

STRARTUPS: CONTEMPORARY FORMS AND CHALLENGES

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Startups are new businesses based on an innovative idea with the goal to find markets for their innovative products and hold their share of such markets, and capable of rapid growth and substantial revenue generation in a short period of time which drives the success of the startups and their increasing role in the economic growth. Obviously, there are also many startup failures, caused essentially by the risk of innovation and the uncertainties surrounding the activities of the startup companies. In this sense, the aspect of exploring the challenges obstructing the development of startups and their failures becomes particularly important. The article attempts to analyze the international practice of the more common practical challenges the startups face and assess the underlying causes, along with presenting the structured integrity of such causes based on their substantive features – starting from the level of the life cycles of the startups up to the institutional level. This review will help the Armenian startups to avoid, as much as possible, such problems and, thus, also failures, which already have substantial share despite the solid cases of success the startups have had in Armenia.

Key words: startup projects, startup company/startup, startup ecosystem, boosting economic growth, barriers to development, challenges startups face.

Introduction

Startup projects are capable of accelerated growth, job creation and outgrowing into large companies with increasing profits in short period of time, thus turning into a key driver of the economic development. This trend of fast-paced growth and development into large companies is driven by the fact that the goods and services offered by the startups are based on innovation, which enables market disruption and attraction of large clientele.

There are numerous startup projects globally which have largely succeeded, thus, changing the world with their products and services and improving the human life. However, there is another noteworthy specificity associated with the startup projects – they are rather risky, with great probability of failure. As some studies suggest, almost 67% of the startups do fail [1]. Furthermore, this figure may sometimes reach up to 90-95% [2]. Causes of such failures vary – from lack of entrepreneurial skills and knowledge of the startup founders to the lack of qualified human resources, lack of access to finance and inadequate level of institutionalization. Armenia is not an exception in this sense.

The establishment and development of the startups in Armenia gained its momentum since the last decade. Most of Armenian startups are creating goods or services for retail consumption and are primarily operating in the sphere of e-commerce. While few in number, some startups have started operations in finance, health care technologies, bio-technologies, as well as machine learning and artificial intelligence. Early startups include the PicsArt (photo editor with millions of downloads globally), Joomag (a leader in interactive digital publishing), GG (a mobile app for getting a ride with thousands of orders daily), Menu Group (food delivery service, active in Armenia, as well as Belarus). These startups were created and operated in a period when the startup ecosystem in Armenia was in its onset and was not developed enough to extend adequate support to and assist the startups in their development path. Meanwhile, there was no venture capital fund active in the Armenian startup ecosystem, there was no network of business angels, and finance and investment could be attracted only from relevant foreign funds, which was extremely difficult. The ecosystem infrastructure (incubators, accelerators, co-working space, etc.) was not developed. However, some Armenian startup projects did manage to succeed overcoming multiple obstacles. Meanwhile, quite a number of startups failed and did not survive.

Conflict setting

As we have already mentioned, the startups play an essential role in the economic development. In the present context of the Armenian economy, sustainable development of the startups will also boost the economic growth and development. In this regard, it is important to explore the challenges that obstruct the development of the startups and study the problems that create unfavorable environment for the development and success of the startups. The challenges associated with the development of startups and the causes of their failures are diverse. To provide a thorough review of these challenges, one should develop an understanding of the nature and profile of the startups, as well as the development cycles of the startup project before it outgrows into a viable business.

The Nature and Profile of Startup Companies

The nature of startups has been discussed a lot in the publications of foreign and local authors. Startups are viewed as a type of entrepreneurial venture, which, as a rule, is a newly founded, fast-growing viable business that brings an innovative product or service to the market.[3] From the professional perspective, “a startup is a newly established business, which aims to rapidly develop its own business model.”[4] The business model is the general snapshot of the company which gives an understanding of all the processes required to achieve the strategic objectives of the company and create a value. Steve Blank, a renowned scientist in the field and entrepreneur, has given another definition for startups from the business-model perspective: he sees the startup as “a company which is created to find an evolving and repeatable business model.”[5] According to Blank, startups should be perceived as “scalable startups” that strive to seek and find their own business model, as well as do it quickly to ensure that the value created by them have an impact on the existing market. This is the core difference between the startups and small enterprises. Summing up these definitions, a brief definition of the startup can be articulated: startups are newly created, innovation-based and fast-growth implying business-initiatives with distinguished development phases, that act in the context of risk with a view to continued improvement of their own business model, without any financial and/or operational background, being largely dependent on the private capital.

Development phases of startups.

