STUDIES OF STRATEGIES AND MANAGEMENT

VENTURE CAPITAL - FROM THE VIEW OF AGENT THEORY

PhD. Ta Doan Trinh, M.Sc Nguyen Thanh Tung
M.Sc Dang Thu Giang, BA. Ta Doan Hai
National Institute for Science and Technology Policy and Strategy Studies

Abstract:

Venture capital is a modality of investment playing an important role in promoting the success of start-up businesses, especially for those which based on high technology and new technology in many countries in the world. This is also the issue of great concern of managers, policy researchers in our country.

However, the actual practice of Vietnam pointed out that not many high technologies and new technologies based startup businesses had received investment of venture capital funds, in spite that our country possesses an increasingly crowded force of highly qualified personnel with many unique innovative ideas and great ambitions to contribute to society. In addition, venture capital funds in Vietnam were mainly by nature came from foreign investment and no legitimate ones established from domestic sources.

National authorities effort to establish a state owned fund to directly involve in remedying defects of capital markets for high-tech, new-tech start-up businesses and creating a flow of capital with catalytic role to attract the participation of local and foreign investors in venture capital activities. There have been still controversial opinions against these efforts, because of concerns about the high risk of start-up investment.

Based on the analysis of specific nature of venture capital and from the perspective of economic relations between fund owners (investors) and start-up businesses (direct users of the fund), this paper aims at providing a better insight into the economic nature of the fund owners - users relationship through the perspective of agent theory - a theory has widely been used in political science and economics to justify specific character of the behavior of investors. Thereby, it provides a new perspective helping managers, policy researchers with useful information in the process of policy decision making with a view to promoting venture capital in developing start-up businesses in the field of high tech, new technology in our country.

Keywords: *Venture Capital; Start-up Business; High technology; New Technology.*

Code: *15121501*

1. Venture capital fund, the role of venture capital in development of science and technology based start-up businesses and the challenges for Vietnam

1.1. Venture capital fund and its differences to other types of capital flow

By the concept of OECD (1996), venture capital is "the fund provided by the companies having parallel conducted investment and management of young, not yet listed on the stock market businesses". These investment firms are for-profit businesses. Their venture capital activities aims at achieving high profit. They expected that fledgling start-up businesses established a good partnership and the use of their venture capital and professional management experience would bring about high economic value and profit.

However, OECD's studies showed that, in reality venture capital firms mobilized funds and then made investment in start-up businesses or acquired on-going businesses in operation.

According to the concept of the US National Association of Venture Capital Funds, venture capital means "the funding provided by professional investors who parallel conduct investment and management over young, rapid growth enterprises which have potential development to become enterprises of significant important economic contributions".

In Vietnam, the concept of venture capital is formally defined in the Law on High Technology, 2008: "Venture capital for high-tech development is the investment in research and development of high technologies, formation and development of enterprises in connection with the application, production of high-tech products and provision of high-tech services undertaken in the form of fund sharing and consultancy giving to fund receiving organizations and individuals"[1].

Based on the concept of venture capital funds, we can distinguish from other types of investment funds available in the capital market, as follows:

First, there is a difference between venture capital funds with public equity shareholding. Venture capital funds are aimed at small businesses of great growth potential. These companies are often not mature enough to trade on public capital markets. Compared with public equity investment, venture capital funds have very low liquidity level, large asymmetric information and high-risk investment.

[1] Article 24 of the Law on High Technology contains provisions on Venture capital for high-technology development

Second, venture capital is different from non-venturous equity investment (including acquisition, restructuring) because it focuses on fast-growing businesses. Companies supported by venture capital funds often have significant growth potential. For these businesses, the cash flow generated from their operation are often not enough to further invest for growth and borrow of money is often very difficult. On contrary, non-venture funds tend to flow toward more matured enterprises with already stable cash flow but limited growth potential.

Also, it is easy to recognize the fundamental difference between the concept of OECD and that of the US National Association of venture capital, i.e who is the owner providing funds: one side is investment companies and the other is professional investors[2]. The difference in funding holders as defined above helps us distinguish between venture capital and angel capital. Managers of angel capital are investors using the currency of their own to invest, while managers of venture capital funds are professional investors who mobilize funds from other investors.

Other distinctive aspect of venture capital compared with other types of fund is reflected in timing and form of divestment. Unlike other forms of investment, venture investors accept the cycle of fund revolving of about 5-7 years. Time for venture investors to make divestment is the time when start-up businesses have grown up to a certain extent[3], so that the fund owner can continue to invest in other start-up businesses. The time of capital withdrawal usually occurs in later stages of product development, marketing promotional products before expansion of production scale and offer products and services through various methods, namely: listed on the stock market or transfer of shares to other investors or sell out the shares to other firms, or sell the business to other enterprises.

