

Contribution to the Impact of Incubator on Nascent Startup Performance

-- From Agency-problem Perspective

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Abstract: This study provides a novel model to discuss the function of incubator on startups by combining agency theory and social capital theory. The analysis is based on the assumption that the agency cost in startup business operations results in higher information asymmetry for creditors and equity investors in firm evaluation, which leads to more obstacles to a startup's access to funding. The emphasis is on the startup's operating environment from the perspective of goal-directed conflict and information asymmetry. The inference is conducted based on antecedent literature that mainly relied on social capital theory, and we try to shed light by adding agency theory to extend the boundaries of current studies. The implications of this result indicate the improved efficiency of utilizing an incubator in alleviating the complexity of a startup's operating environment. The study provides insight into future policy making in startup development and incubator-related assistance.

Keywords: startup, agency-problem, incubator

1. Introduction

Over the last 20 years, we have seen the tremendous stories regarding overnight-success of startups becoming industrial unicorn and giant. The nature of innovativeness, flexibility, and potential of growth in startup has been seen as the robust power to local economy and employment. According to the LEADIEO research institute [1], there were 271,000 startup firms founded from 2017 to 2019 in mainland China, which overall contributed approximately 4.167 million jobs. However, the data shows the astonishingly low survival rate of startups. Chinese small and medium business has merely average operating life 3-5years with 50% discontinued operation in 3 years, and the situation of startups are speculated even worse.

There are many arguments stating that the fundamental reason for a nascent startup's low survival rate is substantially due to a lack of access to resources. The limitations of smallness, access to finance, lack of market information, and immature management skills signal a lower survival rate for startups [2]. From the perspective of supply chain management, it is indeed overarching that the company's ability to efficiently manage the value-added process is crucial to its performance [3]. The lack of capabilities of accessing and managing resources is the subsequent result from both

environmental and startup internal problems. Financing is considered to be hierarchically important as it is determining factor to the ability of startup's resource obtainment. A startup is generally experiencing higher agency costs from its external operating environment than a mature firm, and this would further increase the agency cost to its potential debtors and investors, which would also improve the cost of the startup's opportunity to capture the financing resource [4]. The agency cost deteriorates a startup's operating efficiency as the dilemma of lacking financing support continues in the long term. Thus, it is crucial to pay attention on the agency-issues involved in startup's operating environment as the causality is ultimately linked with the efficiency of accessing resource. This paper aims to analyze the mediating factors of the agency problem related to the startup operating environment and how the utility of an incubator alleviates the issue.

Startup entrepreneurial firm, regardless of the member of which industry, its ultimate goal is to demonstrate the value of 'raw material' to the end customer through the 'manufacturing' or handling process. Thus, the firm is in the position of collaborating and coordinating with upper and lower agents (e.g., suppliers, logistics, administrative, and other contractors) to deliver the value proposition to the market, which is decisive to its growth and survival. From the general perspective of principal-agent theory, hypothetically, it could occur whenever there is a contractual relationship [5]. Such comprises of operating environment and nature of business destinies the higher uncertainty of raised cost from its external agents.

Incubator as its literal meaning, provide different kinds of assistance and resources such as management training, up-to-date market information and conservatory environment to facilitate operating efficiency of incubatee. The incubator reduces the information asymmetry by supporting startups to construct comprehensive managerial systems and routines, which reduces the early startup agency cost when dealing with material suppliers, external professionals, and seeking for local administrative subsidies, etc [6].

2. Literature Review

The implications of efficient market theory [7] applies extensively in economics, which is defined as a market price that fully reflects the available information. Theoretically, the nascent startup should be able to obtain resources in the most efficient way possible, which has been identified as crucial to the survival of the firm. Agency-cost is the realistic cost raised from the company operation, the Jensen and Meckling [4] proposes the incentive effect of utilizing debt and equity involved in managerial behavior. The literature explains the reason for the bank's investment restriction over the company's lending, as the manager-owner of the company is presumably going to favor investments with high risk, for which the creditor would bear most of the risks if it fails [4]. Similar for the equity investor, the information asymmetry causes the investor's suspect on the true value of firm. Beside the startup-creditor or investor relationship, the startup itself is also facing high agency costs due to its nature of newness, which results in a low capability to obtain correct information and identify the behavior of the agents that are collaborative with its business operation. It further extends the level of information asymmetry to potential funding providers in evaluating the firm's value. For example, the empirical result of Rottenburger and Kaufman [8] recommends that a nascent startup has a relatively high possibility of receiving deceptive behavior from the sales team compared with mature firms. The cost of receiving such deception can imaginably take the form of a non-immediate reflection in the firm's financial performance but might have a long-term effect on the development of the startup (e.g., a potential lawsuit over a key competitive patent). Thus, it is more difficult for startups to capture funding opportunities due to the high potential agency cost to creditors and debtors, which is a crucial factor in their survival.

