How Does Competitive Strategy Influence the Complementary Between Trade Credit and Bank Credit

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Abstract. As the main sources of financing, the optimal allocation between trade credit and bank lines of credit is crucial for the long-term development of enterprises. Based on Chinese A-share listed companies from 2000 to 2017, this paper examines the complementary relationship between trade credit and bank credit. Furthermore, comparing with cost leadership strategy, higher degree of differentiation strategy can enhance the bargaining power of suppliers by differentiated products and diversifying risks, so as to strength the complementary relationship between trade credit and bank credit. By employing a new method of natural language processing and deep learning to identify firm strategy from textual annual financial report, this article enriches the research of trade credit and bank credit, and is instructive for companies to make reasonable financing decisions based on their strategic characteristics.

Introduction

The survival and development of modern enterprises are inseparable from the support of funds, especially in the increasingly competitive market environment, the importance of financing activities is increasingly prominent. However, for a long time, Chinese enterprises, especially small and medium-sized enterprises, have faced the dilemma of “difficult financing and expensive financing”. In a banking-dominated financial system, bank credit is the most important way for enterprises to obtain external funds, but due to imperfect guarantee system, banks tend to release funds to state-owned enterprises and large enterprises with good credit, and enterprises with low market status will face financing constraints. In order to solve the capital needs of enterprises, trade credit is widely used and has become an important channel for corporate financing. In recent years, with the intensification of market competition and changes in the competition model, many enterprises have relied on the "burning money" model to occupy the market, and the demand for capital has increased rapidly. On the other hand, enterprises’ choice of trading partners has changed from focusing on single prices to establishing stable and lasting partnerships with a few core trading partners. Under this changing environment, the use of trade credit by upstream and downstream enterprises has increased significantly. Some scholars even believe that Chinese companies may have used trade credit more than bank credit (Ying Ge and JiapingQiu) [1].

Trade credit uses deferred payment to ease the pressure on funds. Is there any conflict between this short-term financing method and the bank’s credit model, or can it be used as a complementary method to alleviate the inefficient bank resource allocation and imbalanced credit rationing, which is still controversial in academia. Some scholars believe that trade credit allows the buyer to postpone payment after they obtaining goods and services, which is equivalent to the seller granting the buyer a short-term financing. This deferred payment behavior is equivalent to the enterprise giving up its own cash liquidity, and lending its own bank loan to other companies again, so some
scholars proposed the "redistribution effect" of trade credit. Because the use of trade credit is based on the business relationship between the buyer and the seller, so the threshold of trade credit is lower than that of bank credit. In addition, the supplier can obtain more corporate information than the bank, so the information asymmetry is low. Therefore, suppliers can formulate commercial credit policies based on their understanding of enterprises correspondingly, and to a certain extent, make up for the inefficiency of resource allocation in the banking system. Robert Cull [2] used data from Chinese industrial enterprises to find that inefficient state-owned enterprises indirectly allocate the bank credit funds obtained through commercial channels to more efficient private enterprises, which constitutes the supplement of commercial credit to the allocation of formal financing channels.

This article selected the cross-sectional data of all A-share companies from 2000 to 2017 in China's Shanghai and Shenzhen listed companies as the research sample, used a combination of theoretical analysis and empirical analysis, and combined the current status of the Chinese financial system to analyze the correlation between commercial credit and bank credit and its main factors of this relationship. In addition, from the perspective of company strategy, this article further examines whether the level of company diversification will have a significant impact on the relationship between commercial credit and bank credit. The structure of this paper is as follows: The second part is the literature review and hypothesis, the third part is the research design, the forth part is the empirical results, and finally the research conclusion.

**Literature and Hypothesis**

**The Complementary Relationship between Commercial Credit and Bank Credit**

Trade credit is a credit relationship formed by suppliers and customers in the form of deferred payment or prepayment in the process of conducting business transactions. Trade credit is widely used in the world as a financing method for modern market economy. In China, since the current financial system is based on bank credit, financing constraints are more serious. As an informal financing method for both parties to business transactions, commercial credit is an important way for enterprises subject to financing constraints to ease the pressure of credit financing.