Thus, it can say that "Venture capital is an investment modality whereby professional investors make investment in young, newly established enterprises, not listed on the stock market to provide necessary services in order to foster and accelerate the maturing and development process of

[2] By definition of venture capital in the 2008 Law on High Technology in Vietnam, it was not clearly specified the share holders (fund contributors), but in fact, they were legal entities representing the investors (eg IDGVV venture capital fund) or angel investors using their own capital to make investment.

[3] Venture capital investment can be expressed in one of the following forms: (i) providing capital to businesses at an early stage of development for jointly sharing profit and risk; (ii) investment in businesses with long historical development but still in the maturing stage of development cycle; (iii) investment in potential enterprises to become leading companies; (iv) rescue difficult enterprises standing on the edge of bankruptcy. Then, with their experience and relationship, they can assist operation of these companies with the hope that one day, they would become real "dinosaurs", by then, the investment before would be multiplied many times.

enterprises; after a certain period, investors shall withdraw their invested capital together with accompanied interest".

In terms of finance, participants of venture capital are the following major partners: (i) investors without direct involvement in management of the capital invested and investment decision making; (ii) funds managers- usually are persons responsible for fund raising, direct involvement in capital management, decision-making, and direct participation in business administration of start-up enterprises; (iii) Recipients of capital (start-up businessmen). Venture capital process includes 3 major steps:

- *Step 1*: Call for investment capitals;
- *Step 2*: Selecting, assessing and conducting investment and funding into start-up projects or businesses[4];
- *Step 3*: Terminate investment or divestment, selling stocks invested or sell out enterprises to other investors.

With high profitable expectations of all investors, venture capital fund is often invested in best opportunities, companies, ideas and best people to create products and services capable of changing the domestic and world market. It should be emphasized that, although venture capital is often associated with investments in high-tech firms, venture capital itself did not ultimately target for high technology development. The true goal of venture capital is to nurture and develop start-up young enterprises.

The link between high-tech development and venture capital can be explained by the fact that high-tech firms are often of high innovative business with good growth potential and expectation to create new industries, new businesses which may change basic economic activities not only within a country scope but also on the world scale[5]. It is, therefore, start-up enterprises operating in the field of high technology is often the target of venture investors. Experience also shows that many enterprises operating in traditional industries can also develop new ideas, new products and they are also the goal of venture capital companies provided that they bring higher expected profits.

---

[4] The full investment process in step 2 includes the 6 following steps: (i) Seeding (seed money): a minimum level of investment required to prove a new idea; (ii) Start up: provide funding for expenses related to marketing and product development; (iii) Series A round: making investment in production and start sale; (iv) Series B round: funding for operational costs of Series A of selling products for non profit purpose; (v) Series C round: Mezzanine financing: expanded investment to generate profit; (vi) The fourth round (also called bridge financing): IPO on stock markets.

[5] Large corporations in the world such as Microsoft, Apple, Google,... received investment from venture investors when they were in start-up period.

1.2. The role of venture capital fund in development of start-up science and technology based enterprises

Although it was quite fussy in selecting investment objects, the modality of venture capital plays an important and essential role in transforming results of scientific research and technological development into life. In reality, there are two basic forms of transformation or commercialization of research results: *first*, the transfer of technology in the form of transfer of right of use or transfer of ownership of research results; *second,* establishment of new scientific and technological (S&T) enterprises by scientists using their findings. However, not all ideas can be commercialized to become a reality, nor could bring enormous economic benefits even having been commercialized.

In the case of self-established enterprises to make profit from outcomes of their research, scientists themselves as entrepreneurs have to experience many "non-research" activities to achieve a successful business, such as business idea development; market survey and production plan design; technology and products perfection to satisfy the need of market competition,… These activities are basically quite different from pure research, it makes most scientists hard to introduce business idea from their research results into a success in the market.

In addition, the problem of securing loans or investment capital from commercial banks for scientists in a market economy was very difficult due to loan guarantees by collateral was very small, even if scientists had own funds (personal funds, support of family/friends or funding from other legal sources). The commercial bank itself, in protecting profit of its shareholders did not dare to take much risk to lend out or invest in start-up businesses when they could not estimate the final profits based on conventional standards of cost - benefit analysis.

At this point, venture investors, private or organizations will play an important role to fill this investment gap. They are professional investors who either have resources of their own or are trustees to manage the resources entrusted by other individual investors. In this capacity venture investors will associate with scientists to foster and develop start-up businesses. This explains the reason why, when investing in start-up businesses, venture investors in addition to providing capital under a strict procedure, they always link closely with scientists to actively advise and transfer experience on business administration, together with them develop production plans, business plans and seeking markets for start-up businesses.

