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The Influences of Venture Capital on Technology Innovation: Taking Yuyue Medical Corporation as an Example

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Abstract

In recent years, venture capital industry has taken a very short time from its rise to its rapid growth, and the proportion of venture capital in the amount of equity investment has become more and more important. As a new investment and financing mechanism, it has a good integration with technological innovation, which has been closely linked. As a bio medical industry based on innovation, it has received a large number of concerns. We should pay attention to how the venture capital of equipment industry affects the innovation and development of Yuyue Medical Corporation. Through the analysis of the way, process and output of venture capital's impact on the technological innovation of Yuyue, it is found that venture capital has a positive effect on the technological innovation of enterprises. Finally, it puts forward relevant suggestions from the three levels of government, enterprises and venture investors.

Keywords

Venture capital; Technological innovation; R&D investment

Introduction

In recent years, corporate venture capital has become increasingly important in the VC/PE industry. A large number of powerful CVC investment institutions have also emerged in China. Venture capital is to invest capital in high-risk and high-yield areas (such as high-tech or product research and development), and participate in the project management process to a certain extent to reduce risks, and after success, both recover capital and obtain high amounts Returning investment behavior. In my country, the total amount of venture capital increased from 5.13 billion yuan in 1985 to 113.9 billion yuan in 2019. Although the growth rate has slowed down in the past two years, it does not affect the support and promotion of venture capital to enterprises. Technological innovation is the core of industrial competition between countries, and it is also the only way for industry development. This is very crucial for my country, which is currently in the stage of industrial

restructuring and upgrading. Under the epidemic, the technological innovation and development of my country's medical industry has attracted everyone's attention. The epidemic has highlighted the importance of the development of biomedicine. The outbreak of the epidemic is both a development opportunity and a test for the medical device industry. Especially the challenge of epidemic prevention and control to the intelligentization of equipment will prompt the industry to rethink its development direction and pay more attention to the industry's technological innovation and development.

Regarding the promotion of venture capital to corporate technological innovation, in the 20th century, 90% of high-tech companies in the United States developed in accordance with the venture capital model, and less than 5% of inventions and patent applications came from non-venture companies. This also confirms that venture capital can effectively drive the growth of enterprise technological innovation and economic innovation. So in China, what is the relationship between venture capital and technological innovation? Can venture capital promote enterprise technological innovation? This article uses Yuyue Medical as a case to introduce the background of the biomedical industry; then it analyzes the ways, processes and outputs of venture capital's impact on Yuyue's medical technology innovation; in the process of analyzing the impact pathways, it is found that venture capital can pass Financial support affects technological innovation, technological innovation through joint investment can also affect technological innovation through value-added services; in the process analysis that affects Yuyue medical technology innovation, it is found that after Yuyue Medical receives financial support from venture investors, it will Increase investment in research and development, such as increasing the number of technical staff, building research centers, and Yuyue Medical will use investment funds to carry out mergers and acquisitions of related high-tech enterprises; venture capital affects Yuyue's technological innovation output reflected in the new patents and software copyrights; At the end of the article, relevant suggestions are provided from the perspectives of the government, enterprises, and venture investors.

Literature Review

For the research of venture capital on technological innovation, scholars at home and abroad have done a lot of research. Pan Lulu (2019) pointed out that in recent years, "innovation-driven strategy" has become a crucial factor in improving national competitiveness. At the same time, under the influence of policy orientation and venture capital institutions, venture capital is increasingly keen on technological innovation. And through regression analysis, the promotion effect of venture capital on technological innovation is obtained. Wang Wen (2020) analyzed that venture capital, as an innovative financing method, is one of the important sources of financing for enterprise technological innovation. Therefore, the relationship between venture capital and technological innovation is a topic of common concern in the current theoretical and practical circles. Based on the efficiency perspective, the DEA model is used to empirically analyze the impact of venture capital on the technological innovation efficiency of high-tech industries. The results show that the impact of venture capital on the technological innovation efficiency of the industry is not as obvious as R&D. Huang Tianxiang (2020) pointed out that at present, the technological innovation of enterprises is not without risks. It has long-term and uncertainties. Therefore, technological innovation and incentives of enterprises require sufficient tolerance to failure and sufficient risk tolerance. It is the charm of corporate venture capital. Enterprise technology innovation investment requires incentives that combine long-term returns and short-term tolerance. In the 1970s, some scholars began to pay attention to the research on the effect of venture capital on techno-

logical innovation. Kortum and Lerner (2000) used the innovation production function for the first time. The impact of venture capital on patents in the past 30 years has been found to be 3.1 times the impact of venture capital on patent applications. On the contrary, some scholars have found that venture capital has a restraining effect on technological innovation. The research of Stuck and Weingarten (2005) showed that in the 1990s, even if the venture capital market was on the rise, the technological innovation level of American companies was still declining significantly. At the same time, some studies believe that there is no inevitable connection between venture capital and enterprise technological innovation.

