community economy comes into being with the urbanization process, and there is a huge business community development space, although the community economy presents a difference due to different types of community, such as the different commercial requirements of residential area of commercial needs and comprehensive business district.

But if community business resources are exploited according to their characteristic, they will get a huge return.

E-commerce is a combination of concept innovation, technology innovation and institution innovation, is the embodiment of the spirit of innovation, and is also an industry in great need of innovation. Community e-commerce which is put forward to solve the problem of the B2C e-commerce consumers' organizational issues is the development trend of residents living environment community. Through the combination of e-commerce operators and organizational forms of community property management, import of people management and property management into e-commerce business models, it makes e-commerce operators of residential area the organizational form, and provides targeted, intensive, real time control services and business services for the community formed as the unit of the customer groups. Thus, it can solve the commercial credit, logistics and payment issues that are more difficult to solve when facing disperse and uncontrollable consumers. Local e-commerce is a more realistic profit pattern of e-commerce.

From the perspective of the participants, city community e-commerce can be divided into three levels: the first level is the community residents; the second level is the community service center; the third level is the service or commodity providers, including business-men, logistics companies, banks, digital authentication centers, etc. Among them, the second level is a two-level structure, namely the community service center platform and the second level platform of community service. Community service center platform is a link between

Table 1. Community E-commerce Participants and their Activities

Participants	Activities
Community Residents	Login community website or through call centers, select goods or services, order, within a specified time and place for receiving orders and services
Community Service Center	Analyze residents' consumption preference, choose matching preferences enterprises stationed community site, integrate web content; concentrate community order and foreign orders; to be as a temporary distribution center receiving the collective order and delivering according to the specified time and place; to be as a temporary payment bank
Enterprises	Provide goods and services that residents need

community resident and goods or services providers. It provides commodity information and shopping services for community residents and offers online store display goods for providers. The second level platform of community service is the background service window of community service center platform, which is responsible for the analysis of residents' demand, choosing a businessman, providing distribution and paying for ancillary services and other value-added services, such as collection of orders, unified price negotiations, etc. The community e-commerce activities of participants are shown in table 1.

1.2. The Present Situation of the Research Review

With the economic development and the improvement of people's living standard, city residents have put forward higher requests for the convenient, quick and comfortable home life and they hope that not leaving home can meet the demand of home services. With the government reform and the advancement of the city construction, urban informatization construction is more and more important. Community e-commerce business model combine e-commerce operators with organizational forms of community property management and people management, and solve the commercial credit, logistics and payment issues in a simple way that traditional B2C model is hard to solve.

Lin Zhongxin thinks the main characteristic of city community e-commerce is that it has identified consumer groups. In traditional e-commerce filed, consumer groups are fuzzy and e-commerce enterprises fail to grasp the real needs of the consumers, therefore it cannot launch its own goods and service types, and form a unique way of marketing. In digital community, e-commerce enterprises doing business have identified community consumers for a long time, have a good grasp of community consumer types and preferences and can strive to improve the quality of its goods, services, and targeted marketing. Replacement or return of the disputes happening between consumers and businesses because of goods quality and service can be directly solved through the property management company. Thus, community consumers can timely have access to the best goods and services, and be able to maintain their own rights, which will undoubtedly improve the community residents' trust and satisfaction

for e-commerce. Having a solid community consumer group object, sustainable development of e-commerce can be achieved.

Doctor Wei Yong believes that community e-commerce mainly has characteristics of several aspects, such as effective integration of resource, implementation of diversified means, clear product and definite positioning, fast logistics distribution, etc. It is essentially the summary of community e-commerce advantages.

Lao Guoling, Zhong Yanping and Qin Zheng think digital community e-commerce, in order to effectively solve the traditional B2B e-commerce and B2C e-commerce model of consumer organizational issues, must be based on the property management, focused on value-added services. It connects the function of integrated e-commerce sites with the organization form of community property management and people management, import the community resident management, property management into e-commerce business model and establish community organization form. Community e-commerce becomes more close to the community residents with the participation of the property management company, and provides convenience for e-commerce enterprises and residents. Community e-commerce achieves "three wins" of community consumers, e-commerce businesses and property management companies, which can fundamentally solve the organizational problems of B2B and B2C e-commerce model of congenital deficiency.