Academia's research on trade credit focuses on its motivation and influencing factors. Meltzer proposed the theory of alternative financing, arguing that during the austerity period, companies with sufficient cash flow would provide longer terms of trade credit for downstream companies that were rationed by bank credit. After that, scholars continued to improve alternative financing theory. Mitchell A. Petersen and Raghuram G. Rajan [3] believe that trade credit originates from credit rationing. Credit rationing prevents some high-risk enterprises from obtaining sufficient loans from banks, and only turns to downstream suppliers to obtain substantial financing through deferred payment and other means, thus forming a credit relationship between customers and suppliers. Ge and Qiu proposed that trade credit is the equilibrium result of demand and supply under the combined effect. Some empirical research also provides support for the alternative hypothesis. Petersen and Rajan conducted a study on small businesses in the United States and found that when suffering from bank credit rationing, small businesses tend to use more commercial credit. Jeffrey H. Nilsen [4] studied a long period of time for American companies and found that both small and large companies that could not use open market credit channels used trade credit instead of bank credit.

However, there are some studies that disagree with alternative financing theory and even contradict it. For example, Giuseppe Marotta [5] studied the contract characteristics of 1900 manufacturing companies in Italy and found that trade credit has the expected effect because Italy’s customary credit period is shorter, it is more effective in protecting the rights of creditors. Whether the company has credit rationing will not affect the use of trade credit; Cook believes that during the financial crisis, due to opaque information, the information asymmetry between banks and
enterprises has increased. At this time, trade credit has become an important confirmation signal for banks to the quality of borrowers. It is more likely to issue loans to borrowers who have more trade credit; Kestens conducted an in-depth study of the 2008 financial crisis and found that Belgian companies significantly reduced their use of trade credit during the crisis.

In recent years, scholars have begun to pay attention to the competitive role of trade credit. Daniela Fabbri and Anna Maria C. Menichini[6] put forward the buyer’s market theory from the perspective of information superiority. They believe that suppliers can get more information than banks in transactions with customers. Increased information transparency has increased the trust of suppliers to customers, making suppliers willing to provide commercial credit to customers who have difficulty in obtaining bank loans, but in fact have development potential, thereby obtaining long-term returns in future sales. Mariassunta Giannetti et al. [7] pointed out that based on the buyer’s market theory, companies that buy more goods and services can obtain cheaper commercial financing in the long run. In addition, companies with strong buyer market strength can obtain greater trade credit discount. Simona Mateut and Thanaset Chevapatrakul[8] thought that companies with high market share and low industry concentration have obtained more trade credit from suppliers. I believe that companies with a high market position have an advantage in business relationships. In order to maintain customer relationships and promote sales, suppliers will passively provide trade credit to buyers.

Due to the constant changes in the economic situation, the scope and scale of the use of trade credit has expanded rapidly, and the research on trade credit has also continued to be deepened and new discoveries have been made. Nicholas Wilson and Barbara Summers [9] found that large enterprises with high market position can obtain more trade credit, so they believe that suppliers tend to provide trade credit to companies with high market position and good credit. The research of J. Murfin, Njoroge[10] proved that investment-grade buyers will obtain loans from smaller suppliers and force suppliers to reduce investment, which is more obvious during the credit crunch period; Jean. NoelBarrot [11] found out that providing restrictions on trade credit can greatly reduce the risk of corporate reporting violations by studied reforms in the French transportation industry; Based on the research on equity capital market and trade credit financing conducted by Yomna Abdulla et al. [12], the scholar Chenguang Shang[13] demonstrated that companies with high stock liquidity rely less on commercial credit financing by measuring stock liquidity and trade credit measures, this relationship is more significant for companies that are constrained by financing and rely on short-term debt.