Thus, venture capital is an important tool to form and develop start-up businesses. This is particularly important for scientists of start-up firms who mainly rely on the results of scientific research and technological development.

1.3. Venture capital in Vietnam and issues posed for theoretical studies

a) Regarding venture capital operation

The concept of venture capital was first introduced in Vietnam in the early 90's of the last century. To date, in Vietnam, there have been some investment funds in operation such as IDG Venture, Mekong Capital Fund, Vina Capital, Dragon Capital, Cyber Agent, etc. In terms of the capital investment nature, these funds do manage investment capital mobilized from foreign investors. In terms of investment objects, most of these funds targeted in the businesses whether having stable development, fast growth rate and high liquidity, or being already listed on the stock market or being in the first phase of equitisation process of and had more than 2 years of operation. Main areas of the investment funds' interest were: real estate, e-commerce, media and entertainment, social network.

There were very rare cases that these funds made investment in new technology, high-tech start-ups businesses in their early stage as expected by policy makers[6].

b) Regarding the establishment of national high tech venture capital funds

The idea of establishment of the national venture capital fund was proposed by Ministry of Science and Technology in 2006[7]. The Law on High Technology 2008 was the first legal document issuing provisions for venture capital operation and the establishment of the national venture capital fund to promote organizations and individuals to engage in venture capital for high technology in Vietnam. The direct intervention of state in venture capital operation was explained by the fact that it should play a bridging role to fill investment gap in the capital market as commercial banks was reluctant to invest in the introduction of research results into S&T enterprises.

---

[6] DFJ Vinacapital, IDG Venture Vietnam and CyberAgent Capital are the only funds investing in new tech, high-tech areas, ICT equitized medium and small enterprises with innovative ideas, are capable and potentially listed on the stock market, and possible acquisition by other companies.

[7] In 2006, Ministry of Science and Technology developed and submitted to Prime Minister, "a proposal to establish venture capital funds", but due to some financial policy constraints, especially the condition of preservation of the capital provided by the State budget, it made this proposal not accepted.

However, the establishment of state-owned venture capital fund for high technology found difficult as the fund was mostly mobilized from the State budget and it was not supportive from legal aspect and strong concerns about economic viability and sustainability of the invested capital due to high risks in initial stages of development of high tech, new tech enterprises.

c) As concerns the legal basis for venture capital operation

So far, we have not had specific legal provisions on the establishment of venture capital funds. Existing provisions related to investment funds in the applicable legal documents (High Technology Law, Securities Law, Investment Law and other under-law documents) had not explained the contents and procedures for the establishment of venture capital funds.

Also, there were no studies on specific policies/mechanisms in respect of supportive/incentive measures for investment funds to find start-up partners, creating an enabling environment to promote development of new technology, high technology based enterprises.

From the above situation, there are 3 theoretical questions posed in the context of Vietnam: (i) How could explain the phenomenon that foreign investment funds were not so interested in making investment at early stage of start-up businesses? and Why local investors have still been reluctant to participate in market of venture capital? (ii) Is it possible to minimize the risk level shared by the State when it directly intervenes in the market of venture capital or not? (iii) Is the legal corridor adequate enough that can help increase domestic investment in venture capital? These issues can be answered partially when these are scrutinized from the perspective of agent theory.

2. Venture capital, from the perspective of agent theory

2.1. Agent theory and asymmetric information

In political science and economics, the issue of ownership and agent has exposed difficulties in the context of imperfect and asymmetric information. It occurred when owners hired agents to obtain benefits for themselves but the agent may have conflict of interest and not act for the interest of the owner.

Principal is the owner of resources, while the agent is the authorized person, hired by the owner and is given a certain rights to manage the resources of the owner for the interest of the owner.

For example, in productive enterprises, directors, managers and employees are authorized or hired subjects (agent) to maximize profits for shareholders (principal). Also in the service institutions (hospitals, schools, research institutes), doctors, nurses, teachers, researchers (agent) they are obliged to use their knowledge and professional skills to meet the needs and interests of patients, students or customers (principals). In this case, customers gives their trust and some of their resources to receive, in exchange, professional services of health care, education, research which have been done for them.

The separation of ownership and executing authority has created asymmetric information between the owner and the agent. Asymmetric information is a state where the parties involved in transactions receiving not the same information about the subjects and issues relating to such transactions.

