

# *Industrial chain structure, market competitive advantage and Manufacturing industrial chain financing*

Wang Peng

*School of Economics and Management, Dalian University, No.10, Xuefu Avenue, Economic & Technical Development Zone, Dalian, Liaoning, The People's Republic of China (PRC)*

**Keywords:** *Industrial chain structure pattern; Market competitive advantage; Paper industry chain financing; Large-scale paper making enterprise*

**Abstract:** Based on the statistical data of 500 Manufacturing enterprises in jilin province of China, a two-stage model and a two-stage model were used to quantitatively study the influence of the structure of the Manufacturing industry chain and the market competitive advantage on the financing quality and benefit of the large-scale Manufacturing industry chain. The research results show that the industrial chain structure of leading enterprises or intermediary organizations can help paper enterprises to increase the financing scale of the industrial chain and improve the financing efficiency of the industrial chain. Then this study based on the price game analysis ability and the alternative double observes Manufacturing enterprise market competitive advantage as the scale of the role of internal and external financing of the industry chain, empirical studies have found that the size Manufacturing enterprise market competitive advantage has a significant positive influence on its Manufacturing industry chain financing: Manufacturing industry scale, fixed assets are depreciated value, stable income expectations about factors such as degree can scale Manufacturing enterprise the quality and effectiveness of the industrial chain of external financing; Factors such as farmers' management ability, personal credit rating and production type have significant restraining effects on the internal financing of the industrial chain.

## 1. Introduction

Large-scale paper enterprises can realize three-dimensional expansion of paper industry chain: extend the length of the industry chain by fine processing of products, increase the width of the industry chain by expanding the product functions of various industrial links, and expand the thickness of the industry chain by efficient allocation of production resources. It can be seen that the discourse power of scale Manufacturing enterprises in the industrial chain is higher than that of other industrial chain owners -- that is, they have more prominent market competition comparative advantage. However, the important precondition for scale paper enterprises to maintain their market competitive advantage is stable capital supply, so their credit demand is relatively strong. On the other hand, most of its repayment is based on profitable projects. It can be seen that the traditional microfinance model is obviously difficult to meet the scale of paper enterprises credit demand. The

paper industry chain financing through the main industry chain external capital supply and internal capital borrowing and other ways to solve the bottleneck problem of farmers financing.

At present, domestic and foreign academic and practical research results all agree that the paper industry chain financing conforms to the operator's financial demand structural transformation trend, and through the capital chain transmission mechanism to increase the paper industry chain of the main body of the cumulative surplus capital scale. Most studies use case analysis or grounded analysis to explain the impact of industrial chain integration on its financing accessibility. However, due to the availability of data and feasibility of research methods, the pertinence and timeliness of current research conclusions need to be improved. At the same time, represented by their brains of scholars, based on the perspective of market power and trade credit financing for Manufacturing industry chain subject of influencing factors and mechanism are studied and found in Manufacturing industry chain complete constraint conditions, the operation and the manufacturer's market power and paper making industry chain financing scale there exists a significant correlation between each other, but because of the lack of large sample size of Manufacturing enterprise data support, the scholars did not manufacturer's market power in the industry boundary, business profitability, brand channels construction and other core components to deeply analyze the mechanism of the financing of the industry chain [1]. This paper is based on this realistic consideration and based on the field survey data of 500 Manufacturing enterprises in jilin province, to study the impact of industrial chain structure pattern and manufacturer's market competitive advantage on its industrial chain financing. On this basis, the paper puts forward some Suggestions for optimizing the organization form of paper industry chain and improving the financing service of paper industry chain.

