B2B E-Marketplace Adoption in Agriculture

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***Abstract*—the Internet provides new opportunities and challenges for agricultural product marketing. B2B E-marketplace is a model of E-commerce, which has been used to trade a wide range of goods, including agricultural products. The paper attempted to analyze the benefits and critical factors of B2B e-marketplace in agriculture product marketing case study by Shandong Shouguang Vegetable Trading Market Online (SSVTMO), which is a integral system including information publish system, visual digital transaction system and online auction system based on medium long-term spot trading. SSVTMO can implement value creation by personalized information services, control of the fulfillment process, Strategic partners network and controlling complexity. Furthermore, E-marketplace adoption in agriculture still faces technology and collaboration barriers.**

***Index Terms*—e-commerce, B2B E-marketplace, Agricultural product logistic, Vegetable Trading, Medium Long-term Spot Trading**

I. INTRODUCTION

The Internet provides new opportunities and challenges for businesses around the globe. E-Commerce (EC) has resulted in new business relationships and enabled new markets, new business, and new marketing paradigms [1]. In its broad sense, e-commerce includes all transactions which use Information Technology. It encompasses everything that allows us to electronically gather, generate, store, analyze, distribute, or otherwise use information.

Penetrated into agriculture in the end of the 20th century, E-commerce provides existing customers with another avenue to disseminate product information and link into a new customer base. It is similar with other businesses that agribusiness face the challenge of changing their business model significantly and practicing to incorporate Internet activities. Many agribusinesses have capitalized on the advantages of e-business to improve the marketing and trading of their products. There are still many benefits about the potential success of e-commerce's in agriculture. Common agribusiness business-to-business (B2B) transactions such as buying, selling, trading, delivering, and contracting seem to be natural targets for conversion to e-commerce (Shapiro, 1999). E-commerce has penetrated agriculture in USA as well as the rest of the world. By 2000, one in 25 U.S. farms had already bought or sold agricultural products on the Internet [2]. Goldman Sachs estimated that 12% of all agricultural sales in the U.S. would be conducted over the Internet in 2004, compared to only 4% in 1999 [3]. In India, the agribusiness is regarded as a major contributor to the economy. The high reliance on accurate and timely information and large physical distances between producers and customers in the country has made this sector conducive to the benefits of e-business [4].

Many theoretical benefits of e-commerce in agriculture have been identified such as: promotion of information flow, market transparency and price discovery; facilitation of industry coordination; and reduction or elimination of transaction costs [5]. Goldman Sachs argued that the general barriers cited by businesses to Internet-based e-commerce adoption. Those included budgets, unclear return on investments, lack of stakeholder support and complicated technology. These concerned appear to apply to agribusiness as well. However, there may be additional factors slowing down e-commerce adoption in agriculture. Nicole Leroux represented three dominant factors that impact the development of B2B commerce in agriculture: change in industry structure; product complexity and high-touch nature of transactions in agriculture. The rapid development of e-commerce presents challenges and opportunities to agribusiness at all levels of the supply chain. This task is especially difficult given the seemingly continual flow of new information technology and software applications. Nevertheless, agribusiness is forging ahead with their e-commerce strategies, in part fearing they will lose customers to competitors if they do not take some position.

China launched its first agricultural e-commerce website on August 17, 2000, according to the Ministry of Agriculture (MOA) [6]. From then on, agricultural websites have achieved

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a fast growth. The number of agricultural website has increased from 200 five years ago to more than 3000 at present. Out of their totality, 37 percent of websites are by agricultural enterprises and 17.45 percent by institutional departments, leaving another 16.4 percent in the category of science and education [7].

