



Designing Native Decision-Making Model for Selecting Venture Capital Investment in Emerging Companies

Mohammadreza Radfar^a, Gholamreza Zomorodian^{* b}, Mansoureh Aligholi^b, Mehrzad Minouei^c, Farhad Hanifi^b

^aDepartment of Financial Management, Central Tehran Branch, Islamic Azad University, Tehran, Iran

^bDepartment of Business Management, Central Tehran Branch, Islamic Azad University, Tehran, Iran

^cDepartment of Industrial Management, Central Tehran Branch, Islamic Azad University, Tehran, Iran

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ABSTRACT

Venture capital companies play an important role in the economy of countries and greatly influences economic and employment growth. VC is the provision of capital for companies and entrepreneurs that is prone to leaping and growing value and, of course, a lot of risk. However, the volume of venture capital in our country is far less than the economic capacity. Many of analysts consider having no model for venture capital in our country as the main reason for this. Therefore, the present study by the qualitative method aims to design decision-making native model for selecting venture capital investment in emerging companies. To achieve this goal, by collecting qualitative data through literature reviews and having deep interview with experts and venture capital firms, a native decision-making model for selecting venture capital in emerging companies is presented. The methodology of this research based on purpose, is fundamental and through the qualitative methods, thematic analysis method is used. Purposeful sampling method is used and interviewing experts continued to theoretical saturation level that means the number of selected samples includes 16 elites. The native decision-making model for selecting venture capital in emerging companies presented in this research has 16 main themes and 86 sub-themes.

1 Introduction

Mathematically, investment can be considered as function of capital to time. The aim of any type of investment is to achieve a reward or profit in future [16]. Making optimal investment decisions and use of profitable investment opportunities is possible only under conditions that in particular, to achieve sufficient financial resources [1]. It is examined in the literatures that the effectiveness of investment and financing decisions and showed that private and public firms are significantly differently behave in investment decisions and financing [13]. Investment is one of the most important tools for achieving economic growth in the country. For financing various forms of investment, different approaches have been presented so far. One

* Corresponding author Tel.: +989122977566
E-mail address: gh.zomorodian2@gmail.com

of the most recent and most efficient financial means is Venture Capital, which has been given much attention today. Venture capital, as the name implies, takes particularly a determined rate of risk. A Venture capital company is private and profit seeking one which put its capital in risky or novice activities. Venture capital can be defined as financial investment in the companies which have not been priced yet and have potential to grow significantly [7].

VC is usually used in order to propound a creative idea or new product, which is of high-risked type but is capable to make a bigger return more than average profit. This type of investment is mainly deployed in those companies, which are potentially innovative or have a specific research on advanced technologies and are susceptible to be profitable or unprofitable. This is the reason why this investment is called risky or Venture Capital [4]. The driving motor of technological developments is creative functional idea of entrepreneurs, inventors and innovators and form as a new business with their serious effort, and the concept of entrepreneurship begins. Yet, most of such entrepreneurs are intellectual and young graduates without experience in three factors of managerial knowledge and experience, adequate financial resources and customer, consuming the product of this entrepreneurship. Most of such efforts for establishing new business fail due to the lack of these factors.

The problem can be solved today by the investors cooperate with entrepreneurs actively and cover their weaknesses with the aim of getting profit, relying on their extraordinary tact and accepting the calculable and not calculable hazards. They are known as venture capital, which have turned to the main rings of national innovation system in developed countries [10]. One of the special privileges of venture financing is to support excessively and transfer the provided knowledge by investor companies for emerging companies [3]. Moreover, since the results of innovative activities are somehow uncertain, the governmental banks and funds are not very interested in investment. In other cases, that novice company can persuade the banks and institutions for granting the loan, the company will face other problems. Receiving credible civil bail and guarantee documents are usually the main problem of entrepreneurs. Additionally, reimbursement of principal and interest on received loans is very difficult for such start ups and causes mental distress of entrepreneurs and even stopping their activity. Due to this, the presence of venture capital companies is more necessary. Venture capital companies invest in such firms, through financing the entrepreneurs, and not only finalize the plans and projects but also they cause their economic growth and development. Hence, the entrepreneurs of developed companies usually go to the venture investment companies (VC) to get their required capital [19].

