ORIGINAL ARTICLE

Research on the Influence of Venture Financing on Enterprise Growth

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Abstract.:Innovation is the core force of economic development and social progress. Entrepreneurship, as the foundation of innovation, leads the development trend of the times. A large number of innovative enterprises are constantly emerging, providing a powerful impetus for economic growth. However, the high risk of start-up enterprises will inevitably lead to financing difficulties. The participation of venture financing can obviously affect the growth efficiency and efficiency of enterprises, and the capital expansion ability, profitability, solvency, operation ability and innovation ability of enterprises with venture financing are better than those without venture financing; The background and financing type of venture capital will also affect the solvency and operational ability of enterprises to varying degrees; However, the risk financing participation and its characteristic variables have no significant influence on enterprise management ability. Risk financing has a time effect on the growth efficiency of enterprises, and its effect weakens with the increase of years. This paper analyzes the effect of venture financing on the growth of enterprises accurately, and provides reference for venture enterprises to strive for venture capital and increase the growth of fans.

Keywords: Entrepreneurial enterprises; Venture financing; Enterprise growth.

1. Relevant basic theory of the influence of venture financing on enterprise growth

1.1 Definition of related concepts of start-up enterprises

With the continuous improvement of China's scientific and technological level, high-tech industry have become an important force driving economic growth. Its characteristics of high income, high growth and innovation have injected an inexhaustible power into the improvement of national innovation level. Compared with traditional enterprises, high-tech enterprises have the following characteristics.

Technology-intensive and capital-intensive. High-tech enterprises generally rely on high-level technology, which is complex and difficult to understand. Enterprises need to bring in a large number of high-quality scientific research personnel. According to the survey, the number of scientific and technical personnel required for R&D of high-tech enterprises is about five times that of traditional enterprises. However, high-intensity R&D also needs a lot of money. The cost of developing high-tech industries is 10-20 times higher than traditional enterprises. R&D expenses account for 5-15% of sales revenue, which is 2-8 times higher than traditional enterprises. An enterprise needs a lot of money to invest in product research and development at the initial stage of its establishment.

With high growth, it is easy to occupy the market. The core of the growth of high-tech enterprises lies in technological breakthroughs, so its development presents a leap-forward growth. On the one hand, the high technology content of the enterprise products will bring high profits and promote its rapid growth. At the same time, high-tech products have a strong market monopoly. Once a technological breakthrough is achieved and accepted by the market, the market will soon be occupied by fans.

Both high risk and high return coexist. The core of high-tech enterprises lies in the technical level. They are at the forefront of technology research and development, and there are too many unknown contents, so it is difficult to break through technology. Once they fail, the enterprises will face enormous risks. However, high risks is accompanied by high returns. Once the products of high-tech enterprises are successfully developed, the enterprises will get huge returns, and investors will also get tens or even hundreds of times of the original investment. [1]

1.2 Meaning of starting a business

The definition of start-upnterprise refers to the process of capitalizing a potential opportunity under the organization of entrepreneurs, which is the initial definition of start-up. After that, compared with ordinary enterprises, start-up enterprises take innovation as the core of enterprise development and engage in no less than one innovative behavior. Therefore, most start-upnterprises are small enterprises, but small enterprises are not necessarily start-up enterprises. Chinese scholars also put forward the definition of start-uperprise, among which Zhu Jianfeng thinks that start-up enterprise is an enterprise at the early stage of start-up based on high technology, which has mastered a certain high technology and developed corresponding products or services with this technology as the core. Jiang Wei thinks that a start-up enterprise is an innovative and pioneering enterprise because it is in the initial stage and has a strong innovative spirit, creativity, high risk and high profitability. Jiang Sanliang explained the entrepreneurial process and thought he was the founder of the company. He collected, analyzes and acquires related resources, information and technology, and then created a new enterprise. By continuously improving the value of the enterprise, he led the enterprise through the dangerous period of initial stage, which enabled the enterprise to achieve long-term survival and rapid growth.