## **2. Theoretical Analysis and Research Hypotheses**

### **2.1. Industrial Chain Structure and Paper Industry Chain Financing**

At present, the nature of the industrial chain structure of large-scale Manufacturing enterprises in China lies in the operation and organization form of Manufacturing industrialization, which is mainly dominated by the two paradigms of "leading enterprises + manufacturers" and "intermediary organizations + manufacturers". Driven by the main bodies of these two kinds of different industrial chains, the degree of alliance organization between large-scale Manufacturing enterprises has not only been effectively improved, but also directly improved the financing accessibility of manufacturers. At present, domestic and foreign scholars divide industry chain financing into external financing and internal financing based on the perspective of capital source. In terms of external financing of the industry chain, credit providers can better monitor the security status signals of fund flow and logistics in the paper industry chain, so as to effectively control the financing management cost. In addition, the Manufacturing industry chain by different subjects in the financing of credit community alliance, the move for manufacturers, members of the intermediary organizations, financial institutions have triple benefit, manufacturers can use leading enterprises increase the success probability of financing, financing guarantee service intermediary organization members also can increase the individual credit rating, with the alliance of mutual platform financing alliance form at the same time also can make the financial institutions effectively circumvent any negotiations with farmers long transaction costs rising problems[2]. More importantly, the cooperative contractual relationship formed between manufacturers, leading enterprises and intermediary organizations can be regarded as "virtual pledge" by credit institutions -- the industrial chain alliance will effectively reduce the production and operation risks of individual manufacturers, thus prompting financial institutions to upgrade their credit ratings. Therefore, it can be seen that manufacturers will greatly increase their accessibility to external

financing of the industrial chain by integrating the industrial chain structure with leading enterprises, intermediary organizations and professional operating institutions as the main body. From internal financing industry chain, industry chain between different subjects of money lending behavior financing channels to help expand the manufacturer: manufacturers and leading enterprises, intermediary organizations related transactions to form strategic alliance, not only can make the reimbursement mechanism of vendor into embedded to the industrial chain of internal financing behavior, also can strengthen the manufacturer's trade credit qualification, thereby lowering the transaction cost in the process of financing. Based on the above analysis, this paper proposes the following research hypotheses:

H1: manufacturers take the initiative to integrate into the industry chain structure led by leading enterprises or intermediary organizations, which can significantly enhance the external financing scale of their industry chain.

H2: manufacturers integrated into the industrial chain structure led by leading enterprises or intermediary organizations can obtain more credit qualification for internal financing of the industrial chain.

## **2.2. Market Competitive Advantage and Paper Industry Chain Financing**

Trevor Aaronson scholars study found that the scale of agricultural modernization under the background of China's Manufacturing enterprise financing difficulties faced by micro and small enterprises with a strong similarity: multiple occupations with the traditional companies, a variety of different business model, a firm possesses significant "professional farmers" identity, its operation management is given priority to with specialization, intensification, the characteristics of its production targets are also realized in all kinds of resources endowment efficient investment to promote the profit maximization. Therefore, the important precondition for successful financing is the market power. According to the theory of industry chain finance, as a low-cost financing channel, industry chain financing is favored by small and medium-sized enterprises [3]. Dong her in on trade credit, market competition advantage and value chain financing relationship study pointed out that the enterprise market competitive advantage and trade credit has significant inevitable cause-and-effect relationship between each other, when the enterprise has the strong market competition advantage, may be with the leading supply chain or value chain occupies means so as to obtain low cost of trade credit, raise its capital to use voice and trade bargaining power[4]. As mentioned above, the Manufacturing enterprises and small size micro enterprises has significant business similarity between each other, and the heterogeneity of trade credit and the production and business operation behavior causes manufacturers: industrial chain of the forces of the financing of the differences between parts with scientific management system, high quality agricultural products, well-known brand channel advantage manufacturers tend to have strong market competitive advantage, then in the Manufacturing industry chain financing has the prominent comparative advantage. Therefore, under the precondition of complete layout of paper industry chain, the financing game ability and resource bargaining ability of manufacturers with low market power will be restricted. By integrating into the organization of the paper industry chain, manufacturers can significantly improve their trade credit lines, which will help them gain a larger scale of paper industry chain financing by virtue of market competitive advantages. Based on the above analysis, this paper proposes hypothesis H3:

H3: as an important recipient of trade credit, the larger the market competitive advantage of a large-scale paper making enterprise is, the larger the financing scale of its paper industry chain will be.