Given the importance and necessity of principles 44 and expansion of private section as well as the use of all capacities, facilities, tools and experiences of developing countries, establishing VCs is more necessary as one of modern financial tools based on Islamic model. Although in comparison with such countries, we are still at the beginning, due to Iran vision of 1400 and considering the mentioned benefits, the legislators and economic affairs custodians are obliged to plan to both eliminate the related limitations and barriers and use this fi-

nancial tool for attracting public participation. In the world and in our country, Iran, many researches have been done in the field of financing, but due to the importance of this issue, it needs more thought and contemplation. One of lost and important rings in entrepreneurship chain in Iran is VC. A few companies can be found to meet venture investment indicators completely. Lack of a comprehensive and native model for making decision in venture capital plan in the country has caused low growth of such industry in the country. The main aim of current study is to propose a native decision making model to select venture capital in emerging companies. The overt uncertainties in such cases will be investigated. Therefore, given the discussed information, the main question of study is: what the components and decision making model are to select venture capital in emerging companies?

2 Theoretical Subjects and Research Literature

2.1 Theoretical Subjects

Among many scientific and technological elites of the country, investment on entrepreneurship ideas and innovative plans, which are active in modern industries, is considered as an opportunity for industrial growth and national development. Some of profits, which nation and government obtain socially and economically, are direct and indirect employment, using scientific and industrial power of scientific and entrepreneur elites, increasing GDP, modern technology development and growth in the country and region, completing the evolutionary chain from the phase of idea to maturity inside the country and localizing the technologies, preventing the migration and brain drain, commercializing the valuable results and studies and producing investment by private investors and etc. [18].

Venture capital refers to financing emerging companies, not having adequate experience for attracting capital from traditional financing resources such as public markets or lending institutions. These newly established companies are the entrepreneurs, requiring financial resources for developing their commercial programs and usually lacking visible assets to use them as load guarantee. Moreover, negative cash flow in these companies is another reason for reluctance of banks and other lending institutions as well as stock market to finance and support the plans of these companies [17]. Venture capital is allocated to the companies, which are generally novice and newly established and also lack required capital to continue their activity. Additionally, there is no guarantee for the success of entrepreneur's plan. Therefore, VCs shall be risk taking and invest on such emerging companies, hoping to gain higher return than usual. Now if VCs are risk averse, their activity will be limited to granting loan and getting heavy bails such as banks and financial institution. So the previous problems occur and the entrepreneurs face serious financial problem in realizing their ideas and do not continue. Therefore, the main feature of venture capital is risk taking [19]. Venture capital is interesting in many fields and industries. For example, this industry is functional in construction building, industrial products and so on but the major activity of VCs is in developed technologies. For more than several decades, venture capitals have significant role in occupa-

tional opportunities and employment improvement, economic growth, increasing GDP and increasing international competition of countries through supporting small, newly established, entrepreneur and technological companies. In fact, venture capital can be considered as one of modern financial tools, collecting and leading the wandering capitals to emerging companies, actualize potential ideas in technological industries. The developed industrial countries and then developing ones especially southeast of Asia have been able to take major steps in creating and developing technological big companies using such tool. Many known American companies in three last decades have been established by venture capitals. Apple, Google and Microsoft are three fifth of the biggest world companies, which have received their initial financial resources from venture capitals. Many well-known and successful companies such as Intel, Home Depot and Medtronic have received their initial capital from VCs, indicating the importance of venture capital in the world.

2.2 Research Literature

There are some studies in the field of venture capital, that some of them are mentioned in this section. In a study, Dhochak and Sharma [9] proposed a model for decision making on the selection of venture capital in emerging companies using fuzzy AHP. In this study, using interview, they collected qualitative data and then quantitative ones were gathered by questionnaire. The statistical population of study includes venture companies. After collecting the qualitative and quantitative data, the variables of entrepreneurship features, product, market features, managerial skills, financial problems, economic environment and institutional rules were used as the main factors of selecting venture capital model in emerging companies.

