

CHALLENGES OF ARMENIAN STARTUP COMPANIES: ANALYSIS OF SURVEY FINDINGS

Kristine Arshakyan

Yerevan State University, Ph.D. Student

kristine.arshakyan@ysu.am

Abstract: Startup companies, by their nature, entail substantial risks and frequently encounter an array of challenges. Despite some instances of success of Armenian startup companies, it remains evident that significant headway on the global stage has yet to be achieved. In contrast to well-established ecosystems, the Armenian startup ecosystem falls short in providing the necessary support for the sustained advancement of these companies. As such, there exists a pressing need to highlight and comprehensively examine the obstacles impeding the growth of Armenian startup companies.

This article provides an analytical overview of the survey conducted among Armenian startup companies to identify key obstacles hindering their progress. Additionally, it offers recommendations aimed at addressing the aforementioned challenges.

Keywords: startup company, startup ecosystem, survey, development issues

JEL code: E3

Research Aim: to identify the challenges faced by Armenian startup companies and present relevant recommendations to effectively tackle these challenges.

Research Novelty: on the basis of the survey, comprehensive analyses were conducted, yielding targeted recommendations aimed at enhancing the startup entrepreneurship landscape in Armenia.

Introduction

Startup companies serve as the driving force of the modern economy, assuming an important role in fostering innovation and job creation. Nonetheless, these enterprises operate in an environment rife with uncertainty, consequently subjecting them to an array of challenges. These challenges manifest prominently during their early stage of development, a period in which startup companies have no sustainable development and they are vulnerable to these challenges. Numerous research studies have revealed a number of problems that are common to most startup companies. These problems include scarcity of resources, the uncertainty of market demand, overcoming competition, legislative gaps, lack of qualified workforce and more. It is important to acknowledge that each startup ecosystem has its own characteristics, thereby necessitating an examination of these issues at the local level.

Within the startup ecosystem of Armenia, a number of problems exist that impede the optimal functioning of local startup companies.

It is important to note that there is a limited number of research studies focusing on the challenges faced by startup companies in Armenia. Existing research primarily focuses on the technological sector in the Republic of Armenia, providing statistical insights into IT and engineering sectors [1], without specifically delving into the realm of startup companies. Another study [2] predominantly offers data concerning technology-based startups, thereby overlooking information pertinent to non-technology startups.

Between June 2021 and March 2022, an extensive survey was conducted to identify and analyze the challenges faced by Armenian startup companies¹. Studying the challenges highlighted through this survey will not only help develop effective policies to overcome these obstacles, but it will aid in cultivating an environment that nurtures the expansion and sustainable development of startups.

¹ Given the absence of an official, publicly accessible statistical data and consolidated registry for startup companies in Armenia, for the purpose of the survey a comprehensive database of startup companies was created including information from incubation and acceleration programs, grant programs for startups, technological events, angel investor clubs, venture funds of Armenia's startup ecosystem, as well as platforms such as Crunchbase and Startupblink. This compilation included 137 companies. Employing simple random sampling and convenience sampling, a sample of 68 companies was identified for inclusion in the survey. The precision of the survey findings was upheld, with a margin of error under the 5% threshold of significance. The research data was collected through personal in-depth interviews, involving active participation of the startup founder and/or co-founder. The interview questionnaire was made up of sections representing the main areas of the activity of startup companies and containing both open-ended and closed questions. The data obtained as a result of the interviews was managed and analyzed using the MS Excel software.

Moreover, the insights gained will provide valuable information to government agencies, essential for developing a precise strategy for the advancement of the startup ecosystem in Armenia.

Findings of the Research

The survey achieved a participation rate of 79%, with active involvement from 54 companies. Among the startup companies that chose not to take part in the survey, 43% expressed a lack of interest in participation, while 57% remained unresponsive. The survey encompassed a diverse spectrum of startups, spanning from those at the idea stage to both registered and operational companies established between the years 2011 and 2022.

