Original Article

How Start-up Ecosystem and Public Administration Support Entrepreneurs in Surviving the Valley of Death

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Abstract

This paper provides the discussion on how start-up ecosystem and public administration play important role in helping start up to survive Valley of Death. Most startups do not advance beyond the early stage of development and face challenges of sustainability and enter the valley of death. Within an ecosystem there is sufficient proximity between key actors so that fast progress is possible. Mentorship that combines business, tech, and health can be very helpful. Startups need to collaborate with their stakeholders such as academic and research institutes and people with relevant know-how and business skills. Government support through public policy making is important to bridge the entrepreneur into ecosystem. Policy should provide a better business environment or infrastructure, allocate more funds for commercialization of innovations, construct facilities for entrepreneur and tax breaks for new and striving businesses.

Keywords: Entrepreneur, start-up, valley of death, public administration

Introduction

Startups are considered as an important players in Indonesia’s digital transformation. This is evident in the government’s target of encouraging the emergence of three new unicorns-startups with a valuation of more than $1 billion each—as outlined in the Medium-Term National Development Plan (MTNDP) for 2020–2024. This goal has been surpassed. By 2022, nine new unicorns have emerged, in addition to the five that existed in 2019 (ADB, 2022). Sustainability remains a key factor for entrepreneurs to help transition towards sustainable ASEAN economies. An estimated 393 tech investments in Southeast Asia in the first half of 2021, with 70% are coming from Indonesia and Singapore. While in Indonesia accounted about 51% of capital invested (Marsan, Sabrina & Jin, 2020).
SEADS (2023) reported that Indonesia’s startups began to rise in the 2000s, with their number increasing rapidly. As of 2022, Indonesia has a total of 2,431 startups. The increase in startups has been helped by ecosystem development. Now, there are about 120 incubators and accelerators in Indonesia, as well as 200 financing institutions that cater wholly or partially to startups. With the improvement of digital infrastructure supported by the product of public administration by the government, people in Indonesia more accustomed to buying products and services online offered by or through startups. Governments through regulations and policies at the national and city levels have played a role in introducing programs for startups and incubator programs to support them. However, most startups do not advance beyond the early stage of development and face challenges of sustainability and scalability. They enter the ‘valley of death’—a high-risk period in which they try to reach scale in an environment of competition, uncertainty, and creative disruption (SEADS, 2023). Valley of Death (VoD) is a situation when new businesses cannot break even. It is also described as the inability of a startup to have a breakthrough. Valley of death is defined as a funding gap (e.g. a failed technology commercialization, or a lack of startups’ governmental support. Considering these explanations, hence valley of death regarded as an unfavorable business condition that any new enterprise during their early life cycle. (Gbadegeshin et al., 2022).

Indonesia’s size and market potential is large and continues to make it an attractive market for start-ups and investors. This market potential attract the development of strong entrepreneurship ecosystems in major cities. However there are key factors challenging the situation such as (1) the unequal development and access gaps between different cities; (2) key talent shortages undermining the ability of local start-ups to perform to their maximum potential; and (3) complexity in starting and operating a business in Indonesia (Shenov & Tan, 2021). Startups in technology need an ecosystem support that differs from the assistance provided to traditional small enterprises. The ecosystem should comprise not only dedicated government policies and programs, but also financing solutions, support from incubator and accelerator programs, and talent development (human resources) versed in technological innovation, but also in inventing new business models. The ecosystem includes public and private. Building the ecosystem is critical to developing a vibrant community of tech startups. Startups are supported by the key components of the ecosystem. The components of the ecosystem: (1) incubators, (2) accelerators, (3) finance, (4) government programs as fundamental aspects of the ecosystem, and (5) digital infrastructure for accessible through the internet (Bachtiaar et al., 2023). Startup ecosystems are the union of localized cultural outlooks, social networks, investment capital, universities, and active economic policies that create environments supportive of innovation-based business (Ziakis, Vlachopoulou & Petridis, 2022).

The government can manage public policy successfully by using tools by policymakers to influence society in a politically desired manner such as to stimulate the economy. Entrepreneurship can be encouraged with specific targeted support, such as technology assistance to small firms, to general macro policies to maintain a stable economic environment. Entrepreneurship policy in a much broader concept aimed not to stimulate firms but to support an economic system that encourages socially productive entrepreneurial activity by individuals acting independent of business form (Henrekson & Stenkula, 2010). Public administration having important role in constructing the policy to support the entrepreneurship ecosystem. Vogel (2013) suggest that an interactive community within a geographic region composed of varied and interdependent actors (e.g. entrepreneurs, institutions and organisations) and factors (e.g. markets, regulatory framework, support
setting, entrepreneurial culture) that evolve over time and whose actors and factors coexist and interact to promote new venture creation. On their paper, Hermanto & Suryanto (2017) mentioned that pillars of the entrepreneurship ecosystem consists of eight components, among others: (1) accessible markets, (2) human capital/workforce, (3) funding & finance, (4) support system/mentors, (5) government & regulatory framework, (6) education & training, (7) major universities as catalysts, and (8) culture support.