B2B electronic marketplaces, or e-marketplaces, have been in existence for over a decade, in which time they have been used to trade a wide range of goods. B2B e-commerce is mainly conducted through B2B e-marketplaces, that is, through Internet-based electronic markets that allow online B2B communications and transactions. B2B is an e-market between enterprises and is generally more profitable than the B2C market since the volume of trade is 10 times that of the B2C market [8]. The Chinese government showed interest in the impact of B2B e-business on the Chinese economy and capabilities of Chinese organization, and began to building a nationwide data communication network in 1993. There are many Internet companies actively engaged in business-to-business e-commerce through a network of partner companies and farmers' organizations in China. The CCEC, an online B2B Exchange firm in China, enjoyed success ever since its introduction of a B2B system early in 1997.Its registered members has exceeded five million. The B2B exchanges offer more than 500 classified products in 26 industries for its members. Alibaba is the dominant e-market in China, with a market share of more than 60%. Alibaba.com offers an open environment for SMEs, who can join with minimum requirements. It ensures a reliable online payment process through a third-party payment website [8].

The paper discusses e-commerce adoption in agricultural product marketing and study a case of vegetable marketing in China. Section 2 discusses E-commerce application in agriculture and also describes the benefits of agriculture e-commerce. Section 3 analyzes the critical success factors of B2B E-marketplace. Section 4 studies a case of Shouguang Vegetable Trade Mareket Online and analyzes the value creation from e-market process. Section 5 discusses some chanlenges to B2B E-marketplace in vegetable marketing and draws the conclusion.

II. E-COMMERCE APPLICATION IN AGRICULTURE

A. Agriculture E-commerce

Agriculture E-commerce is the kind of trading models whereby buying and selling of agriculture products and services are carried out electronically with the use of computer systems linked together over inter network protocols and standards. The various parties involved in the electronic business dealings agree to conform to the norms, rules and regulation guiding the industry [9].

Unlike manufactured goods, agricultural products have the low of standardization. Standard grades help simplify product description, but time and location factors also influence the price of a commodity. For example, that digitizing all the information of a common commodity product like No.2 yellow corn (location, time, price, quality, quantity, etc.) requires very elaborate databases and search engines. The same load of No.2 yellow corn will have a different price today than a month from now. It may have a different price in Quincy, Illinois (USA) than in Gardner, Iowa (USA) [10].

Agricultural E-commerce is any method of using electronic communications and computer technology to conduct agricultural business, so that trading partners can share a wide range of data. Agricultural E-commerce transforms the way agricultural products are sold and the way agribusiness interact with each other and customers through communication channels. In order words, the technology is a subject of the larger world of both Information Technology and Agriculture [11].

The agricultural supply chain was described as full of imperfections that restrict efficiency. In these areas e-commerce had great possibilities for improvements. The high level of fragmentation in the supply chain, large volumes traded and homogeneous product all incline agriculture towards e-commerce. Goldman Sachs identified as one of the seven most business to business inclined industries. Agribusiness organizations worldwide have capitalized on the many advantages of e-business to improve the marketing of their products [12]. The advent of e-commerce will change considerably the economics of marketing channels, patterns of physical distribution and the structure of distributors.

B. Benefits of E-commerce adoption in agriculture

E-commerce can provide greater transparency in the purchasing process since prices and stock levels are all accessible in an open environment. The trading time constraints under the context of international trade are removed as it is possible to operate on a round-the-clock basis. Some of the potential benefits are summarized below:

- Saving transaction costs

The Internet may reduce transaction costs by lowering trading and/or transfer costs when the following scenarios: facilitated information search, lowered the costs of adjusting posted prices, facilitated negotiations between geographically separate buyers and sellers, and monitored more easily fulfillment. Furthermore, because communication costs on the Internet are largely independent of data volume and distance between sender and receiver, geographic distance is unimportant in search and negotiation. Finally, the Internet has the most profound impact on trading costs when information is digitized, e.g. when cattle or fresh produce are sold by digital video rather than by physical display [13].

Both buyers and sellers can benefit from the positive impact since efficient transaction processes can be outsourced. However, at the present time, the positive impact on procurement is greater than on potential supplier benefits. In several markets, efficiency recovery is required more upstream than downstream in the value chain. This is why these solutions are now mainly buyer-driven. Updated information on price and availability makes it easier to secure the best deal. E-marketplaces offer a convenient way to compare prices and products from a single source rather than spending time contacting each individual supplier. Established e-marketplaces provide a level of trust for the buyer as they

are dealing exclusively with suppliers who are members. Regular requests for quotations from both new and current customers are possible. It provides an additional sales channel to market and sell products. E-marketplaces can offer reduced marketing costs when compared to other sales channels.