In general, the startups undergo three main development phases: *Creation, Idea validation and Business development.*



Fig. 1 Startup development life cycles [6]

The first process of the *Creation* phase is the business idea generation. It should be a good or service based on a “scalable” business model that matches all the specifics typical of its target market. First of all, the value to be created by the business idea should be clarified. In this phase, it relates

exceptionally to idea generation, and it does not yet relate to either to the establishment of team or the inputs required and, in general, the potential rate of return of the project. The development of the business idea is followed by the process of clarifying the conceptual foundations of the business idea. In this case it is about designing the mission and vision of the business idea, thanks to which the goals of the next several years should be designed and implemented, and the ways of achieving these goals should be clarified.

In this phase, the team of co-founders shall be established. It is crucial that each of the co-founders disposes of the inputs and skills required to complement each other.

In the *Idea validation* phase the implementation team shall get to work – each of them contributing to the fulfillment of the goals specified. The prototype and the execution process of the key product (service) shall be designed and prepared taking into consideration the limited resources and time given. The following process of this phase includes the approval of the prototype. The existing prototype shall be regularly tested and improved. The business model sets the key efficiency and performance indicators. Then, attraction of funds and investment shall take place.

In the *Business development* phase, the business venture starts accelerated growth in the targeted markets based on the key efficiency and performance indicators. The startups may and should grow rapidly to fill the gap on the target market. It is the special aspect of the startups – by continued improvement, replenishment and transformation such business ventures shall achieve the highest level of development rate in this phase, attracting new investments, inputs and staff, as well as improving the business processes and their management. The business model established in this phase should, as much as possible, align with the market needs. In the stabilization process it should have already reached tangible growth, and such growth is expected to go on in the future as well.

It should be noted that any startup, in almost every phase of its activity, might cease being one. Such a process may take place, for example, through an initial public order (IPO) or merger with a larger company through takeover by the latter.

Research Results

Development Challenges and Causes of Startup Failures

Research of the startup companies suggests that irrespective of the level of economic development, there are common challenges typical of all startups, which are systematic in nature. It attaches importance to identification of the practicalities of the development of startups, discovery and comprehensive assessment of the underlying reasons, as well as the need for their typification. It will help the startups to avoid, as much as possible, such problems in their development path, find the proper solutions and develop in a more efficient way.

Let's try to analyze the causes of failures by the startups during their development lifecycles and point to the main forms of such failures. As noted above, the startups have three main phases of development. The first phase is the creation, when the business idea is generated. It is crucial to properly formulate the business idea, based on which the prototype of the product (service) shall be created in later phases and the business strategy of the company shall be designed. In the *Creation Phase*, the founder of the startup may face challenges in the absence of the essential knowledge and skills of the idea generation and presentation. In this phase, the problem with the human and financial resources is not substantial, as it is primarily in the dimension of the implementation and responsibility of the founder of the startup.

Next, the *Idea Validation Phase* includes the design and approval of the product (service) prototype, followed by continuous testing and improvement. The business model of the startup is also designed. This phase attaches importance to the mobilization of the human and financial resources, as the availability of a working team with qualified specialists, as well as attraction of additional financial investments is a precondition for the success of the startup. With no qualified specialists and essential amount of investment, the startup company may even fail.

And lastly, *the Business Development Phase* should have clearly stated the goals focused on ensuring the accelerated growth in the target markets and revenue creation. However, the problems of this phase predominantly relate to literate development and enhancement of the business, and require in-depth entrepreneurial knowledge and expertise. Besides, in the phase startups need to attract large financial investments and mobilize substantial human resources, which, in its turn, requires availability of relevant know-how and experts.

Henceforth, the problems observed in the lifecycles of the startups relate to the following substantive areas:

- *Financing Challenges*

Startups have varying financial needs and sources of finance in different phases of development. In the initial or creation phase, the main finance is provided by the co-founders, in the next phase of idea validation the funding is generally provided by individual investors, so-called business angels, as well as by various donor organizations and acceleration programs. The business development phase is mostly financed by the venture funds. The issues that arise here, i.e. those connected with fundraising, are associated with the failure to interest and/or convince the potential investor, which, in turn, is correlated with the lack of the startup founder's skills to properly pitch the idea, as well as with a situation when an idea which either already exists, or fails to meet the consumers' needs or solve the problem is presented.

Hence, the challenge of seeking funds seems to be mostly correlated with the startup's ability to properly analyze and pitch the idea (whether it does tackle a problem that exists on the market or it meets a need or whether it tackles it in the best possible way). Moreover, financing may depend on the lack of investors or inadequacy of the investment resources, henceforth, it might be an ecosystem level problem, when the number of the business angels or venture capital funds is not adequate in the ecosystem concerned, and when there is lack of access to finance from other ecosystems. The failure to raise adequate funds, inter alia, may cause associated problems, such as being a barrier to the global market entry or further development of the startup.

