Network Society and Enterprise Management Reforms: 
A Fieldwork Study in Daoxiangcun Group Co. Ltd.

Zhang Jijiao  
Chinese Academy of Social Sciences

Yang Li  
University of Chinese Academy of Social Sciences

In a network society, the fast-changing economic situation brings about considerable challenges to traditional enterprises, especially for a “time-honored” enterprise like Daoxiangcun Group. It is an interesting academic topic for scholars to portray the ways in which these time-honored enterprises have achieved tradition-modernization transformation via the internet technology. This paper, by taking Daoxiangcun Group as a case study, makes an anthropological fieldwork research and analyzes the changes in the management of Daoxiangcun Group at four levels: network society as the macro structure, the baking industry as the meso structure, the company’s organizational structure and business processes as the micro structure. It is found that the tradition-modernization reforms reflect the pattern of “from outside to inside” to “from inside to outside”, and the pattern of “from top to bottom” to “from bottom to top”.

Keywords: enterprise anthropology, four-level analysis, social structure, network society, enterprise management reforms

INTRODUCTION

Internet technology came to China in the 1980s and its application spread from scientific studies to business and finally to the general public. Since the introduction of the Internet in business, dramatic changes have taken place in China’s commercial world. On the one hand, the easy access to internet facilitates the purchasing. For example, people from mountainous areas can now use cellphones to buy almost whatever they want. The long-established notion of saving money in China is not as much praised as before. On the other hand, new business patterns among manufacturers and sellers spring up one after another, such as “fan economy”, “live selling”, and “platform economy”. Such emerging economic phenomena have exposed traditional enterprises in China to quite a number of uncertainties and they must be ready to meet every single challenge in a world dominated by internet technology.

In parallel with the struggle of enterprises, scholars in economics, management and sociology have also given their attention to the adaptations and reforms of enterprises, intending to come up with a theoretical interpretation. In the West, most scholars referred to the time after the 1990s as the “information society” or “post capitalism society”, where manufacturers’ organizing principle shifted from production capacity to consumers’ needs and the operating system of the organizations were reformed. Both Drucker (2009)
and Champi (1998) portrayed this reformation as the organization’s structural change from a hierarchical one to a blend of the market and hierarchy, and they highlighted the impact of the external environment on enterprise management. Following the western management theories, Chinese scholars have made several attempts to describe the changes and reforms of Chinese enterprises in the last decade. According to Xu Wei (2008), the Chinese enterprises have also been undergoing structural reforms so as to adapt themselves to the external environment. The external factors include new techniques, economic environment, competitors and market. Lou & Han (2011) further pointed out that, in addition to internet technology, external environment also involves the legal system and cultural background. Both of them see the enterprises’ development in China as a distinct evolution process and both lay an emphasis on the influence of non-economic factors, such as the internet and cultural differences.

In the West, the structural transformation of enterprises drew attention from scholars in economics, management, and sociology as well and they largely described this reformation as networked organizations, indicating the allied relations among enterprises. However, Castells (2005) shed a different light on the organizations’ change. He assumed that, in addition to the cooperative relations between enterprises, the enterprises’ domestic structural changes are worthy of more study. According to his observation, small and medium sized enterprises show a preference of seeking for cooperation with others for the convenience of resources while larger companies are more interested in reducing unnecessary managers and offices, focusing more on forming project-oriented teams. The flat and borderless structure of the enterprises makes it possible to form a swift information flow. Djick (2020) conceptualized the new structure as a decentralized structure and proposed three perspectives to study it: the interpersonal relations between individuals, the relation between teams or work units, and the interrelation between individuals and the units they belong to. It can be seen that the two scholars’ assumptions and perspectives are rooted in individualism, in which individuals remain the focus. Such explanations tend to overlook the fact that enterprises are more of a social part and the social role of a company, in fact, weighs more than individuals in China. Moreover, different from western enterprises, who have established a modernized management system in the 1990s, Chinese enterprises are not as developed as western companies and remain far from being modernized. Therefore, the study of enterprises in China could not be limited to individuals, and more factors need to be examined.

The above theories and discussions have contributed significantly to our understanding of reforms of enterprises in China at the time of the network society; however, there remain unresolved questions worthy of further discussion. First, detailed narrations of how traditional enterprises achieved modernization through internet technology are scarce. Second, great changes have taken place in the Chinese social structure in recent decades and, so far, however, there has been little discussion on social economic forces in the study of Chinese enterprises, considering that they are the main economic players in the society. This paper seeks to address these problems by analyzing the literature in enterprise anthropology, aiming to interpret enterprises’ economic behaviors from the perspective of social structure. We examine the way in which the time-honored brands in China, or to be exact, Daoxiangcun Group, achieved tradition-modernization transition by means of the Internet. The aim of this study is to shed some new light on the interpretation of enterprises’ modernization process and explore the interactions between social structure and economic organizations.

LITERATURE REVIEW

During the last decade, a considerable amount of literature has been published on Chinese traditional enterprises. There are generally two strands running through the literature: some studies conducted by scholars of management from the perspective of economics, and a growing number of systemic anthropological studies on time-honored brands from the perspective of enterprise anthropology. Viewed from the perspective of economics, much of the current literature on traditional enterprises pays particular attention to their marketing activities, for example, discussions on the value of a trademark or brand. In recent years, scholars of management have also paid attention to the relationship between the Internet and the tradition-modernization transition of time-honored enterprises, involving mainly three
aspects: online marketing as a transition path, using new media communication means to upgrade a brand, and the Internet as a driving force for transition and industrial chain innovation. These discussions, mostly case studies, draw our attention to the impact of internet on marketing behaviors and industrial chain innovation.