2. Analysis of City Community E-commerce and the Current Situation of Informatization Community

2.1. Current Situation of Community E-commerce

2.1.1. Community E-Commerce of Street Type

The concept of city community e-commerce alone is rarely mentioned in the construction of street type community, but only appears with the concept of community informatization or the function module of assistance electronic community construction. Because the community informatization of street type is driven by government and proposed as a supplement to the electronic government affairs, so its main content is the electronic government affairs and providing public serv-

Table 2. The Comparison of Community E-commerce of Street Type with Community E-commerce of Community Type

Content	Community e-commerce of street type	Community e-commerce of community type	
Driver	Government	Property companies, owners	Individual investors
Function	Giving priority to the public service, strong government elements, involving little content of e-commerce, and only providing a low level of information display	Basically no public services, giving priority to the leisure services of community life, involving more content of e-commerce, but only providing a low-level information display	No public services, giving priority to commodity business, having realized the online transactions
Network	All public network	Mostly the Intranet	All public network

ices. The content involving electronic commerce such as housekeeping service, order delivery services, flea market, etc., is merely information display function.

2.1.2. Community E-Commerce of Community Type

In 1997, China's real estate developers began to promote the concept of city community e-commerce. At the beginning of this century, Beijing, Shanghai, Guangzhou, Shenzhen and some other far-sighted real estate developers set up e-commerce districts. The real estate developers often established online supermarket by setting up a special department (such as electronic commerce) for services of local community residents. However, due to few items and high operating cost, most were in trouble. The community e-commerce of community type usually adopts closed-loop management model, that is to say, the property company is responsible for technology research and development and product management, as well as the delivery and settlement. They operate every link on their own. At the same time, due to technical wall space and cost, small businesses without the strength from surrounding communities are unable to participate. Relative monopolistic competition hinders the development of community e-commerce of community type.

In addition to property companies leading the community e-commerce form, there are also some spontaneous community sites established by the owners. Residents publish supply and demand information in the flea market similar to BBS, or serve community residents in the e-commerce sites established spontaneously by merchants from surrounding communities.

Table 2 shows that two city community e-commerce forms are compared in terms of three aspects: the driver, containing function and dependent network form.

2.2. Current Situation of Informatization Community

In informatization community, information communication, computer and automatic control technology are used in residential area, through effective information transmission network, the optimized configuration of each system and the comprehensive application providing advanced security, information services, property management and other aspects of function for residents, so as to create safety, comfort, convenience and efficien-

cy for the occupants of the living space. Informatization community has generally established informatization property management system, broadband local area network (LAN), a comprehensive information service platform, "all-in-one-card" system, informatization service center, automatic monitoring and management system, community supermarkets and financial services institutions. The main aspects of informatization in the property management are public facility file system, table data automatic carbon copy system, property management service system, network housekeeping service system and safety management system, etc.

Informatization community can use be expressed vividly as follows:

Informatization community = community informatization (excellent building structures and construction quality + good residential district informatization system) + perfectly formed set of property management and quality services.

In 1997, with Shenzhen Mei Lin, Shanghai Posts and Telecommunications Village-China's first batch of informatization community construction, China's residential area began the process of informatization construction. "Key points and technical guidelines of residential area informatization system construction" promulgated in December 1, 2000, is the mark of perfect domestic informatization community construction standards. However, at present a lot of informatization communities have only informatization residential hardware and broadband are obviously deficient in application. In terms of the complete set of perfect property management and high quality services, they need to be improved.

In analysis, on the one hand, community e-commerce meets with developmental disorder due to technical and cost issues; on the other hand, complete network infrastructure of informatization community is lack of application, unable to meet the needs of informatization community residents with high income and high consumption. Therefore, if informatization community and community e-commerce are combined, community e-commerce based on informatization community is developed and community e-commerce portals are built on the existing network of domestic system platform, it will, through complementation, improve the development of community e-commerce, on the one hand, and enhance the level of informatizati-

Table 3. The Feasibility Analysis of Community E-commerce Based on Informatization Community

Performance	Digital community software testing has been on the right track, and many software has been used in intelligent residential area; a complete set of property management intelligent system has been built
Information	Property companies master a large number of real information of community residents to facilitate consumer demand analysis, choose the right stores and reduce consumer risks
Economy	Perfect network infrastructure and supporting facilities of intelligent communities make the construction of community e-commerce no additional facilities cost, and property companies can profit through community platform, improving the service level of community while increasing the tangible benefits and also increasing the intangible benefits
Control	Property company mastering community residents' real information leads community e-commerce, which reduces the network fraud, provides the credit guarantee, and eliminates the security concerns of the buyer and the seller
Efficiency	Implementing efficient distribution of dual JIT type
Service	Community residents obtain high quality service, and the real estate brand image is enhanced today when real estate goes into the era of the brand

on community service, on the other hand, thus achieving a win-win effect.