From here, there appeared the issue of action one party is for the benefit of another party from the perspective both theoretical and practical. In this relationship, the operation manager (or agent) has an advantage over the owner in respect of information, so they are easy to obtain interest for themselves. Furthermore, if the owner wants to control the agent's action, it may require high cost for this difficult, complex task.

Therefore, when the agent acting by assigned tasks and for the sake of others, they need to be motivated properly (for example, whether be enjoyed with some incentive measures, material or spiritual, or be forced to take responsibility to perform the tasks assigned). Normally, the higher autonomy given the more dynamic the agent is, therefore with strong spirit enough, the agent will work more efficiently to complete the tasks assigned by owners. If sanctions have to apply for infringement, the efficiency and effectiveness of work, of course, will be lower. Therefore, the agent theory requires an operating mechanism whereby it can attract agents with enthusiastic people, diligent work for the interest of the owner and at the same time, it must be tied together for a long term with the interest of the agent.

The theory of asymmetric information appeared first in the 1970's and has confirmed its position in the modern economics in the event in 2001 where the scientists studied this theory, George Akerlof Michael Spence and Joseph Stiglitz[8] had the honor to receive together the economic Nobel Prize.

---

[8] George Arthur Akerlof (born on 17th June 1940) was an American economist, professor of economics at the University of California, Berkeley. Akerlof was best known from the article: "The market of used cars: Quality uncertainty and the market mechanism" (The Market for Lemons: Qualitative uncertainty and the Market Mechanism), published in the *Quarterly Journal of Economics* in 1970. In this paper, he identified the major issues affecting the market, it was the asymmetry of information. This article brought him to Nobel Prize.
Andrew Michael Spence (born on 07th November 1943) was an American economist.
Joseph Eugene Stiglitz (born on 09th February 1943) was an American economist, professor at Columbia University. He was former Vice President and Chief Economist of the World Bank. He received the John Bates Clark Award in 1979. These three persons were co-authors of the Nobel Prize for Economics in 2001 for their work on dynamic information flows and market development.

Asymmetric information is often known as a combination of opportunism occurred prior or post the transaction that the two parties conducted leading to the two following economic consequences: (i) concealed information leading to adverse selection; (ii) concealed actions leads to moral hazard.

a) Concealed information and the adverse selection

Asymmetric information may occur before conducting transactions (e.g, signing contracts) as a party to the transaction concealed information by intention. Concealed information occurs when one party in the transaction acquires extra information considered as relevant that the other party in the transaction does not know. Concealed information leads to adverse selection effects. In this case, the buyer does not have the information in true, complete and timely manner, as a result, it pays at lower prices than the real value of goods. Consequently, the seller is not motivated to produce valuable goods, leading to providing lower quality of products than the average quality on the market. Eventually, on market existing only bad instead of good quality products, this leads to adverse selection for both sides. Thus, adverse selection prevents mutual benefit transaction.

b) Concealed action and moral hazard

Information asymmetry may occur after conducting transactions (e.g, signing contracts) as for cases of concealed action. Concealed actions appear in the situation when one party to a transaction could not observe relevant actions done by the other party (or at least could not verify the action of the other party in a legal manner). Effects of concealed actions may cause moral hazard. It happens in the case that one party by intention try to conceal relevant information in order to achieve highest benefits for themselves regardless that can make harm the other party, and it make the other side difficult to control, or if it's managed to control, the cost involved will be very expensive.

c) Mechanism to minimize asymmetric information

Michael Spence pointed out the signaling mechanism, i.e the party having much information can transmit a signal to other one with little information in a honest and trust manner. With this signal, the seller of high-quality products have to take measures as considered as too expensive compared to the seller of lower quality goods. The use of expensive advertising programs, the maintenance of warranty regime for the product and the dividend to shareholders are examples of how signals operate in the marketplace.

Joseph Stiglitz continued adding value to the work of Akerlof and Spence. Stiglitz proposed the issue that the less information holder itself could also improve the situation through screening mechanisms. He pointed out that the less information party might collect information from the other party by offering different terms in contract deals. For example, insurance companies often offer insurance contracts with different premium rates corresponding to different levels of compensation. Customers could make their own choice of insurance contract that suits them, so it automatically classifies them into different types of customers. Low-risk customers prefer contracts with lower premiums while high-risk customers tend to choose contracts with high insurance premium.