- Increasing the transparency of price and product information

Digital marketplaces play an important role in increasing the transparency of price and product information, and can significantly affect competition. Digital technologies lower the marginal cost of finding new counterparts and transactions can be made by means of a broader and more efficient comparison of potential partners [14].Companies can access a wider range of business opportunities if they operate in a digital marketplace. Interacting with a large number of potential counterparts reduces transaction costs and allows companies to enhance their businesses. The family production and management is still the main form of agriculture in China. Although it promotes the activeness of produce, small and scattered management mode is not benefit for the development of producing socialization. E-commerce can change the situation of hard bargain caused by scattered farmers and lack of information. The fast and convenient electric bargain manner can accelerate the circulation of commodities, and lessen the risk, and increase the competition of Chinese agricultural products in the international market.

- expanding market opportunities

Since in digital marketplaces companies basically exchange information flows, intermediary usually have to develop a complex, multi-faceted partnership with different logistic operators in order to supply services that can lower procurement costs. The explosive growth of B2B is mainly due to the cost saving derived from outsourcing most of the supply chain activities. Goldman Sachs estimates that B2B solutions enable companies to decrease the unit cost of a single procurement process from 10 to 25 percent [15]. Moreover, much more time is spent on order processing activities than on looking for new solutions. B2B services allow companies to streamline the procurement process and employ human resources on more value-added activities. Improved stock management and procurement and transport efficiencies can also increase delivery speed, production flexibility and reduce lead times and time-to-market.

Intermediary services strongly influence trust and other relational resources. Price and product transparency reduces information asymmetry, opportunism and adverse selection phenomenon. In digital marketplaces, the contractual power between buyers and sellers is altered. Services such as supplier information, customer rating and tracking past transactions reduce the asymmetry and the complexity of markets, and increase efficiencies in the transaction process.

III. B2B E-MARKETPLACE: A MODEL OF E-COMMERCE IN AGRICULTURE

A. B2B E-marketplace and its types

A general definition of B2B E-marketplace is under specific transaction scope, both the suppliers and buyers are willing to proceed with exchanging of money, and distribution of products and information through the mechanism and norms provided by the Internet (Deloitte Consulting, 2000). With the rapid development of electronic commerce, there appear more and more e-marketplaces on the Internet, such as Ariba, CommerceOne, etc [16]. E-marketplace supplies a central dealing platform for enterprises, and realizes a new business pattern with lower cost and higher return. Agriculture third party e-marketing is usually a business-to-business online platform for agriculture product market, which is served for the farms and agribusiness. By registering on an independent e-marketplace, you can access classified ads or requests for quotations or bids in your industry sector.

A major classification for B2B EC is determined by its owner, such that it is an e-distribution if it comes from the seller's side, an e-procurement if it is on the buyer's side or an e-marketplace if it is intermediary. However, scholars have extended the scope of the intermediary e-marketplace to include both the e-distribution and the e-procurement. For example, Kaplan and Sawhney classified the B2B e-marketplace into maintenance/repair/operating center (MRO) hubs, catalog hubs, and yield manager exchanges based on procurement and product types [17].

E-marketplace can be further classified based on industry type into horizontal, vertical, and diagonal market. A horizontal e-marketplace connects buyers and sellers across different industries or regions. A horizontal e-marketplace can be used to purchase indirect products such as office equipment or stationery. Vertical e-marketplaces provide online access to businesses vertically up and down every segment of a particular industry sector such as automotive, chemical, construction or textiles. Buying or selling using a vertical e-marketplace for the industry sector can increase the operating efficiency and help to decrease supply chain costs, inventories and cycle time.