Venture Capital and Yuyue Medical Corporation

Venture Capital and Its Development Status

Venture capital, also known as venture capital, is a financing method that provides financial support to start-ups and obtains shares of the company. Its five stages are, seed stage, start-up stage, growth stage, expansion stage, and mature stage. These five stages all involve higher risks. The specific manifestations include project screening, due diligence, post-monitoring, and intellectual property rights. Selection of technology, public policy, high level of information asymmetry, moral character, management team, business partners, financial supervision, environment, taxation, politics, communication platform, etc. According to incomplete statistics, for every 10 projects that venture capitalists invest in, only 3 are successful and 7 are failed. Its purpose is not to hold shares. Regardless of success or failure, exit is the inevitable choice for venture capital.

In recent years, corporate venture capital has become increasingly important in the VC/PE industry. In 2019, the global CVC participation in corporate equity financing amounted to US$57.1 billion, and the Chinese region reached 113.9 billion yuan; the number of VC financing cases in which CVC participated in the world accounted for nearly 25%. With the help of the strong industrial background of the parent company, CVC has achieved good performance in achieving strategic and financial goals and gained more and more recognition. CVC's investment cases and the amount of investment in artificial intelligence and other smart technology fields are increasing year by year. For large enterprises, including traditional industry companies and emerging technology companies, it is becoming a trend to set or adjust the positioning of foreign investment to be centered on main business and guided by corporate strategy. A large number of powerful CVC investment institutions have also emerged in China, especially peripheral CVC institutions.

Since 2013, my country's CVC investment has developed rapidly. The investment frequency of the entire industry reached its peak in 2015-2016. After 2018, due to the cold winter of capital, the frequency of CVC investment has decreased slightly. In 2010, China's CVC investment amount accounted for about 4.3% of China's equity investment market. It reached a peak of 23% in 2015, and has remained at 15%-17% since then. With the transformation of the modern economy from the consumer Internet to the industrial Internet, an obvious trend is that companies with industrial backgrounds have increased their attention to the underlying IT technologies that are highly related to artificial intelligence and big data. In 2019, the IT sector investment accounted for more than the Internet sector.

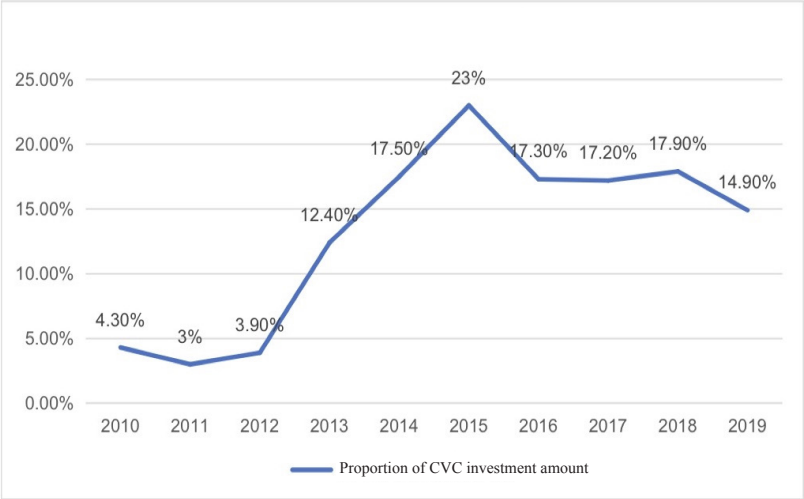

Figure 1. Proportion of CVC investment amount

On the whole, the frequency and amount of CVC investment in China have been increasing with the prosperity of entrepreneurship and equity investment in recent years. While industry groups have enriched their own innovative forms through investment activities, they have also accelerated their own industrial upgrading and development speed and operational efficiency. The role of CVC in the entire VC industry cannot be ignored. The distinguishing feature of CVC investment that is different from traditional VC is that its funds are generally provided directly by the parent company, while taking into account both strategic and financial goals. For invested companies, accepting CVC investment can obtain, (1) more patient long-term funds; (2) parent company's resource support; (3) parent company's own brand effect and credit endorsement. But the invested company may also bear the risks of inconsistency in the development direction of the two parties, loss of core technology, and restricted available market resources. Research shows that VC capital injection is generally conducive to corporate innovation. Compared with traditional VC, CVC's business assistance such as R&D facilities, researchers, and sales channels provided by its parent company is more conducive to promoting the innovation of invested companies.