Eric Afful-Dadzie and Anthony Afful-Dadzie [6] proposed a model for making decision to select governmental venture capital using TOPSIS approach. Due to high demands of beginning business from private venture investors (PVCs) and lack of financial support through traditional investment, most of governments around the world are threatened as venture capital. Using interview in this study, qualitative data were collected and then by questionnaire, quantitative ones were gathered. The statistical population of study included governmental venture companies. After collecting qualitative and quantitative data, the variables of entrepreneurship personality, entrepreneurship experience, product, financial features, market features and social issues were used as the main factors in selection of venture capital model in emerging companies. Derakhshan and Mohammadi [8] prioritized the effective factors on the evaluation of venture capital plans. The aim of such study was to investigate and prioritize the intended factors by venture investors in evaluating the modern idea-based plans. To this end, using survey, the required data were obtained. To analyze data, Partial Least Squares method was used. The results of this study indicated the superiority of financial considerations of product and then personality and the entrepreneurship ability respectively as next priorities. Pourzarandi and Sahriari [15] designed a comprehensive model of venture capital. In this study, a financing model of knowledge-based institutions, considering the existing

challenges in this field was sought to be designed. Due to this and in the first section, meanwhile the existing experiences in this field, the problems of it were also identified, analyzed and prioritized consulting banking and financial experts. In the next step, using step by step process of knowledge-based financing, the challenges and solutions were investigated in each step. Finally, the validity of proposed solution, the performance of it in the coverage of developed challenges were investigated and confirmed by financial and banking experts.

3 Research Methodology

3.1 Methodology

Qualitative method is used in this study. Qualitative research carried out within the framework of an interpretative paradigm and the type of data used is the implication of sentences and phrases. In this type of research, a theory or perspective is constructed [11]. Qualitative study let the researcher achieve a wide perception of meaning, daily experienced by people. In this type of study, the researcher perceives the phenomena from the vision of participants in their particular social and institutional context through an interpretational approach.

This study is conducted, aiming to propose a native model of decision making for selecting venture capital in emerging companies. The methodology of this research based on purpose, is fundamental and the aim is to develop knowledge on the venture capital industry within the country. In this research and through the qualitative methods, thematic analysis method used to design native decision-making model for selecting venture capital investment in emerging companies. The main difference between thematic analysis method and other qualitative research methods is that this method, while being an independent research approach, is also the basis of many other qualitative methods. In the theme analysis technique, information is categorized according to the topic in meaningful categories to summarize and analyze the viewpoints of the respondents [12]. In this study, the qualitative data is collected by deep interview. The data of this study was collected in autumn 2018.

3.2 Statistical Analysis

As indicated before, qualitative method is used in this study. In the qualitative part of study, our statistical population include professors of university, researchers and financial elites. All of them have Ph.D. Referring to them, the main themes and sub-themes of multi-goal decision making model were found to select venture capital in emerging companies.

Lecomte and Perciel [14] introduced the general strategies of sampling in qualitative study as “criterion-based selection” because qualitative researcher determines the inclusion criterion for choosing people or other units. Paton [14] also used “purposeful sampling” in this case. The aim of qualitative study is to achieve a perception of the nature of subject to open the meaning, developing the thick descriptions, producing ideas, concepts and data-based theory. Hence, the samples shall be selected to enter all consisting elements, events and processes. It finally helps understanding this concept. This principle of qualitative sampling is

known as “symbolic representation” because a particular unit is selected to both represent and symbolize appropriate features. Purposeful sampling is widely used in qualitative research for the identification and selection of information-rich cases related to the phenomenon of interest. Theoretical saturation is filling the space of a concept and no new data emergence. Saturation is usually defined as “when there is no new data, we have achieved saturation”.