### 3. Study Design

#### 3.1. Data Source

Data in this paper were obtained from the field survey of yushu city, gongzhuling city, nong'an county, yanji city, changling county, qianguo county, fuyu city and changchun jiutai district in jilin province from September 2017 to September 2018. Among them, yushu city is the county level city with the strongest ability of paper industry integration and development in jilin province. Gongzhuling city actively gives play to the leading role of leading enterprises in Manufacturing industrialization in the process of agricultural modernization, and actively popularize the paper industrialization operation mode of "cooperative + peasant household", "company + peasant household", "company + cooperative + base + peasant household", forming a leading enterprise industrial cluster with strong driving ability. County agriculture and yanji is the core jilin national modern Manufacturing industry demonstration zone, modern agriculture, modern agriculture demonstration pilot demonstration zone construction and reform, initially formed within the county organized as an operating subject, factors of production factory, the production process more scientific and industrial operation brand of modern agricultural management system. Changling county and qianguo county have formed a close interest connection mechanism among manufacturers, leading enterprises and specialized paper manufacturers by leading enterprises and leading cooperative economic organizations, and launched a producer cultivation plan with scale paper enterprises as the main body. Fuyu city and jiutai district took the lead in exploring the establishment of industry-finance combination pilot area and paper industry demonstration base in jilin province, and initiated the open agricultural supply chain finance operation mode of "leading enterprise + main enterprise of industrial chain + manufacturer + bank + insurance + science and technology". The above samples in jilin province in central, eastern and western areas, respectively, from the perspective of the macro economy operation index of sample area, in 2017, yushu city, gongzhuling city, county agriculture, yanji, changling county, investment promotion, fuyu city, nine area per capita GDP in 39 county economy in jilin province rank 2, 7, 11, 15, 19, 21, 25, 29. It can be seen that the sample areas can reflect the ladder features of economic development of jilin province comprehensively and have a significant representativeness[5]. At the start of this research in the field research, first of all, from the scientific selection of 3-9 representative sample area of villages and towns, and then for each sample in Manufacturing industrial organization form, the manufacturer's market competition advantage and industrial chain financing of sampling survey, the survey of 950 questionnaires were distributed, recycling effective questionnaire 908, questionnaire recycling effective rate was 95.6%.

#### 3.2. Model Setting and Variable Selection

Industry chain internal financing。 At present, the main carrier of manufacturers' internal financing of paper industry chain is trade credit. But considering the industrial chain internal financing with the credit terms and the amount is hard to quantify the status quo of restriction, and Manufacturing enterprise scale absolute value exists significant heterogeneity between each other, this study selected manufacturers from the harvest in the industrial chain each link of trade credit and financing aggregate demand ratios measure the size of the industrial chain of Manufacturing enterprise actual financing scale. Since the panel data selected in this study are not strongly correlated with each other, this paper analyzes the impact of heterogeneous paper industry chain structure and manufacturers' market competitive advantages on the financing scale of their paper industry chain based on the partial least squares model, so as to verify the correctness of assumptions H2 and H3. Some explanatory variables selected by this study need to be highlighted

as follows: first, 78 manufacturers in the survey sample choose to integrate into the industrial chain structure of leading enterprises and intermediary organizations, and their proportion in the total sample is 0.08%. Second, the behavior of manufacturers to obtain market competitive advantage is mainly reflected in winning the market control position of products and services, as well as realizing large-scale commercial benefits. Therefore, this paper USES market competitive advantage 1 and 2 to respectively measure the resource price game ability of manufacturers in the industry chain. As the demand side of the industry chain, the price game ability refers to the bargaining power of large-scale Manufacturing enterprises in the purchase process with the upstream subject of the industry chain. As the supplier of the industry chain, the price game ability refers to the bargaining power of the scale Manufacturing enterprises in the sales process with the downstream subject of the industry chain. The level of bargaining power can better reflect the scale of paper enterprises market competitive advantage. Third, the market competitive advantage in table 1 3 aims to measure the marginal substitution rate of scale paper enterprises to other paper industry chain subjects. Based on the research results of Marc Abrahams, this study takes the time period for the main body of the industrial chain to find alternatives to other suppliers as the core index to measure the market competitive advantage of the scale paper enterprises. Fourthly, the number of years of education of farmers in the questionnaire is high school and below, university and below, university and above. In order to facilitate quantitative observation, this study takes the years of education as its alternative observation index, which is 12 years, 15 years and 18 years respectively.