B. Critical Success Factors for E-marketplaces

According to Butler and Fitzgerald, critical success factors are the functions or areas where things must go right to ensure successful competitive performance for an organization.[18] The literature on the critical success factors were mainly in such fields as IT adoption, project management, and marketing. We can analyze the success factors of e-marketplaces according to the study of Julta D as follows [19]:

- Functional Factors. Functional factors include facilitation of product customization, support for negotiation (bidding/negotiating), and access to a similar interest user community. The core function of an e-marketplace can be described as 3C's-commerce, content, collaboration [20]. E-marketplaces operators should use the 3 C's Mix in a specific way because each E-market and industry is unique. Furthermore, functions differentiated from its competitors are needed to add value to customers. According to the research of Raisch, some key areas of value-add functions are: domain expertise; life cycle support; logistics support; electronic payment and escrow

services; community building; integration capabilities; and data mining services.

- Strategic Factors. Before referring to the strategic factors, it is critical to identify what specific buyer and seller segments to target as well as decide what type of products on the e-marketplace; then the following strategies factors can be considered, including first-to-market, brand establishment, customer focus, targeted marketing, outsourcing, and development of a customer or user community. Without a clear focus on these factors, the e-marketplace runs the risk of positioning wrongly and failing [19].
- Technical Factors. Technical factors have direct consequences for the success of the e-marketplace. Technical issues encompass quality-of-service items such as response time, throughput, compatibility and reliability, etc. Basically speaking, the technical performance objectives for an E-marketplace are to satisfy all participants' need [21].

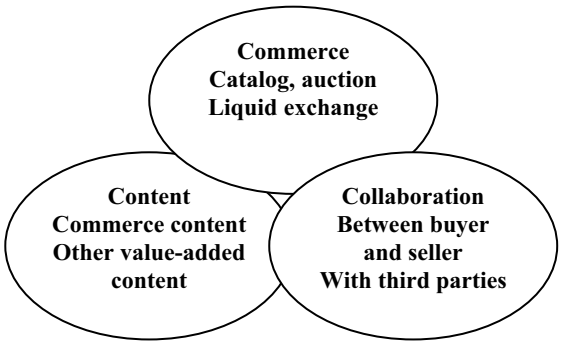


Figure 1 the 3 C's of B2B E-marketplace, adapted form A.T. Kearney by Peter Brunn

IV. B2B E-MARKETPALCE OF VEGETABLE MARKETING: A CASE STUDY

A. case description

Vegetable market is the largest sector in the country's retail agricultural products market. Relying on the nation's largest vegetable wholesale market, the vegetable electronic trading market will be built, which is called Shandong Shouguang Vegetable Trading Market Online (SSVTMO). This was chosen because of the excellent design of their e-commerce processes. Shandong Shouguang Vegetable Trading Market Online (SSVTMO) is the professional vegetable trading market online which is set following the important instruct "do the best to the agriculture brand of Shouguang Vegetable" of China president Hu Jintao and the deployment "Shouguang needs to establish the vegetable intangible alike futures, makes the tangible market and the intangible market combine and founds the internationalization vegetable trading centre" of governor Han Yuqun. It is approved by Shandong People's Government and authorized by Industry and Commerce Administration Department.

It is vertical e-marketplaces provide online access to vegetable. It is the national modernization market demonstration item supported by the National Development and the Reform Committee. The Market is jointly organized by Chinese Vegetable Circulation Association, Beijing Gold Net & Tech Information System Co., Ltd. and Shouguang Chenlong Investment Consulting Co., Ltd. The market organizes vegetable trading market online leading by senior experts of Chinese bulk commodity Electronic Commerce field, supported by the special administration team and using the network information technology. The advantage for the Market is that Shouguang, Shandong was hometown of Chinese vegetable, and it is the first in China as well as national maximal vegetable trading market online.

B. Platform and systems of Shandong Shouguang Vegetable Trading Market Online (SSVTMO)

Shouguang Vegetable Trading Market Online is a integral system which consists of different subsystems.