2.2. Venture capital from the perspective of agent theory

Stemming from the agent theory, there have been many studies demonstrating that adverse selection and moral hazard was an important decisive factor in financial investment for venture capital operation. In economic relationship between venture capitalists and start-up entrepreneurs, the former wish to acquire the latter's assets. Venture investors are also resellers or effectively aware of how to divest from their investments. In this relationship between venture capitalists and start-up entrepreneurs, there always present two kinds of asymmetry of information.

a) Information concealed in venture capital

In venture capital, capitalists to invest in start-up businesses may be unable to observe whether start-up businesses do have capacity to work hard and make reasonable decision or not, or they had plan to take over the capital invested and run away. This issue leads to moral risk effect, by then the side with more information often occurs personal motives not to publish all information or provide false information. For example, when starting a business, managers often magnify the success of the product being developed. In that case, in market, there appear too many proposed start-up businesses with low quality. This makes investors difficult to distinguish between good quality and poor quality start-up proposals.

This phenomenon leads to adverse selection effect. Potential investors understand that there exists adverse selection therefore, they are very careful in providing fund for start-up efforts.

b) Action concealed in venture capital

In venture capital, investors in start-up businesses may not have the ability to observe whether the startup entrepreneurs are really working hard and making the right decision or they keep "the money for themselves and then run away".

This problem leads to moral hazard effects. Party with information at this time may have its own motivation to act on its personal interests, even if that action creates huge costs for the other side.

It is easy to recognize, the adverse selection and moral hazard that may occur in any investment environment. However, they are particularly serious and become a major challenge in financial investment in start-up businesses, due to multiple mechanisms being applied in normal practice and in fact not suitable for start-up businesses with venture capital particularly when they are listed on the stock exchange.

Examples of loan practice can be cited. This is a financial instrument widely used in financing stable businesses, not for start-up businesses.

For large enterprises with stable operation, investments are safer because it uses existing assets as collateral or uses reputation as an asset of trust. The fear of loss of collateral or reputation can help mitigate the negative impact of both effects: adverse selection and relying psychology.

In the case of start-up businesses they often have few tangible assets and low liquidity value, in addition they cannot expect to create a quickly positive cash flow nor have high interest rates enough to offset the risk and avoid adverse selection. At the same time, start-up businesses own not enough "achievement" which is necessary to make up prestige or reputation effects of asymmetric information to make strong influence on the market failure than stable businesses. Furthermore, there was not stock market with good liquidity existed ready for investors to assess to the evaluation of performance of start-up businesses, because kind of assessment is much more difficult than the evaluation of already listed enterprises. These factors make start-up businesses become not attractive borrowers.

3. Special economic mechanism - a measure to minimize the impact of asymmetric information in venture capital

In venture capital, life cycle of the investment can be divided into three main stages, as follows: (i) call for capital from private investors; (ii) selecting, assessing and conducting investment and funding into start-up project or businesses; (iii) termination investment or divestment. The distinctive characteristics of asymmetric information in each stage of the life cycle of venture capital need distinctive corresponding solutions or economic mechanisms to solve the problem of the representative agent. A special mechanism proposed is extremely important for a successful venture capital funding.

3.1. Special mechanism in calling for investment

To meet the challenges of capital investment for start-up businesses, venture capital firms play the role as financial intermediary between venture capital investors and start-up entrepreneurs. By professional operations in venture capital investment, these firms have necessary skills to help investors solve management problems of start-up businesses. These firms also help create a large volume of capital enough to invest in a given area in need of venture capital.

The emergence of venture capital firms created an issue of new agent agents because these firms actually are the representatives of investors. Investors on the one hand, make capital contribution to the business also on the other hand, need to address the management issue of their capital before allowing venture capital firm to assist in managing its investment. Many scholars argue that limited partnership is a powerful solution to address the issue of representatives in mobilization of venture capital funds.

Limited partnership is a form of organized activity primarily taking place in venture capital in the United States. In limited partnership, individual investors are the limited partner providing the main source of venture capital (usually 99%). These private investors are not participating in daily operation in partnership in order to get the limited legal authority, as well as preferential tax policies. Venture capital firm is the general partner who will be involved in direct management of the investment and responsible for the implementation of this partnership.

These following mechanisms have been identified as effective solutions to the problems arising in relation to representatives as mentioned above:

a) Mechanism of concluding covenant agreements

These agent issues can be very serious in limited partnership because limited partners do not participate in the daily operation of the business. Meanwhile, profits of limited partners are not easy for liquidity, so it makes investors unable to control the activities of businesses like the market. In this case, a well designed covenant shall be an appropriate and very important instrument to limit opportunistic behavior and for minimizing the cost of representative agents.