Viewing from the perspective of enterprise anthropology, systematic studies on traditional enterprises have been conducted. Enterprise anthropology starts with the setting up of a research group specialized in time-honored brands. The research paradigm is established based upon numerous empirical studies that investigate the time-honored brands in the last decade in China. From 2010 to 2011, the research group conducted a survey on time-honored enterprises in 12 provinces and municipalities across the country, and a series of academic works have been published, including an overall analysis report, three regional comparison reports, eight provincial (municipal) research reports, and four industry investigation reports. In 2013 and 2014, the research group followed the study in previous years and launched a new round of surveys, focusing on some specific aspects in some regions and some industries. In the process of investigation and research on those time-honored enterprises, a basic research paradigm was established— to view the economic behavior of enterprises from the perspective of social structure.

After 2015, enterprise anthropology began to focus on the impact of internet on time-honored enterprises, mainly including three aspects: online sales, enterprise information, and the tradition-modernization transition.

The literature above suggests that enterprise anthropology provides theoretical reflections on the reality of enterprises in transitional China. The research paradigm— to view the economic behavior of enterprises from the perspective of social structure— originates from the distinct experiences of enterprises in China, and is targeted to explore the relationship between corporate transformations and social structural changes. He Xingliang (2017) pointed out that the transformation of research paradigm occurs when a few scholars believe that the existing theories cannot explain some social phenomena and begin to seek new solutions. The proposition of the theoretical paradigm of enterprise anthropology is precisely based on the research limitation of the western "totalitarian paradigm" and the domestic "differential mode of association" theory.

This new paradigm of enterprise anthropology has undergone two transformations: the abandonment of foreign theories (totalitarian paradigm) and the reflection and reconstruction of domestic theories (differential modes of association). Contradictory to the western totalitarian paradigm, enterprise anthropology basically draws from the notion of “the social structure transformation as another invisible hand” proposed by Li Peilin, and Zhang Jijiao goes further in discussing social structural transformation through an empirical observation of the traditional modern transformation of time-honored enterprises. According to his assumption, the social structural factors can be divided into two levels: big society and small society. Accordingly, the study of time-honored enterprises in China should cover three levels: a macro level to observe the whole social environment in which time-honored brands live; a meso level to analyze the business street and urban area where the time-honored brand enterprises are located; and a micro level to depict experiences of time-honored enterprises.

This three-level analysis method is supported by the anthropological research approach: holism. It is highlighted by He Xingliang (2017) who wrote that holism is a basic principle of modern anthropology, and an anthropological study should cover the overall environment of this individual cultural phenomenon and the relationship between the individual and its outer levels, the influence and infiltration relationship between individuals and other individuals, and the impact of individual traditional structure on individuals.

In addition to holism, ethnographic writing is universally acknowledged as a major research approach in anthropology. However, drawing on an extensive range of sources, some scholars set out the different ways in which the ethnographic research method of specific and in-depth description of individuals is deemed to be inadequate in reflecting the reality in transitional China. For example, Yin (2014) believed that in an information society, enterprises should be regarded as dynamic individuals, and studies should be conducted from three aspects: the development needs of enterprises themselves, the industry situation of enterprises and the society in which enterprises are embedded.
Zhang Jijiao (2021) identified holism and ethnographic writing as major research methods in enterprise anthropology. He proposed the social structure perspective in studying economic behavior of enterprises, saying that the research can be carried out from four levels: the first level is to explore time-honored enterprises from the macro social perspective, and analyze the relationship between the government, the market and the "small society" in the development process of time-honored enterprises; the second level is to explore the "small society" of time-honored brands from a middle view, observe the relationship between time-honored brands and old business streets, and analyze the networking and competition relationship between time-honored brands and other enterprises; the third level is to explore the traditional modern transformation of time-honored enterprises from a middle view too, and analyze the core competitiveness of time-honored enterprises from the perspective of industry chain, industry, value chain and supply chain; the fourth level is to describe and analyze the cases of time-honored enterprises in the form of ethnography from a micro perspective.

Following the research on Chinese traditional enterprises conducted by scholars in management and enterprise anthropology, our paper intends to do an empirical study on the transitional process of Chinese time-honored brands from the perspective of social structure. We adopt the “four-level analysis” approach of enterprise anthropology to observe the transitional experiences of Daoxiangcun Group Corporation, a time-honored brand making pastry cakes in China and; through this case study, we believe that the use of "four-level analysis" provides a scientific theoretical framework for studying the traditional modern transformation of time-honored enterprises in the current network society. The observation in these four levels can clearly reveal the development path of enterprises under the influence of both internal and external factors. Following the four-level analysis framework, we first make clear the four levels in our research: the network society as the macro level, bakery industry as the meso level, and the organizational transformations and the business process reforms as the micro level. Table 1 shows the analytical framework of our study.

<table>
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<tr>
<th>Research Levels</th>
<th>Resource Allocation Patterns</th>
<th>Levels in This Paper</th>
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<tbody>
<tr>
<td>Macro Level</td>
<td>government, market, big society</td>
<td>The network society</td>
</tr>
<tr>
<td>Meso Level</td>
<td>Market, small society</td>
<td>The baking industry</td>
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<tr>
<td>Micro Level</td>
<td>Market</td>
<td>Reforms of organizational structure in Daoxiangcun</td>
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<tr>
<td>Micro Level</td>
<td>Market</td>
<td>Reforms of business processes in Daoxiangcun</td>
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In this paper, the research from the macro level focuses on combing through the development of China’s network society and making clear how Daoxiangcun Group responds in terms of running e-commerce business and informationization. The meso level analyzes the baking industry. Without the participation of the government, the market and social structural factors play the role of allocating resources, such as between enterprises and industries, and between enterprises. What changes have taken place in the baking industry under the influence of internet applications? In which way does the Internet influence the competitiveness of Daoxiangcun Group? The third level is the organizational structure reform of the small structure, which studies the organizational restructuring process of Daoxiangcun Group, including organizational structure adjustment and transformations connected with any changes. The fourth level examines the reforms of business process, reflecting the changes in procurement, production, distribution, logistics and finance.
METHODOLOGY

This research takes the management reform of Daoxiangcun Group as its object. In contrast to traditional anthropological studies that use a specific community as a fieldwork site, this study takes Daoxiangcun Group as the target community. It is a study of complex organizations using anthropological research methods. In addition to the first-hand information collected from enterprises and organizations, we comb through considerable large amount of relevant literature, researches, media reports, industry reports and other online materials. These second-hand materials are very useful in sketching the development of the network society, baking industry and Daoxiangcun Group. In the field survey, we adopted methods such as participatory observation, in-depth interview, symposium and unstructured interview to faithfully record the relevant information of the research object. In the process of sorting out and writing the paper, we collected relevant statistical yearbooks and data from official websites such as the National Bureau of Statistics, the National Post Office, and the Ministry of Industry and Information Technology, combined with field survey materials to reduce the possibility of subjectivity in interviews.

