

Proposal of Entrepreneur's Behavior Process for Overcoming Japanese Type Valley of Death in Startup Companies

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— *Review of* —
**Integrative
Business &
Economics**
— *Research* —

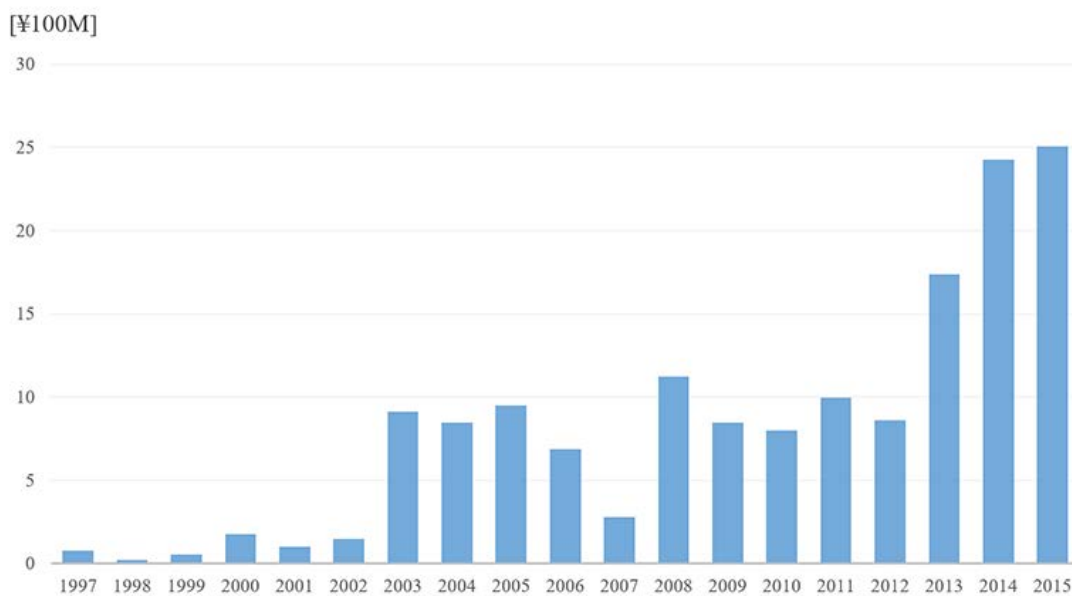
ABSTRACT

The purpose of this study is to propose a process to help entrepreneurs navigate and survive the entrepreneurial “Valley of Death.” The term valley of death is used in the venture capital industry to refer a situation when a startup company closes its business before successfully generating its steady revenues. We propose a process that includes specific behavioral actions and steps to support entrepreneurs who have not yet walked through and overcome the valley of death where various issues occur. The proposed process consists of 4 steps for creating a business and 14 themes representing behavioral actions and steps. We developed these 4 steps and 14 themes based on findings from interviews conducted with 8 entrepreneurs who have successfully overcome the valley of death. The entrepreneurs who are interested in using the proposed process can change the behavioral actions and steps they take. We confirmed the constructed process with 2 entrepreneurs and 1 company auditor. We also established validity and reliability for construction of 4 steps for creating a business by cross-checking data results and analysis from two viewpoints — the subjective viewpoint of the entrepreneurs themselves, and the objective viewpoint of the board members of the company.

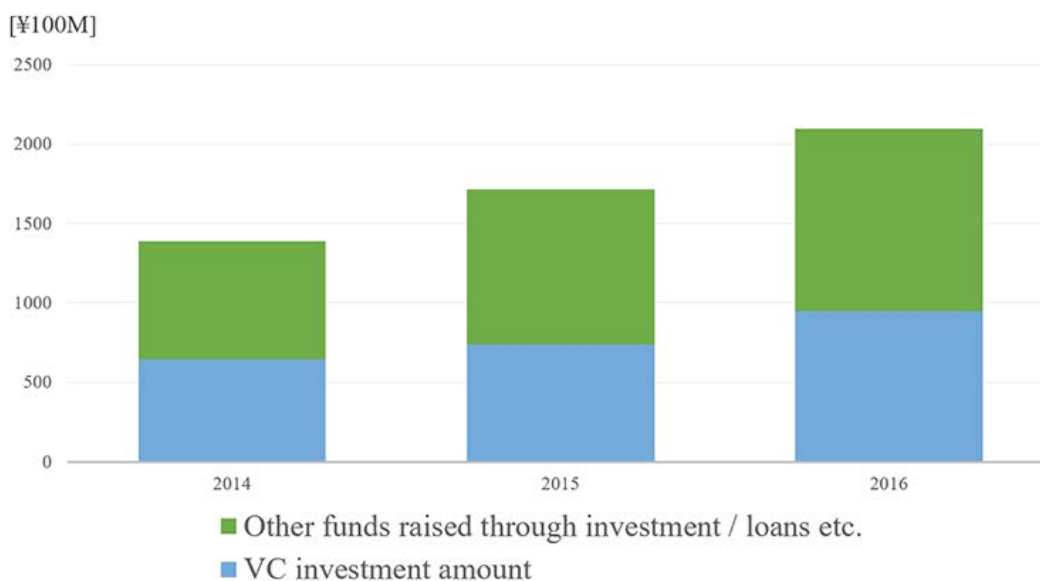
Keywords: Startup company, Entrepreneur, Japanese type Valley of Death, Behavior process.