**Methods**

This study uses literature to find references to relevant theory with the hope that researchers can assess the development of entrepreneurship ecosystem and how the startups can survive valley of death. References to theories obtained by the literature studies serve as the foundation and a major instrument for research practice. The data obtained by examining documents, research paper, browse material source through internet, and relevant sources. The descriptive analysis method is performed by describing the facts, and by providing an understanding and explanation.

**Results**

The Valley of Death is a term used to describe the period between the start of a company’s development and its commercialization, during which it is particularly vulnerable to failure. For startups and entrepreneurs, this is a critical phase as they face significant challenges in securing funding and developing their product or service. The Valley of Death is a complex and dynamic environment, and startups that can navigate this period successfully are more likely to succeed in bringing their product or service to market. The term comes from plotting the shape of a company’s cash flow onto a graph. About 70% of startups fail during years two through five (Gupta, 2023).

![Figure 1. Illustration Of Valley Of Death From Business Initiation To Commercialization](source: Espinoza et al, 2020).

The valley of death is a challenge that every startup must face to be successful. However it can be overcome only with the right combination of preparation, perseverance, and creativity. By embracing the right mindset, seeking out the right resources, and engaging in smart risk management, startups can rise from the valley of death to be stronger, more resilient, and more poised for success. Government support for the development of the startup ecosystem through
tech startup ecosystem and talent development. Indonesia’s territory is large, and internet connectivity across the archipelago is a major challenge. Only 36% of villages have access to a base transceiver station (BTS) and only 64% of villages have a strong internet connection. Disparity in infrastructure leads to disparity in local startup ecosystems in smaller cities and rural towns. In this context, development start up technology in the agriculture suffers considerably from the lack of internet connectivity. The lack of internet connectivity resulting difficulty in the development of the startup ecosystem and talent pool at the local level. On the one hand, the startup talents’ skills are difficult to develop without better internet connectivity (ADB, 2022).

Survey conducted by Simamora, Hidayati & Alghifari (2023) indicated that the majority of start up in clean technology or green technology rely on founders’ personal savings as their main source of funding. On their survey shows that only one startup, Swap Energy, has reached the pre-series A funding round. Other cleantech startups are either still in the bootstrapping phase or at the pre-seed stage. The survey reveals that most of the still-operating cleantech startups foresee a relatively short livelong due to fund availability. About 22 of them can only sustain their operations for the next 1 to 6 months before running out of cash, while only 11 startups claim to have a possibility to be run more than 12 months. According to data from the Indonesian Business Incubator Association (AIBI), there are over a hundred incubators in Indonesia, with many of them being university affiliated. In their survey of 34 incubators, accelerators, and venture builders, it was found that the clean energy sector was not a priority sector for most respondents. The top sectors of preference were retail and consumption, agriculture, and the environment. Among those that have supported cleantech startups, about 60% have incubated energy efficiency startups, while other clean energy technologies they have supported include Solar Photovoltaic Cells, wind turbines, biomass, electric vehicles, energy storage, and geothermal. The challenges faced by the incubators are lack of in-house experts and coaches with knowledge of clean energy technologies and businesses, low demand for clean energy technologies, and lastly, a high capital expenditures.

Gupta (2023) suggested that startups should validate their ideas and make sure there’s a real market demand for their product or service. This requires engaging with potential customers and getting feedback on the product or service. By doing this activities, startups can refine their offerings and reduce the risk of failure. Start-ups should seek out mentors, that are people they admire and whose expertise they value. They might be entrepreneurs in the same field or at other field but having a respected reputation, or they could be academic minds in their sector. Start-ups are far more likely to thrive when the entrepreneur can draw on the advice and guidance of a team of experienced and highly-talented mentors with a proven track record. Learn from any fellow start-ups will be very valuable as this type of advice sometimes worth more than the investment to help the businesses survive or thrive.

In order to thrive, an ecosystem needs a multiple activities simultaneously and intercorrelated. A successful ecosystem needs access to ideas and entrepreneurially minded people to pursue them. The ecosystem needs also access to talent to be recruited to work in the growth ventures. Access to capital is also critical, as without proper amount of investment capital especially the growth phases of startups are likely to stifle; expanding to new markets using simply cashflow can be too slow to reach a critical mass to beat out the competition, whereas with investment capital the companies can accelerate growth and take over new markets. Government support through public policy making is important to bridge the entrepreneur into ecosystem and to the network consists of experience and talented mentor will help the start up to have better access and able to learn from the experts to survive. Ecosystems also need to be close to the type of customer the startup serves. Government to ensure and to provide the ecosystem and the facility in making the ecosystem is easily access by entrepreneurs to help them survive in
navigating the business to go through valley of death.

