



Research Article

ISSN : 0975-7384
CODEN(USA) : JCPRC5

The empirical study of influence factors in small and medium-sized enterprise (SMES) financing in Liaoning province

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ABSTRACT

Small and medium-sized enterprises of our country is in a period of expansion, it is not able to meet their development needs only by capital investment such as primitive accumulation, private lending and fund-raising in the start-up period. At present, short-term lending gap in small and medium-sized enterprises is very big, long-term loan is not available, financing difficulties has become the bottleneck of restricting the development of small and medium-sized enterprises. In the old industrial base – Liaoning province, small and medium-sized enterprise financing problems plagued by the same small and medium-sized enterprises and related departments, this article study on financing for small and medium-sized enterprises based on the financing problems of small and medium-sized enterprises in Liaoning province.

Keywords: small and medium-sized enterprises; Financing; Factors; research

INTRODUCTION

For a long time, financing difficult issue in small and medium-sized enterprise has always been a universal problem in many countries, domestic and foreign scholars and financial practitioners have made broad discussion and research, the study of small and medium-sized enterprise financing problems has formed a relatively mature system and put forward a series of policy Suggestions accordingly, many beneficial attempts and explorations had been put in practice, and obtained a more fruitful results. Berger and Udell G. F. (2009) suggested that credit market transactional mainly relies on the hard information of the borrower, and relationship lending relies mainly on the can but difficult to quantify and soft information [1]. Modigliani (2010) argued that in accord with their level of risk of interest rates on loans, Enterprises are facing difficulties, their financing sources are mainly endogenous, including family, suppliers, and those with repeat business and enterprises manufacturers[2]. Bradford (2004) argue that the government should provide financing guarantee for small and medium-sized enterprises in a number of ways, the government's credit guarantee measures can alleviate the pressure of the funds to help small and medium enterprises more than direct to provide loans, under the government's credit guarantee, more access to bank loans for small and medium-sized enterprises[3]. Linyifu, Liyongjun (2011) argued that the fundamental reason of financing difficulties of small and medium-sized enterprises from the current financing situation is low management transparency of small and medium-sized enterprise which leads to high degree of information asymmetry[4]. Zhangrunlin (2004) argued that the main reason for the financing difficulties of small and medium-sized enterprises in our country is immature capital market development, resulting financing channels for SMES impeded[5]. Zhangjing (2010) conducted a comprehensive analysis on the causes of the difficult financing of small and medium-sized enterprises from three aspects of enterprises, banks, policy etc[6]. Wangqian (2008) analyzed different financing needs from the enterprise life cycle theory to the SMES in the pioneering period, growth period, mature period and declining period [7]. However, in the absence of empirical results support the case, put forward to solve the financing difficulty of small and medium-sized enterprises of all kinds of policy recommendations, the pertinence and effectiveness of the lack of support and to verify sufficient. In this paper, the influence factors on the financing of small and medium enterprises from the theoretical and empirical analysis, the micro level research to solve the problem of SME

financing countermeasures, has important practical significance. The main innovations: regional -- Liaoning Province as the research sample, previous studies focus more on the general situation, and its characteristics of small and medium-sized enterprises decide it has strong regional characteristics, select a specific area as the research object, to better analyze the factors that affect the financing of small and medium-sized enterprises.

1. financing status of small and medium-sized enterprises in Liaoning province

As of the first half of 2013, small and medium enterprises in Liaoning Province in the financial comprehensive tension state, more than 78% of the small and medium-sized enterprise loan difficult situation appeared, the small and medium-sized enterprises faced a shortfall of 100 billion yuan according to estimates in the first half of 2013 in Liaoning province, enterprise cost greatly increase, small and medium-sized enterprises facing serious pressure to survive.