1. INTRODUCTION

In February 2002, the Law for Supporting Small and Medium Enterprises Challenges was passed at the Diet in Japan. As a result, the minimum capital required for the establishment of a stock company has changed from 10 million yen to 1 yen. This helped increase the amount of venture investment by individual investors (Figure 1). These investors are known as "angels" who support the initial stage of startup companies, and their investment amount is still increasing (METI (2016)).



[Figure 1] Trends in venture investment by individual investors (by Japan’s Ministry of Economy, Trade and Industry)



[Figure 2] Trends of VC investment amount and venture company fund procurement amount (by General Foundation Venture Enterprise Center)

As Figure 2 indicates, investment by venture capitalists has also become active. The fund amount raised by startup companies, shown in “Other funds raised through investment/loans” in Figure 2, is also increasing (General Foundation Venture Enterprise Center (2017)).

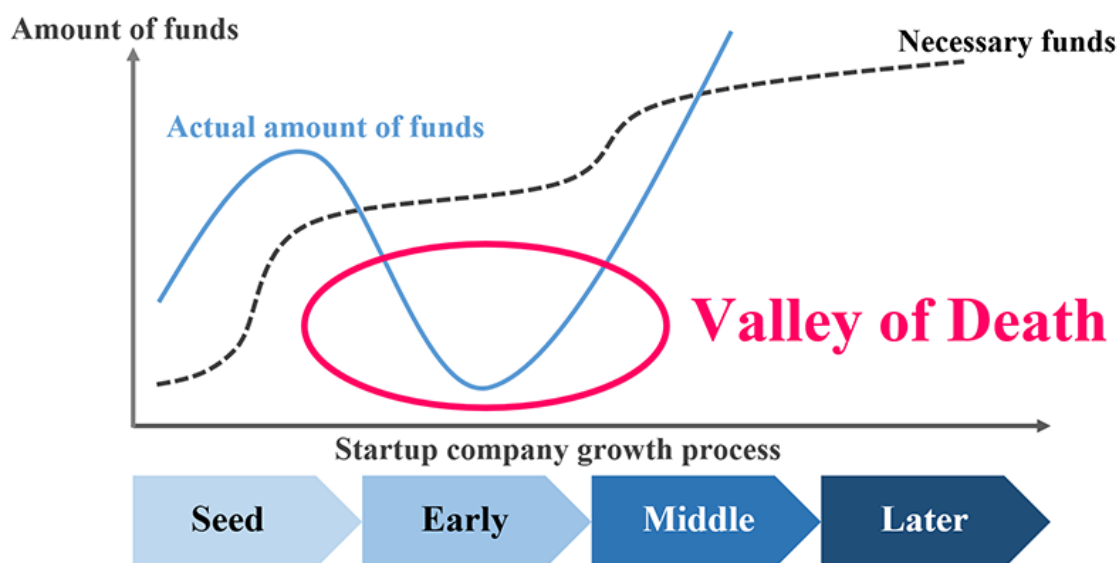
Based on the investment trends in Figure 2, the environment for obtaining financial resources has been improving for startup companies. In other words, the hurdle for the startup companies in Japan has lowered.

Although accessibility to financial recourse has been improved, the bankruptcy rate of startup companies has increased in recent years. Figure 3 shows that according to the most recent data available, the bankruptcy rate was 24.5% in 2017 (Tokyo Shoko Research (2018)). This indicates that almost a quarter (24.5%) of startup companies are expected to file the bankruptcy in the future under the assumption that they continue to place themselves in a similar business environment.