The following factors were identified by Gompers and Lerner (1996) as variables affecting the cost of agents: (i) investment in start-up businesses should take place in early-stage firm, because in this phase enterprises often have very high asymmetric information level; (ii) investment should be made in high-tech enterprises with high uncertainty and information asymmetry because their technology and business model has not been confirmed; (iii) the influence of the fund by the venture capital investment firm will be strongly encouraged as long as the fund grow further.

b) Mechanism of Self-Liquidation

Limited partnership in venture capital is very different from other forms of relationship because it is designed to create self-liquidation. The limited life itself requires a stricter discipline on the part of the general partner: they must provide results within a certain period. Limited lifetime also requires general partners to frequently call for investment. Failure to satisfy previous customers will lead to difficulty call for next investment partners.

The pressure in calling for capital is considered as an effective screening mechanism to prevent less capacity venture investors to participate in venture capital market.

c) Mechanism of remuneration tied to performance efficiency

According to Sahlman (1990), venture investors often get 2.5% of capital and 20% of profits as remunerations to compensate for their jobs. This preferential remuneration is quite high and sensitive to minimize the impact of asymmetric information on the operation of venture capital investors.

The mechanism of remuneration tied to operational efficiency applied to the general partners can help align the interest of venture investors to the benefit of capital providers. In fact, when the remunerations is taken from investment profits, it may prevent less capacity venture investors from participating in venture capital market.

d) Mechanism of using intermediary institutions

Another solution to the problem of asymmetric information is to use professional intermediary services: the emergence of investment consultants. These kinds of advisors will act as a "gatekeeper" to help investors in selecting venture capital firms, negotiating contracts and monitoring the implementation.

These specialized professional services of intermediary institutions would bring experience of venture capital investment to investors, minimize the asymmetry of information and help venture investors make more accurate decision.

3.2. Special mechanisms in the investment implementation

After raising capital from private investors, venture investors need to make investments in start-up businesses. At this point, venture investors plays the role of principal (more accurately representative of the owner), and start-up entrepreneurs are the agents.

Following are mechanisms used by venture investors to minimize problems of representative agents in investment.

a) Mechanism of investment segmentation - funding in various installments

Funding in several stages is a clear difference operation of venture capital investment. Venture investors normally divide their investment into installments for several different phases. Only those enterprises having obtained expected results can receive the next disbursement. Sahlman and Gomez said that the funding under phases is the most effective control mechanism for venture investors. In this mechanism, venture investors are not directly involved in the daily operation of business. Instead of daily interventions, the major decisions will be made at the end of each stage of investment.

Agent theory believes that the following characteristics of start-up business will help estimate agent costs: (i) the value of tangible assets which the enterprise owns, a small percentage of tangible assets will prove that the expected agent costs will be higher; (ii) historical development of the enterprise, enterprises with a longer history of development will provide more useful information for venture investors to better assess the prospects of the business; (iii) maturity level of the business, the business in the early stages of development will have greater uncertainty and provide less information for potential investors.

b) Mechanism of dependent equity ownership

The second characteristic of venture capital is the equity of share owned by start-up entrepreneurs. It depends on the financial performance of the enterprise. The terms of the proportion of dependent equity will minimize communication problems in the representative relation because venture capitalists have more power over cash flows when enterprises operate inefficiently.

An inefficient startup entrepreneur will have to accept such terms with investors because this provision will prevent start-up businesses abuse advantages of information for their own.

c) Mechanism of using exchangeable stock

The third characteristic of venture capital is the use of exchangeable stock applied in a popular manner because it helps create an effective solution to solve management problems in venture capital operation. Exchangeable stock shall allow startup entrepreneurs gain a significant proportion of benefits if their business works well. A priority proportion of exchangeable shares applied will be a mechanism of high discipline in cases of poorly performing enterprises.

This discipline mechanism can also prevent those start-up businesses with no capacity to enter the market. Stocks shall only be allowed to convert into ordinary shares when venture investors show that their business performance is good.

d) Mechanism of segregation between the ownership and the management power

The fourth characteristic of venture capital is the separation between the ownership and the management power. In general, management authority of enterprises is usually given to people with highest ownership. However, this mechanism may not be optimum in the case of venture capital. Venture investors are often faced with difficult choices: on the one hand, there should give a percentage of shares worth for start-up businesses to encourage them in an appropriate way; on the other hand, provide them a proper percentage of shares which can create many opportunities to acquire property of investors.

To address this issue, venture investors typically retain a control right over enterprises by covenant agreement. This control right can be exercised through the rule as majority of members in the Trustee Board; absolute superiority in important decisions; rights of mandatory reimbursement; prohibited sale of assets; restricted spending; restricted new shares; etc… With such terms stipulated, start-up businessmen will be difficult to make important decisions without the consent of the venture investors.

