

# Human Capital Factors of Management Team in Venture Capital Decision

Mudong Liu\*

The Department of Mathematics, The University of Manchester, Manchester, United Kingdom

\*Corresponding author: mudong.liu@postgrad.manchester.ac.uk

**Abstract.** Venture capital provides important funding and management experience support for high-tech start-ups. But due to the high risk, final decisions of this investment can only be made after investors evaluate these companies based on observable metrics. Among all the metrics, human capital plays an important role in this evaluation-decision process. Using literature research methods, this paper selects four typical human capital factors of experience, education, passion and gender, and analyzes the mechanism of how they affect investment decisions of these factors. The results have drawn conclusions as follows: First, information on experience, education, and passion conveyed to investors can remove the uncertainty of these firms, while gender factor directly affects decision outcomes. Second, the impact of experience, education, and passion on firm evaluation is complex, which depends on the specific situation. Third, compared with ordinary members of the team, investors pay more attention to the human capital of business leaders.

**Keywords:** Venture capital; human capital; experience; education; passion; gender.

## 1. Introduction

In modern society, venture capital plays an important role in the development of start-ups. These start-ups often have advantages such as advanced technology or innovative business models, and thus have great potential for development. However, usually their scale is not so large, and lack experience in business management. Venture capital can just provide financial support and management knowledge and experience for such companies; and at the same time, the invested company usually sells a part of the equity to the venture capital company, so that it can get more long-term profits in the future, It's a win-win investment. At present, many unicorn companies in the market have received venture capital in the early stage of their development, such as ByteDance, Stripe, Shein, etc.

However, due to the uncertain market prospects of start-ups and the fact that their core assets are mainly intangible assets, such investments come with relatively higher risk. Therefore, the final decision of venture capital can only be made after going through comprehensive research. Venture capitalists need to evaluate the risk and potential of those start-ups by using observable indicators. Among all of the indicators, the human capital of the management team of the invested company is an important indicator. The human capital of the management team, such as the accumulated experience and education, can be converted into the unique competitive advantage of the enterprise in the operation of the enterprise — with more such skilled and competitive team members, the company is more likely to achieve the desired results. Therefore, for VCs, acquiring information that whether the candidates have high-quality human capital is a reliable means to reduce investment risks. Overall, it is valuable to research on human capital to understand the mechanisms by which it affects the investment decision-making process.

Specifically, this paper uses the method of literature research, and chooses several important influencing factors in human capital, using actual research cases to explain how each factor plays their role in the decision-making of venture capital. Factors of the human capital of management selected in this paper include four factors, experience, education, passion, and gender, which will be analyzed separately in the following sections. Finally, this paper will summarize and give the specific impact of each factor on investment decisions.

## 2. Experience

In venture capital financing, the experience of the venture's team possesses the function of reflecting those key unobservable qualities of ventures technology partly. Besides, this experience itself is also a part of the company's productive assets, thus it's possible to influence the ability to attract venture capital funds [1].

Entrepreneurs with entrepreneurial experience are considered to have richer skills and broader social connections that can give these experienced founders a greater competitive advantage when raising VCs. Entrepreneurs with entrepreneurial experience, in particular, can connect with VC investors earlier through the social connections established in their previous experiences, thereby being able to obtain more capital in early-stage financing and completing early-stage rounds faster second financing. At the same time, these companies can also gain more advantages in subsequent financing rounds because they have accumulated more experience and skills in previous investments [2].

In the biotech industry, founder-based firm-specific experience, international experience, and industry-specific experience of the CEO can influence VC investment outcomes. Among them, the assessment of industry-specific experience is also affected by the size of the top management team, which has a positive impact on companies with a smaller TMT scale, but a negative impact on companies with a larger TMT scale. This shows that the information conveyed to VCs by industry-specific experience is complex [3].

In BRIC countries, there exist positive correlations between the prior career experience of the management team and the ability to attract the venture capital investments. Compared to those who start an undertaking with career experience in lots of companies but with shorter average working years, entrepreneurs with a longer average working year, with significant business expertise developed are more welcome in attracting venture capitalists [4]. Because deeper understanding of the industry and a wider horizon are critical in getting success in starting a business, and a more focused career experience can just indicate that the team is more likely to have these qualities.

In the P2P lending industry in China, the international experience of start-up CEOs has a positive impact on VC financing, but industry experience has little impact. In the P2P lending industry, international experience can reflect the CEO's ability to develop and guide industry changes. However, since the P2P lending industry is a nascent cross-industry service, professional industry experience and knowledge in the traditional industry may not be as important as the financial background in the traditional financial industry and the computer background in the IT industry [5].

In general, for investors, the experience of the investee company's team can provide them with information about the team's capabilities and skills. If this information, combined with other information held by the VC, can make it convinced that the team can succeed in subsequent development, it can effectively reduce the risk and uncertainty of the VC investing in this enterprise, so this is a positive influencing factor: having Experience can increase the probability of getting VC investment, but no experience will not cause additional negative effects. In addition, depending on the industry, the aspect of the experience that VCs focus on varies according to the skills required by the industry. At the same time, the impact of experience on investment decisions is also related to other factors such as the company's TMT scale. Therefore, it can be considered that the impact of experience on investment decisions is industry-specific.