FOUR-LEVEL ANALYSIS OF DAOXIANGCUN GROUP

Network Society and Daoxiangcun Group

This paper intends to analyze economic behaviors from the perspective of social structure and sort out the great changes Daoxiangcun Group has experienced in the network society. Therefore, the development process of the network society is mainly viewed from the perspective of the internet industry transformation.

Based on this assumption, we think that the development of the network society in China could be generally divided into three stages: from 1994 to 2006, grass-roots internet companies rose up and struggled to grow; from 2006 to 2015, the internet industry oriented to the consumer service picked up development speed and these nine years witnessed a booming e-commerce in China, while the internet industry oriented to business service was mainly manifested in enterprise informationization; after 2015, e-commerce development came to the stage of maturity and for the sake of the official proposal "Internet plus", internet technology found its way into every industry and its economic value in business-oriented service is discovered and soon takes a prominent position. Enterprises in all industries are using internet technology to reform their management and even production.

In the paper E-commerce Development of Daoxiangcun Group from the Perspective of the "Four level Analysis Method" of Enterprise Anthropology, we identified three distinct stages of e-commerce development (the internet industry oriented to consumer service) by sorting out the role of e-commerce platforms or e-commerce companies in business activities they have been playing in these years: the period of platforms as information channel (before 2005); the period of platforms as distribution channel (2006-2014) and the period of platforms as operators (2015-2020). In this study, I highlight the forces of social structure and goes further to classify the e-commerce industry into two stages: PC e-commerce (2001-2006) and mobile e-commerce (2014- ).

PC e-commerce involves traditional business modes, such as B2B, C2C and B2C. The main e-commerce businesses include taobao.com, tmall.com, jd.com and vip.com. At this stage, the online transaction relies on payment through Alipay and e-bank, and the delivery service is provided by courier service companies who start up specially for e-commerce.

Different from PC e-commerce, the mobile e-commerce is more demanding in advanced technology and social support. Advanced technology is mainly supported by smartphones and a high speed network, while social support depends on the population structure to a large extent. At this stage, businessmen set up offline stores to give consumers emotional experience and affect their purchasing online. Such O2O business mode requires swift flowing of goods and traditional e-commerce players like the Alibaba Group and JD expand offline business in neighborhood. In addition to these traditional online platforms, some internet companies are established to focus on online services alone, such as Meituan and Eleme Inc, who are takeaway stores in the beginning. The payment goes along with the Wechat wallet on smartphones and

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is more convenient than e-bank. More striking at this stage is that, except the traditional e-commerce delivery companies, a large number of people choose to serve platforms like Meituan and Eleme, shuttling back and forth on electric motors in busy streets. The population of widely called “takeaway brothers” kept growing in the last decade and increased up to 600 million in 2020, almost 60% of the whole labor in e-commerce delivery industry\(^6\). Therefore, together with the “courier brothers” who deliver goods to consumers in traditional e-commerce, the “takeaway brothers” are creating new occupations in the society, forming new social class in cities.

**TABLE 2**

**THE DEVELOPMENT OF E-COMMERCE IN CHINA**

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<tbody>
<tr>
<td>Traditional e-commerce</td>
<td>B2B, C2C</td>
<td>Traditional e-commerce</td>
<td>B2C</td>
</tr>
<tr>
<td>E-commerce platforms</td>
<td>8848, taobao, etc.</td>
<td>Taobao, tmall, JD, vipshop, etc.</td>
<td>Taobao, JD, etc.; new media like TikTok</td>
</tr>
<tr>
<td>Payment</td>
<td>Paypal, e-bank</td>
<td>Paypal, e-bank, Wechat</td>
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</tr>
<tr>
<td>Delivery</td>
<td>From “To B” to “To C” e-commerce</td>
<td>“To C” e-commerce</td>
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We can boldly assume that this new social structural change makes significant contributions to China’s e-commerce development when we make a comparison of e-commerce in the West and in China. In Europe and the United States, e-commerce started around the year 2000, earlier than in China, but e-commerce in the West has been stagnant, the retail e-commerce turnover in 2021 accounting for no more than 20% of the total retail sales. However, in China, this percentage surpassed 50% in 2021. According to a report by Zhongtai Securities Research Institute, the “courier brothers” and “takeaway brothers” are mostly the labor forces in the countryside who move to cities during urbanization in recent decades\(^7\). This proves that the demographic dividend brought by urbanization facilitates the delivery with labor forces and then pushes the development of e-commerce. In the West, urbanization happened before e-commerce and there is no such cheap labor force in delivery industry. As a result, the high cost of delivery becomes a very important factor hindering the further development of e-commerce in the West.

1. The e-commerce Development of Daoxiangcun Group

   Based on the relationship between Daoxiangcun Group and e-commerce platforms, we divide the former’s e-commerce development into three stages: direct sales through its official website, dealer sales on platforms, and direct sales on platforms. The e-commerce business of the group started in 2009, i.e. in the second stage of e-commerce development in China that we have identified above. At this stage, the essential conditions for platforms’ business have been constructed, such as the payment and delivery. Enterprises regard e-commerce as one of the distribution channels to expand sales and earn extra profits. In 2009, Daoxiangcun Group set up its own online shopping mall on its official website and arranged five to six staff to specially run online business, but this ended in failure. And the failure of this direct selling mode lay in that the self-built online shopping mall was, in essence, still a "website e-commerce" in the primary stage and a single company simply could not afford the time and labor cost in developing payment techniques and delivery systems. Then the company decided to franchise dealers to sell on platforms.
When we were collecting information on the e-commerce from 2009 to 2015, ZDS, the CEO of e-commerce office described the situation as the following:

In 2009, the online selling was through dealers on platforms such as No.1 Store (Shanghai). It wasn't particularly good at the beginning, because it was all done by e-commerce platforms. Our leaders didn't have much interest in a relatively new thing. From 2009 to the beginning of 2015, the online sales volume grew moderately, but was not so satisfactory.