According to recent statistics released in Liaoning network information display, from the survey of 125 enterprises, 72.3% enterprises from its own funds and private lending. At the same time, 38.9% of enterprises believe that the shortage of funds, the financing difficulty is the main factor restricting the development of enterprises, There are 56.4% enterprises that obtain loans from financial institutions is not easy, of which 29.6% of enterprises believe that the bank loan guarantee conditions are too strict, 17.7% due to lack of guarantee banks refused to loan, The 125 surveyed enterprises, only 8 companies have government guarantee institutions guarantee. But relatively speaking, small and medium enterprises in Liaoning Province, compared with large enterprises, SMES obtain bank loans in the absolute disadvantage. By the end of all bank loans at the end of 2013, Liaoning is 1.5925 trillion, 2.66 trillion in Zhejiang; the balance of loans in which small and medium enterprises, Liaoning is 453.7 billion yuan, the total loan balance of 28.5%; Zhejiang is 1.65 trillion yuan, accounting for 62.4%. Can be seen from the data, two of the province's gap, visible, small and medium-sized enterprises in Liaoning province and external financing ratio imbalance, the financing structure is extremely unreasonable [8].

Table 1: Banking financial institutions in Liaoning province survey (2013)

Institution category	A number of institutions (unit)	Number of employees (person)	Total assets (100 million yuan)
Large commercial banks	4105	84757	32378
Policy banks	128	3346	3828.5
Joint-stock commercial banks	340	12051	6890.8
City Commercial Banks	578	15211	4908
Rural cooperative organization	5270	58465	9127.2
Finance company	6	241	590.4
Foreign bank	21	606	207.7
The new type of rural institutions	12	302	187.2
Postal savings	2706	6154	2717.1

Data sources: the people's bank of China Shenyang branch

Table 2: loan growth area is in Liaoning province (20010-2013) (%)

Area	New loans in the proportion of 2013	New loans in the proportion of 2012	New loans in the proportion of 2011	New loans in the proportion of 2010
Shenyang	10.21	19.47	10.03	3.15
Dalian	21.46	28.11	19.65	17.58
Anshan	11.5	24.37	8.19	14.78
Fushun	7.03	20.28	13.4	9.96
Benxi	13.39	23.48	10.79	10.82

Data sources: according to the statistical yearbook of Liaoning province to sort out

2 the empirical analysis on factors affecting of small and medium-sized enterprises financing in Liaoning

2.1 selection of variable

Small and medium-sized enterprise financing ability depends on financial institutions credit supply ability of the enterprise and the credit level of subjective evaluation combined with the present situation of the financing of SMEs in Liaoning province. Perspective from the bank, credit supply ability of small and medium-sized enterprise was mainly affected by the assets of banking institutions themselves, the types of organization, internal incentive mechanism, the influence of the management idea, etc; From the point of small business itself, mainly by culture of enterprise scale, business owners, the assets of the enterprise itself ratios, industry distribution, the influence of factors such as establishment of fixed number of year. Based on the research of small and medium-sized enterprise financing ability, choose bank to small and medium-sized enterprise credit as a substitute indicator, to a certain extent, reflect the small and medium-sized enterprise financing ability.

Table 3: selection of variables

Variable type	Variable name	The variable meaning
The explanatory variable 1	approval limit bank for small and medium-sized	The bank finally approval limit of small and medium enterprises
The explanatory variable 2	The rate of assets and liabilities	Debt / total assets
The explanatory variable 3	Rate of return on net assets	The enterprise net profit / net assets
The explanatory variable 4	Credit rating	Bank of enterprise credit rating
The explanatory variable 5	The scale of the enterprise	Miniature, Small, Medium-sized
The explanatory variable 6	Enterprise set up years	Enterprise set up years
The explanatory variable 7	Business owners age	Business owners age

2.2 sample selection and statistical description

In order to comprehensively analyze the impact of various factors on the small and medium-sized enterprise financing ability, In this paper, taking 210 small and medium-sized enterprise business data of a large national joint-stock commercial bank branches in Shenyang as a sample. The joint-stock banks is an important source of financing of small and medium enterprises, so choose small and medium-sized enterprise customer data from the company bank can reflect the small and medium-sized enterprise financing characteristics to a certain extent., thus facilitating small and medium-sized enterprise financing influence factors analysis, it is concluded that affect the ability of the small and medium-sized enterprise financing in Liaoning province.