The survey data underscore a notable nonproportional development of the Armenia's startup ecosystem throughout the country, with a predominant concentration centered in the city of Yerevan. This is evidenced by the fact that in Armenia 94% of the surveyed companies are registered in Yerevan, while a mere 6% are registered in Gyumri. Nearly half of the startup companies surveyed, accounting for 47%, hold dual registrations, both in Armenia and abroad. 45% possess sole registration in Armenia, while the remaining 8% are exclusively registered abroad.

According to the surveyed companies, 62% of them cite patriotism as the most important driver for registering in Armenia. This is followed by quality and cost-effective labor (43%), along with winning a grant (21%). These findings shows a noteworthy trend: Armenian startup companies do not consider Armenia and its

startup ecosystem as the most conducive environment for business expansion. As a result, they prefer to register and/or continue their activities abroad. (Of particular interest is the US state of Delaware as the favored destination for 79% of these companies.)

The primary purpose of registering and conducting operations abroad is attracting investments (65% of the respondents, see Table 1). This decision stems from the perception within surveyed companies that Armenia's startup ecosystem lacks investment funds or programs that provide investments in stages higher than seed stage. A second compelling reason for registration abroad is the opportunity to enter the market (46%). This is attributed to the challenges associated with conducting effective market research and entering foreign markets directly from Armenia. Furthermore, the surveyed companies perceive Armenia's tax system as less than favorable for their successful operations. As such, 38% of respondents identify this as a pivotal factor prompting foreign registration. Additionally, 30% of participants view the more supportive legal frameworks abroad as a crucial consideration in their decision-making process.

Table 1. Factors Influencing the Choice of Foreign Registration for Armenian Startup Companies

Attracting investments	65%
Market entry	46%
Favorable tax system	38%
Supportive legal frameworks	30%
Availability of payment systems	14%
Other	14%
Not specified	11%

Workforce

A majority of the companies participating in the survey have 5 to 10 employees (30%). The pronounced escalation of salaries in the technology sector has generated a predicament for startups in prototyping and early development stages: they grapple with the challenge of recruiting both qualified professionals and large numbers of employees. Among businesses with 10 to 20 employees and those with more than 20 employees (26% and 22% respectively), a prevailing pattern is discernible. These companies are primarily beneficiaries of grants or have received investments and generate revenue or are in the expansion stage. Consequently, they maintain a requisite number of employees thanks to the availability of substantial funding or generated revenue. However, these companies also acknowledge the impediment posed by elevated salaries, which significantly dampen their capacity to attract qualified workforce.

The lack of qualified workforce within Armenia's startup ecosystem commands special attention, emerging as a matter of

paramount concern raised by the interviewed startup companies (63%, see Table 2). 83% of the companies surveyed share a consensus on the overall inadequacy, both in terms of quality and quantity, of specialists within the Armenian labor market. This deficiency is attributed to the low quality education in Armenia. The respondents pinpoint subpar professional knowledge and absence of practical experience as resultant issues, owing to a lack of relevant, updated, and hands-on education. Additionally, 13% identify that there no connection between academia and the labor market. When it comes to recruiting, surveyed companies prefer graduates from the American University of Armenia, followed by the Russian-Armenian University and the French University in Armenia. Personal connections remain the most reliable channel for discovering qualified professionals (41%). Meanwhile, 26% of respondents opt for job postings, acknowledging, however, that this method does not always yield the desired outcome of attracting suitable personnel, and it can be a time-consuming process.

The absence of international market experience (15%) and the issue of staff turnover (13%) also hold notable significance as challenges related to the labor market.