1) vegetable information publish system

The system will focus on gathering information, analyzing information and releasing information of vegetable. It develops the collection, analysis and forecasting on market information of fresh vegetable in Shandong province. The system releases the information of current price and price trend of vegetable in domestic and foreign markets, in order to meet the demand of vegetable in people life.

The platform also develops the system to collect, analyze and release the information about vegetable, including garlic, onion, red dry pepper, potato, ginger and etc. With this information, farmers which provide agriculture products can put their products on market, and sellers can find these agriculture products to promise the vegetable quality as soon as possible. Shandong Shouguang Vegetable Trading Market Online has been formed already price that having bigger influence in international and domestic, approved widely by insider at present. At present, the first trading variety in the Market is garlic. The trading varieties to be public are pumpkin, ginger, onion, potato, garlic sprout and etc.

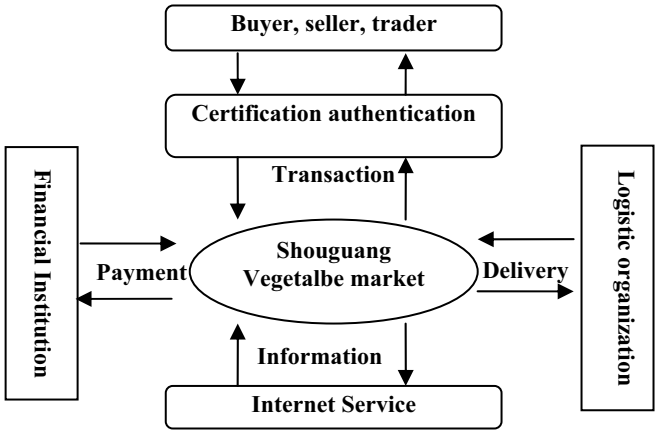


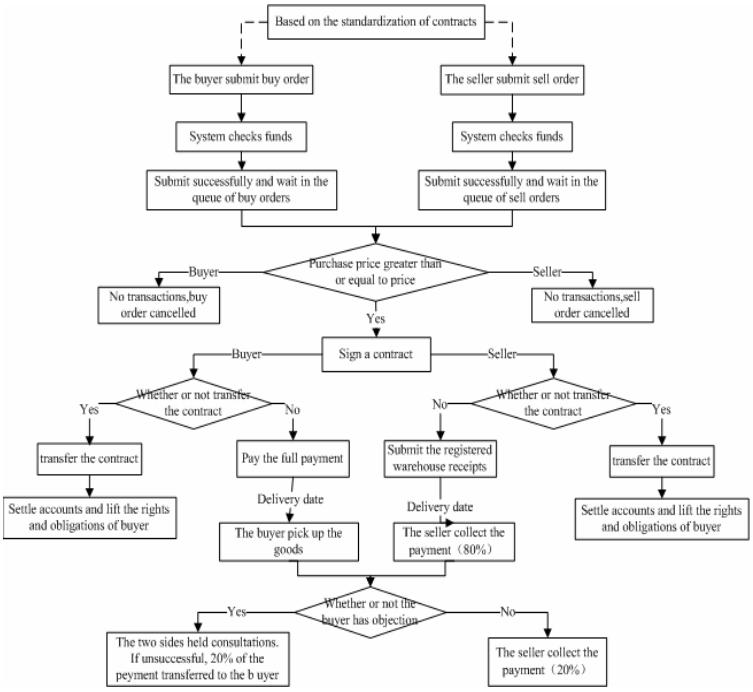
Figure 2 e-market platform of Shouguang vegetable

2) visual digital transaction system

The system includes the platform of spot transaction (including spot and medium long-term), financial system of spot transaction, management system of spot transaction. The transaction process takes the way of electronic matchmaking, which depends on price priority, quantity priority, and time

priority. Dealers can take transaction on what they want freely. The process will be charged some deposit and fee. Farmers can input the information of vegetable on the digital transaction system by computer, telephone and cell phone. From the intelligent connection engine of trade, the demand part can easily find the suppliers. The e-commerce platform of Shouguang Vegetable Trading Market Online develop order system to collect, analyze and release the information. E-Order agriculture is the important way to promote agriculture industrialization, which can meet agricultural product demand of agribusiness and the material demand of farmers. It can break a new path of foreign exchange and revenue promotion to stimulate the development of agriculture informationization. The platform manages the human resource, financial resource and material resource by information technology, and develops the digital transaction management system of vegetable trading market Online to improve the market efficiency and quality (See Figure 3).