- *Entrepreneurial Skills*

It is the entrepreneurial skills of the startup founders that are vital for the successful development of the startup, especially, in the creation phase. Given that most of the startups are technology-oriented in the present era of "technological revolution", the startup founders are primarily technological professionals (such as software developers) and they substantially lack entrepreneurial know-how. It is the cause of most of the problems that emerge in the creation and idea validation phase, since, due to lack of such knowledge, they perform insufficient market research (or don't do it at all), they don't measure the extent the product or service created is tackling the consumers' needs or problem or whether it is doing so at all, as well as they don't develop an appropriate and viable business model. All these aspects are preconditions for a startup to successfully grow. Meanwhile, the lack of knowledge and skills is usually filled by corresponding training providers and programs available in the ecosystem.

- *Human Resources*

The aspect of human resources seems to be one of the most important one, and the further development of the startup also depends on it. In the startup creation phase the key member of the team is the founder or the co-founders. As the startup evolves, other specialists should be involved, for instance, to design the prototype and the least viable product. Future success of the startup predominantly depends on the success of this particular phase and, in case of failure to recruit proper specialists, the startup may simply fall apart. Another staffing-related challenge is the lack of qualified human resources on the market. This problem has two main reasons: 1) the education institutions do not train sufficient number of specialists (currently, the universities fail to match the needs of the Armenian market for information technologies [7]), 2) the "brain-drain", i.e. most of specialists are migrating to find better pay abroad or get a job in large international tech-companies with an

expectation of professional growth. This creates a significant lack of highly qualified specialists, which obstructs the operations of the startups.

- *Supporters*

A number of agencies and organizations, as well as individuals are active in the startup ecosystem delivering support to the startups. These players have a crucial role in different phases of development of the startups. They include individual investors or business angels, incubators, accelerators, R&D parks, small business support agencies, venture funds, donors and so on. Lack of presence or insufficient presence of such entities and programs in the ecosystem creates challenges for the successful development and even survival of the startups.

Favorable Business Environment for the development of the Startups

Presence of a favorable business climate is also crucial for the successful operation and development of the startups. Elements of such an environment include the favorable legal framework and tax regime, the market opportunities, the state aid and so forth. Through corresponding legislation, for instance, the governments may reduce the tax burden for the newly established startups and for those in financial difficulty, as well as set some tax advantages for them. In this regard, presence of appropriate institutional framework is especially prioritized as a pillar of the startup ecosystem. The startup ecosystem ensures the following:

- Access to finance through business angels and venture funds;
- Learning of entrepreneurial know-how and skills development through organizing focused trainings and learning programs, including via incubators and acceleration programs;
- Creation of the startup community and improving the efficiency of mutual collaboration between various startups.

Thus, the development challenges of startups can be distinguished at the level of the startup ecosystem and the startup project:



Fig. 2 Ecosystem and Project Level Challenges of the Startups
(The figure is prepared by the Author)

Development challenges on the level of the startup projects refer to the actions undertaken by the startup co-founders and are interim in their nature.

Tackling of the startup ecosystem level challenges is crucial from the perspective of the startup output.

In summary, one should acknowledge the vital role of a mature vital ecosystem for the startups to succeed.

Startup Development Challenges and the Approaches to Overcoming them in Armenia

Along with the success of evolvement of the startups, there are multiple challenges and cases of startup failures in Armenia, which are obstructing the sustainable development of the existing startups and their access to the global market.

The Armenian market lacks the market conditions required for the startups to evolve. The market lacks adequate infrastructure for piloting the prototype of certain products and further commercialization thereof. It is a serious problem in the sense that if the product of a startup is not presented on the global market, the limited size of the Armenian market may create solid barriers for the startup to further grow and enhance.

The role of the startup ecosystem is vital for the success of the Armenian startups, as it ensures the access to and availability of finance, acquisition of entrepreneurial know-how and skills development, promotion of mutual collaboration among the startups and improvement of productivity. While the startup ecosystem in Armenia has already had certain progress, there are still many issues remaining. Lack of qualified specialists is especially big, since:

- The education providers fail to provide the specializations required by the startups;
- There are few matching courses or training programs for improving the qualifications;
- The Armenian students, while pursuing further studies abroad, prefer staying there for work, which results in labor migration leading to the lack of qualified staff for the Armenian startups.