According to the theory of enterprise growth life cycle, the life cycle of small and medium-sized enterprises can be divided into five stages: seed stage, creation stage, growth stage, expansion stage and maturity stage. Most scholars believe that the start-up stage means that the technological research and development achievements of enterprises have been relatively mature, and then the technological achievements are transformed into products and industrialization, and gradually move towards the market. This stage is an important period for high-tech enterprises to realize the productization and commercialization of technologies.

1.3 Financing structure of start-up enterprises

Although the financing priority theory reveals the financing order of enterprise, the financing contract theory is consistent with the financing priority theory to a certain extent. But for start-ups, because they are in the early stage of enterprise development, the risks are very great. If they succeed in starting businesses, there will be a high returns. Therefore, the financing structure of start-ups should be treated differently from the traditional theory of financing structure. In the external financing structure, their equity financing usually takes priority over debt financing.

As far as the risk level is concerned, the traditional financing theory takes general enterprises as the research object, and its risk level is consistent in all stages, but for start-up, its risks is relatively large, and it faces different risks in all stages of enterprise development, and its risk level gradually decreases with the growth of enterprises. However, investors in most enterprises are risk-averse, hoping to get relatively satisfactory returns in the future with less risks, while investors in start-up enterprises tend to be risk-biased, hoping to get high profits from investment.

As far as the types of risks are concerned, the risks involved in financing theory are often financial risks, while as far as start-ups are concerned, the survival and development of enterprises are based on technical capabilities. Therefore, the risk of technological innovation is the most important risk for an enterprises. Because technological change requires a large amount of capital to invest in R&D and production, all the processes can not guarantee the innovation and applicability of technology, so the risks is very high. [2]

2. Enterprise financing mode and theory

2.1 Life cycle theory of enterprise growth

In order to better understand the changing rules of financing methods of SMEs in different stages of development, Weston and brigham put forward the hypothesis of enterprise financial life cycle in 1970. In the early stage of the establishment of enterprises, the assets were small, the products were not produced or put on the market, and the relevant business records and financial audit were lacking. The information of enterprises was closed and not open to the public, which led to asymmetric information. Investors couldn't get the key information of enterprises, and the possibility that the enterprises can obtain financing through external channels was very low. Therefore, enterprises mainly rely on internal financing. When the enterprise develops gradually and enters the growth period, it needs to expand its scale and increase its capital demand. With the expansion of its business scale and the increase of profits, the assets available for mortgage increase, while the enterprise information is relatively open, and the public information of the enterprise held by external investors increases, so enterprises begin to adopt foreign debt financing methods; After entering the mature stage of stable development, the enterprise's strategic layout, product form and related financial management are gradually improved, and funds can be obtained through equity financing such as public listing. At this time, the proportion of equity financing increases, and the possibility of the development and growth of enterprises increases. Therefore, according to this theory, it can be concluded that the financing methods of enterprises are different at different stages of their growth. At the initial stage of their establishment, they mostly use their own funds and retained earnings to obtain financing, and the financing channels are narrow. With the growth and scale expansion of enterprises, they often use external financial institutions and capital markets to obtain funds, thus spreading the risks of enterprises.

Table 1 Financing sources of enterprises at different stages of development

stage	Sources of financing	Potential problem
Founding period	Entrepreneur's own funds	Low capitalization
Growth stage 1	Self-owned funds, retained profits, commercial credit, short-term bank loans and lease investment	Excessive inventory and liquidity crisis
Growth stage 2	Long-term financing from financial institutions	Financial gap
Growth stage 3	Securities issuing market	Decentralized control
Mature period	All the above sources	Conservative return on investment
Recession period	Withdrawal of financial resources, mergers and acquisitions, stock repurchase, liquidation, etc.	Declining return on investment

2.2 Financing methods of start-up enterprises

Since start-up enterprises are in the initial stage, their future development is uncertain, and information asymmetry leads to difficulties in financing. In addition, it is difficult to get the support from financial institutions, and the credit level can not be investigated. Therefore, traditional financing methods such as bank loans are difficult to obtain, while angel investment, venture capital and private equity investment in venture capital provide a good opportunity for start-ups and make up the "financing gap".