In this study, deep interviews are used to collect information in the form of qualitative study. In the case of sampling method, a purposeful sampling method, which is specific to qualitative research, is used and interviews continued to theoretical saturation level. According to this, the 16 experts who are informed about the subject or aspects of the study were interviewed and after the last interview and the collected data, the researcher concluded that according to all interviews, theoretical saturation level is reached and no more interviews are required. Time, availability of interviewees and the rate of their cooperation were noticed in selection of this sample. To conduct interviews with each person and experts, the necessary coordination was done in advance and there were no restrictions on the timing of the interviews. Interviews usually took place in the office or the faculty of the interviewer and lasted between 30 and 45 minutes.

4 Results of the Research

16 professors of university and financial experts were interviewed in this study. As mentioned before, in this research and through the qualitative methods, thematic analysis method used to design native decision-making model for selecting venture capital investment in emerging companies. In the thematic analysis method, there are four main phases of analyzing, which these main phases of analyzing this research data based on theme analysis are: coding, categorizing and naming the codes and themes, describing the main themes and drawing the themes network and proposed model.

4.1 Coding

Coding in the thematic analysis method must be defined correctly and should not be repeated. Also, the codes should be limited to the scope of the research and be clearly focused on the subject of the research. Coding can be done manually or with the help of software [12]. In this research, coding is done manually. For qualitative analysis, the researcher first wrote the interviews on the paper precisely. Then the text of interviews was read several times to be fully familiarized with it and the least error happens during coding. After that, coding started. In the initial coding, the meaningful items, those parts with significant information related to research questions were sought to be identified through reading the text and comparing it with different parts of interview. For example, the interview of one of elites can be mentioned who stated that “perception and human competence of entrepreneur” shall be noticed by VC. This meaningful item means that “perception and human competence of entrepreneur” can have the code of this item. During coding, the researcher also encountered

unexpected meaningful items [5]. For example, according to one of elites, marketing capabilities is one of the most important features of entrepreneur, which shall be noticed by VC. Therefore, the researcher has coded this meaningful item.

4.2 Categorizing and Naming Codes and Themes

In the process of coding, the base themes, indicating important points in text, were first identified and then those with the most similarity and capable of making a unit meaning semantically were considered in a category. Ultimately, all themes were categorized in 16 groups, including:

- a) Financial features
- b) Product or service
- c) The features of market and industry
- d) Risk types
- e) Entrepreneur's experience
- f) The ability to patent or intellectual property rights
- g) Personal competence of entrepreneur
- h) Marketing capabilities
- i) Exit strategy
- j) Participation, responsibility and social effect
- k) The rules and regulations
- l) Innovation
- m) Personality traits of entrepreneur
- n) Investment horizon
- o) Entrepreneur's character
- p) Information asymmetry.

4.3 Describing the Main Themes

After counting the themes, in this step, the researcher describes the themes and samples of interviewees which will be shown as follows.

a) Financial Features

The first main theme of this study is related to financial features. According to the conducted interviews, financial features have sub-themes including "cash flows", "operational flows", "investment volume", "Return of capital", "the rate of capital return", "the rate of internal return", "the rate of capital cost", "net profit", "the potential of earning money", "the rate of assets return", "the high capability of liquidity" and "the time of reaching to breakeven point".

b) Product or Service

The second main theme is product or service. According to the conducted interviews, product or service include the sub-themes of “proposing a new product or service”, “the exclusivity or unique product”, “physical appearance and the manner of proposing services”, “the rate of acceptance in market”, “the need of product in market”, “competitive advantage of product”, “having high level of technology” and “the capability of exporting the product and service”.

c) The Features of Market and Industry

The third main theme is the features of market and industry. According to the conducted interviews, the features of market and industry include the sub-themes of “market size and market share of intended product”, “geographical territory of product”, “easy entry into the market”, “the rate of market growth”, “the low rate of threat in first years and the number and power of competitors”, “the acceptability of industry in society” and “the growing or declining industry”.

d) Risk Types

The fourth main theme is the risk types. According to the conducted interviews, risk type includes the sub-themes of “plan failure risk”, “the risk of commercializing the product or service”, “financial risks”, “non-financial risks” and “not returning the capital”.