[Figure 3] Number of bankruptcies with companies less than 10 years old.
Trends of composition ratio (by Tokyo Shoko Research)

Although it has become easier to start a company, the chance of bankruptcy in Japan is still rising. The problem in terms of financing for many of the startup companies is a difficult situation known as the entrepreneurial “Valley of Death” (Ministry of Internal Affairs and Communications (2007)). The startup company establishes necessary funds in the beginning. After a while since its founding, a considerable period of time is required until profit is raised and funds are secured. The valley of death is a phenomenon of fund shortage occurring during that period. As Figure 4 illustrates, Japan has a deeper valley of death than the one in the United States (Degawa et al. (2006)).



[Figure 4] The actual state of "Japanese type of Valley of Death"
(by Ministry of Internal Affairs and Communications)

For Japanese startup companies in the early stage of founding a business, navigating and surviving the valley of death is the first significant challenge during the company's growth process. This is a barrier to overcome for their future growth.

In this study, the authors interviewed entrepreneurs who navigated and survived the entrepreneurial valley of death, overcame barriers, and continued their business. We identified 14 themes from the findings in the interviews. The 14 themes create a process for entrepreneurs who are in the early stage of the company's founding. The process includes actions and steps to take in creating a robust business that can navigate and survive the valley of death.

In Section 2 of Description of Study, we examine how the navigation and survival of the entrepreneurial "Valley of Death" has been understood in previous studies. We also define study participants and the category of the startup companies that the participants own. In Section 3, we show a process of deriving factors from our study. Then we propose the process with 14 themes, including actions and steps, for entrepreneurs to navigate and survive the valley of death. In Section 4, we show the behavior process of supporting entrepreneurs in overcoming challenges in the valley of death. Our conclusion is presented in section 5.

2. DESCRIPTION OF STUDY

2.1. Literature Review

In this section we examine how the entrepreneurial valley of death has been studied in previous literature and what suggestions were made as a survival approach.

Matsuo et al. (2012) proposed a way for entrepreneurs to overcome challenges in the valley of death through establishing a collaboration among industry, academia, and government. Degawa et al. (2004) describes one approach of surviving the valley of death as utilizing "entrepreneurship mindset and skills from large companies." Both suggested the importance of making changes in the external organization's behavior and the significance of collaborating with external organizations. Although this is an ideal approach, not all companies can collaborate with external organizations. If companies can't make a good support system with external organizations, making changes in the entrepreneurs' behavior themselves is important. This led us to focus on studying successful entrepreneurs who have already navigated and survived the entrepreneurial valley of death.

In this study, we clarified the behavior process of entrepreneurs who have overcome challenges in the valley of death. With the findings, we propose a process of suggested behavior for entrepreneurs to take in navigating and surviving the valley of death.

2.2. Selection of Study Participants and the Category of the Startup Companies

The growth process of the startup company (Obata et al. (2003)) is divided into 4 stages, namely "Seed," "Early," "Middle," and "Later." Each stage is defined in Table 1. We selected study participants from entrepreneurs whose startup companies were in the "Middle" and the "Later" stages. This is because they have experiences, knowledge, and skills for successfully navigating and overcoming challenges in the valley of death.

[Table 1] Stage classification in the growth process of startup companies (by JAFSCO)

Seed	Within 3 months of establishment
Early	Sales down to 200 million yen or less and ordinary income to 10 million yen or less
Middle	Companies that are neither seed nor early or later
Later	Ordinary income over 150 million yen

3. PROPOSAL OF THIS STUDY

3.1. Summary of valley of death

As mentioned earlier, the valley of death is a phenomenon of fund shortage occurring during the "Early" stage in a startup company's growth process. When entrepreneurs' companies are placed in the "Seed" and "Early" stages, they are considered to have not yet overcome challenges in the valley of death. Once entrepreneurs' companies are classified in the "Middle" stage and beyond, they are considered to already experienced navigating, surviving, and overcoming challenges of the valley of death.

3.2. Steps to conduct open coding of valley of death

We interviewed 8 entrepreneurs whose companies are positioned in the "Middle" stage and beyond. The purpose of the interviews was to identify necessary actions and steps of navigating and surviving the valley of death. After collecting data through interviews, open coding (Sato et al. (2008)) was carried out and 14 themes were found from 435

original comment texts. Procedures 1 to 3 of Kobayashi et al. (2017) were used as a method of open coding. The specific procedure is as follows;

Step 1. We selected something related to the behavior of entrepreneurs from the verbatim record data of the interview and decided the point of view to use for categorizing the affinity method (KJ method) (Kawakita et al. (1967)) used in the next procedure.

In order to create an action process of entrepreneurs who support overcoming the valley of death, we set the viewpoint "behavior of entrepreneurs who overcame the valley of death."

Step 2. We categorized comments in the free description column by affinity projection, with contents of similar meaning, with the above viewpoint as the axis.