The separation of the ownership and the control right will also help create screening mechanisms. Successful start-up businesses easily accept inter-rim provisions to relinquish their control right as they believe that they will get this right in the future. These start-up businesses are less confident in themselves, so they more hardly accept the separation of the ownership and the control right.

e) Mechanism of composition of the enterprise's executive Board

The enterprise's executive Board plays an important role in supervising the business operation. Agent theory predicts that the higher expected cost of representatives the more important is the supervision of the board.

The oversight role of the board is usually measured by the proportion of outsider of the board. *Lerner (1995)* tested this hypothesis for venture capital operation in the field of biotechnology in 271 enterprises which have received 653 financial investment rounds from venture investors during the period from 1978 to 1989[9]. Results of this verification showed that the closer associated of venture investors with enterprises the more likely they join the board.

g) Mechanism of joint investment

Finally, mechanism of making together investment is one more important characteristics of venture capital. It is a normal practice in venture capital. In this mechanism, venture investors tend to choose other experienced venture investors to jointly make investment in early stage of start-up businesses when the asymmetric information is the highest.

Lerner (1995) also verified this hypothesis and had the views consolidated that this mechanism of joint investment was the best approach to improve the quality of selection of start-up entrepreneurs for investment.

4. Significance of the use of agent theory to explain the venture capital operation

Agent theory based on two types of asymmetric information: concealed information lead to adverse selection and concealed actions lead to moral hazard, in order to explain the behavior occurred in the relationship among parties involved in venture capital markets. Based on this agent theory, researchers have also tried to explain the behavior of venture investors.

In their study, Raphael Amit, James Brander and Christoph ZOTT[10] made the following observations about the choice of action of venture investors:

1) Venture investors will operate in an environment where they can promote relative efficiency in the selection and monitoring of their investments, as well as where exists value-added services that would give them a higher comparative advantage to other investors.

---

[9] Verification data was taken from the database of Venture Economics.

[10] Raphael Amit, James Brander and Christoph Zott. *Why do venture capital firms exist? Theory and Canadian evidence*. Journal of Business Venturing 13, 1998 Elsevier, Vancouver, Canada.

Thus, we can expect that venture investors prefer to make more investment in sectors with asymmetric information or relevant information which are of important implications, for example in biotechnology, software computer,... to in other fields of "normal" start-up (such as opening a restaurant, a shop,…). These areas are also risky, because of quite high fluctuate profits as well, but these risks can be easily recognized by traditional financial institutions compared to the venture capital sector where the added value is created by the result of special knowledge and traditional financial institutions can hardly recognize or estimate it immediately.

2) Among the projects that venture investors prefer to get involved are those with relatively low supervision costs, or the costs involved in dealing with asymmetric information are not seriously high.

Thus, when planning to focus investment on a given area, venture investors prefer the businesses that have more "clean" start-up profile.

3) In the case of serious asymmetric information, divestment of venture capital via the stock exchange will be affected.

The most ideal divestment case of venture investors is the sale of shares after being listed on the stock market. However, if the investment has been done in the case of serious asymmetric information, investors may be difficult with the sale of shares on the stock market because the majority of investors on the floor have very little information about the operation of the start-up businesses in question.

Therefore, there may be two major forms of divestment, as follows: (i) the divestment is done through the sale of shares to investors who understand the history of start-up businesses (start-up business owners, or the investment fund management firms or other enterprises in the same industry); (ii) continued efforts to create a reputation for start-up businesses in order to bring good performance enterprises up to the stock market.

4) Finally, the theory of asymmetric information believes that businesses will perform better when the enterprise manager is also the owner of venture capital fund and owns a majority of stocks in the enterprise.

This means that, in businesses where venture investors are not managers owning the majority of shares will perform less effectively than other enterprises. This is the moral hazard problem, because high proportion of equity in venture capital will reduce the level of encouragement that requires extra effort of start-up entrepreneurs.

However, in certain situations, venture investors having higher share of ownership still may be the best option, because it's probably the only way to obtain sufficient financial investment for start-up businesses. In this case, it should pay attention to the relationship between the inverse proportion of share of ownership and operational efficiency of the enterprise.

Conclusions

Many countries around the world have been paid a lot of attention to venture capital activities. This concern partly comes from the fact that many giant global influenced corporations (like Google, Intel, Apple, Microsoft,...) had received huge venture capital investment from venture investors when they still were in start-up period. In addition, the rapid development of start-up business is considered as an important achievement of innovation activities and methods of increased labor productivity, creating more jobs for the society.

Although receiving increasing attention and importance, venture capital industry has little attention in research than many other financial investment sectors such as insurance, banking, securities. The main reason was that this area had very little published information available by private, non-listed start-up businesses having received investments from venture investors, and they were not bound to disclosure to public their financial reporting as required by other normal businesses. In addition, not much information came from this source because there was no organized information exchange activities for venture capital investments.