The proposal of "Internet plus" in 2015 accelerated the integration of the Internet in all walks of life, and China has entered the Internet era in an all-round way. As a traditional "time-honored" enterprise, Daoxiangcun Group applauded the arrival of the Internet era. The leaders found it not adequate for dealers to do online selling, and then they stopped most online franchising from dealers, such as Tmall and Vipshop. The company started to run flagship stores on its own. It took about a year or two to make such adjustments, which was basically completed in 2018. In our interviews, ZGJ, the director of board, viewed the cooperation with e-commerce platforms as a win-win process.

Taobao and JD will share a lot of data when they talk about strategic cooperation with us. The data department or operation department will help us plan with the data of last year or every year. They will share data with us, and they will not only dig our data, but also know the industry data. For example, in the past, for a time-honored enterprise in JD, the unit price of our products may be relatively low. One day, the platform said, “hey, this unit price should be here”. After we tried, we found that the performance was very good, so we could raise the price as suggested. The platform can also diagnose consumer preferences, consumer reactions and industry needs. For example, for our festival products Zongzi, the platform will provide data information on packaging, unit price, consumer preferences, and some evaluations on consumption regions, consumption portrait data, etc. Also, we are an important customer of the platform. They need us to generate sales on his platform and hope Daoxiangcun goes very well, and thus will benefit a lot.

At this stage, the function of e-commerce platform has changed from a traditional distribution channel to an operation adviser. The platforms now play the role of upgrading brand operation, store operation, mobile operation, data operation and channel operation for enterprises, thus optimizing the overall supply chain management of enterprises.

2. The Informatization in Daoxiangcun Group

As a "time-honored" traditional enterprise, Daoxiangcun Group has informatized itself through three stages. The first stage started from the office automation of its finance and warehousing in 2008. The second stage was the informatization within the factory before the year of 2018. The development of e-commerce accelerated the pace of informatization and network connection in local areas had been accomplished in each factory, but network communication between factories was not realized. In order to meet the need of e-commerce, the company increased its investment in informatization, mainly employed in the supply chain module and warehousing module. The third stage was the connection of factories within the group after 2018. At this stage, the main business processes of each factory were finally connected within the company.

In 2018, MCB was hired as director of information technology and his arrival marked the all-round informatization reforms. In our interview, he recalled the situation at that time:

I came to work in early 2018. Before I came here, the level of informatization was relatively low. When I came here, the company had seven or eight factories, but they were all single organizations, and the control from the base was quite limited. Each factory had its own business and there was no connection between each other. It (informatization reforms) took four months from planning to implementation, from February 2018 to July 2018, and then the head office and all other companies were connected. We mainly conducted connections between five factories: Beijing, Shandong, Jinxiang, Heze and Suzhou. There are also companies in Shenyang, but Shenyang is a joint venture with special circumstances. After the plan was implemented, the rules apply to all companies, and all company informatization is based on this rule.
The informatization reforms are carried based on ERP, a popular system widely used in manufacturing industry. As to the application of ERP in Daoxiangcun Group, it was first built and implemented in primary business sections, such as producing, finance and warehousing. Now it is widely used in marketing, e-commerce, new media and stores. At present, informatization has been achieved in the main business process of Daoxiangcun Group, including procurement, production, sales and channel links; the supporting business process includes a finance module.

The main business processes within the whole value chain have been technically reformed and connected now. Yet the informatization construction will continue. The coming reforms will mainly be focused on upgrading the service of existing modules and the completion of the modules under construction, such as reforms of human resources, financial management, and intelligent production to support business processes, especially the application of the Internet of Things technology to connect equipment.

For a time-honored brand and traditional enterprise, it is a pioneering thing to implement informatization reforms, but for Daoxiangcun Group, it is also what they must do to survive in the network society. As ZGJ, the president of board, stated in the following, the company’s informatization is mainly decided by the internal and external factors.

At that time, there were internal and external factors to be considered when we were making this plan. I mean, the information should suit the situation of the company and the industry, especially the company’s development phase. Let’s say you were driving a car of handbrake. It’s ridiculous to fix an advanced airplane panel. You do not need it. But what if you were driving a plane? It’s a must to fix this panel. That’s what I mean by internal factors and external factors.11

It can be summarized that internal factors which refer to the need of the company itself and external factors are more concerned with the situation of its suppliers in the upstream, the dealers and distributors in the downstream, and even the rivals within the industry.

### The Baking Industry and Daoxiangcun Group

The transformation of traditional industries brought by the Internet usually begins with the e-commerce on the marketing side, and then follows the reform of product structure, channel structure, and internal business processes.12 This is also true of the baking industry. Therefore, we will analyze the competition pattern of baking industry from the above three aspects: product structure, distribution channels structure and the competition over business process.

1. Product structure

Baking industry is a highly marketized and highly competitive industry. Although there are hundreds of product types in the baking industry, the products are technically homogeneous and repetitive, showing only differences in design, shape and formula. So it is really hard for baking enterprises to form product barriers in competition, and price wars are common in baking market.

This is also true of Chinese pastry, which has also suffered from similar product duplication and price wars. What makes it special in market competition is that the manufacturers in China tend to add cultural values and social functions to their pastries. Following the fashion of "cultural consumption" in recent years, some businesses redesign their festival products and seasonal products by adding in cultural elements to awaken people’s memory of traditional culture. For example, Qingtuan used to be a popular pastry for the Qingming festival in Jiangsu. Its origin could be traced back to the Tang dynasty. The pastry makers take advantage of the Internet and make the local seasonal food “an online celebrity”, hence people’s queuing up at some stores. Even people in the northern part of China are making their purchases online to have a sense of cultural belonging.