e) Entrepreneur’s Experience

The fifth main theme is the entrepreneur’s experience. According to the conducted interviews, entrepreneur’s experience includes the sub-themes of “entrepreneur leadership quality and power”, “the entrepreneur’ ability in traction to the risk”, “entrepreneur’s education”, “his working history (about actualizing his previous ideas and plans)”, “making and finding opportunity by entrepreneur”, “his ability for making team” and “coping with environmental changes”.

f) The Ability to Patent or Intellectual Property Rights

The sixth main theme is the ability to patent or intellectual property rights. According to the conducted interviews, the ability to patent or intellectual property rights includes “the potential capability aspects of commercializing the plan”, “the copyright”, “the ease of copyright” and “license”.

g) Personal Competence of Entrepreneur

The seventh main theme is personal competence of entrepreneur. According to the conducted interviews, personal sub-themes of entrepreneur includes “technical and scientific competence”, “perception and human competence”, “entrepreneur’s knowledge and skills”,

“communicational skills of entrepreneur”, “the ability to make decision”, “strategic thinking” and “emotional intelligence of entrepreneur”.

h) Marketing Capabilities

The eighth main theme is marketing capabilities. According to the conducted interviews, marketing capabilities includes “brand capability and the entrepreneurs’ power of making brand”, “the capability of market-orientation and identifying market by entrepreneurs”, “interacting with customer and certain accountability to his needs by entrepreneurs” and “identifying and creating appropriate distribution channels by them”.

i) Exit Strategy

The ninth main theme is exit strategy. According to the conducted interviews, exit strategy includes the sub-themes “ownership ratio”, “being open-end or close-end”, “commercial sale and public offering”, “selling to the third party” and “selling to entrepreneur or management”.

j) Participation, Responsibility and Social Effect

The tenth main theme is participation, responsibility and social effect. According to the conducted interviews, participation, responsibility and social effect includes the sub-themes of “plan effect on environment”, “economic effect on country” and “employment”.

k) Rules and Regulations

The eleventh main theme is rules and regulations. According to the conducted interviews, rules and regulations includes the sub-themes of “monitoring policies”, “legal framework and legal knowledge”, “tax benefits” and “insurance rules as well as business rules”.

l) Innovation

The twelfth main theme is innovation. According to the conducted interviews, innovation includes the sub-themes of “new idea” and “using the new methods and technologies”.

m) Personality Traits of Entrepreneur

The thirteenth main theme is personality traits of entrepreneur. According to the conducted interviews, personality traits of entrepreneur include the sub-themes of “extroversion”, “compatibility”, “consciousness”, “neuroticism and stability”, “openness to learning” and “experiencing by entrepreneur”.

n) Investment Horizon

The fourteenth main theme is investment horizon. According to the conducted interviews, investment horizon includes the sub-themes of “lifecycle of entrepreneur or start up” and “the

duration or lifelong of plan”.

o) Entrepreneur’s Character

The fifteenth main theme is entrepreneur’s character. According to the conducted interviews, entrepreneur’s character includes sub-themes of “courageous factors”, “leading”, “co-operation”, “perfection”, “moderation”, “responsibility taking”, “justice”, “modesty”, “humanity” and “excellence of entrepreneur”.

p) Entrepreneur’s Information Asymmetry

The sixteenth main theme is information asymmetry. According to the conducted interviews, information asymmetry includes the sub-themes of “information availability for VC” and “the rate of information hiding by entrepreneur”.

4.4 Theme Network and Proposed Model

Finally, after interviewing the elites and analyzing the obtained results, the native model of decision making is proposed to select venture capital in emerging companies. In this research, after each interview, the information was rewritten and coded. After collecting all the interviews and reaching the theoretical saturation level, different codes were divided into the themes. Then the main and sub-themes were identified, and finally, after determining the main themes and sub-themes, the model and the network of the themes are drawn.