As an indirect credit, bank credit acts as a credit medium in the credit relationship. Bank credit develops on the basis of commercial credit, and the two together form the basis of a modern credit relationship. Compared with commercial credit, bank credit is provided in the form of currency rather than commodity credit in the process of industrial circulation. It overcomes the limitations of the scale and direction of commercial credit and has the advantages of large scale, low risk, and low cost.

For enterprises, bank credit has two important functions. On the one hand, it is a financing function, and it is also the main purpose of enterprises to use bank credit. Bank credit can provide financing for enterprises while effectively reducing financing costs. It is currently the main way for enterprises to finance in the Chinese financial system. On the other hand, bank credit also has a supervisory function. In order to reduce credit risk, banks are motivated to monitor the financial risks of enterprises and the use of credit to avoid losses.

Whether in theory or in practice, many scholars have found that the company's bank credit is related to the nature and scale of the company. In 1960, Meltzer put forward the theory of "credit rationing", arguing that due to the imperfection of the financial market, bank credit is good for large enterprises and bad for small enterprises. Joseph E. Stiglitz and Andrew Weiss[14] further analyzed that "credit rationing" originated from the moral hazard and adverse selection problems caused by
the information asymmetry between banks and enterprises. Some types of enterprises may not be able to get the bank credit because of the information asymmetry. Franklin Allen [15] pointed out that based on the study of China's financial system, China's banking industry dominates the economy and its role is much greater than that of the securities market. Measured by the ratio of bank credit to GDP, China’s ratio reached 1.11, compared with 0.62 in the UK and 0.55 in France. Yijia Zhao [16] used 4,248 unique firms from 1996 to 2018 as a sample to examine the impact of loan types on relational loans. The results show that companies repeating loans to the same bank can reduce information asymmetry and thus reduce loan costs, but this is limited to loans in the form of credit lines, and in other types of loans, this effect is not significant.

Another theory generally accepted by scholars is that bank credit can improve the financial flexibility of enterprises. Holmstrom and Thako believe that bank credit can be used as a hedging tool to deal with external financing constraints and ease liquidity pressures. Murillo Campello et al. [17] conducted a survey of 1050 CFOs in Europe, America and Asia in 2009 and found that when large companies are facing credit restrictions due to the financial crisis, they tend to significantly reduce technology input and capital expenditures, while small private enterprises will choose to use a large amount of credit lines in order to deal with the shortage of funds during the crisis.

Compared with bank credit, trade credit has the advantages of easy access and no guarantee, but the cost of using trade credit is still closely related to the characteristics of the enterprises itself. The typical form of trade credit is accounts payable, and the cost will increase as the duration of the corporate credit increases. The study found that a good institutional environment and the improvement of the effectiveness of internal control can reduce the cost of using business credit. For large enterprises with well-organized structures and standardized management, trade credit is a cheap way of financing, and the cost can even be lower than bank loans. Based on the principle of maximizing profits, if an enterprise can obtain low-cost trade credit, it is possible to force suppliers to surrender their cash flow and provide them with relatively cheap commercial financing. In order to increase market share, enterprises with low market position will occupy trade credit less and provide trade credit to customers. At this time, the use of trade credit increases and bank credit tends to decrease.

Based on the above theoretical analysis, we propose the first hypothesis of this article:

H1: There is a complementary relationship between commercial credit and bank credit. A high market position will weaken the complementary effect of commercial credit.

The Role of Competitive Strategy

The corporate strategy is the long-term goal formulated by the enterprise, as well as the measures and resource allocation methods adopted to achieve this goal. Each company's strategy is usually unique, but in order to study the differences in results caused by the company's strategic characteristics, many scholars have classified the company's strategy. Porter proposes a "general competitive strategy", which divides the company's strategy into a cost-leading strategy, a differentiation strategy and a concentration strategy. March divided the company strategy into exploration strategy and utilization strategy. Raymond E. Miles et al. [18] proposes three categories of attackers, defenders and analysts according to the strategic aggressiveness. These classifications clearly distinguish the differences between different types of company strategies and are therefore widely used in the field of strategic research.