In addition to the internet impact on product design as observed in the above, the Internet further exerts influence on the production mode. At present, the Internet and intelligent manufacturing are mainly applied to the production of some mass products like bread and moon cakes. It is rarely used in producing store products, whose wide variety of product can attract customers. The network society has highlighted the
individual needs of consumers, but the current development level of the baking industry cannot meet their diverse needs. Therefore, the transformations in production are inevitable directions in the future.

Since the development of e-commerce and informatization, under the influence of the overall development trend of baking industry, Daoxiangcun Group's product structure has also experienced some significant changes, which are mainly reflected in the adjustment of its product strategy and product design. First, it makes adjustments in product strategy. The company takes a leading position in the industry and its seasonal products of moon cake account for half of the company’s total sales every year. In recent years, consumers' consumption habits are changing. On one hand, baked goods are widely accepted as staple foods; and on the other hand, “leisure consumption” is gaining more popularity and becomes a lifestyle. The company is very sensitive to the subtle changes within the industry and making adjustments in product strategy and product structure.

ZJ, brand manager of the president's office, introduced the overall product strategy in the company as the following:

Seasonal products remain our primary products, taking up 50% of the total sales volume. From chain stores to e-commerce, moon cakes are always what we focus on. But as you may know, moon cakes are only consumed during the Mid-Autumn Festival. We want to increase the consumption frequency of our products, especially when it comes to the e-commerce time. We notice that consumers show a strong interest in buying leisure products. There are small packages like this that are sold in supermarkets, and there are things like bread breakfasts. So last year we had a new focus on leisure products. We purchased a new cake line last year, costing over $10 million. Leisure products will also be a major development direction. We have this famous brand, and the consumers believe in our quality. So this is a strength we can make use of in products expansion.\(^\text{13}\)

According to our interviews in the company, we understand that in addition to the seasonal products and leisure products, the company also takes advantage of the time-renowned brand effect of Daoxiangcun to expand its production line, covering a wide variety of products such as fresh foods, cooked foods, traditional Beijing pastry and western cookies.

To follow the recent trends in the baking industry, Daoxiangcun also makes adjustments in its product design, such as reducing fat and sugar in a product formula, respecting the consumers’ needs in packaging, and integrating external elements in product taste, appearance and packaging.

2. Distribution channels structure

Most manufacturers gradually integrated the Internet into the marketing side after 2010 and took online sales as part of the distribution channels. The Internet has become an essential part in business and mainly plays the role of “de-intermediation”, getting rid of middle-men in physical transactions. This view is evidenced by Mr. MZQ, deputy secretary general of the Baking Association:

The introduction of the Internet has indeed brought changes to our industry. For example, in our industry, everyone is now doing e-commerce through tmall, JD and other platforms, and some are selling through official public accounts and live streaming. But, no matter what means they choose, the Internet, in fact, for this traditional industry, has not wiped out our traditional modes. It only provides an additional distribution channel.\(^\text{14}\)

However, there are also some distinctions between these enterprises regarding how they make use of the channel. I synthesize the Internet applications in the whole industry and divide the companies into three categories: The first is the enterprises like Daoxiangcun Group that produce pre-packaged products and distribute goods to the whole country through dealers or self-owned stores. These enterprises are still expanding in offline channels. For example, there are 200 to 300 new chain stores opened every year for Daoxiangcun Group. At the same time, these enterprises sell on third-party e-commerce platforms such as JD.com, Tmall, Pinduoduo and Douyin. The second category refers to companies such as Holiland, Wedome and Tiger Attitude Chartered Pastry Bank that make short warranty products and serve local markets through chain stores. Different from Daoxiangcun Group, these stores still focus on local markets.
They make use of group-buying platforms such as Meituan, Ele.Me, and Hema for sales. Meanwhile, they outsource through the mini programs and their official Wechat accounts to a third party for operation, in order to accumulate private fans and strengthen customer adhesion. The third category includes the emerging Internet brands in recent years, such as 21cake, Xuanma that focuses on egg yolk pastry, and Nuoxin that focuses on cakes. These online enterprises do not have physical stores and only sells through the Internet. In general, the competition pattern of the baking industry involves a diversification of e-commerce platforms and the integration of online and offline distribution.

In recent years, the online distribution for Daoxiangcun Group has been diversified too. In addition to the traditional platforms like Tmall and JD flagship store, it also rides on the tide of new media business and sells pastries through live streaming. ZDS, director of the e-commerce business division, talks about the live streaming situation.

The live streaming started in the last couple of years. We first conducted live streaming in 2016 and 2017, earlier than the popularity of Viya. But we didn't have much energy to do that. From 2020, the live channel soon attracted considerable consumers during the COVID. But you know, the price in a live channel is almost the lowest point in market, no profits to earn at all. 15

In spite of the low profits, live streaming is more about marketing and branding. Therefore, most enterprises, like Daoxiangcun Group, have managed to set up their own team to reduce the cost.

Seen from the whole development stage of the baking industry, the Internet now mainly plays the role of a sales channel. The market of offline stores and dealers in the whole industry has become saturated. Bakery businesses and enterprises need to make full use of the Internet to expand their market. Daoxiangcun Group has diversified online channels, and takes the leading position in the industry. But in fact, for baking enterprises, e-commerce channels cannot become a sharp tool for cutting costs like other retail industries. Considerable expenses are needed to establish logistics simply by itself or to use third-party platforms for logistics. The Internet has brought a wider market to the baking industry in both time and space. However, in the face of diverse and rapidly changing consumer needs, the baking companies not only need to transform their channels, but also strengthen their responding ability in view of the changing market.