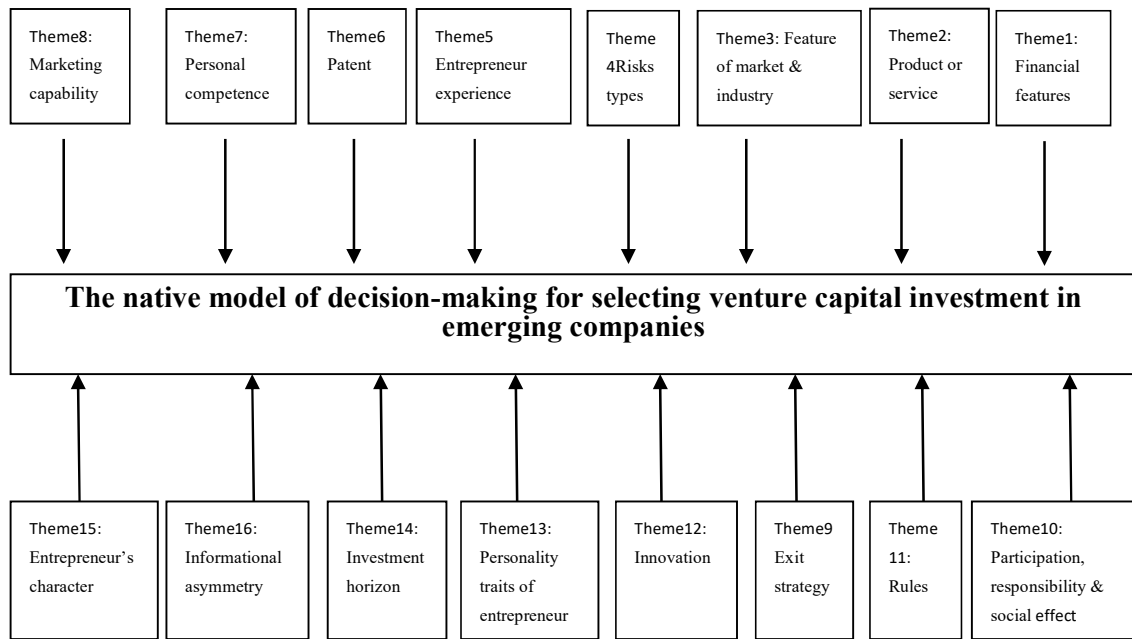


Fig. 1: Native model of decision-making for selecting venture capital investment in emerging companies

5 Conclusion and Suggestions

Investment is one of the important tools of economic development in every country. In order to finance in any kind of investments, different methods have so far been introduced. One of those is a hazardous investment called "Venture Capital", "Risky Investment" or "Private equity" [4]. Entrepreneurship and new business concepts are of the important, basic and effective subjects on economic growth and development of countries. Given the young working force and moving in modern economy, this subject has been also noticed in our country for a while. Noticing the structures and tools of entrepreneurship development such as venture capital is very important so developing venture capital has been emphasized in the country economic development plan [2]. Venture capital has still some problems in our country and many of institutions and companies, involving such investment have not been very successful because most of models of such investment have been imitated from foreign ones.

There is not a native model of decision making for selecting venture capital in emerging companies. Interviewing the elites, the main elements of native model of decision making for selecting venture capital are found in emerging companies. Qualitative method is used in this study. Also, thematic analysis method is used. For gathering information, deep interviews are used. In the case of sampling method, a purposeful sampling method, which is specific to qualitative research, is used and interviews continued to theoretical saturation level. According to this, the 16 experts who are informed about the subject or aspects of the study are interviewed and after the last interview and the collected data, the researcher concluded that according to all interviews, theoretical saturation level is reached and no more interviews are required. The proposed model in this research has 16 main themes including financial features, product or service, the features of market and industry, risk types, entrepreneur's experience, the ability to patent or intellectual property rights, personal competence of entrepreneur, marketing capabilities, exit strategy, participation, responsibility and social effect, the rules and regulations, innovation, personality traits of entrepreneur, investment horizon, entrepreneur's character and information asymmetry.