Company strategy was proposed as early as in the 1970s, but the research on company strategy in the financial field started late, mainly because of the lack of effective tools for measuring company strategy. Kathleen A. Bentley et al.[19] proposed that we can use public data to classify corporate strategies, and use business strategy to score the enterprise. The results show that offense companies are more likely to be involved in financial reporting violations. Bentley's strategy classification method has provided ideas for measuring corporate strategy for a series of subsequent studies.
Danielle Higgins et al. [20] found that, compared with defensive and analytical companies, offensive companies will engage in more tax avoidance and adopt a more unsustainable tax position. Ahsan Habib and Mostafa Monzur Hasan [21] found that compared with defensive companies, offensive companies have a greater risk of stock price collapse.

Among the many classifications of company strategies, Porter’s competitive strategy is relatively mature and complete. Cost leading strategy is a strategy to reduce the cost of an enterprise as much as possible in various ways. In this way, companies can obtain profit margins and bargaining power, thereby gaining a competitive advantage strategy. Differentiation strategy is to provide customers with valuable uniqueness that is different from the industry homogenization of products or services, so as to obtain premium and development space. So companies that adopt differentiation strategies usually have a higher degree of diversification. The centralized strategy is to implement a low-cost strategy or a differentiated strategy for a specific customer group or market segment in the industry chain. The implementation scope of centralized strategy is relatively small. Porter believes that the three basic strategies can bring competitive advantages to the enterprise, but the specific implementation strategy needs to be adjusted according to the enterprise's resources and goals.

Compared with cost leading strategy, differentiated strategy need to invest more in product development, marketing expenses, and market share acquisition. However, the differentiated enterprises’ R & D investment and product promotion and recovery cycles are usually long, making a huge funding gap for differentiated enterprises. On the other hand, since differentiated enterprises can play a co-insurance effect by spreading risks, and increase the confidence of lenders in the enterprise, they can get increased credit.

Based on the above theoretical analysis, we propose the following assumptions:

H2: Compared with low-differentiation companies, the complementary relationship between commercial credit and bank credit is more significant among differentiated companies.

Research Design

Data and Variable Definition

This paper selects the 2000-2017 annual financial reports of A-share listed companies in China as the research samples, and then excludes: (1) financial industry samples; (2) samples of ST and *ST companies; (3) samples with missing data.

Loans for China’s enterprises mainly come from banks. This paper selects the ratio of the company’s unused lines of credit in annual financial report, and standardized by total assets.

The business credit of an enterprise comes from suppliers. There are mainly three types of transactions between enterprises and suppliers: accounts payable, bills payable, and prepaid accounts, so it is defined as follows:

\[
\text{commercial credit} = \frac{(\text{Accounts payable} + \text{bills payable} + \text{accounts received in advance})}{\text{total assets}}
\]

This article refers to the measurement and research of Nan Hu (2018) on the company's competitive strategy, uses the natural language processing method based on Word2Vec, and uses the "seed word + Word2Vec similar word expansion" method to measure the company's competitive strategy and diversification. The specific methods are as follows: by combing the classic literature of competitive strategy, summing up the relevant vocabulary, and extracting the vocabulary describing the competitive strategy and differentiated characteristics as seed words. After determining the seed words of the competitive strategy, using the Word2Vec statistical language model proposed by Mikolov to extend the seed words. Word2Vec represents words as...
real-valued vectors according to the context and forms a word vector space. The distance between word vectors is the semantic similarity between words. The closer the distance, the closer the semantics between the two words. In the end, this paper obtains 36 literature-based competitive strategy vocabulary seed word sets, including 15 cost-leading strategy vocabularies and 21 differentiated strategy vocabularies.

Empirical Model Design

In order to have a comprehensive understanding of the current Chinese corporate credit system, it is necessary to analyze the relationship between corporate trade credit and bank credit, and to analyze the financial level of the enterprise, and test which financial factors of companies can influence the relationship between bank credit and trade credit. So we build model (1) to test hypothesis H1. If hypothesis H1 holds, then Bankunusecre is significantly positive. That is, the positive of $\beta_1$ indicate that trade credit and bank credit are complementary.