3. Competition over business process

Through the above analysis of product competition, it is found that the current product competition is very fierce, and products are highly homogeneous. It is difficult to form barriers through products in the industry, and it is also difficult for enterprises to gain product competitive advantages. In terms of channel competition, the integration of online and offline channels could be a competitive advantage for Daoxiangcun Group. But as Zhang (2016) put it, this does not necessarily guarantee a sustainable competitive advantage. In the long run, a company’s success still relies on a comprehensive competitiveness, which consists of core competitiveness and system operation ability. For baking enterprises, the core competitive- ness of an enterprise could be embodied in its product competitive advantages, and the enterprise's system operation capability refers to the business value chain of the enterprise, that is, a series of operations and services within the enterprise that generate value-added products for internal production and external customer service. As for Daoxiangcun Group, its core competitiveness mainly lies in its product strategy and its system operation capability depends on its informatization of value chains.

Core competitiveness. As we have mentioned above, Daoxiangcun Group has adjusted its product strategy in recent years to adapt to the development of e-commerce business. In the past, the company's main product was moon cake, but now it has adjusted to focus on both moon cake and leisure products.

System operation capability. At present, the company’s main business process has achieved informationization in purchasing, production, sales and channel links, and the supporting business process is completed in a financial module. Therefore, the informatization of supply chain and production has been realized. The company takes a leading position in information construction in the industry, but is still far from intelligent manufacturing.
Rebuilding Organizational Structure

The organizational structure of enterprises is a dynamic process in the sense that enterprises need to adjust their organizational structure so as to adapt to the changes in market and customers, and their own development needs as well. According to the value chain management theory, the goal of management is to improve the operational efficiency and strengthen its comprehensive competitive advantage, by means of optimizing the business process and organizational structures. The basic content of value chain management includes two aspects: organizational structure and business process. In the network society, it is the reform path for most traditional enterprises to use internet technology and information technology to rebuild their organizational structure and reconstruct their business process.

Generally, the adjustment of organizational structure falls into two categories: an overall change and partial adjustment. Partial adjustment generally refers to the changes at two levels: departments and positions. Through the field investigation and related literature of Daoxiangcun Group, we will discuss its organizational changes from two levels: the overall level and the partial level.

Before the information transformation in 2018, the organizational structure of Daoxiangcun Group was of a typical functional type. There were two functional departments under the direct governance of the president of the board: the production and operation center, and marketing center. The financial center was in parallel with the production and operation center and marketing center, indicating an important position of financial business in the company. The engineering department and other factories are under the direct management of the president. Supporting services are provided by the General Office, including brand management, human resource management, administrative management, legal affairs, supervision, business assessment, strategic planning, research institute, system construction, management and control system, etc.

The organization structure of Daoxiangcun Group before 2018 was of the pyramidal hierarchy type with the president as the center. The typical characteristics include: limited supervising range of the president, multi-level structure, long route for top-down information flow, and high possibility of forming a bureaucratic working mode. Horizontally, it reflects the president's emphasis on production and sales, and the lack of contact between production and sales.

From February 2018 to July 2018, the company launched an information reform and the company’s organizational structure was rebuilt. As Figure 2 shows, the organizational structure has been completely transformed from the functional organizational structure to the matrix organizational structure in which
cross-department business connections were made possible. The matrix organizational structure, in theory, is a transitional stage of structures from the functional type to the process type. In this structure, there is still a bureaucratic structure within the organization, but it requires common efforts from all functional offices to fulfill a certain project. It can be seen that the goal of this new structure is to ensure the completion of the whole business process rather than a single task in one department.

In addition to the overall structural changes we have described in the above, we also found some partial adjustments in departments and positions. Take the marketing center for example, it faces the consumers directly and therefore, is extremely sensitive to market changes and changes in consumer demand. This department is the most active one in terms of changes and adjustments. Before 2018, the divisions in the marketing center are set up based on market areas. But after the reforms in 2018, there are six divisions, which are set up by considering factors of product types and market areas as well. Two more divisions have been set up as the company’s product strategy requires: the division of seasonal products and the division of leisure products. The division of e-commerce is one of the six divisions in the marketing center. To meet the increasing need of online purchasing, the size of the e-commerce department has kept growing in these years: from 5 people in 2009 to 20 in 2018 and to over 300 in 2021. In our survey, the title of “e-commerce director” arouses our interests. In spite of the fact that this position is in parallel with the managers of seasonal products and leisure products divisions, it enjoys a higher level in the hierarchy structure. So considering the above two factors, we can assume that the company attaches great importance to the division of e-commerce. This is evidenced by an interview of ZGJ, the president of the board.

"In the past, we thought our e-commerce was still young. But they are not young now. Most of them were born in the 1990s. I believe they are smarter than the elder generations. I used to think that I need to know what they are thinking about. But now, I don’t think it necessary. Just let them do it, right? They sometimes make mistakes. But it’s okay. I think they know the young customers better than I do. At least, it’s easy for them to fit the position in e-commerce."
It can be seen from this talk that the e-commerce division, compared with other offices in the company, is regarded as an office of innovation and has more freedom in decision making. This is typically characteristic of organizations in the network society as Jan Van Dijk 18 mentioned.

**Reshaping Business Processes**

In order to enhance the company’s value chain management and integrate the internal and external value chains, the company applies internet and information technology to reshape its business processes and major changes mainly take place in purchasing, production, distribution and logistics links.

In distribution links, changes are mainly found in the competition and integration between online and offline channels. There are three parts in the marketing business process: stores, dealers and e-commerce. The first part is the informationization of stores. The informationized link between the stores and the company is achieved by means of the cashier system and ordering system. In 2018, the company started to provide a cashier system installation service to its stores for free. After the installation, the operation data of the stores would be sent to the company in real time, and this would facilitate the company in information collecting and data analysis for future management and control. When the stores need further purchasing, they can place an order through Dingding and SaaS systems, which are connected to the company’s ERP system. This helps the company make fast responses to customer needs and market changes. The second part is the informationization of dealers. The informationization connection between the dealers and the company is achieved by an order link built by the company within the ERP system and extended to the dealers. The third part is the informationization of e-commerce platforms. The informationized link between the e-platforms and the company is achieved through Wangdiantong, an ERP system specialized for online business. This ERP system is integrated into the company’s internal ERP system and whenever there is an order placed by the buyer on Taobao or other platforms, this order action will be sent to the e-commerce department of the company. However, different from Taobao, JD has its own order system and does not require the company to purchase any additional link. The company only needs to send goods to the warehouse of JD and JD will take over the distribution work.