Case Company Selection

(1) Industry Background of the Case Company

During the epidemic, the biomedical industry has made great contributions to the country in the face of the new crown. The biomedical industry is not only an important part of the high-tech industry, but also one of the important areas of strategic emerging industries. Therefore, the research and practice of the development law of the biomedical industry has attracted more and more attention from all over the world. Many countries regard the biomedical industry as a key strategic area for development. my country's biomedical industry is expected to grow into a trillion-yuan pillar industry. The key directions include the development of new vaccines, the transformation of traditional vaccines, antibody drugs, and protein drugs. my country's biopharmaceutical industry has broad prospects, but it is currently facing challenges such as weak foundation, low investment, lack of top talents, and weak innovation capabilities. The vast majority of biotechnology innovations and patents originate from developed countries. For example, 59% of biotechnology patents are from

the United States, 19% are from Europe, and 17% are from Japan. Due to the late start of medical equipment in my country, the technology is currently relatively backward. More than 70% of high-end medical equipment is monopolized by foreign products, mainly GM, Siemens, Medtronic, etc. At present, my country's medical device industry has grown from 43.4 billion yuan in 2006 to 369.6 billion yuan in 2016, with an average annual compound growth rate of 23.89%. The market size is expected to reach around 600 billion in 2019. Among them, imaging equipment, in vitro diagnostics and high-value consumables account for the top three major parts of the medical device market, accounting for 19%, 16% and 13% of the total market size respectively. In 2017, the medical device market achieved sales revenue of about 380.5 billion yuan, accounting for 72.7%. Household medical equipment is in a weak position. In 2017, its revenue was about 142.9 billion yuan, and the industry market accounted for 27.3%. According to data, "the consumption ratio of medicines and medical devices in 2015 was only 1,0.33, which was far lower than the global average of 1,0.7 and even lower than the 1.02,1 level of developed countries. Therefore, the development of the domestic medical device market The prospects are broad and the market is far from saturated." Household medical and health care equipment is actually a kind of popularized small medical and health care equipment. Most of them are innovative products of miniaturization, electronic and intelligent medical equipment. They have certain functions of prevention, diagnosis, health care, treatment, auxiliary treatment, and rehabilitation, etc., convenient Applicable, safe and controllable, especially suitable for home use by the elderly. The structure of my country's medical device market is similar to that of the global medical device market. From the perspective of my country's medical device market structure in 2015, medical imaging accounted for the largest proportion, followed by in vitro diagnostics, low-value consumables, cardiovascular devices and orthopedics.

(2) Case Company Profile

As a medical device-focused Yuyue Medical, after Mindray Medical, which became the industry's first tens of billions of revenue in 2017, Xinhua Medical is also about to reach tens of billions, so as the industry has the most complete products and e-commerce and OTC poles What is the status quo of the advantageous Yuyue Medical?

Yuyue Medical is mainly composed of three major sectors, family medicine, clinical medicine and a better life. Rehabilitation equipment is the starting and core sector of the company. As one of the three major sectors of the company, the clinical medical sector is mainly achieved through acquisitions and shares. The effect of rapid expansion also disperses the potential crisis that a single product may bring. Among them, clinical supplies and clinical consumables are the series that the company focuses on. Judging from the company's acquisition strategy in recent years, Yuyue has been very successful in continuously improving its rich clinical sector. In the medical device industry with a single product category, Yuyue Medical's biggest advantage is that its medical products are numerous and cover a wide range. Among 43 products, 37 types of rehabilitation care and 5 types of medical oxygen are covered, and more than 800 brand counters , There are more than 10,000 terminal sales outlets. In the home medical system, the company has a marketing team of more than 400 people, a global customer service center, eight regional service centers and more than 1,200 terminal service outlets. The company has established brand flagship stores on all major e-commerce platforms, and each Flagship store marketing and promotion are in the leading position in the industry. In the medical clinical system, hospital infection control, surgical equipment, Chinese medicine equipment, AED emergency equipment and other fields, it is jointly constructed by more than 500 marketing personnel or after-sales engineers,