Table 2. Issues Related to Workforce and Labor Market

Lack of qualified workforce in the technological sector	63%
Inability to pay high salaries	35%
Shortage of experienced senior and mid-level professionals in the technological sector	33%
Lack of experience for working in the international market	15%
Staff turnover	13%
Lack of connection between the university and the labor market	13%
Lack of sales specialists	11%
Challenges with both quantity and quality of project managers	9%
Lack of specialists engaged in R&D	9%
Insufficient foreign language proficiency	9%
Lack of self-education among professionals	9%

Only 32% of the surveyed companies have foreign employees as a measure to address the labor shortage and attract talents. Meanwhile, 63% abstain from engaging foreign workers, citing that they do not need or have the possibility to find them. However, it shall be noted that the context of this survey's findings predates the Russian-Ukrainian conflict of 2022, which has undoubtedly ushered in a situational transformation worth considering.

Funding

In the Armenian startup ecosystem, as revealed by the survey findings, a substantial proportion of startup companies have received grants (65%). In contrast, a comparably smaller segment has acquired funding through investments from angel investors and

venture funds, accounting for 19% and 9% respectively (see Figure 1). This pronounced divergence can be attributed to a combination of factors. Primarily, the accelerating stage of the Armenian startup ecosystem comes into play, with a larger presence of companies positioned at the idea and early developmental stages and not yet ready for advanced-stage investments. Furthermore, this might underscore a potential scarcity of angel investors and venture capital funds in the Armenian startup ecosystem, perhaps further exacerbated by the absence of significant international funds.

This is further evidenced by the fact that a substantial majority of the surveyed companies (56%) prefer to seek future funding from international venture funds, predominantly those based in the USA. This inclination can be attributed to the prevailing circumstance where Armenia lacks significant international venture funds, and local funds encounter limitations in facilitating larger investments.

The majority of the surveyed startups have outlined their intentions to allocate the anticipated future funding predominantly toward marketing initiatives including increasing sales volumes and entering new markets, constituting a notable 74% of the respondents (see Table 3). 50% of these companies also accord equal importance to investing in product enhancement and expanding their team.

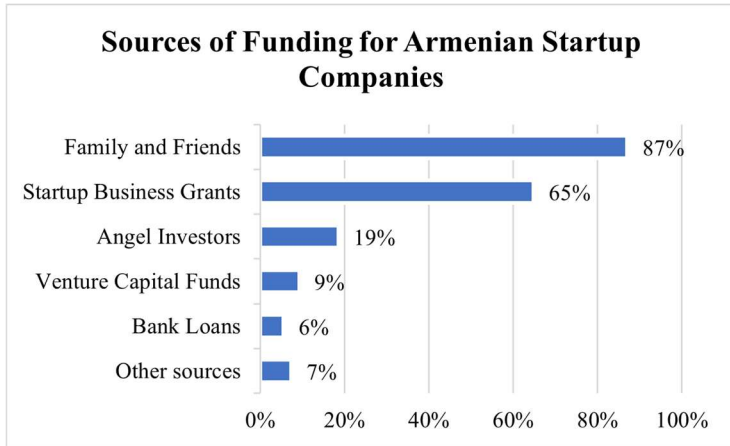


Figure 1. Sources of Funding received by Armenian Startups

However, a mere 11% intend to dedicate their forthcoming funding to research and development. This disparity might suggest the limited presence of scientific-oriented startup companies within Armenia's startup ecosystem, thereby potentially constraining the ecosystem's growth and development potential.

Table 3. Allocation of Expected Funding

Marketing campaign/increasing sales volumes/entering new markets	74%
Product improvement	50%
Team expansion	48%
Research and Development	11%
Acquisition of equipment	6%
Acquisition of licenses	4%

Among the overarching challenges concerning funding, as highlighted by survey participants, the primary concern is the

insufficiency of financial resources accessible to startup companies in Armenia (33%, see Table 4). Following closely, the lack of pitching skills and experience in effectively communicate with investors emerges as the second most pivotal issue among founders (26%). This factor has the potential to derail investment negotiations even when the idea itself is promising. Equally noteworthy is the Armenia's low attractiveness for foreign investments (11%). This, to some extent, stems from the absence of foreign investors in Armenia (9%), further constituting a notable hindrance to the flourishing of the startup ecosystem and the growth of startup companies in the country.