Yani (2018) suggest that pragmatism shows governance as collaborative institutions - public, private and quasi-public-private agencies - and active involvement of citizens to better resolve public problems and to achieve common goals based on useful approaches. It requires institution of government such that those having the renown and power which goes with the exercise of these functions shall employ them for the public and do not turn them to their own private benefits. The important role of institutions and reality social idea are interrelated in the context of causal nexus between action and outcomes. Something is institutionalized that it involves a tough body of customs, ingrained habits of actions, organized and authorized standards and methods of procedure. Acknowledgment of institution in pragmatism follows the pragmatism perspective of rationality as “an outcome of the social process, a set of mental habits developed over time, which has become regulated and institutionalized.

The suggestion is aligned with the study by (Järvilehto, 2019). He suggested that within an ecosystem there is sufficient proximity between key actors so that fast progress is possible. Entrepreneurs meet to exchange ideas and interact with universities and other talent pools to attract employees. Support functions like legal firms and accountants learn by interacting with the entrepreneurs the peculiarities of startups and can thus serve the startups better. Investors learn to understand better which types of entrepreneurs, teams and startups are most likely to succeed, and by enabling radical growth. Organisations such as accelerators, university networks and venture builders work closely with founders to provide guidance and a nurturing environment for our impact entrepreneurs to grow their ideas from seedlings to self-sufficient organisations. Awards and competitions help in raising awareness on the achievements of social entrepreneurship.

SEADS (2023) found that while Indonesia has produced some unicorns and even a decacorn, the ecosystem has weaknesses. One of the weaknesses is funding which is scarce in the early stages. The number of incubators and accelerators has increased but the quality of some of them remains questionable, especially in providing sector-specific and real-world business advice. Other weakness is the need of experienced mentors. More mentors are needed to guide startups in their early and growth stages. Further, SEADS (2023) suggest that the other weakness is digital infrastructure. Digital infrastructure needs to be improved to increase internet speeds and expand coverage of high-quality services beyond the major cities. Given such challenges, three areas can be focused on to improve Indonesia’s startup ecosystem: (1) the quality of incubators and accelerators, (2) financial access for early-stage startups, and (3) talent development. Incubators and accelerators get the advantages from improved staffing, especially employees with more business knowledge, and experienced mentors with sector expertise. Early-stage startups are difficult to convince equity investors to provide funding, highlighting the urgency to find and develop alternative sources for capital and support is needed. Finding good talent has also been a challenge because of short supply and competition from large companies in hiring. This is on top of the need for better geographic distribution of support.

The recommendations for four market segments by SEADS (2023) are technology startup in agriculture (agritech), education (edtech), green-technology (greentech), and health technology (healthtech). For agritech, it is suggested to improve local government support to link startups with farmers. By getting closer to the sector, startups can better understand farmers’ needs and the farming context. Nurture skilled talent in agriculture, to increase investment in farms. While in edtech, it is suggested to increase media coverage of edtech performance and benefits to attract more investors. To explore the use of technology, including edtech products, to improve the quality of education. Greater use and experimentation of edtech products should be encouraged by education managers in schools, colleges, and universities. Effective use of digital
technologies should be included in teacher training to encourage teachers to use edtech in the classroom. Government training activities may be conducted in partnership with edtech startups, either fully online or in hybrid form. In healthtech, it is suggested to encourage incubators and the use of mentors who specialize specifically in healthtech. Mentorship that combines business, tech, and health can be very helpful, as can dedicated rather than generic incubator and accelerator programs. Lastly, in the Cleantech, SEADS suggested to provide cleantech-specific incubators and accelerators. Given the techno-specific nature of the sector, startups need incubators and accelerators, and associated mentors who can provide a deep understanding of cleantech and related markets. Develop networks and platforms to consolidate cleantech expertise—domestically and abroad. Promote impact investments in cleantech. Demonstrate the social value of greentech and other impact investments. Enforce environmental regulations to stimulate demand for greentech. Ensure that decentralization policies are cohesive. Overlapping authority under decentralization policies pose a challenge for cleantech. Clear agency access points for greentech startups are needed at both the national and regional levels. This will ensure a more continuous engagement process with all levels of government. Jucevicius, Juceviciene, Gaidelys & Kalman (2016) suggested that one of the key challenges for every innovation ecosystem is bridging the Valley of Death. The Valley of Death means the gap that emerges between the research economy and commercial economy, between the technologies and ideas that emerge from public funded research environment and the practical implementation in the marketplace in the form of commercially viable products and services. The early stage of product development, which is based on technology demonstration, customer validation, co-piloting and prototyping. This stage calls for the allocation of substantial resources with unclear return on investment (ROI) and a high rate of failure (often nine out of ten investment projects fail).