covering major hospitals across the country. The continuous improvement of the online and offline marketing systems, both inside and outside the hospital, has made Yuyue's system elements more complete and system advantages are more obvious. The core channel e-commerce of Yuyue is even more effective. In 2015, it surpassed Omron and became the e-commerce sales ranking. Ranked first among all medical devices. On February 2, 2018, Yuyue Medical also opened the O2O medical device experience hall in cooperation with Suning, which opened up a new way of retail. At the same time, Yuyue also invested 5.638 billion yuan in Yunnan Baiyao's controlling shareholder Baiyao Holdings on June 30, 2017. After the completion of the transaction, the equity structure of Baiyao Holdings was changed to Yunnan Provincial SASAC, Xinhuadu and Yuyue, respectively. It has 45%, 45%, and 10% equity. Through mergers and acquisitions, Yuyue Medical continues to achieve its own technological innovation and progress.

Analysis of the Impact of Venture Capital on Yuyue's Technological Innovation

"When the soldiers and horses are not moved, the grain and grass go first." For enterprises, "funds" are "grain and grass." Whether it is buying equipment, land and recruiting workers at the start-up stage, or introducing technical talents, setting up research centers, and M&A related technology companies in the growth stage, they cannot do without strong financial support. Therefore, capital is the core way for venture capital to promote enterprise technological innovation. Different from the direct injection of funds into enterprises, joint investment is favored by venture capital and enterprises because of its few equity conflicts and no disputes over controlling rights. In addition to the above two methods, venture capital will also provide enterprises with their own technology, experience, talents and contacts, that is, value-added services. After the enterprise receives the support of venture capital, it will increase R&D investment and merge related high-tech enterprises. Years of increased investment in research and development and mergers and acquisitions of related high-tech enterprises have led to rapid growth in technological innovation of enterprises, manifested in the increase in patents, high-tech products, and software copyrights. As shown in the figure below, it reflects the path, process and output of venture capital's impact on Yuyue's medical technology innovation.

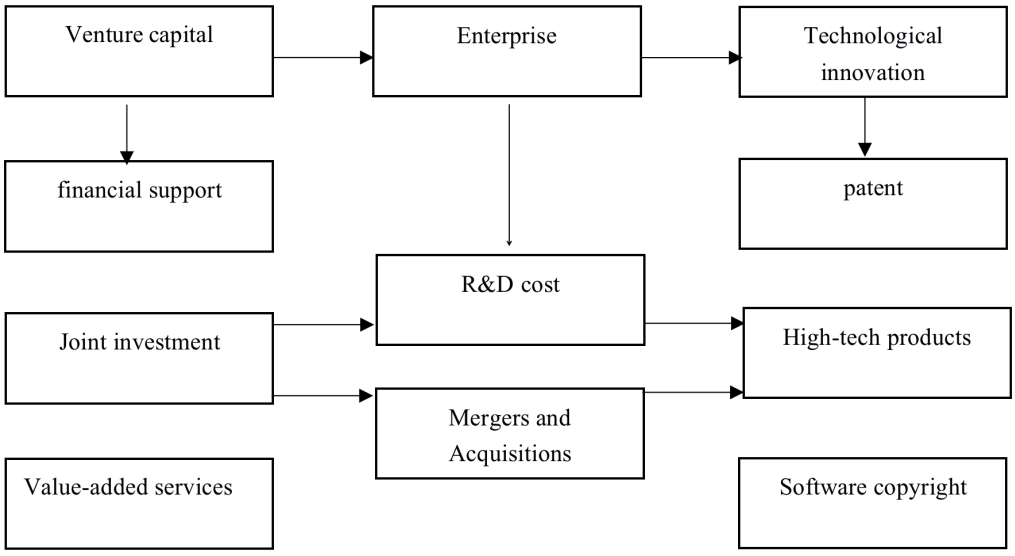

Figure 2. The process and output of venture capital affecting Yuyue's technological innovation

Analysis of the Ways that Venture Capital Affects Yuyue's Technological Innovation

(1) Venture Capital Affects Technological Innovation through Financial Support

First, analyze the financial support of Yuyue from venture capital before listing (1998-2008). In 2007, Wu Guangming transferred his 3.89% stake to Shenzhen Shifanglian Venture Capital Co., Ltd. at a price of 6 million yuan.