2.2.1 Angel Capital

Angel investment originated in the 19th century. At first, investors invested in Broadway drama performance out of support for art. In the 1980s, the Venture Capital Research Center of New Hampshire University used "angel" for the first time in the research field to express specific investors and investment ways who are willing to invest in enterprises and meet their investment needs. According to Liu Chao, angel investment is a wealthy individual with idle assets and high risk tolerance, and invests idle funds in more interesting fields. Angel investment is generally located in the seed stage or initial stage of enterprise development, and the enterprise products are initially put into operation, but its model has not been effectively certified, and the investment risk is relatively high. Angel investors include entrepreneurs or professional angel investment institutions. Usually, angel investment institutions will carry out industry analysis, due diligence and value-added services for enterprises in a professional way. Their investment strategies includes three levels: S, A and B, in which S-level projects actively participate in the board of directors in the form of lead investment, and A-level projects participate in directors and supervisors in the form of joint investment. At the same time, docking the strategic resources of investment institutions, and assisting enterprises to upgrade projects. Class b projects are only responsible for regular follow-up, and when the enterprise has a development trend, consider continuing to invest. Angel investment started late in China, but it developed rapidly. In 2015, there were 2,075 angel investment cases, up 170.9% year-on-year, and investment financing exceeded 10.188 billion yuan, up more than 214.9% year-on. The Internet, telecommunications, value-added services and IT industry have become the main investment directions of angel investors in China. Angel investment are mainly concentrated in Beijing. In 2015, there were 902 investment cases, with an investment of about 4.341 billion yuan. Shanghai and Shenzhen followed closely, with 341 investment cases and 185 investment cases, respectively. See Figure 1 for details. [3]

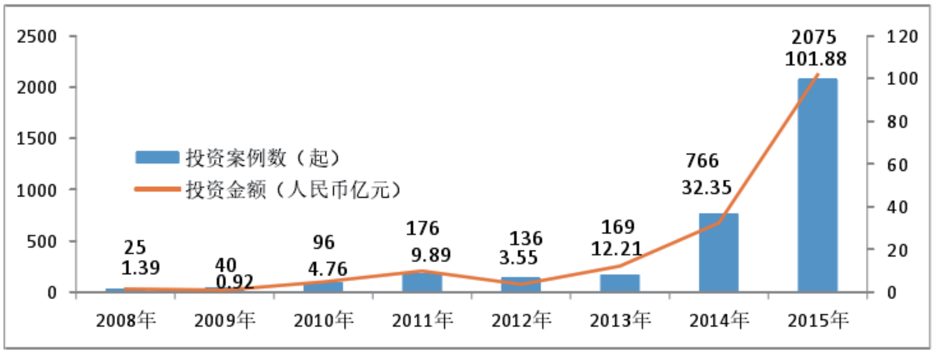

Fig. 1 Development of Angel Investment from 2008 to 2015 (Source: Zero2IPO Database)

2.2.2 Venture Capital

In a broad sense, venture capital includes all investments with high risks and high potential returns. In the narrow sense, venture capital is based on high-tech, producing and managing technology-intensive products. The risk capital defined here is the risk capital in a narrow sense. Venture capital is generally in the early or growing stage of enterprise development. At this time, the enterprise's project development is perfect, the operation mode is stable, there are operational data that can be evaluated, and the risks is relatively reduced. There are a, b and c rounds of venture capital, and some enterprises even have d rounds. Venture capitalists are also professional investment institutions, including government-backed institutions such as Shenzhen Venture Capital, an investment fund set up by the government, and foreign-funded institutions such as Sequoia Capital and IDG Capital. It is more professional, and has a more complete operation flow and investigation method. The specific data are shown in Figure 2.