2.1. Information Asymmetry

The assumption of information asymmetry regarding nascent startups is that they are unable to efficiently filtrate correct information when collaborating with external agencies (supplier, government supervisor, service provider) because of their newness and lack of internal control and ultimately will be taken advantage of. There is fruitful literature regarding the association of access to information or the source of information with the performance of startups. Bandera and Thomas [9] suggests that high-tech companies which has long-term collaboration with external agent(government administrative, universities, mature firm peers)enormously outperform its peer firms. The finding is outlined by Gonzalez [10]. The empirical findings in this study demonstrates the positive correlation between building long-term relationships with key resource providers and startup survival rates.

2.2. Agency-theory Relation with Nascent Startup Performance

As important as other factors, agency issues involved in daily business-to-business activities also aggravate the performance of nascent startups. Eisenhardt [5] concludes the general element of concurrence of agent-principal problem, the parties with different objectives and risk preference engaging in the collaboration while principal having difficulties to identify behavior of its agent. Additionally, Jensen [11] concludes two mainstreams of research on agency theory, namely positivist and principal-agent. Principal-agent is more relevant in our case, which applies to any agency relationship such as buyer-seller, service receiver-provider, and any contractual employment. Those studies are connected with the assumption in our paper that nascent startups are engaging with different agents in processing their value proposition for the market and are having difficulties verifying external agents' behavior.

2.3. Incubator Assistance

According to Allen and McCluskey [12], there has been a huge development in different incubators with varieties of forms that are basically categorized as for-profit, non-for-profit, and academic-based, all of which provide affordable real estate and business development services. Allen and Rahman [13] states that such services and facilities are of one set-up arrangement, and it creates synergy which lowers the cost of overall startup operating. This claim is underpinned by a few papers [14-15] using comparative and survey-based mythology and demonstrating the positive effect of geographic clustering on startup performance. Hulsink and Elfing [16] points out that incubators with different backgrounds would have different objective priorities. This implicates the potential agency-problem opportunity, which is discussed in the later section. The antecedent assertions might indicate that an incubator could be the solution to the failure of startups. Nascent startups have few open-source alternatives other than incubators, science, and other outside entrepreneurial institutions to improve their operating efficiency at the early-stage [17].

3. Incubator Alleviation

3.1. Symmetric Goal of Interest

The study provides an overview of incubator evolution and define the general functions of the three generations of incubators. Rental and services are two universal assistance programs provided to the incubate [18]. Higher generations of incubators have a larger percentage of business support services in their value proposition as the incubator's generation evolves [12, 18]. Antecedent studies

categorize incubators into four types ¹: There are many other forms of categorization on incubators, but our discussion focuses on the goal of interest in lined with startup to reduce the agency-problem involved in the startup early stage. The framework identifies the selection criteria for incubators to choose the tenant firms, whereas there is little written with regard to incubatees' applications for incubators [19]. Since incubators with different backgrounds of funding differ, the emphasis on objectives ought to vary [12]. Thus, beside the relevant knowledge, facility, and other features, startup firms need to apply for an incubator by considering the goal of conflict. For example, the primary objective of a for-profit seed Capital incubators are mainly associated with the capitalization of investment [12], and if the business development plan of a startup is regarded as R&D and innovation-oriented, it might encounter a conflict of goals as a seed capital-based incubator's primary goal requires the high growth of investees to return a higher yield. The indicator of incubator's objective is generally implied by its funding source and assessment of outcome.

3.2. Filtering External Parties

Despite the heterogeneity of an incubator's background and emphasis on objectives, business support services are generally provided in addition to the facility. Business support services include professional training, networking activities, and resolution of other business matters [15, 19]. Professional training services, including accounting, tax, marketing, and entrepreneurship, promote immature entrepreneurs to update information and knowledge with external expertise. Most importantly, the information from the enteral parties is filtered by the incubator before being conveyed to the incubatees, which alleviates the agency's dilemma of selecting the source of advice and reduces the cost associated with uncertainty.

3.3. Facility Efficiency

According to the China Torch Statistical Yearbook 2017 [20], there were 3225 operating incubators at the end of 2016, owning a 100.07 million m² facility for incubatees, which on average provided 310,000 m² per incubator. In addition to the larger scale of economics, government subsidies occupied approximately 30% of incubator total income from 2014 to 2017 on average, and many of those subsidies and state-owned incubators required compulsory cut-offs on tenants' rent. This would ensure a lower cost of rental for startups and improve their early-stage efficiency by avoiding the possibility of encountering leasing deception and wasting money on overhead costs. Facility resources are a necessary element for most business types. The nature of a small startup indicates a relatively limited demand for leasing requirements, resulting in less or no benefit from economic scale. Additionally, the potential agency-issue might encounter when searching for office renting as startup is much more easily to receive deception than mature firms [2]. One of the basic functions of an incubator is to shelter premature startups by providing an affordable turnkey office and sharing administrative services [18]. This would largely reduce the fixed cost to ensure the startup's stability of operation and reduce overhead costs as the sharing services are amortized among several incubatees.