Table 1. Yuyue's equity structure before listing

Initiator name	Number of shares held (ten thousand shares)	Shareholding ratio (%)
Jiangsu Yuyue Technology Development Co., Ltd.	4,620	60
Wu Guangming	1,356	17.61
Wu Qun	1,173	15.24
Shenzhen World Union	300	3.89
Shu Meizhen	231	3
Song Jiuguang	20	0.26

Note: Data source Yuyue prospectus

Shenzhen Shifang Lianchuang Investment Co., Ltd., referred to as Shifang Lianchuang Investment Co., Ltd., was established in 2006 and later changed its name to "Shihezi Rongkehua Investment Limited Partnership" and was cancelled in 2015. Since investing in Yuyue Medical in 2007, it has been the only venture capital company with long-term holdings in Yuyue Medical for 9 years. This is not only Yuyue Medical's first venture investment, but also the only one before the listing, which has a significant effect. Part of the funds will be used to purchase land to build a new factory area to expand the production capacity of new products such as oxygen generators and oxygen valves, and the other part will be used together with raised funds after listing to promote research and development projects, namely, medical molecular sieves Oxygen concentrator technology transformation project, manual and electric wheelchair technology transformation project, R&D center technology transformation project, ultra-light oxygen valve technology transformation project, small mechatronics.

In addition, Table 1 on the one hand reflects the difficulties of private enterprises at the beginning of their establishment. Most of their funds come from themselves and their relatives and friends, and it is difficult to obtain financial support from banks and venture capital. On the other hand, it also indicates the future of individuals (Wu Guangming And its family) absolute control over the enterprise. From listing in 2008 to 2019, Wu Guangming (and his family)'s holding ratio in Yuyue Medical has been reduced from 90% to 43%, but it is still in an absolute controlling position. In contrast, the control ratio of venture capitalists has not been high. This means that the traditional path of "venture investment-appointment of directors-management decision-technological innovation" is not feasible for Yuyue. Secondly, analyze the financial support of Yuyue

Medical from venture capital after listing (2008 to present).

Table 2. History of venture capital after listing

Release date	Financing	Financing Amount	Venture capitalist	Shareholding ratio
2011	Equity investment	unknown	Citi (Martin Curry)	1.14%
2013	Equity investment	unknown	Rongkehua (formerly Fanglian)	2.70%
2014	Equity transfer	850 million	Everbright Capital, Sequoia Capital, Honghui Capital	7.00%
	Equity investment	unknown	Shanghai Shengyu Equity Investment Center	0.75%
	Equity investment	unknown	China Capital	0.65%
2015	Equity investment	unknown	Shanghai Wu Niu Zhengzun Investment Center	0.89%
	Equity investment	unknown	Central Huijin Asset Management	0.93%
2016	Equity investment	unknown	Shanghai Guoxin	0.15%
	Equity investment	60 million	Hunan High-tech	unknown
	Strategic investment	unknown	Pan City Assets	unknown
2019	Strategic investment	1 billion	Shengyu Investment	

As can be seen from the above table, unlike the pre-listing venture capitalist, there is only one World Alliance. After the listing, due to the increase in the popularity and market size of the diving, there are about 13 venture capitalists to provide financial support for it. Venture capitalists have complex backgrounds, including well-known domestic venture capitalists (China Everbright Capital, China Capital, Shanghai Guoxin, Shengyu Investment), and foreign capital (Citi, Sequoia Capital, Honghui Capital). These capital injections have effectively promoted Yuyue Medical's technological innovation and mergers and acquisitions over the past 12 years. For example, in 2014, Yuyue Medical, in order to acquire 100% equity of Shangxi Group and 51.51% equity of China Resources Wandong, sold part of Yuyue's equity to introduce Sequoia Capital and other strategic investors to raise funds of 850 million.

(2) Venture Capital Affects Technological Innovation through Joint Investment

Joint investment refers to the establishment of a fund or shareholding in other companies by a company and venture capital in order to obtain profit returns or technical experience. Compared with financial support, this method does not involve disputes for controlling rights and will not cause hostility from the invested company. Take the recent 2019 as an example, Shengyu Investment and Yuyue Group jointly initiated the establishment of "Jiangsu Shengyu Heike Medical Health Investment Fund". With a scale of 1 billion yuan, the fund focuses on investing in high-end medical equipment, biopharmaceuticals, and medical services in the medical and health industry, and deploys core projects with technological platform capabilities and entrepreneurial spirit. The fund will help Yuyue Medical to enter the high-end medical device market in Europe and the Unit-

ed States from the low-end medical device market, break the monopoly of foreign medical device companies in the high-end device market, and achieve the goal of the "Made in China 2025 Plan" in the medical field.