Model 1.

$$\text{Bankunusecre}_{i,t} = \beta_0 + \beta_1 \text{Commercial}_t + \beta_2 \text{Lev}_t + \beta_3 \text{Tobiq}_t + \beta_4 \text{Roe}_t + \beta_5 \text{Hhi}_t + \beta_6 \text{Insholder}_t + \beta_7 \text{Itang}_t + \sum \text{Soe} + \sum \text{ind} + \sum \text{year} + \epsilon_t$$

The explained variable bank credit in model (1) is bank credit, which refers to the loans obtained by enterprises from banks. The following variables are controlled in the model: the size of the enterprise (Size), the listed company’s asset-liability ratio (Lev), and the return on net assets (Roe), these variables reflecting the company’s market position, financing capacity, and profitability. We also added the dummy variable Soe to consider the property rights of the enterprise.

Besides, due to the differences in corporate governance quality, enterprises that can achieve effective governance and supervision often have good credit and are more likely to obtain bank credit loans. In order to verify whether corporate governance factors will affect the relationship between trade credit and bank credit, we added control variables for corporate governance, including the number of independent directors on the board of directors (numinde), the number of professional committees under the board of directors (subcomit), to examine the impact of corporate governance on trade credit and bank credit.

In order to test hypothesis H2, we further split our sample according to company strategic diversification (Stratreport) on the basis of model (1) to test whether the company's diversification will affect the correlation between trade credit and bank credit.

Empirical Results

The Complementary Relation between Trade and Bank Credit

First, we try to indicate companies with more bank credit will also receive more trade credit. Column (1) of Table 1 reports that the bank credit coefficient is positive, which means trade credit and bank credit show a complementary relationship.

By controlling the financial factors such as capital structure, profitability and industry factors, we see that the complementary relationship of bank credit in the column (2) is still significant at the 1% level, but the coefficient decreases from 0.1319 to 0.0488, yet still significant at 1%. Trade credit enables some companies that are constrained by financing and unable to obtain formal financing from banks to obtain funds through trade credit, indicating that trade credit improves the efficiency of bank credit allocation. For the performance of control variables, cash flow (Cflow) is positive, while the cash ratio (Cash) is negative, indicating that the more the company's cash flow is short, the more difficult it is to obtain loans from banks; size and the proportion of tangible assets (Tang) are significantly negatively correlated with bank credit, with a size coefficient of -0.0577 and Tang
of -0.2542. This shows that in large enterprises or enterprises with a high proportion of fixed assets, the supplementary effect of trade credit not only weakens, but also turns into a substitution effect, that is, fewer loans are obtained from banks and more trade credit are used. Large enterprises and enterprises with high fixed asset ratios have strong bargaining power with suppliers, so they have obtained more trade credit from suppliers.

We need to further verify whether H1 is still true under corporate governance factors. Column (3) is the report result after controlling the corporate governance variables. It can be found that the coefficient of bank credit further decreases to 0.0378, but trade credit and bank credit are still significantly complementary, the H1 is established. The number of independent directors in the board of directors (numinde), the general manager and chairman of the board of directors (dual) and the number of professional committees under the board of directors (subcomit) are negatively correlated with bankunusecre. The absolute number of independent directors on the board of directors is the largest, indicating that numinde has the greatest impact on bank credit. The more independent directors, the less credit the company gets from the bank. Corporate governance factors have further weakened the complementary relationship between trade credit and bank credit. Companies with well-organized corporate structures, low concentration, and effective supervision will use more trade credit with lower interest rates.
Table 1. Supplementary relationship between commercial credit and bank credit.