Table 4 sample statistical description

	The mean	standard deviation	minimum value	maximum value
approval limit bank for small and medium-sized	5.2341	0.3876	4.9807	7.4407
Assets and liabilities rate	0.413219	0.152587	0	0.95
Rate of return on net assets	0.217798	0.269434	-0.14	3.31
The credit rating	6.2725	0.9138	3.0000	7.0000
Enterprise scale	2.2308	0.4976	1.0000	4.0000
Enterprises set up fixed number of year	8.2961	4.4502	1.0000	47.000
Business owners age	45.57739	7.732528	17	67

2.3 established model

this paper explore the influence factors of small and medium-sized enterprise credit financing ability based on the multiple regression model after descriptive analysis on all above indexes. The equation is as follows:

$$Y=A+ B_1 X_i + \varepsilon$$

Among them, Y to reflect the SMES credit financing capacity of explanatory variables, the small and medium-sized enterprise approved financing reflect the ability of firms to obtain credit loans from the bank. X_i is the explanatory variable vector, refers to a series of bank credit evaluation index of enterprise.

This article set the econometric model based on the above factors, as:

$$Y= B_1 var_1+ B_2 var_2 + B_3 var_3 + B_4 var_4 + B_5 var_5 + B_6 var_6$$

Y is explained variable, reflects the small and medium-sized enterprise financing ability, choose the bank for the small and medium-sized enterprises (SMES) for examination and approval of the credit limit as an alternative indicator; Among them, the var_1 refers to the enterprise scale; var_2 refers to the credit rating; var_3 refers to the asset-liability ratio; var_4 refers to business owners age; var_5 refers to return on equity; var_6 refers to the enterprises set up a fixed number of year, assuming the index return on equity, credit rating, enterprise scale, enterprise establish a fixed number of year and business owners age the positive influence to the small and medium-sized enterprise financing ability, the asset-liability ratio has a negative impact on small and medium-sized enterprise financing ability.

2.4 The empirical results and analysis

Through analyzing the influence factors by multivariate linear regression analysis, in order to prevent the heteroskedasticity existence to the regression results caused by unstable, the heteroskedasticity stable standard deviation, the regression results shown in the table below.

Table 5 Econometric model regression results

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Var1	0.912*** (219.95)	0.638*** (30.84)	0.629*** (30.36)	0.346*** (8.72)	0.346*** (8.67)	0.341*** (7.92)
Var2		0.298*** (12.47)	0.284*** (12.36)	0.268*** (11.78)	0.263*** (11.37)	0.264*** (11.52)
Var3			-0.121*** (-2.59)	-0.0851** (-2.19)	-0.0955** (-2.42)	-0.0952** (-2.47)
Var4				0.609*** (7.22)	0.624*** (7.29)	0.583*** (6.83)
Var5					0.0439 (1.95)	0.0543** (2.34)
Var6						0.108** (2.49)

Among them, the values in brackets are the t statistics, ***mean significant at 1% level; **mean significant under 5% level; *indicates significant under 10% level. The table above shows that enterprise size have a positive impact on small and medium-sized enterprise financing ability, small and medium-sized enterprise scale is larger, Access to bank credit line is higher, financing ability is stronger; Small and medium enterprises credit rating level is higher, the amount of bank credit is greater, then the financing needs of SMES is more conducive to be satisfied; Debt level of small and medium-sized enterprise is higher, the more the amount of financing is lower, consistent with the hypothesis of this article is expected; Entrepreneurs age level for small and medium-sized enterprise financing ability has a positive effect, namely entrepreneurs age is greater, small and medium-sized enterprises to obtain bank credit is higher; Return on net assets have a positive impact on small and medium-sized enterprise financing ability, the return on equity is higher, ,access to bank loans is easier for small and medium-sized enterprises, financing amount is higher; Through further analysis of the impact of enterprise life to the small and medium-sized enterprise financing ability, this article suggests that the enterprise is longer, the cooperation between bank and small and medium-sized enterprises is longer, the possibility to obtain bank loans is more, can get more loans.

In order to verify the results of the robustness, The total sample was divided into three sub samples according to the fund size, each sub sample containing 1/3 population sample, this article analyzes the sub samples based on Heteroscedasticity robust multivariate linear regression model above, respectively shows that in the case of different scale enterprises access to funds, specific results are shown in table 6 below:

Table 6 Stability test results

	Model 7	Model 8	Model 9
Var1	0.7939*** (4.14)	0.7497*** (11.86)	0.5681*** (5.87)
Var2	0.2631** (2.35)	0.1985*** (6.17)	0.2213*** (4.61)
Var3	-0.2075* (-2.11)	-0.32787*** (-2.39)	-0.473** (-2.28)
Var4	0.6417** (3.15)	0.7313*** (10.98)	0.5409*** (7.49)
Var5	0.063 (0.978)	0.0732*** (3.25)	0.0314 (0.518)
Var6	0.1916*** (7.21)	0.0447 (1)	0.393** (5.64)
Goodness of fit	0.9984	0.9972	0.9984

As you can see, in according to the size of the classification of the enterprise after the return of the results, the goodness of fit were 0.9984, 0.9972, 0.9984, better fitting situation, Help model accurate analysis of the influence factors of credit support.