(3) Venture Capital Affects Technological Innovation through Value-Added Services

In addition to providing financial support and joint investment, venture capital may also provide enterprises with value-added services, such as technical experience, consultants, credit guarantees, and personal connections. Taking 2014 Everbright Capital, Sequoia Capital, and Honghui Capital as an example, the three capitals jointly bought 37,212,448 shares of Yuyue Medical, accounting for 7.00% of the shares. Although Honghui Capital has not been established for a long time, it focuses on the medical and health field, and its style is an all-round investment in the medical and health industry chain. The investment in Yuyue provided a lot of advice and assistance for its development strategy and mergers and acquisitions. In addition, Sequoia Capital has a large amount of investment and successful experience in the global Internet and medical fields. Entering Yuyue Medical will help to improve and enhance the governance structure of listed companies, and it is important for Yuyue Medical's internationalization process and its development in the medical Internet field. Development has provided reference and help.

Process Analysis of Venture Capital's Influence on Yuyue's Technological Innovation

When a company receives financial support from venture capitalists, coupled with stock market financing after the IPO, it will increase R&D investment and mergers and acquisitions of related high-tech enterprises.

First, analyze Yuyue's R&D investment, that is, the number of technical personnel and research centers, which are reflected in the financial statements as R&D expenses.

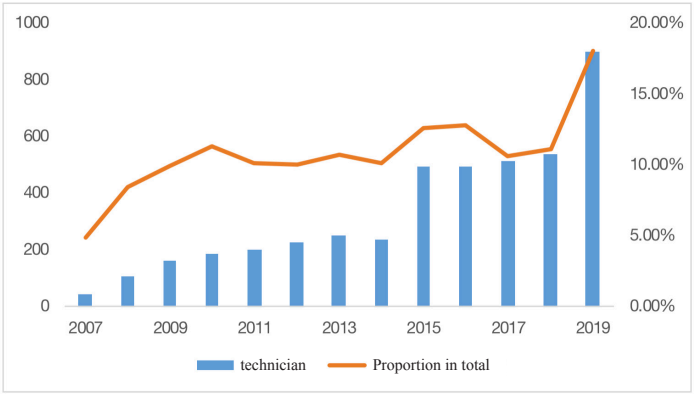

Figure 3. Technical personnel and their proportion trend chart

As can be seen from the above figure, the number of technical talents in Yuyue Medical has grown steadily, with explosive growth in both 2015 and 2020 year-on-year. The proportion of technical talents in the total number has risen from less than 5% in 2007 to nearly 20% in 2019. The increase in technical talents will inevitably require the addition of supporting research centers for technical talents to develop new products, as

shown in the following table.

Table 4. Establishment time and distribution of research centers

Time	Research center
2007	Jiangsu Medical Diagnostic and Nursing Equipment Engineering Technology Research Center
2012	Three major research centers in Nanjing Jiangning, Suzhou New District, and Nanjing Xuanwu
2017	Six research centers in Tuttlingen, Germany, Chinese Taipei, Shanghai, Nanjing, Suzhou and Danyang

The location of the research center has gradually expanded from within Jiangsu Province to the whole country. Currently, there are also R&D centers abroad (Germany). Whether it is an increase in the number of technical personnel or the establishment of a research center, it will increase R&D expenses, as shown in the figure below. Since its listing in 2008, the continuous high growth of R&D expenses for many years has laid the foundation for the high growth of the final "technical innovation output".

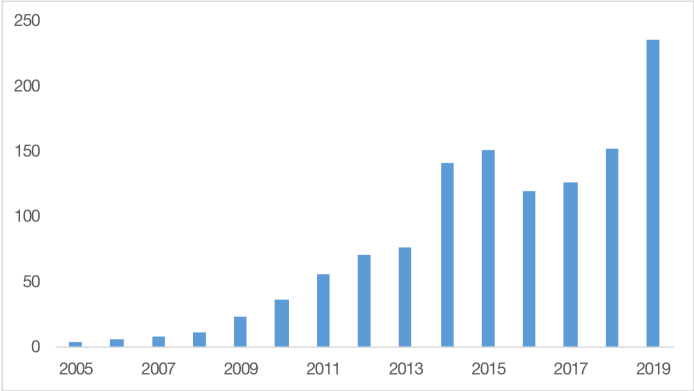

Figure 4. Trend chart of R&D expenses (unit, million yuan)

Second, analyze the history of Yuyue's mergers and acquisitions of related high-tech companies. Increasing R&D investment to promote technological innovation is expensive and slow to yield results. In contrast, the use of venture capital funds to directly acquire related high-tech enterprises can directly obtain patents, technologies and talents, with quick results.