|               | (1)           | (2)           | (3)           |
|---------------|---------------|---------------|---------------|
| Bank credit   | 0.1319***     | 0.0488***     | 0.0378***     |
|               | (0.011)       | (0.013)       | (0.013)       |
| tl            | 0.0403        | 0.0575        |               |
|               | (0.044)       | (0.045)       |               |
| tang          | -0.2542***    | -0.2466***    |               |
|               | (0.034)       | (0.035)       |               |
| itang         | 0.1865        | 0.1577        |               |
|               | (0.170)       | (0.171)       |               |
| cflow         | 0.2851***     | 0.2562***     |               |
|               | (0.057)       | (0.057)       |               |
| cash          | -0.2134***    | -0.2138***    |               |
|               | (0.052)       | (0.052)       |               |
| invt          | -0.1713*      | -0.1485*      |               |
|               | (0.089)       | (0.089)       |               |
| size          | -0.0577***    | -0.0584***    |               |
|               | (0.008)       | (0.009)       |               |
| tobin         | -0.0042       | -0.0050       |               |
|               | (0.004)       | (0.004)       |               |
| Stratreport   |               | 0.0093        |               |
|               |               | (0.017)       |               |
| numinade      |               | -0.1591       |               |
|               |               | (0.131)       |               |
| dual          |               | -0.0266       |               |
|               |               | (0.018)       |               |
| subcomit      |               | -0.0027       |               |
|               |               | (0.019)       |               |
| _cons         | 0.1748***     | 1.5977***     | 1.7146***     |
|               | (0.004)       | (0.193)       | (0.218)       |
| N             | 1538          | 790           | 780           |
| r2_w          | 0.1332        | 0.3416        | 0.3258        |
| F             | 153.0485      | 21.5060       | 13.4946       |

The Degree of Diversification Affects the Complementary Relationship between Commercial Credit and Bank Credit

Table 2 reports the regression results after incorporating the comparative strategy of the company. After extracting the competitive strategy vocabulary from the annual report and management analysis and discussion literature, the company's diversification degree is divided into two levels of
low and high and returns. From the results, the coefficient of bank credit of companies with high frequency of differentiated strategies in annual reports and MD&A is relatively high, with a minimum of 0.0385 and a maximum of 0.1223, and remains significant at the level of 1% and 5%. This results indicates that the complementary relationship between trade credit and bank credit is significant in companies with a high degree of diversification, consistent with our hypothesis H2.

Observing companies with a low degree of diversification and high degree of cost-leading, there is a negative correlation of -0.0042, but the results are not significant. Therefore, in companies with low diversification, trade credit has little to do with bank credit. We attribute this result to the fact that enterprises with a high degree of diversification have relatively large expenditures on R & D investment and marketing expenses, but the payback period from R & D to output sales is long. It is often difficult to rely on income alone to maintain normal operating cash flow, so financing needs are relatively large, even if they are obtained bank loans will also obtain more funds through trade credit. Enterprises with low diversification have relatively small demand for funds. In order to reduce loan costs and reduce unnecessary loan expenditures, they will use less credit funds.
Table 2. Comparative strategy and the complementary between bank lines of credit and trade credit.