Gbadegeshin et al (2022) on his study found that business enterprises need to get more funds to finance their activities. It is recommended that startups need to appeal to business angel, venture capitalists, and government grants for alleviating their financial hurdles during pre-commercialization stages. The use of government subsidies to sail through Valley of death is crucial for startup. Early commercialization of technologies is suggested to limit the impact of valley of death on the startups. Relevant stakeholders in the startup ecosystem should help to manage valley of death problems and help businesses grow during the critical transition. Startups need to collaborate with their stakeholders. Collaboration with academic and research institutes is important. Having people with relevant know-how and business skills is essential. A diversified team, where individuals from different backgrounds and with diverse competences that complement one another, brings strength in the business.

Startup teams recommended to look for knowledge on specific technology supply chains, both industrial and market information that might influence in different aspects of a product’s supply chain. Factors such as competition, suppliers, and customers information are of essence for the successful commercialization of a new technology to go to the markets. By adopting good governance and good public administration approach; governments should provide a better business environment or infrastructure, with the emphasis on the need to allocate more funds for commercialization of innovations, construct facilities for entrepreneurial use, offer tax breaks for new and striving businesses, and provide subsidies for these organizations. On their paper; An & Zhang (2021) provide recommendation for the solutions for startup to be able to pass the valley of death successfully. According to them; governmental coordination and institutional support regarded as effective means to relieve high-tech startup from valley of death. Further, they provide example that Germany succeeded in the enabling smaller firms to grow faster than larger firms, the main reason for this was the establishment of the Neuer Markt, a financial institution established by the government to support in the development of SMEs. In order to remedy the
undersupply of credit to startup, various government and donor initiatives are established in Japan, such as the credit guarantee scheme (CGS), which is aimed at reducing the gap between supply and demand in startup finance. In the United States of America, some of the most dynamic firms received R&D support through federal government programs during the early stages, including Apple, Federal Express, and Intel. This program was orchestrated through the Small Business Innovation Research (SBIR). Gbadegeshin et al (2022) suggested that the public infrastructure of innovation ecosystem for piloting, validation, prototyping, scaling-up and demonstration of new technologies / ideas play an important part in overcoming the valley of death. Such infrastructure helps to spread and reduce the individual risk of enterprises and lower entry costs to the new players. As a result, the potential investors are eager to participate in innovation-related undertakings as the prospects of profitability are increased.

Conclusion

The valley of death is a complex and dynamic environment. When the startups can navigate this period successfully are more likely to succeed in bringing their product or service to market. To survive valley of death, startups should validate their ideas to make sure real market demand for the product or service. Startups can refine their offerings and reduce the risk of failure. Start-ups should seek out mentors, that are people they admire and whose expertise they value. They might be entrepreneurs in the same field or at other field but having a respected reputation, or they could be academic minds in their sector. Start-ups are far more likely to thrive when the entrepreneur can draw on the advice and guidance of a team of experienced and highly-talented mentors. Government support through public policy making is important to bridge the entrepreneur into ecosystem and to the network consists of experience and talented mentor will help the start up to have better access and able to learn from the experts to survive. Ecosystems also need to be close to the type of customer the startup serves.

Suggestion

Government to ensure and to provide the ecosystem and the facility in making the ecosystem is easily access by entrepreneurs to help them survive in navigating the business to go through valley of death. The public infrastructure of innovation ecosystem for piloting, validation, prototyping, scaling-up and demonstration of new technologies will help entrepreneurs in overcoming the valley of death. The infrastructure helps to spread and reduce risks and lowers the entry costs to the new players. Governmental coordination and institutional support will help in alleviating startup. Further study is needed to learn the effectiveness of own entrepreneur efforts in managing and sailing the valley of death; as well as study of effectiveness of public administration support to entrepreneurs.

References


SEADS (2023). Indonesia Needs to Strengthen Startup Ecosystem to Ensure More Companies Survive the 'Valley of Death'. South East Asia Development Solutions. 21 November 2023


Yani, A., A. (2018) "Reframing Concept of Governance in Public Administration Researches: A Philosophical Discussion," BISNIS & BIROKRASI: Jurnal Ilmu Administrasi dan Organisasi: Vol. 25 : No. 1 , Article 1. DOI: 10.20476/jbb.v25i1.9719 Available at: https://scholarhub.ui.ac.id/jbb/vol25/iss1/1