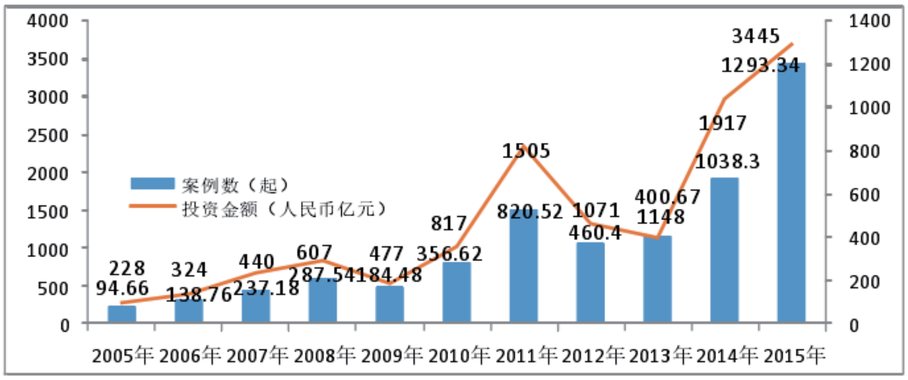

Fig. 2 Development of Venture Capital from 2005 to 2015

3. Analysis on the Impact of Entrepreneurial Financing on Enterprises

3.1 Analysis of the Influence of Venture Financing on the Growth Efficiency of Enterprises

According to financing priority theory, internal financing is better than external financing, and debt financing is better than equity financing in external financing. However, for start-ups, the internal financing channels is not enough to maintain the long-term development of the enterprise, so they must obtain funds through external financing. However, due to the lack of complete financial information, product information and operational data information, start-ups can not provide credit guarantee to investors. The development of enterprises is faced with great risks. At the same time, creditors face little risks in debt financing. However, when the enterprise is facing bankruptcy liquidation, creditors can only get few benefits through limited creditor's rights. Even if the enterprise is successful in starting a business, the income obtained by creditors is relatively fixed. Therefore, it is relatively difficult for start-ups to get debt financing. As far as the characteristics of start-ups are concerned, the characteristics of high risk and high return determine that equity financing becomes a better way for enterprises to obtain financial support. An incentive and restraint mechanism can be established between investors and enterprises through equity financing. Especially for the financing method of venture capital, investors are risk-biased and pursue excess profits brought by high risks, so startups get more financial support through equity financing, especially venture capital.

For start-upscapital demand is the key factor of success or failure, and the lack of financing funds will limit the rapid growth of start-ups. After obtaining the capital of venture capital, start-ups will invest their main capital into core technology R&D, product production and market expansion. While ensuring the improvement of technology R&D expenditure and innovation ability, they will also tap the potential markets, dig deep into customer needs, and occupy the leading position in the industry with excellent technical level, thus obtaining a significant improvement of their own innovation ability, and obtaining rich profit returns and expansion of capital capabilities; On the other hand, after the initial investment, venture capitalists will still follow up and supervise the development of enterprises, actively provide follow-up financing support for venture enterprises, and let enterprises obtain A, B or even C rounds of financing. This follow-up financing support can alleviate the stagnation of development caused by the shortage of funds in time, increase the growth of start-ups, and promote their profitability and efficient use of funds.

3.2 Analysis of the Impact of Entrepreneurial Financing on Enterprise Growth Efficiency

Judging the growth of a start-up includes not only the improvement of its efficiency, but also the increase of its efficiency. According to Penrose's theory of enterprise resource growth, the speed, mode and boundary of enterprise growth are determined by enterprise capability, and the core of enterprise capability is management capability. According to Chandler, the growth of an enterprise is the result of the joint action of technological change and market expansion, that is to say, the growth of an enterprise also includes the improvement of its technological level. Early research has proved that venture capital institutions support enterprises in two aspects: "screening" and "counseling". The theory of "screening" shows that investment institutions can screen and choose enterprises with high growth potential in reverse. The theory of "coaching" shows that it can provide guidance and suggestions for the technology, management, market, production and operation of the selected enterprises. Therefore, the impact of venture financing on the growth efficiency of enterprises is mainly manifested in the "coaching" effect of value-added services brought by the investment institutions, thus providing potential support for enterprises to innovate and improve their management capabilities. [4]