#### 4. Conclusions

Based on the sample data of 500 large-scale Manufacturing enterprises in the central, eastern and western parts of jilin province, this paper USES two-stage model and model to empirically analyze the influencing factors on the industry chain financing of large-scale Manufacturing enterprises. The analysis results show that :(1) in terms of the external financing of the industry chain of large-scale Manufacturing enterprises, the integration of the paper industry chain organization led by leading enterprises and intermediary organizations is helpful for manufacturers to obtain formal credit supply. In addition, social resources, scale of labor force, scale of agricultural operation, present value of fixed assets and stable income expectation are also the key factors affecting external financing of industrial chain of large-scale Manufacturing enterprises. Internal financing, (2) in the industrial chain to join leading enterprises DaiDongXing or mediation organizations DaiDongXing Manufacturing industry chain manufacturer with strong trade credit scale: body formed by contract manufacturers with other industry chain strategic alliance, which can effectively alleviate the information asymmetry caused by the internal financing cost is high. (3) from the perspective of the effect of manufacturers' market competitive advantages on the financing of the paper industry chain, the price game ability and the degree of supply chain substitution have significant effects on the internal financing of the industry chain of manufacturers. Compared with the external financing influencing factors of manufacturers' industrial chain, the "soft power" factors of farmers represented by years of education, types of paper industry, agricultural operation scale, total profit and stable income expectation have a significant impact on the internal financing scale of their industrial chain. Therefore, based on the above empirical analysis results, this study can be inspired as follows:

First, agricultural financial institutions should dynamically meet the financing demands of manufacturers by means of financial services and product innovation, such as focusing on helping family farmers, large planting and breeding families, and the backbone of farmers' cooperatives to finance the purchase of means of production and the improvement of productivity. Second, we should focus on shaping the market competitive advantages of large-scale Manufacturing



enterprises, such as strengthening the support for technological innovation of manufacturers, guiding manufacturers to improve the derivative income of their agricultural output by means of brand management and value chain management. Third, manufacturers should be encouraged to take the initiative into the paper industry chain organizations. The empirical analysis results of this paper show that the trade credit obtained by manufacturers through the internal financing of the industrial chain can be used as a credit supplement to the formal credit of Banks. Therefore, the structure of paper industry chain should be extended and innovated to form a close benefit sharing system between manufacturers and other subjects of the industry chain, so as to improve the comparative advantage of internal financing of manufacturers' industry chain. Fourthly, considering that the trade credit granted by the paper industry chain has the risk of "double-edged sword" -- once the main body of the industry chain has the operation risk, it is easy to produce the negative effect of cluster risk diffusion. Therefore, on the one hand, measures such as trust isolation and closed operation of credit funds can be adopted to effectively defuse agricultural natural risks, market risks and credit risks. On the other hand, the government should focus on defusing the financing risks of the paper industry chain: try to guarantee the financing security of the industry chain of manufacturers through the risk compensation mechanism of the industry chain, risk compensation fund, expanding the scope of agricultural insurance and other means.

## Acknowledgements

This article was specially funded by Dalian University's 2019 Ph.D. Startup Fund (20182QL001) and 2019 Jinpu New District Science and Technology Project.

## References

- [1] Sandra Aamodt.. (2015) *Organization form of industrial chain, market power and financing of agricultural industrial chain -- based on the empirical analysis of 397 households in jiangsu province*,10, 1956-1977
- [2] Trevor Aaronson (2018) *Study on transformation and upgrading of agricultural industrial chain based on agricultural supply-side reform*, *Journal of Economic Literature*, 2, 4985-5002.
- [3] Shi Chun-Sheng. (2004) *The impact of structure-oriented organizational innovation on technological innovation*. 2006 *International Conference on Management Science and Engineering*, 6, 228-234.
- [4] Marc Abrahams (2017) *Development elements and upgrading ways of American agricultural industrial chain* *.Journal of Economics Perspectives* . 12: 916-941.
- [5] Karim Abouelnaga (2018) *The evolution of cultural industrial structure and the strategic choice of Europe*. *American Economic Review*.3: 3698-3711.