Table 5. Yuyue Medical M&A History

Time	Acquired company
2005	Soochow Guangming
2007	Shanghai Yuyue Medical Equipment Co., Ltd.
2008	Assets (land and real estate) of Nanjing Zhonghe Medical Devices Co., Ltd.; Yancheng Diling Thermometer Co., Ltd.

2009	Suzhou Medical Supplies Factory Co., Ltd.
2011	Zhenjiang Kangli Medical Equipment Co., Ltd.
2012	Xinyang Zhongyuan Medical Devices Co., Ltd., Suzhou Huatuo Medical Devices Co., Ltd.
2013	Shanghai Youyue Optical Co., Ltd.
2014	Suzhou Nissei Instrument Co., Ltd.
2015	Shanghai Medical Devices (Group) Co., Ltd.
2016	Shanghai Zhongyou Pharmaceutical High-Tech Co., Ltd.
2017	Shanghai Youke Orthopedic Equipment Co., Ltd.; Metrax GmbH, Germany
2018	Jiangsu Yuyue Tiger Precision Electromechanical Co., Ltd.
2019	Suzhou Liuliu Vision; Shanghai Shicao Washing Co., Ltd.

Throughout the history of medical mergers and acquisitions in the above table, the direction of management mergers and acquisitions is clear, that is, focus on companies that have leading technology in the medical and clinical field, have channel synergy, or have leading positions in subdivisions, such as Zhenjiang Kangli Medical Equipment Co., Ltd., Xinyang Zhongyuan Medical Equipment Co., Ltd., Suzhou Huatuo Medical Equipment Co., Ltd., Suzhou Nissei Instrument Co., Ltd., Shanghai Youke Orthopedic Equipment Co., Ltd., etc. Take Suzhou Nissei Instrument Co., Ltd. as an example. Its R&D, manufacturing and sales of electronic sphygmomanometers and sphygmomanometers are at the leading level in Jiangsu Province. After Yuyue merges them, it can quickly improve the quality of its own products and take advantage of economies of scale. reduce manufacturing cost. In addition, Yuyue can also gain access to the market and sales channels originally occupied by Suzhou Nissei Instrument Co., Ltd. to expand its market scale.

In addition, Yuyue successfully extended the company's industry to traditional Chinese medicine through the extension of mergers and acquisitions and good integration after mergers, such as the mergers and acquisitions of Soochow Guangming, Shanghai Youyue Optical Co., Ltd., Suzhou Liuliu Vision, Shanghai Shicao Washing Co., Ltd., etc. Equipment, surgical instruments, medical emergency equipment, hospital disinfection and sensory products and services have enriched its product structure. On the one hand, Yuyue has continuously improved the competitiveness of the company's products through a variety of methods such as multi-category product structure, product combined sales, and collaborative expansion of marketing channels; on the other hand, the multi-category product structure has also brought the company Strong risk resistance and quick response to various emergent market conditions effectively maintain the company's overall competitiveness in the medical device industry. The most typical performance is that during the 2020 new crown epidemic, Yuyue rapidly increased the production capacity of epidemic prevention materials, provided the public with disinfection control, temperature measurement, blood oximeters and masks and other protective equipment, and provided hospitals with ventilators, atomizers and manufacturing equipment. Oxygen machine products and other core equipment for pneumonia treatment.

Risk Investment Affects Yuyue's Technological Innovation Output Analysis

Whether it is R&D investment or mergers and acquisitions, the ultimate goal of the company is to improve the level of technological innovation of the company and to base itself on the industry market with "technology". Measure the level of technological innovation generally, patents and software copyrights, high-tech

products.