## 3. Education

The impact of management education is moderated by the size of the top management team of the venture firm. CEO having received good management education will have a positive impact on the business of a company if the company is operated by a large top management team. Because larger teams are more likely to imply the existence of problems such as poor communication, poor team cohesion, poor departmental coordination, and conflict among team members, and CEOs with management education background are more likely to have the ability to resolve these problems. But

for smaller teams, investors may worry that this management experience will make its system and strategy too formal and structured to the point of undermining the dynamism and flexibility of the top management team [3].

Another point is the education background of the founder of the company. In start-ups, it is one of the key factors in obtaining the first round of financing. Education will become even the most important factor in the later rounds of financing and long-term development. At the time of the first round of financing, investors believed that the education level of the founder was related to the opportunity cost of investment, because they could enter established firms with their outstanding education background while they still chose the riskier start-ups, which means that this company is more attractive to them. In subsequent rounds of financing, it is believed that a higher average level of education means more innovation and broader growth prospects, which are important factors for venture capitalists to determine the amount of their investment. Therefore, it can be argued that the educational level of founders can have an impact on venture capital decision-making over a longer time horizon [6].

Research shows that in BRIC countries, teams with higher average levels of education are more likely to receive larger amounts of venture capital [4]. In the biopharmaceutical industry in Europe and the United States, not only the educational background in the field of biological sciences and medicine which are highly related to the industry can become a positive factor for the start-ups management team to attract venture capital, education experience in management science and law can also contribute to attracting more venture capital funding [7]. This can be explained by the belief of investors that in this industry, in addition to the necessary industry-specific skills, legal and ethical risks can also determine the uncertainty of investment to a large extent, and the top management team having members with law and management education background means that the company can avoid these risks.

In general, education as a more standardized framework can be used to compare the skills and knowledge of top management teams better. However, in different industries and different investment stages, investors will hold different evaluation criteria for education background. Meanwhile, the influences of the education background of the founder and the ordinary member of teams are also different. Education can play a role on a longer time scale, as investors believe that a better educational background also means better development potential.

#### **4. Passion**

Passion is a force that encourages people to devote themselves to doing something. For start-ups, the entrepreneur's passion for the business itself, as well as the products and services offered by the company, can positively influence investors' decisions. To be more specific, venture capitalists take passion, especially their enthusiasm displayed, their preparation for current and future issues, and their commitments for the future, into consideration in investment decision. This will help investors evaluate the company's potential for development. However, if the entrepreneur's enthusiasm becomes excessively extreme, such as becoming too insistent on their ideas so that they cannot accept or even tolerate feedback from others, this enthusiasm will do damage to the venture capital investment issue. Prior research has shown that venture capitalists welcome the passions of entrepreneurs only if they hold an open mind to the world, which implies that they can perform better by iterating their works according to the feedback they get [8].

While passion can motivate people to complete their tasks with higher speed and quality, which is often seen as individually helpful, the impact of personal enthusiasm on a company's overall performance may not be that simple. If individual passions act on different objects, they will prevent the entire team from focusing on the main goal of the company. If team members have different levels of enthusiasm for the same thing, they may have a conflict with each other, resulting in the inefficiency of the whole team. In these cases, passion can negatively impact the overall team performance. Among the new start-up teams in the Netherlands, team passion is proven to have a

negative impact that cannot be ignored. Diversity of team passions can lead to the inconsistency of the strategy of the company, which in turn can spoil the company's long-term performance, thereby lowering the investors' expectations of the team and the amount of funds they are willing to invest [9].

Passion is a subjective concept, and investors can only judge and assess the level of passion through observable aspects of the entrepreneur's behavior, speech, and or her work. For individuals, passion-based on openness to feedback is beneficial, but excess passion may cause a negative effect. The impact mechanism of passion within the team is even more complex. The complexity of the level of passion of individual team members and the objects their passions focus on can lead to the difference between the level of passion the team displayed as a whole and the average level of individuals.

## 5. Gender

Since the 1980s, women have gradually gained equal status with men in the workplace, and the number of women-led enterprises has increased significantly. At the same time, however, there was still very little venture capital in companies founded by women entrepreneurs. This discrepancy between potential investment opportunities and actual transactions has led people to realize that gender has also become one of the factors influencing venture capital decision-making objectively.

One idea to explain this phenomenon is the serious gender imbalance among decision-makers in early venture capital firms. The proportion of men was too high so sex prejudices towards women were excessively exaggerated in the decision-making process. Since when making decisions, people will naturally prefer the party with whom they have a connection, in the aspect of gender, they will tend to choose companies whose leaders are of the same gender as themselves. This bias can directly lead to the underestimation of women-led companies, which can cause these companies to lose the funding support they should have received from venture capitalists, and it has become the potential driving force of the huge disparity in the amount of venture capital received between male-led and female-led companies. This has also led to a masculine trend among female entrepreneurs in terms of appearance, decision-making style, etc. [10].