Also 86 sub-themes introduced in this model are: "cash flows", "operational flows", "investment volume", "Return of capital", "the rate of capital return", "the rate of internal return", "the rate of capital cost", "net profit", "the potential of earning money", "the rate of assets return", "the high capability of liquidity" and "the time of reaching to breakeven point", "proposing a new product or service", "the exclusivity or unique product", "physical appearance and the manner of proposing services", "the rate of acceptance in market", "the need of product in market", "competitive advantage of product", "having high level of technology" and "the capability of exporting the product and service", "market size and market share of intended product", "geographical territory of product", "easy entry into the market", "the rate of market growth", "the low rate of threat in first years and the number and power of competitors", "the acceptability of industry in society" and "the growing or declining indus-

try”, “plan failure risk”, “the risk of commercializing the product or service”, “financial risks”, “non-financial risks” and “not returning the capital”, “entrepreneur leadership quality and power”, “the entrepreneur’s ability in traction to the risk”, “entrepreneur’s education”, “his working history (about actualizing his previous ideas and plans)”, “making and finding opportunity by entrepreneur”, “his ability for making team” and “coping with environmental changes”, “the potential capability aspects of commercializing the plan”, “the copyright”, “the ease of copyright” and “license”, “technical and scientific competence”, “perception and human competence”, “entrepreneur’s knowledge and skills”, “communicational skills of entrepreneur”, “the ability to make decision”, “strategic thinking” and “emotional intelligence of entrepreneur”, “brand capability and the entrepreneurs’ power of making brand”, “the capability of market-orientation and identifying market by entrepreneurs”, “interacting with customer and certain accountability to his needs by entrepreneurs” and “identifying and creating appropriate distribution channels by them”, “ownership ratio”, “being open-end or close-end”, “commercial sale and public offering”, “selling to the third party” and “selling to entrepreneur or management”, “plan effect on environment”, “economic effect on country” and “employment”, “monitoring policies”, “legal framework and legal knowledge”, “tax benefits” and “insurance rules as well as business rules”, “new idea” and “using the new methods and technologies”, “extroversion”, “compatibility”, “consciousness”, “neuroticism and stability”, “openness to learning” and “experiencing by entrepreneur”, “lifecycle of entrepreneur or start up” and “the duration or lifelong of plan”, “courageous factors”, “leading”, “cooperation”, “perfection”, “moderation”, “responsibility taking”, “justice”, “modesty”, “humanity” and “excellence of entrepreneur”, “information availability for VC” and “the rate of information hiding by entrepreneur”. The results of this research are somehow similar to previous ones. Dhochak and Sharma [9] proposed a model for decision making on the selection of venture capital in emerging companies. The variables of entrepreneurship features, product, market features, managerial skills, financial problems, economic environment and institutional rules were used as the main factors of selecting venture capital model in emerging companies.

Eric Afful-Dadzie and Anthony Afful-Dadzie [6] proposed a model for making decision to select governmental venture capital. The variables of entrepreneurship personality, entrepreneurship experience, product, financial features, market features and social issues were used as the main factors in selection of venture capital model in emerging companies. By comparing the results of this research with model of Dhochak and Sharma [9] and Eric Afful-Dadzie and Anthony Afful-Dadzie [6], It can be concluded that the variables “the features of market and industry”, “risk types”, “the ability to patent or intellectual property rights”, “marketing capabilities”, “exit strategy”, “the rules and regulations”, “personality traits of entrepreneur”, “personal competence of entrepreneur”, “investment horizon”, “entrepreneur’s character” and “information asymmetry” are the new variables that were added to the model in the current research, as well as the variables “financial features”, “product or service”, “entrepreneur’s experience”, “participation, responsibility and social effect” and “innovation” were

common with the previous models.

Given that evaluation process of plans is time consuming and costly for venture investors and there is no native model of decision making for VCs in our country, the venture capital companies are recommended to use the 16 introduced components in this study and proposed model for decision making to select venture capital in start ups. Using the native model introduced in this research, which is proposed by the current situation in the country and after interviewing academic, financial experts and experienced managers of venture capital companies, will reduce the failure of VC companies to select entrepreneurs and emerging companies. Also, attention to the main themes and the sub-themes in the model can lead VC companies to desirable results, high returns, and the country to increase employment and economic growth. Therefore, we recommend venture capital companies to use the model presented in this study in selecting entrepreneurs and emerging companies.

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