Step 3. We gave names to the categories identified in Step 2. This is the open coding results.

3.3. Open coding results

These are the results of open coding of the valley of death;

- 1) Plan more than 3 years of achievable business plans
- 2) Do not carry out a business plan if you cannot imagine a successful business in the future
- 3) Know exactly what end users want
- 4) Create a business plan which clearly identifies differences from the other people's business plans
- 5) Proceed with the project as you planned
- 6) Understand your strengths
- 7) Develop a strong organization and system for making a profitable business
- 8) Have overwhelming confidence in your service
- 9) Have a hiring strategy for your team
- 10) Be as simple with your business plan as possible
- 11) Have a system in place for acknowledging efforts of employees
- 12) Implement the PDCA (plan-do-check-adjust) cycle, a repetitive four-stage model for continuous improvement in business process management
- 13) Create social capital
- 14) Think outside of the box

We confirmed the open coding results and analysis with 2 entrepreneurs who conducted interviews. Both agreed with the results and analysis. In addition, we confirmed the reliability of the results and analysis with 1 researcher specializing in qualitative survey methods and 1 researcher with experience in qualitative survey methods (Kawase et al. (2008)) (Golafshani et al. (2003)).

3.4. Building a behavior process to support overcoming the valley of death

In the construction of behavior processes, we used the process of creating a business from technical seeds (Tomizawa et al. (2016)). The process consists of the 4 steps: 1) "identification of explicit or potential market needs," 2) "value creation as a product or service," 3) "business development," and 4) "management of a growing business." The 4 steps are important for any type of business, including businesses with seeds of technology.

[4 Steps]

< Step 1. Identification of explicit or potential market needs >

Identifying market needs is necessary regardless of whether companies possess seeds of technology. It is impossible to develop customers and calculate market size unless market needs are investigated.

< Step 2. Value creation as a product or service >

Business is not created unless the products and services are of value, so it is necessary regardless of the technical seeds.

< Step 3. Business development >

Even if good products and services can be made, it is necessary regardless of technology seeds, because the company cannot make a profit without doing business development.

< Step 4. Management of grown business >

It is necessary regardless of technology seeds. If the company cannot operate the business, it cannot keep the company.

This process can be used with businesses other than those with technical seeds. In this study, this process is called "process of creating business." The 14 themes mentioned above indicate which step of the "process of creating business" step is necessary. It is shown in Table 2.

We checked with 2 entrepreneurs who participated in interview in this study about the classification of the 4 steps of the "behavior process to support overcoming the valley of death." Both agreed with how we categorized the steps. In addition, we confirmed the steps with 1 company auditor from a Japanese listed company, who agreed with the results of its construction. We established validity and reliability for construction of the 4 steps by cross-checking data results and analysis from two viewpoints—the subjective viewpoint of the entrepreneurs themselves and the objective viewpoint of the board member of the company.

4. DISCUSSION

Matsuo et al. (2012) and Degawa et al. ((2004)) suggested in their studies that changing behavior of external organizations can lead entrepreneurs to overcome challenges in the entrepreneurial valley of death. In this study, we propose an approach to change the behavior of entrepreneurs themselves in order to overcome the valley of death. For that purpose, we constructed an action process of entrepreneurs to help them navigate and survive the valley of death. The 14 themes were identified to overcome challenges in the valley of death. These themes were captured from the open coding results at each step of the "process of creating a business."

[Table 2] Behavior process to support overcoming valley of death

Process of creating business	Factors necessary to overcome the valley of death
Identification of explicit or potential market needs	<ul style="list-style-type: none"> • Need to know exactly what users want • Create social capital
Value creation as a product or service	<ul style="list-style-type: none"> • Create a business plan which clearly identifies differences in the business plan compared to competitors' business plan • Understand your strengths • Think outside of the box
Business development	<ul style="list-style-type: none"> • Plan more than 3 years of achievable business plans • Do not carry it out if you cannot imagine a successful business in the future • Have a hiring strategy for your team
Management of grown business	<ul style="list-style-type: none"> • Proceed with the project as you planned • Develop a strong organization and system for making a profitable business • Have overwhelming confidence in your service • Implement the PDCA (plan-do-check-adjust) cycle, a repetitive four-stage model for continuous improvement in business process management • Be as simple with your business plan as possible • Have a system in place for acknowledging efforts of employees

Below, we describe reasons why the 14 themes are necessary at each step of the "process of creating business."

[Reasons behind why the 14 themes are necessary]

< Theme 1: Need to know exactly what users want >

"Need to know exactly what users want" is required for "Identification of explicit or potential market needs." If you do not know what users want, it is difficult to understand the market needs.