As for the business processes of Finance and Warehousing, they are the earliest processes to be informationized. Before 2018, the financial information system was in fact partially informationized since it was not connected to the company’s internal system. The application of the ERP system now has made a significant change in the financial workflow and every transaction or internal action within the system will be sent to the financial department and leave a record mark. This makes the financial process transparent and traceable. Also, the document business of the financial center is all implemented online, and this requires the work to be standardized so that the capital risks are reduced.

Under the influence of e-commerce, the company’s production mode has changed from mass production to on-demand production, which is featured by customer-centered and flexible production. Facing the decentralized demand and fragmented markets in e-commerce, which is not as concentrated as the orders and purchases of offline dealers, the company has to deal with considerable uncertain factors in the production process. This requires the company to speed up the informatization construction of management and production. The ERP system can collect the scattered e-commerce orders, send information autonomously to the relevant parties in the production and supply line. This reform makes it possible for the production to make quick responses to the changing demand in e-commerce markets.

Through the procurement platform, the data of suppliers and goods are all standardized and transparent. This, on the one hand, improves the efficiency of warehousing and strengthens the company’s control over suppliers and, on the other hand, makes it possible for the company to track the procurement and progress on the system.

GCP, Director of the Production Operations Center, recalled the issues that the company had to deal with on a daily basis on the procurement side before the ERP system was used.

Before the procurement platform was used, sometimes they would send the cover this day and the bottom the next day, and then the small boxes arrive a few days later. You know, they simply do not match. It’s hard to store or use them. And I have to do a manual accounting of what I’ve got and how many sets I’ve
received. Checking into the warehouse is also troublesome. In fact, it also takes a lot of time for them to submit this data in the process of delivery. After the installation of the ERP system, standardization is required. If a supplier doesn't use our platform, he won't be able to submit the data. He has to use our system, and I can see the fulfillment of the order, and trace back what the purchase order was, how many units were completed, and I can do that.  

In general, after the re-engineering of the business process of Daoxiangcun Group, the information transmission of each factory in the company is quick and efficient and the business collaboration among them is enhanced. At the same time, the centralized control is achieved through the system. Whether it is procurement, production or logistics, the system can allocate resources of each plant scientifically, saving the costs in production and operation. The integration of ERP system and its external platforms has opened up the information channel between the upstream and downstream enterprises, enabling Daoxiangcun Group to make full use of external resources.

**CONCLUSIONS**

**Four-level Analysis: Summary of the Tradition-Modernization Reforms in Daoxiangcun Group**

Enterprise anthropology assumes that studies on economic behaviors could be conducted from the perspective of social structure. In this paper, following the analytical framework of the “four-level analytic hierarchy process” in enterprise anthropology, we examine the management reforms of Daoxiangcun Group from the perspective of social structure and aim to shed new light on the interpretation of traditional enterprises’ modernization process and explore the interactions between social structure and economic organizations. The four levels in our study are: the network society development in China on the macro level, the baking industry development as the meso level, the company’s organizational structure and the company’s business processes as the two micro levels.

On the macro level, we comb through the development of network society from the aspect of internet industry in China. It is found that the internet industry in China experiences two phases: the consumer internet and industrial internet. As one of the time-honored brands in China, Daoxiangcun Group struggled its way into modernization under this background. As early as 2014, the consumer internet, which was far developed than that in the West, has come to its mature stage. In terms of industrial internet, Western enterprises have already carried out information management reforms in the 1990s, and now they are in the Internet era, i.e. the advanced level of informationization. In China, most small and medium-sized enterprises are facing the problem of information transformation, and the tradition-modernization transformation remains the top issue on their reform list. In 2009, Daoxiangcun Group took advantage of the rapid growth of consumer internet in China and started e-commerce business. Up to now, it has reached long-term strategic agreements with several e-commerce platforms and its moon cakes’ online sale is far ahead of the industry. Driven by e-commerce, Daoxiangcun Group launched its informatization reforms in 2018 and now, the informatization connection between the company’s internal and external value chains is basically accomplished.

On the meso level, we comb through the development of China’s baking industry and its development trends under the influence of internet technology. The scale of the baking industry has kept growing in the last two decades and now, the growth mode are shifting from scale growth to structural adjustment. At present, the overall feature of the industry is structural adjustment, which is mainly manifested in three aspects: product structure, consumption structure and operator structure. In order to cope with the competition in the baking industry, Daoxiangcun Group has adjusted its product strategy and product structure, expanded its online sales space, and continued to promote the information technology reform of the value chain to arrive at the comprehensive competitiveness.

On the micro level, the organizational structure and business processes are examined. Under the influence of network society and industry factors, Daoxiangcun Group constantly makes adjustments in its corporate strategy and organizational structure. The overall change of its organizational structure is featured by the shift of functional organizational structure to process-centered type. The partial reforms are mainly
found in the marketing department, especially in the e-commerce division. Such organizational transformations reveal the fact that the company is struggling to adapt to the social changes. In terms of business processes, it is found that the company’s informationization started from the marketing side or e-commerce. To meet the increasing need of information technology in e-commerce, the company applies the ERP system to connect with each main business process, for example, the procurement, production, distribution and logistics. These processes are now basically connected by the ERP system. Other supporting business processes within the company are under construction. The implementation of ERP system has improved the efficiency.

On the whole, the internal and external value chains of Daoxiangcun Group have been connected by means of information technology. Its informatization first took place in marketing and the development of e-commerce forced enterprises to create an swift value chain, connecting internal business processes with the external supply chain, so that the company could make quick adaptions to changes in the network society.