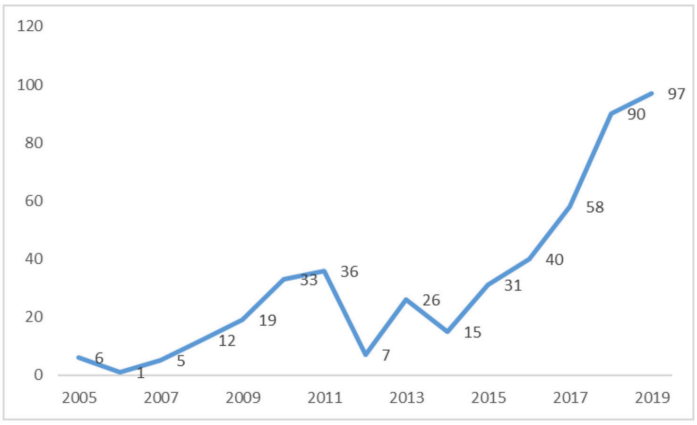

Figure 5. Trend chart of newly added patents and software copyrights of Yuyue over the years

As can be seen from the above figure, years of continuous R&D investment and mergers and acquisitions have driven the explosive growth of patents and software copyrights from 2015 to 2019. In addition, several major R&D centers divide labor and share resources, and have developed a large number of new products such as diffusion oxygen generators, medical electronic blood pressure monitors, non-invasive ventilators, indwelling needles, electric wheelchairs, and bilevel ventilators. These products not only helped Yuyue obtain huge profits during the new crown epidemic, but more importantly, helped Yuyue establish its brand at home and abroad, laying the foundation for becoming an industry giant in the future.

Conclusions and Recommendations

At present, a large number of researches on the impact of venture capital on technological innovation have emerged, enriching the related theories and practices of venture capital and technological innovation. In fact, the development of the biomedical industry is inseparable from technological innovation. Venture capital can contribute to technological innovation. As a model enterprise in the medical device industry, Yuyue Medical has achieved fruitful technological innovations in the development of recent years. At the beginning of the year, with the help of the rise of biomedicine in the new crown epidemic, it once again obtained an opportunity for further development, and took the lead in emerging, and thus obtained greater benefits. This article first conducts a detailed analysis of the biomedical industry. The analysis found that the biomedical industry is not only an important part of the high-tech industry, but also one of the important areas of strategic emerging industries. Therefore, the research and practice of the development law of the biomedical industry has attracted more and more attention from all over the world. As a leading company in biomedical equipment, Yuyue Medical still has great potential for its future development. The article systematically discusses the impact of venture capital on Yuyue's medical technology innovation, and draws the following conclusions. First, obtaining sufficient funds is a prerequisite for the company to increase investment in research and development, merge and acquire other high-tech enterprises. In the end, the increase in R&D investment and the mergers and acquisitions of related high-tech enterprises have driven the rapid growth of enterprise technological innovation, manifested in the increase of patents, high-tech products, and software copyrights. Second, increasing R&D investment to promote technological innovation is expensive and slow to yield results. In con-

trast, direct mergers and acquisitions of relevant high-tech enterprises with funds can directly obtain patented technology and technical talents, with quick results. Third, in addition to providing regular financial support, venture capital may also provide value-added services for enterprises. Fourth, the grabbing effect of venture capital on enterprises may cause enterprises to pursue short-term gains and harm their long-term interests. Venture capital has a high degree of fit for enterprise technological innovation and has a strong promotion effect. Especially in the early stage of enterprise establishment, venture capital has injected funds for the start of the enterprise and laid a solid foundation for the subsequent development and technological innovation of the enterprise. The unique advantages of this article are as follows:

First, the government level. Venture capital can better promote the development of small and medium-sized enterprises. Local governments should increase the guidance of venture capital and provide adequate policy incentives so that the scale of venture capital investment can achieve continuous growth while achieving intensive development. Promoting the optimization of venture capital structure and improving the efficiency of venture capital can have a positive effect on improving the innovation capabilities of enterprises and economic growth.

Second, the enterprise level. From the perspective of enterprises, the integration of venture capital in technological innovation can bring support to the development of high-tech industries in terms of management, innovation and operation. For some technology-intensive industries in the pharmaceutical industry, the most need for financial support for research and development In addition, the venture capital fund supplier will also bring value-added effects to the enterprise, assisting the development of the enterprise by expanding the market, providing consultants, credit guarantees, and expanding personal connections. This has a positive effect on the innovative development of enterprises.

Third, the level of venture capital. From the perspective of venture capital, the long-term holding of venture capital can bring greater benefits to itself. With the goal of maximizing returns, venture capitalists should pay more attention to the long-term development of the company. If they can keep the company running well in the long run, their returns will be long-term stable. Therefore, when selecting investment objects, investors should fully understand the development prospects and value-added potential of the company in order to obtain the greatest benefits.

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