< Theme 2: Create social capital >

"Create Social capital" is required for "Identification of explicit or potential market needs." If social capital is not made, we cannot obtain the knowledge of stakeholders and it will be difficult to grasp the market needs correctly.

< Theme 3: Create a business plan which clearly identify differences in the business plan compared to competitors' business plan >

"Create a business plan which clearly identify differences in the business plan compared to competitors' business plan" is required for "Value creation as a product or service." If it is not possible to create a differentiated business, it will be difficult to create a superior value for that business over the existing business.

< Theme 4: Understand your strengths >

"Understand your strengths" is required for "Value creation as a product or service." If you do not understand your strengths, you cannot judge what kind of strength you have in your products and services.

< Theme 5: Think outside of the box >

"Think outside of the box" is required for "Value creation as a product or service." If you are caught in an existing concept, you cannot think beyond the boundaries of an existing business and it will be difficult to create new value.

< Theme 6: Plan more than 3 years of achievable business plans >

"Plan more than 3 years of achievable business plans" is required for "Business development." We cannot carry out a project without specifying detailed goals for maintaining the project in the medium and long term.

< Theme 7: Do not carry out the plan if you cannot imagine a successful business in the future >

"Do not carry out if you cannot imagine a successful business in the future" is required for "Business development." If you try to do something without a successful image, you will have difficulties in running the project.

< Theme 8: Have a hiring strategy for your team >

"Have a hiring strategy for your team" is required for "Business development." Unless a recruitment strategy can be created, even if the business grows as planned, there will be a shortage of personnel, which will hinder the results of the plan.

< Theme 9: Proceed with the project as you planned >

"Proceed with the project as you planned" is required for "Management of grown business." If there is no ability to proceed with the project as planned, the plan will not likely proceed smoothly.

< Theme 10: Develop a strong organization and system for making a profitable business >

"Strong organization and system to make business" is required for "Management of grown business. If strong sales organization and systems are not made, it is difficult to acquire sales as planned.

< Theme 11: Have overwhelming confidence in your service >

"Have overwhelming confidence in your service" is required for "Management of grown business." If the leader does not have overwhelming confidence in its service, employees who follow it become uneasy and performance will decline.

< Theme 12: Implement the PDCA (plan-do-check-adjust) cycle, a repetitive four-stage model for continuous improvement in business process management >

"Implement the PDCA cycle" is required for "Management of grown business." If PDCA cannot be turned on, it will be difficult to smoothly conduct business activities.

< Theme 13: Be as simple with your business plan as possible >

“Be as simple with your business plan as possible” is required for “Management of grown business.” If the business model is not simple, it is difficult for employees to understand the business models themselves, and management costs are required. In addition, a simple business model is made in the "value creation" step.

< Theme 14: Have a system in place for acknowledging efforts of employees >

“Have a mechanism which reflects the efforts of employees” is required for “Management of grown business.” If it is not structured to reflect the efforts of our employees, it will be difficult to maintain employee motivation. In addition, the mechanism that reflects the efforts of employees is created in the "Business Development" step.

We presented 14 themes that are necessary for entrepreneurs who move forward the 4 steps in order to navigate and survive the valley of death.

We confirmed the results of the action process to support entrepreneurs in overcoming the valley of death with 2 study participants. They provided insightful remarks about the identified themes based on their experiences and knowledge.

One participant mentioned that it is difficult to overcome the valley of death if even one of the 14 themes cannot be realized. Another participant made a comment that there is a possibility for a company to go bankrupt in less than 3 years if entrepreneurs do not focus on considering the 2 themes of "Know exactly what end users want" and "Plan more than 3 years of achievable business plans.”

Another indication was made about the relevance among the themes. The themes of "Have a hiring strategy for your team" and "Have overwhelming confidence in your own service" can be realized when the theme of "Differentiate your business from others" is carried out.

5. CONCLUSIONS

In this study, we proposed the behavior process to support entrepreneurs in navigating, surviving and overcoming challenges in the entrepreneurial valley of death. Specifically, we identified 14 themes from the interview text open coding results, which are necessary for the entrepreneurs. Each of the 4 steps in the process of creating a business included the 14 themes, and we constructed an entrepreneur's behavior process to help them move through the valley of death. In the future, we will confirm whether an action process is appropriate to support the entrepreneurs by interviewing experts. As a future task, we will also propose the action process for entrepreneurs who have not yet overcome the valley of death. This will help us understand the effectiveness of the proposed behavior process in this study.

ACKNOWLEDGMENTS

The authors wish to thank M. Nakada of the Graduate School of System Design and Management at Keio University for sharing feedback on an earlier version of this paper.

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