To address the challenges faced by the startups on their growth journey, presence of an adequate institutional basis is prioritized, which is called to create a favorable business environment for sustainable development of the startup companies. In this regard, setting focused and targeted privileges might be quite constructive. The Law on State Aid to the IT Sector, effective from 2015, in the Republic of Armenia is a good practice to follow. It sets tax privileges for relevant IT startups[8], having proven to be an apparent progress in the IT sector.

Conclusion

Identification of the common practical challenges the startups face in the international practice and structured review and typification of the causes of startup failures, disaggregated by the development level of startups, may help the Armenian startups to avoid such problems as much as possible and, therefore, also future failures, as well as find proper solutions and develop more efficiently.

Given the current level of economic development in Armenia, as well as the challenges on the geopolitical, territorial, infrastructure-related and institutional levels that obstruct the economic growth, the startups may be vital for our country's development as an economic driver.

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Ք.Ռ. Արշակյան

Երևանի պետական համալսարան

Ստարտափ ընկերությունները նորարարական գաղափարի վրա հիմնված նորաստեղծ ընկերություններ են, որոնք իրենց ստեղծած նորարարական արտադրանքի համար շուկա գտնելու և այդ շուկայում իրենց տիրույթը գրավելու նպատակ ունեն, ինչպես նաև ունակ են կարճ ժամանակահատվածում արագ աճ գրանցել և լուրջ եկամուտներ գեներացնել, ինչով էլ պայմանավորված են ստարտափ ընկերությունների հաջողությունները և դրանց գնալով աճող դերը տնտեսական զարգացման գործընթացում: Իհարկե, շատ են նաև ստարտափ ընկերությունների ձախողումները, ինչը հիմնականում պայմանավորված է նորարարությունների ռիսկայնությամբ և ստարտափ ընկերությունների գործունեությանն ուղեկցող անորոշություններով: Այստեղ առանձնապես կարևորվում է ստարտափ ընկերությունների զարգացմանը խոչընդոտող դժվարությունների և նրանց ձախողումների ուսումնասիրման խնդիրը: Հոդվածում փորձ է արվել վերլուծել միջազգային պրակտիկայում ստարտափ ընկերությունների գործնական

դրսևորումներում հաճախ հանդիպող խնդիրներն ու գնահատել դրանց առաջացման պատճառները, ինչպես նաև, ելնելով այդ պատճառների բովանդակային առանձնահատկություններից, ներկայացնել դրանց համակարգված ամբողջությունը՝ սկսած ստարտափ ընկերության կենսափուլերի մակարդակից մինչև ինստիտուցիոնալ մակարդակը: Այս վերլուծությունը կօգնի հայկական ստարտափ ընկերություններին հնարավորինս խուսափել այդ խնդիրներից և հետևաբար՝ նաև ծախսողումներից, որոնք արդեն իսկ բավական մեծ կշիռ են կազմում՝ չնայած ստարտափ ընկերությունների՝ Հայաստանում արձանագրած լուրջ հաջողություններին:

Բանալի բառեր. ստարտափ նախագծեր, ստարտափ ընկերություններ, ստարտափ էկոհամակարգ, տնտեսական աճի խթանում, զարգացման խոչընդոտներ, ստարտափ ընկերությունների խնդիրներ:

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НЫНЕШНИЕ ПРОЯВЛЕНИЯ И КЛЮЧЕВЫЕ ПРОБЛЕМЫ РАЗВИТИЯ СТАРТАП-КОМПАНИЙ

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Стартапы – это новые компании, созданные на основе инновационной идеи, с целью найти и захватить рынок для своих инновационных продуктов, которые также способны быстро расти и приносить значительную прибыль за короткий период времени, что и является определяющим фактором для их успеха и возрастающей роли в процессе экономического развития. Очевидно и то, что значительная часть стартап-компаний терпит неудачу, что в основном связано с риском инноваций и неопределенностями, сопровождающими деятельность стартап-компаний. В этом контексте особенно важно определить проблемы, с которыми сталкиваются стартапы на своем пути развития и изучить причины их провалов. В статье проводится анализ наиболее распространенных проблем, встречающихся в практических проявлениях стартапов в международной практике, и оценить причины их возникновения, а также представить их комплексную целостность исходя из их содержательных характеристик - начиная с этапов жизненного цикла стартапа и заканчивая институциональным уровнем. Такой подход поможет армянским стартап-компаниям по возможности избежать этих проблем и провалов, которые уже значительны, несмотря на серьезные достижения развития стартапов в Армении.

Ключевые слова: стартап-проекты, стартап-компании, стартап экосистема, стимулирование экономического роста, препятствия на пути развития, проблемы стартап-компаний.

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