The Market should transfer ordering payment for goods according to regulations stipulated in e-trading contract. The Market will carry out daily settling for traders' account according to daily settling price. Payment rate for ordering payment for goods will be followed standards in the contract, trade ordering payment for goods in different time will be adjusted according to relevant regulations of the Market accordingly. The Market will charge handling fees according to traders' traded quantity on the current day and fixed standards. The Market will carry out trade profit and loss settling to each trader for their daily transferred ordering goods and relevant capital accordingly.



(Figure 3 a the tranaction flow of medium long-term spot

b the e-marketplace system screen)

3) vegetable online auction system

Online auctions are computerized versions of traditional auctions where prices are set by buyers bidding against each other. What makes online auctions so powerful is that, with Internet technology, vast numbers of businesses or individuals can bid, allowing sellers to get the best price. Conversely, the speed, simplicity and variety of auctions mean that shrewd buyers can cut the time and cost of procurement. With online auction system, the market organizer can attract more dealers and increase the popularity. The model can save the management charge and spot fee for the vegetable wholesale market organizer. The system offer a platform on which dealers can buy the lowest price of vegetable, which can save a lot of money and time, reducing the transaction cost. The platform is public and transparent, which can avoid the purchase cost and price increasing. The platform can relieve the high marketing charge of sellers, which cost little transaction fees. It can speed up the sale process and turnover of the agribusiness. Since the Market was finished in February 2005, has established more than 10 offices and 30 agencies. The traders expand to all over the country and 15 countries, have more than 5,000 and the turnover is between 50,000-150,000 tons. Providing the information and trading platform that having the clear price, trading conveniently and quickly, keeping honesty and good faith for traders. The Trading Market Online can supply the market on day about more than 100 the national vegetable wholesale market and the price though the matching trading. Shandong Shouguang Vegetable Trading Market Online has been formed already price that having bigger influence in international and domestic, approved widely by insider at present. At present, the first trading variety in the Market is garlic. The trading varieties to

be public are pumpkin, ginger, onion, potato, garlic sprout and etc. The trading volume will be finished 30 billion in 2008.

LATEST MARKET					
SYMBOL	SETTLE (dollar)	HIGH (dollar)	LOW (dollar)	CHANGE	VOLUME (ton)
DS0902	28.6	29.5	28	0.50%	987
DS0903	33.9	33.9	33.9	-4.96%	20
DS0904	34.9	34.9	34.9	-4.82%	2590
DS0907	99.3	101.2	97	0.89%	35268
DS0908	99.6	102.7	97.1	1.34%	9130
DS0909	140	142.4	133.7	3.43%	834
DS0910	143.4	145.5	138.4	2.82%	869
DS0911	144.2	144.2	144	1.24%	2
DS0912	146.1	146.8	143.4	1.42%	27
NG0902	39.9	39.9	39.8	0.00%	2
NG0903	37.3	38.6	36.1	3.56%	64
NG0904	36.8	36.8	36.8	-1.96%	3
NG0905	36.8	36.8	36.8	0.40%	2
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Figure 4 the latest market provided by SSVTMO