3.4. Clustering and Information Asymmetry

Many studies based on social capital theory indicate the positive effect of same-industry clustering [14-15]. As discussed in the early section, the importance and startup deficiency of social capital are closely related to its survival. Incubators, as organizational institutions, naturally create an

Incubator Types From [12]

1. for-profit property development incubators; 2. non-profit development corporation incubators;
3. academic incubators; 4. for-profit seed capital incubators; 5. private-public; 6. organizational incubators

environment that gathers firms with similar attributes. The incubator reduces the costs raised by information asymmetry to improve the startup's operating efficiency by creating a greenhouse that contains filtrated information. The joint activities and incubators' daily management enable firms to share information, value, experience, and even collaborate on projects. The MG50 example in [15] demonstrates the non-hierarchical structure of an incubator where firms do not merely share the physical location; they also participate in the same job and share the success. Such an environment creates synergy within the networking relationship and, more importantly, enhances the information sharing, which includes market dynamics, value propositions, business development, and other supportive advice. To conclude the functions of the incubator in their contribution towards conflict of interest and information asymmetry, the proposition is that the resources and services provided by the incubator are supportive of information exchange and cost effectiveness. From the conceptual framework constitute in Eisenhardt [5], one of the element involved in the agency-problem is the information asymmetry. Through the early discussion on how the incubator facilitates information flow and utility, the following proposition is made:

Proposition 1: The incubator reduces the startup's level of information asymmetry by providing services that expand the startup's access to different information sources.

Given the venerability of startups in their early stages, frequent communication with credible experts and industrial peers is a great opportunity to obtain knowledge and information. This mitigates the information asymmetry, as the interactive activities of the incubator are facilitating the situation where startups have difficulty identifying external parties and have limited channels to access critical information. Since it is known from Eisenhardt [5] that the agency problem could arise from the contractual relationship where the principal has difficulties monitoring the agent's behavior, the deception behavior can easily occur between startup and its business partner as mentioned in Wagner [2]. Incubator alleviates the startup's agency-cost involved in interaction with external parties by filtrating trustworthy professionals and networking connection. Although the relationship between the incubator and incubatee also indicates the potential for an agency problem, incubators whose business priorities are consistent with those of the incubatee would ensure their best efforts in providing cost-efficient facilities and reassuring services. Despite the various types of incubators, a consistent goal and level of interest can be achieved if the startup selects the most suitable type of incubator compatible with its business plan, as discussed in the early section. Startups should focus on applying to incubators whose priorities are the same or similar to the firm's business plan to ensure the lowest risk of encountering the potential agency problem.

Proposition 2: The incubator, with the same emphasis on business objectives as a startup, reduces the agency costs raised from the startup's business partner.

4. Conclusion

The antecedent literature Bandera and Thoms [9] focus on investigating social capital in relation with the startup survival indicating the significantly positive correlation between the utility of social capital and startup survival, whereas the availability of social capital is found insignificant in such relation. The implication of the literature suggests the failure of startup's information deficiency, which is lack of channel to receive information of valuable resource. This is supported by several literature asserting startup collaborating with more than one party has higher rate of survival [10,14] Thus, we analyzed the relationship of a nascent startup with an agency problem from the perspective of information asymmetry and the goal of conflict. Through our analysis, we assert that the fundamental reason for startup companies' deficient access to resources and capital is a result of information asymmetry and conflicting goals when interacting with external parties. This fills the gap of antecedent literature which concentrates on investigating the link between crucial resource utility and firm's survival. The new analysis extends the boundaries of social capital theory to startups,

where the emphasis is on the investigation of why access to resources is limited and costly. The perspective from the agency problem also enables us to further discover the relationship between a startup's survival and social capital and propose a new framework for future policy, research, and assistance to startups.

Building the information unobstructed ecosystem is crucial to improve the overall exchange of resource and idea. The analysis brings the new perspective to government administration for future policy making. The implication of governance over startup policy is to enhance the intensity of instruction for startups to obtain available resources. The study provides a new approach to evaluating the pain points of developing local startups. It is suggested to consider more the question of how to obtain such resource than merely inform firm which resource are available.

Incubator is one of the few solutions that can help startup firm in facilitating information exchange, external party filtration, low cost of facility, and consistent goal of interest with correct selection of incubator. Those overall enhance the operating efficiency of startup. However, it is currently difficult to collect credible and sufficient data on nascent startups to further consolidate our analysis. It can be seen as a contribution to future case studies or empirical research on nascent startups in which the aspect of agency issues in relation to startup operations is no longer sparse. The core idea is to develop a more rigorous and systematic theory to explain the relation between agency problems and startup operations, and then we can generate a better solution to help firms in their future development. Additionally, we call for professionals, entrepreneurs, and academics to participate in building a comprehensive startup database, as much of the research could not be implemented without credible data, just as in this paper we are constrained within the conceptual discussion. It is crucial in developing valid government policy, research and operating decision.

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