3 financing countermeasure analysis

Based on the financing status of small and medium-sized enterprises in Liaoning province and empirical research, the author thinks that financing governance can be obtain from the following several aspects in Liaoning province.

3.1 improve enterprise's capacity for independent innovation

In the fierce market competition environment, if the small and medium-sized enterprises want to survival and development, they must keep continuous technical innovation. But the independent innovation capability of small and medium-sized enterprises in Liaoning province has accounted for only less than 23.1%. Small and medium-sized enterprises need to improve the independent innovation consciousness, establish and improve the small and medium-sized enterprise independent innovation incentive mechanism. Through the management

innovation, establish and improve the technological innovation incentive mechanism, by adopting the combination of salary incentive and other incentives, to improve the technical personnel of enterprises a sense of accomplishment and satisfaction, so as to make the science and technology personnel, give full play to the potential to create more value for the enterprise[9].

3.2 Establish smooth channels of direct financing

Liaoning should draw lessons from the characteristics of Shanghai bill market, encourage commercial banks to establish a ticket sales in Liaoning province. Establish funds by cooperation between small and medium-sized enterprise or big business funds. Small and medium-sized enterprises can establish a legal form of fund, under the supervision of the government to reduce into the threshold of the paper market. In addition, small and medium-sized enterprise may request the upstream has a good reputation in the industry of large and medium-sized enterprises, to strengthen their own credit degree, so that Banks and other financial institutions can provide paper services for small and medium-sized enterprises under the existing conditions. Development of financial leasing, trust products and pawn business, increase the small and medium-sized enterprise financing products and tools[10].

3.3 legalization of private equity funds

Private equity is one of the international mainstream direct investment tools, it is also the developing direction of the future fund. The development of Private equity fund also can produce significant positive impact on small and medium-sized enterprise financing in our country. At present, China's private equity securities fund size of at least above one trillion, still survive in legal cracks and grey area. So, establish the legal status of private equity funds, is not only beneficial to private equity 'development, but also is beneficial to the development of small and medium-sized, high-risk enterprise also had a significant effect on the development of capital market[11].

3.4 perfect the social credit system

Building a credit system that the government is the main body, e-commerce is the basis, and then building the enterprise credit system and personal credit system. Through the establishment of public agency, the government mandatory requirements of enterprises and individuals provide reference data to these institutions, and legislation to ensure the authenticity of the data. Establish small and medium-sized enterprise credit database, make the whole society began to clear understanding to the small and medium-sized enterprises of balance of payments and financial information, so as to strengthen the small and medium-sized enterprise credit constraints, effectively reduce the monitoring cost and credit risk, create conditions for enterprise's financing in a timely and effective manner[12].

3.5 perfecting enterprise guarantee system

Implement actively and promote the national laws and regulations related to small and medium-sized enterprises at the same time in Liaoning province, perfect enterprise credit guarantee operation system, let the financing channels. Although the financial environment was improved to a certain extent in Liaoning province, but it is still difficult to solve the funding needs of the enterprise. To solve the financing difficulties should set about in many ways, one is the financial departments should actively support those who have the development potential of the enterprise, and really help enterprise development. Second is to set up specifically for small and medium-sized enterprise service in state-owned Banks credit departments, formulate and improve loan policy suited to the characteristics of the small and medium-sized enterprises and the measures for the administration.

CONCLUSION

We must ease financing problems of the small and medium-sized enterprises on the basis of the existing policies in Liaoning province, fully draw lessons from Jiangsu and Zhejiang area and the foreign advanced experience, creating new methods of Liaoning province, let small and medium-sized enterprise enters benign development in Liaoning province.

Acknowledgments

In the process of writing , my colleagues give me wealthy and enthusiasm support, give my deepest thanks to them together.

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