3. Analysis of Community E-commerce Model Based on Informatization Community

3.1. The Feasibility Analysis

Table 3 shows that the feasibility for the construction of community e-commerce based on informatization community is analyzed from the perspective of the PIECES framework. From the results of the analysis, community e-commerce based on informatization community not only solves the problems of existing community e-commerce consumers, but also provides the opportunity for real estate developers and property management agencies.

3.2. Leading Role and Profitability Analysis of Community E-commerce Based on Informatization Community

Whether community e-commerce based on informatization community can be operated successfully, the key is the role of community service center lying in the second level of model, namely the property company. "Property management ordinance" demands clearly that property be selected through bidding, while the owners' congress have the right to eliminate property company, which makes the property management marketization, competitive pressure great and makes property companies actively seek development; at the same time, the regulations also makes clear that the state encourages the property management to adopt new technologies, new methods by relying on scientific and technological progress so as to improve the management and service level. In this case, the property company leading the construction of community e-commerce is feasible and conforms to the trend of the times. Table 4 summarizes the role that the property company can play in the community e-commerce.

In order to achieve the above functions, the property company, according to the actual situation, can choose the self-built or outsourcing by weighing. Either way, property management agencies must play a leading role in the construction of community e-commerce, and only in this way can they make full use of their information of the residents to pull the entire supply chain of community e-commerce.

Table 4. The Role of the Property Company in Community E-commerce

Role of the property company	Function description
Website builder	It chooses businesses entering into website according to the community residents' preference, and plans the website information(concrete implementation can be outsourced)
Distribution center	Businesses can send goods to the distribution centers set by the property company, in order to meet the community JIT distribution
Clearing center	Responsible for the liquidation of funds information flow
Order collection center	It collects community order, and places unified foreign orders to achieve a bulk

While playing all kinds of roles and providing residents with value-added services, the property company can also find profit points themselves. In the community e-commerce, the property companies can obtain income that comes mainly from the following several aspects:

(1) The rental income. After community sites are built, the merchants obtain rental income by renting shops online, and get advertising revenue by renting advertising places. (2) Distribution commission income. The demands of residential consumption are usually stable and merchants send things to distribution centers through integrating distribution. The distribution center completes the final delivery service, and it can get from shipping cost saved by merchants. (3) Precipitation funds operating profit. Residents can put money on existing clearing accounts by taking top-up advance payment form. When shopping behavior occurs, deduction is directly from the clearing account, and liquidation between residents is performed by clearing centers. The property companies can obtain a large number of precipitation funds in the prepaid; by financial or other investment ways, they make profit; at the same time, merchant payment platform channel fees can also be charged.

3.3. Supply Chain Analysis of Community E-commerce based on Informatization Community

Compared with supply chain of traditional e-commerce, supply chain of community e-commerce, based on informatization community consisting of businesses, property companies and informatization community residents, adds the property company and the supply chain becomes longer. This is discussed where the model characteristic is in this paper, and it is a type of high-response capacity supply chain. From the front-end of the supply chain of community e-commerce, the property company place orders to the businessmen in an unified way and businessmen deliver goods to the property company, both forming the traditional B2B e-commerce model; and from the back-end of the supply chain of community e-commerce, residents pay for goods to the property company in advance and the property company sends goods to the residents, both constituting the traditional B2C e-commerce model. Overall, due to the property company's intervention, community e-commerce model based on informatization community shows a very clear B2B2C business model.

4. Conclusions

To sum up, the current community e-commerce can be divided into two categories: community e-commerce of street type and community e-commerce of community type; the feasibility of community e-commerce based on informatization community is verified by YIECES framework; the property company can expand the development space and obtain profits by leading the four types of roles: website builder, order collection center, distribution center and clearing center. Practice has proved that information services are most likely to succeed in the entry point of e-commerce; the study has shown that the establishment of community e-commerce on the basis of urban informatization community can be regarded as a solution of e-commerce development. Therefore, the construction of community e-commerce based on informatization community should comply with the characteristics, starting from the perspective of the construction of information service. Concrete exploration of the content construction of city community e-commerce based on informatization community will be a research direction in the future.

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