Agent theory helps point out that moral hazard and adverse selection creates market failure in financing for start-up activities. Moral hazard and adverse selection can also lead to missing or under estimating many good start-up entrepreneurs for investment. The interpretation based on agent theory also helps explain why venture investors are those who have the skills to choose the best start-up businesses in existing environmental of concealed information, and also are very good entities at monitoring and counseling for start-up entrepreneurs who may be vulnerable to the moral hazard problem.

Venture capital investors exist because they are professional with better practical investment skills than other investors. Venture capitalists having high skills would make the venture capital operation more efficient by reducing the possibility of market failure. In other words, venture capitalists are financial intermediary agents who have a comparative advantage when operating in environment of high asymmetric information. This is their position although in reality, many young start-up businesses already listed on stock market without seeking financial investment from venture capital funds, only from commercial banks and private investment (including self-investment capital and the fund mobilized from family members).

However, venture investors cannot completely eliminate the adverse selection and moral hazard. Two issues are serious for young businesses, especially, it becomes more serious for start-up businesses. This also explains why venture investors often focus on final stages of development of start-up businesses. At this point, business start-up has developed a "clean" profile of information to provide for investors. At that time, they had had relatively sufficient assets to minimize the restrictions relating to the mortgaged property and limited liability. Thanks to their expertise, venture investors will cope better with the asymmetric information problem than other investors.

The above statement is entirely consistent with the model of divestment. If asymmetric information continues to occur at withdrawal stage, "outsider" investors will not have enough information to assess the asset value of start-up businesses, and "insider "investors would be more favorable to re-purchase and replace the position of venture investors. These "insider" investors can be managers or employees of the investor or they may be of other businesses in the same industry. Therefore, it is not surprising that the proportion of divestments through stock exchange for start-up business accounts for a modest percentage.

For our country, the review of venture capital operation from the perspective of agent theory can be useful to find a satisfactory solution to the problems posed by current practice when combined with other policy instruments./.

REFERENCES

In Vietnamese:

1. Le Quang Huy. (1998) *Study on the issue of the venture capital for S&T activities*. National Institute for Science and Technology Policy and Strategy Studies.
2. Vu Cao Dam, Nguyen Thanh Ha. (2008) *Venture Capital*. Journal of Scientific Activity, No. 1/2008.
3. Phan Thi Bich Nguyet. (2009) *Mobilizing venture capital for technological innovation in Vietnam*. Economic Development Journal, No. 07/2009.

In English:

4. OECD/GD (96)168. *Venture capital and innovation*, Paris.
5. OECD/GD (97)201. *Government venture capital for technology-based firms*. Paris.

6. Akerlof, George. (1970) *The market for "lemons": qualitative uncertainty and the market mechanism.* https://en.wikipedia.org/wiki/The_Market_for_Lemons.

7. Gorman, Michael and William Sahlman. (1989) *What do venture capitalists do?* Journal of Business Venturing, 4: 231-248

8. Sahlman, W.A. (1990) *The structure and governance of venture capital organizations*. Journal of Financial Economics.

9. Gompers. (1994) *The Rise and Fall of Venture Capital*. Business and Economic history. Volume 23, no. 2.Winter 1994.

10. Lerner, Josh. (1994) *The Syndication of venture capital investments*. Financial Management, Autumn 1994.

11. Gompers, Paul và Josh Lerner. (1996) *The use of covenants: An analysis of venture partnership agreements*. Journal of Law and Economics, October 1996.

12. Gompers, Paul (1997) *Ownership and control in entrepreneurial firms: An examination of convertible securities in venture capital investments*. NBER Working Paper.

13. Amit.R, Brander.J, Zott.C. (1998) *Why do venture capital firms exist? Theory and Canadian evidence*. Journal of Business Venturing 13, 441-466p. 1998 Elsevier Science Inc. New York, NY 10010.

14. Lerner. J. (1998) *"Angel" Financing and public policy: An overview*. Journal of Banking & Finance 22 . Elsevier.

15. Gompers và Josh Lerner. (2001) *The Venture Capital Revolution*. The Journal of Economic Perspectives, Vol. 15, No. 2, (Spring, 2001), Published by: American Economic Association.

16. Baygan, G. (2003) *Venture Capital Policy Review: United States, OECD Science, Technology and Industry Working Papers*. 2003/12, OECD Publishing.

17. Bronwyn H. Hall and Josh Lerner. (2010) *The Financing of R&D and Innovation*. Handbook of the Economics of Innovation, Elsevier-North Holland 2010.