| Differentiation | (1)     | (2)     | (3)     | (4)     | (5)     | (6)     | (7)     | (8)     |
|-----------------|---------|---------|---------|---------|---------|---------|---------|---------|
|                 | Low     | High    | Low     | High    | Low     | High    | Low     | High    |
| Bank credit     | 0.0026  | 0.0706*** | -0.0042 | 0.1223*** | 0.0268  | 0.0385**  | 0.0169  | 0.0986*** |
| tl              | -0.0228 | 0.0618   | 0.0692  | -0.1543 | 0.0991  | 0.0369  | 0.1469** | -0.0962 |
| tang            | -0.1746*** | -0.2998*** | -0.1343*** | -0.1156 | -0.0592 | -0.0923 | 0.0133  | 0.0487  |
| itang           | 0.0382  | -0.5064 | 0.1092  | -1.0519** | 0.1321 | -0.5182 | -0.0806 | -0.5605 |
| cflow           | 0.3095*** | 0.1895   | 0.4623*** | 0.2629*  | 0.1687** | 0.2603** | 0.5263*** | 0.3332*** |
| cash            | -0.0928 | -0.2794*** | -0.2349*** | -0.0691 | 0.1856** | -0.0691 | 0.0199 | 0.0620 |
| invt            | -0.0697 | -0.2029 | -0.0590 | 0.0337  | 0.3481** | -0.3356* | -0.1040 | -0.2174 |
| size            | -0.0158 | -0.0946*** | -0.0294*** | -0.1119*** | 0.0502*** | -0.0676*** | 0.0054 | -0.0895*** |
| tobin           | -0.0030 | -0.0084 | -0.0052 | -0.0104 | 0.0010  | 0.0011  | 0.0032  | -0.0033 |
| numinde         | -0.1684 | 0.3561  | -0.1633 | 0.3807  | -0.1591 | 0.0800  | 0.0039  | 0.3677  |
| dual            | -0.0442 | 0.0213  | -0.1130*** | 0.0544 | -0.0377 | 0.0107 | -0.0520 | 0.0878** |
| subcomit        | 0.0152  | -0.1431* | 0.0179  | -0.0201 | 0.0144  | -0.1099 | 0.0226  | -0.1013 |
| _cons           | 0.6899** | 2.8934*** | 1.0765*** | 2.7687*** | -1.1236*** | 1.9733*** | -0.2252 | 2.2172*** |
|                 | (0.347) | (0.464) | (0.296) | (0.501) | (0.347) | (0.360) | (0.370) | (0.394) |

N  296  253  306  234  296  253  306  234  
N  359  359  359  359  359  359  359  359  
numinde  0.3039  0.4577  0.4355  0.4728  0.2639  0.3815  0.2576  0.5275  
F 4.2865  6.1200  6.4294  5.3799  3.1078  4.4727  2.8915  6.6978  
N 296  253  306  234  296  253  306  234  
N  359  359  359  359  359  359  359  359  
numinde  0.3039  0.4577  0.4355  0.4728  0.2639  0.3815  0.2576  0.5275  
F 4.2865  6.1200  6.4294  5.3799  3.1078  4.4727  2.8915  6.6978  

|   | (5) | (6) | (7) | (8) |
|---|-----|-----|-----|-----|
|   | Low | High | Low | High |
| N  | 296 | 253 | 306 | 234 |
| N  | 359 | 359 | 359 | 359 |
| numinde | 0.3039 | 0.4577 | 0.4355 | 0.4728 |
| F | 4.2865 | 6.1200 | 6.4294 | 5.3799 |
| N | 296 | 253 | 306 | 234 |
| N | 359 | 359 | 359 | 359 |
| numinde | 0.3039 | 0.4577 | 0.4355 | 0.4728 |
| F | 4.2865 | 6.1200 | 6.4294 | 5.3799 |
Through the above analysis, we can see that the complementary relationship between trade credit and bank credit is mainly established in differentiated enterprises, and companies with a high degree of diversification have a more significant supplementary role. Enterprises that implement differentiated strategies use trade credit as a supplement, get more funds necessary for business development through trade credit.

Conclusion

Using the financial data of China's A-share listed companies, it is found that trade credit has a significant complementary relationship with bank credit. Enterprises facing financing constraints can fill the funding gap through both trade credit and bank lines of credit. Further analysis found that the internal factors of the company's financial level, asset structure and governance structure are the main factors affecting this relationship. This paper further uses the data obtained by the latest Word2Vec statistical language model to distinguish the company's strategic to examine the relationship between trade credit and bank credit at the company's strategic level. It is found that in companies with a high degree of differentiation, trade credit has a significant supplementary relationship with bank credit, while in companies with a low degree of differentiation, the two are almost irrelevant.

Our paper not only broad the scope of existing literature studies from the perspective of demand and supply, but also add evidence to the contradictory evidence of supplement and substitution, by incorporate the company comparative strategy into the research framework. The article enriches financing theory in the emerging market, enlightens the importance of financing for an enterprise, and can help the enterprise improve the financing environment and ease the financial constraints and optimize the capital allocation. However, certain limitations should be further tested in the near future, especially the roles of corporate governance and the quality of information disclosure, as well as the banking system.

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