3.2.1 Technical guidance

Venture capital institutions can not only solve the financing needs for start-ups, but also provide enterprises with more professional technical guidance. As a professional venture capital institution, it has rich industry information and market pre-judgment ability, and can grasp industry direction and market demand. Many venture capital institutions also have industry experts in a certain field to assess the feasibility and potential value of technology, so as to provide certain technical support and guidance for start-ups. Because venture capital institutions determine the invested enterprises through screening, the development status and future growth potential of enterprises are directly related to whether the investment institutions can obtain excess profits. The venture capital institution will participate in the management of enterprises after investing the funds. Core technology, as a key factor for the success or failure of start-ups, is bound to provide some guidance for technological innovation of enterprises, and the innovation capability of enterprises will serve as a reference for investment institutions to follow up the development and sustainable investment of enterprises, thus promoting the remarkable improvement of innovation capability of enterprises.

3.2.2 Strategic support

After obtaining financing, venture capitalists usually keep close contact with the managers of enterprises, obtain the management right of the enterprise, and provide certain strategic support for the enterprise by attending the daily meeting or the board meetings of enterprise. Especially for joint venture investment, we have cooperated with many investment institutions through leading investment, and jointly negotiated and determined strategy. According to the theory of enterprise internal governance, after the change of senior management, enterprises will seek the right of external supervision. Therefore, by obtaining more board seats, investment institutions will play a role in supervising, restraining and guiding senior executives, and make use of their deep industry experience and in-depth understanding of industry trends, market potential and technical level, so as to enhance the professional level of managers. Therefore, they can effectively help enterprises grasp the future development direction, improve enterprise decision-making, and improve the level of internal governance.

3.2.3 Resource information sharing

Generally speaking, venture capitalists have abundant government relationship resources, enterprise and network resources, and related services, technologies and information sharing platforms, which can control the dynamic grasp of the industry and the use of relationship resources well. Therefore, they can build a communication platform for emerging high-tech enterprises and key resource providers and establish industrial ties. Enterprises can also use the intangible relationship network established by venture capital institutions to enjoy relevant technical support and market development services, so as to promote the smooth production and service of enterprises and quickly explore potential markets, especially for start-up enterprises in seed stage, start-up stage and growth stage, which is crucial to the success of enterprises. At the same time, the support of information sharing, management experience and relationship resources provided by venture capital institutions for start-ups can effectively explore potential customers and business partners for enterprises, and finally promote strategic alliances. Start-ups can also know the policy orientation and industry trends in time through cooperation, thus increasing their growth confusion and scale expansion.

4. Summary

This paper theoretically analyzes the mechanism of venture financing and its influence on the growth of enterprises, clearly defines venture enterprises, venture capital and high-tech enterprises, and combs the ways and structures of venture financing. Then, this paper gives a theoretical overview and definition of the growth of start-up enterprises, and constructs an effective index system to measure the growth of start-up. Finally, the influence mechanism of venture financing on enterprise growth is analyzed, and its influence mechanism is discussed in detail from two main lines of venture financing affecting enterprise growth efficiency and enterprise efficiency.

References

[1] He Kang. research on the impact of venture financing on enterprise growth [D]. jiangsu provincial party committee party school, 2018.

[2] Zheng Changjun. The influence of financing motivation on enterprise growth [D]. Zhejiang Gongshang University, 2017.

[3] Zhang Xiaoyi. An Empirical Study on the Influence of Venture Capital on Enterprise Growth [D]. Harbin Institute of Technology, 2016.

[4]Yao Zheng, Cheng Yuekai, Jin Lie. Research on the mechanism of financing motivation affecting the growth of start-ups: a theoretical analysis frame [J]. Management Scientist (Academic Edition), 2012(06):3-18.