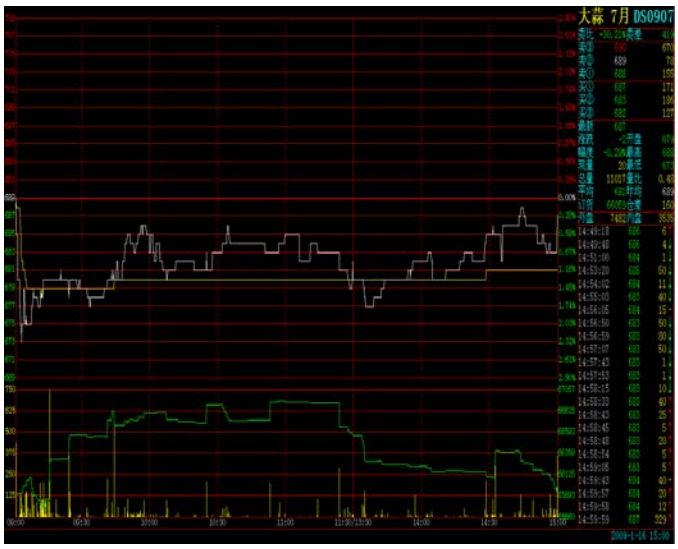

Figure 5 The vegetable online auction system of SSVTMO (on K-Line,RMB)

C. *Value creation of through B2B marketlpace: e-commerce process*

The B2B e-market model consists of a matrix of two-dimensions: transactional process and controlling complexity. For Chinese e-markets, four phases of transactional process are identified: information, negotiation, payment and delivery. They are connected and sequenced according to the trading process. The control dimension includes supervision and control of transactional process for security and trust. If the transactional process is common to all e-markets, controlling complexity allows us to show the special feature of B2B e-market development in China.

1) Personalized information services

In the information phase, SSVTMO provided a Member's office, which enabled customers to have an office to manage their business information. SSVTMO customers could therefore control, revise, change, or dispose of their business information, including registration, issuance, counter offers, partners' offers, contract signing, and trade codes.

In the negotiation phase, SSVTMO provided customization and flexibility to customers through multiple modules, such as online catalogues, a negotiation house, and Sample House' services. Customers selected these services as they wished. Diversified services allowed new opportunities to be created by matching sellers with buyers quickly. Customization is enhanced though the active involvement of managers in the B2B exchange who were available to help customers.

2) control of the fulfilment process

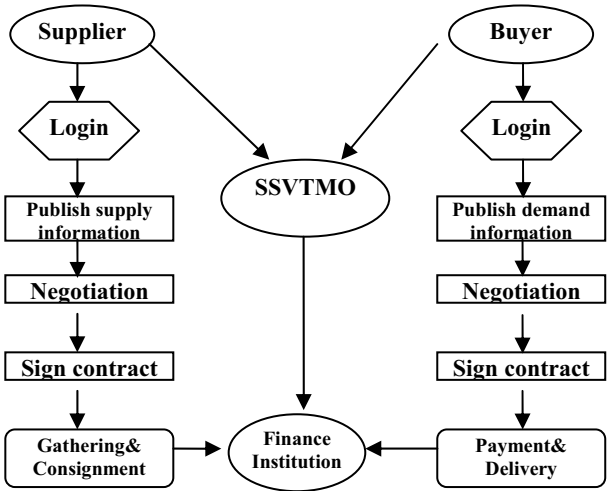

Figure6 the transaction process of SSVTMO

SSVTMO's payment process is intertwined with the delivery phase; it involves multiple players from transportation and storage providers to customs agents and banks. SSVTMO and its branches act as a neutral supervisor. The structure of the fulfillment process involves SSVTMO and its branches, a specified bank, a buyer, and a seller and contracted transport companies as actors. The system aggregates information from the different participants and delivers this data to the appropriate parties. Due to the extensive involvement of SSVTMO branches located national wide, SSVTMO provides a reliable, secure and efficient transactional environment under controlled conditions. But this approach is costly, and can only succeed with the support of the Chinese government. However, this process is especially useful since intentionally delayed shipments and payments occur.

3) Strategic partners network

SSVTMO's payment and delivery are handled through a network of financial institutions, logistics companies and SSVTMO branches. Such a logistic network offers convenience and cost saving potential to users. The ability to track and supervise transactions by coordinated SSVTMO branches adds to the safety of transactions. Both parties in the Chinese market normally rely on personal relationships to ensure execution of contracts; legal actions seldom take place. Hofstede suggested that China has a long-term orientation, indicating a society's long-time perspective. In China, arrears and quality issues may arise, as in other nations, so both parties are worried about problems in virtual market, having reservations about security and trust in online trading. In the B2B e-market, it needs a strategic partner's network of the bank, the transportation entity, and the quality inspection entity to provide a secure and reliable process.