Further Discussion: “From Outside to Inside” and “From Top to Bottom”

Through the "four-level analysis" in enterprise anthropology, we can clearly see the tradition-modernization reform route of Daoxiangcun Group. From the first level to the fourth level, we analyze the enterprise management reforms of Daoxiangcun Group in an "onion peeling" way, and found that the enterprise management reform of Daoxiangcun Group experienced a dual development process of “from outside to inside” and “from inside to outside”. The transformation process “from outside to inside” means that, under the influence of the rapidly growing e-commerce, the continuous deepening of "Internet plus" , and the shift of the growth mode in the baking industry, Daoxiangcun Group gains competitive advantages in the baking industry by making adjustments in its organizational structure and business processes. With the integration of the Internet, the internal structure of the enterprise (e.g. ERP and organizational structure) is improved and the enterprise then gives full play to the energy of its individual structure, generating new functions and stimulating the development of external structure (industry). This is the change path from outside to inside. The change from inside to outside refers to that, in order to improve the operation efficiency, the company needs to reshape its business processes and form a flexible organizational structure so as to make quick responses to the market needs and industrial changes. These are the essential skills with which a company is to capture the attention from the public in the network society. This is the change path from inside to outside.

The management reform of Daoxiangcun also has experienced a dual development process of “from top to bottom” and “from bottom to top”. The former means that, under the impetus of the Chinese government’s initiative (Internet plus) and the support of the domestic business structure (the Internet + business”), traditional enterprises started management reforms through the Internet. For example, Daoxiangcun is experiencing the third stage of informatization and the next step is to “achieve intelligent production through a network of things”, as the president of Daoxiangcun said. This is the change path from top to bottom. With the integration of the Internet, an efficient and collaborative industrial chain is built up to connect with its external structure. Then, the enterprise's own structural advantages would upgrade its external structure (industry structure) and pave the way for further institutionalization of the network social structure. For example, the rapid development of online selling promotes the growth of the logistics industry and new regulations are needed to be put forward by government. This is the change path from bottom to top.

ENDNOTES

1. A research paradigm in essence is a kind of theoretical and methodological system of a research model. It is a set of relatively stable analytical frameworks or models used to study, observe and solve problems. He Xingliang (2017). Investigation and Research Methods of Cultural Anthropology, Beijing: China Social Sciences Press, p. 214.
2. Western sociology has always studied China's social problems in the "totalitarian paradigm" and overstated the intervention of local governments in the market. Obviously, this theory is no longer applicable to China's society which is transitioning its economy to a market economy.

3. The theory of "differential modes of association" is proposed by Fei Xiaotong to depict the difference between the Western social structure and Chinese social structure. In his opinion, the Western social structure pattern is like distinct bundles of straws with clear borders between individuals. The Chinese social structure pattern is like circles that appear on the surface of a lake when a rock is thrown into it. Everyone stands at the center of the circles produced by his or her own social influence. Everyone's circles are interrelated. One touches different circles at different times and places.

4. This theory was put forward by Li Peilin in "Another Invisible Hand" -- Social Structure Transformation, published in 1992. He believed that the development power of China's economy comes from three hands, the first tangible hand of government intervention, the second invisible hand of spontaneous adjustment of the market mechanism, and the third hand that is the potential and huge structural force of China's social structure transformation. This theory is mainly based on China's three major changes in the 20th century: industrialization, urbanization and marketization.

5. The big society refers to the whole human society, which is composed of the interaction between government, market and society. The small society refers to social factors outside the government and market (Li Y.J. & Zhang J.J. 2016). Business Anthropology: Four Stages and Paradigm Transformation of the Study of "Time-honored Brands", Journal of Hangzhou Normal University (Social Science Edition), No. 6, 2016, pp. 95-103.


8. Adapted from the author's interview arrangement, the interviewee is ZDS, general manager of E-commerce Department of Daoxiangcun Group Marketing Center, interview time: June 2, 2021, interview place: General Manager office of E-commerce Department of Daoxiangcun Group Marketing Center.

9. Adapted from the author's interview, the interviewee is ZGJ, Chairman of Daoxiangcun Group. The interview time: June 3, 2021. The interview place: the Chairman's Office of Daoxiangcun Group.

10. Adapted from the author's interview, the interviewee: MCB, Director of Information Technology Department of Daoxiangcun Group. The interview time: June 2, 2021. The interview place: the Financial Center Office of Daoxiangcun Group.

11. Adapted from the author's interview, the interviewee is ZGJ, Chairman of Daoxiangcun Group. The interview time: June 3, 2021. The interview place: the Chairman's Office of Daoxiangcun Group.


13. Adapted from the author's interview; the interviewee: ZJ, brand manager of the President Office of Daoxiangcun Group; interview time: June 3, 2021, interview venue: Conference room of Daoxiangcun Group.

14. Adapted from the author's interview; the interviewee: ZJK, Chairman of China Baked Food Sugar Products Industry Association; Interview time: December 22, 2021; interview venue: President Office of China Baked Food Sugar Products Industry Association.

15. Adapted from the author's interview arrangement; the interviewee is ZDS, general manager of E-commerce Department of Daoxiangcun Group Marketing Center; interview time: June 2, 2021; interview venue: General Manager office of E-commerce Department of Daoxiangcun Group Marketing Center.

16. This theory was proposed by Zhang Jijiao, in the book Value Chain Management.

17. Adapted from the author's interview; the interviewee is ZGJ, Chairman of Daoxiangcun Group; the interview time: June 3, 2021. The interview venue: the Chairman's Office of Daoxiangcun Group.

18. According to Jan Van Dijk, in network society, the organizational structure is decentralized and the power shift to the lower level is common.
19. Adapted from the author's interview; the interviewee: GCP, director of the Production and Operation Center of Daoxiangcun Group; interview time: June 4, 2021; interview venue: Director Office of the Production and Operation Center of Daoxiangcun Group.

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