Another point about gender bias is that it may be the result of tangible educational background and work experience combined with cultural perceptions of gender. In this situation, there are two perspectives for investors to evaluate the company, the investment, and the entrepreneur. When evaluating from the entrepreneur's perspective, gender will have a greater impact on the final investment result. To reduce investment uncertainty, venture capitalists will evaluate entrepreneurs from the perspective of technical background. Women with technical backgrounds are more likely to be favored, while men are the opposite. This has to do with gender stereotypes in cultural perceptions: men being tech-savvy means lacking social skills, while women generally lack a tech background. Breaking these stereotypes can give investors the impression of being 'outstanding', giving those companies a greater advantage in securing venture capital. In addition, if female entrepreneurs have established close social relationships with evaluators, it can also reduce the difficulty of obtaining investment to a certain extent [11].

In the current venture capital world, there exist serious structural barriers to female entrepreneurs, which makes it harder for them to get funding in venture capital. This barrier can be explained as a result of a combination of an imbalance in the gender ratio of investors and the tendency of investors to choose entrepreneurs of the same gender. At the same time, gender stereotypes related to education and working experience may also be one of the reasons for the existence of this imbalance.

## 6. Conclusion

This paper analyzes the impact of experience, education, passion, and gender factors in human capital on venture capital decision-making and its possible mechanisms. The main findings of this paper are as follows:

First, information about the experience, education, and passion of the team of a company seeking financing can be considered as positive or negative signals conveyed to VCs, which can help investors remove the uncertainty of the company so that they can evaluate the risks and prospects of the company's development according to industry-based evaluation standards, and finally make the decisions. However, investors' evaluation process can also be influenced by underlying factors such as gender.

Second, the relationship between the management team's experience, education, and passion factors and investors' evaluations is complex, rather than the simple monotonically increasing relationship when considering the individual situation. Certain experiences and educational backgrounds may have a negative impact on obtaining investment under certain team size, enterprise development stage and industry; and when the team is so enthusiastic that it lacks an open mind to feedback, it will also lead to a lower evaluation of the team by investors.

Third, the enterprise management team is consisted of leaders (entrepreneurs) and ordinary members, but the evaluation of their individual human capital and the whole team's human capital is not necessarily the same. The experiences and educational backgrounds of leaders and rank-and-file team members, as well as their level of passion and focus on the cause, have different effects on the whole company. Furthermore, investors will pay more attention to the entrepreneur who is the core of the team when evaluating generally. For example, the gender bias or gender stereotype existed in the field of venture capital cannot work without the investors casting the gender of the company's leaders onto the company itself.

## References

- [1] Hoening D, Henkel J. Quality signals? The role of patents, alliances, and team experience in venture capital financing [J]. *Research Policy*, 2015, 44 (5): 1049 - 1064.
- [2] Zhang J. The advantage of experienced start-up founders in venture capital acquisition: evidence from serial entrepreneurs [J]. *Small Business Economics*, 2011, 36 (2): 187 - 208.
- [3] Patzelt H. CEO human capital, top management teams, and the acquisition of venture capital in new technology ventures: An empirical analysis [J]. *Journal of Engineering and Technology Management*, 2010, 27 (3-4): 131 - 147.
- [4] Zheng H, Piao X, Park S. The Role of Founder-CEO, Human Capital and Legitimacy in Venture Capital Financing in China's P2P Lending Industry [J]. *Sustainability*, 2021, 13(4): 1625.
- [5] Subramanian H, Chen M, Jiang H. Entrepreneurship in BRIC: Who will Venture capitalists fund? [C]//AMCIS. 2017.
- [6] Ko E J, McKelvie A. Signaling for more money: The roles of founders' human capital and investor prominence in resource acquisition across different stages of firm development[J]. *Journal of Business Venturing*, 2018, 33 (4): 438 - 454.
- [7] Behrens J, Patzelt H, Schweizer L, et al. Specific managerial human capital, firm age, and venture capital financing of biopharmaceutical ventures: A contingency approach [J]. *The Journal of High Technology Management Research*, 2012, 23 (2): 112 - 121.
- [8] Warnick B J, Murnieks C Y, McMullen J S, et al. Passion for entrepreneurship or passion for the product? A conjoint analysis of angel and VC decision-making [J]. *Journal of Business Venturing*, 2018, 33 (3): 315 - 332.
- [9] De Mol E, Cardon M S, de Jong B, et al. Entrepreneurial passion diversity in new venture teams: An empirical examination of short-and long-term performance implications [J]. *Journal of Business Venturing*, 2020, 35 (4): 105965.

- [10] Balachandra L. How gender biases drive venture capital decision-making: exploring the gender funding gap [J]. *Gender in Management: An International Journal*, 2020, 35 (3): 261 - 273.
- [11] Tinkler J E, Whittington K B, Ku M C, et al. Gender and venture capital decision-making: The effects of technical background and social capital on entrepreneurial evaluations [J]. *Social Science Research*, 2015, 51: 1 - 16.