4) Controlling complexity

In the information phase, the control of complexity is low; data about buying and selling business is freely disseminated. Most e-markets in China have this basic capability. The payment and delivery phases entail an end-to-end goods delivery and monetary transaction from suppliers to buyers. Shipment of bulk commodities involves multiple players from various transportation and storage providers, etc. The e-market has to coordinate these players so that the right information is delivered to the right person at the right time while supervising the execution of the transaction in a secure and reliable manner. It is necessary to create a partner network to accomplish collaboration, requiring a higher level of control of complexity.

V. DISCUSSION AND CONCLUSION

Although E-marketplace can bring the benefits for agriculture product marketing, E-marketplace adoption still faces an inordinate number of challenges. Three main categories of adoption barriers are often mentioned: technology, organization and collaboration [22, 23]. Technological barriers include, for instance, network security, system integration, and the integration of internal systems to Electronic Data Interchange. The Internet infrastructure is underdeveloped, Internet linkage connecting speed is slow and the costs are expensive in Chinese rural areas. Undeveloped rural infrastructure largely contributes to the problem. The Chinese government attempts to develop telecommunications in the rural area have achieved some promising results. However, generally speaking, rural telecommunications are still undeveloped and lag far behind the urban areas. For instance, in many remote areas, the whole village may have only one telephone line. The Chinese government has experimented with eliminating installation fees in some rural areas. However, in areas where infrastructure is undeveloped, this policy is virtually of no effect, because marginal costs there are much higher and telecom operators can barely make profits under the current scale. This problem is unlikely to be fundamentally solved without major investment in infrastructure in there areas.

The organizational barriers include, for example, perceived ease of use, perceived benefits, lack of training, and resistance to change, management commitment, and intention to use in order to predict the possibility of IT rejection [24]. Successful companies will the ones who understand their customers and provide them with human interaction. Today's high-tech transactions mean that e-commerce players have to lead individual users toward a new way of conducting business. The nature of adoption of innovation will create opportunities for those who cater to individuals' need for learning and training. To make the transition from high-touch to high-tech, successful businesses in e-commerce must have strong sales, customer service and marketing orientation. In addition, extending e-commerce to the sales force may free employees from paperwork and filing duties and allow them to focus on more value-added activities such as client recommendations, leading to greater customer satisfaction [25]. The agribusiness should pay more attention to Inter-firm collaboration barriers include, for example, economic incentives, strategic alignment, inter-firm conflicts, and social issues such as trust [26]. Many people do not trust online transactions; likewise, the policies and regulations for encryption software and security products are unclear. The insufficient experience of most Chinese network system administrators, and vulnerable hardware and illegal copy of software make customers sensitive to online business. There are no specific laws made to govern the legal use of personal information and transaction records of consumers as well as the safety and the authorization of the use, and effectively protect customer's legal rights as privacy. The EC industry in China has a very long and difficult task of convincing customers that online transactions and privacy are, in fact, very secure.

The evolving B2B e-market in China provided a field for defining a new model of e-commerce markets. We have attempted to analyze the benefits and critical factors of B2B e-marketplace in agriculture product marketing. A case study of Shouguang Vegetable Trading Market Online (SSVTMO) was presented. It showed the performance of e-business strategy needs in the transaction processes of e-markets. Critical e-commerce activities emerged from the analysis. They are customized services, control of transactional process, and strategic partner's network. Payment and delivery are, of course, important business activities. E-marketplace adoption still faces challenges, including technology, organization and collaboration barriers. The analysis of B2B e-marketplace of vegetable marketing offers important managerial implications and provides guideline in identifying the effective strategy, crucial business activities and value creation opportunities in agriculture product e-commerce.

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