Table 4. Common Issues Related to Funding of Startup Companies

Financial resources offered to startup companies in Armenia are insufficient	33%
Lack of pitching skills and experience in communicating with the investor	26%
Low awareness regarding funding opportunities for startup companies	19%
Diminished perception of Armenia's investment environment among international investors	11%
Lack of viable and fundable ideas	13%
Lack of investors/funds offering long-term investment	9%
Small amounts for grant funding (except for grants provided by the RA Ministry of High-Tech Industry grant program)	9%
Absence of foreign investors in Armenia	9%

Issues related to business development

43% of the surveyed companies believe that the most important problem hindering startup business development is the regulatory gap (see Table 5). In particular, the absence of an e-commerce regulation law in the RA emerges as a focal point, significantly impeding the smooth electronic transactions for products and services originating from Armenia with other countries. Despite legislative improvements, certain gaps persist. For instance, the legal framework does not encompass well-defined procedures and prerequisites for the electronic formulation of foreign trade agreements, transportation documentation, invoices, and other documents [4]. Furthermore, there remains incomplete and/or non-streamlined regulation pertaining to the electronic trade of goods, as well as import and export procedures, and customs procedures.

According to survey respondents, a prevalent challenge ranking as the second most common issue is the deficiency of business knowledge and skills among startup company founders (35%). This predicament originates from the scenario where startup founders are primarily technology experts, and not all of them possess skills in business management – an aspect that can substantially lead to a company's failure. A plausible explanation lies in the scarcity of startup entrepreneurship education programs offered by most universities, coupled with the limited presence of university-affiliated incubators or accelerator initiatives. This collectively

contributes to the gap in equipping aspiring entrepreneurs with the necessary skill set to effectively navigate the business landscape.

Table 5. Issues Related to Business Development

Regulatory gap	43%
Lack of business development skills among startup founders	35%
Lack of skills in sales and marketing in the international market	28%
Unfavorable tax system	22%
Absence of legal and accounting services tailored to startups	17%
Insufficient foreign language proficiency	7%
Absence of international payment systems in Armenia	15%
Slow customs clearance procedures	13%
Issues concerning ensuring data privacy	9%

Another important factor influencing the successful growth of startup companies involves sustaining competition. 28% of the surveyed companies emphasized the significance of adept marketing strategies as the prime method for sustaining the competition (see Table 6). 19% believe that a technological advantage holds the potential to overcome competition, while a mere 17% believe that a well-devised strategy holds the key to overcoming competition. A cause for concern arises from the observation that a substantial portion of the surveyed companies do not accurately appreciate the pivotal role of strategic planning.

Table 6. Approaches of the Surveyed Startup Companies to Sustain Competition

Effective marketing	28%
Technological edge	19%
Effective strategic plan	17%
High-Quality Product/Service	13%
Product/Service Improvement	9%
Price advantage	7%
Effective customer service	6%
Not specified	17%

74% of the surveyed startup companies have a mentor, showcasing the founders' unwavering recognition of the significance of mentorship. Among them, 43% are engaged with mentors on a pro bono basis within the context of incubation or acceleration programs. An additional 31% opt for a paid mentoring arrangement, either through direct hiring or equity sharing.

Conversely, 26% have no mentor, largely due to the inability to find one (21%) or the financial constraints that deter engagement (14%). 29% abstain from offering a specific rationale for their lack of mentorship, rendering definitive conclusions elusive. Nevertheless, it's plausible to speculate that the absence of a robust mentoring network in Armenia's startup ecosystem or the limited awareness about the significance of mentorship among startup founders might contribute to this phenomenon.

Common Issues within the Armenian Startup Ecosystem

The survey participants highlighted several issues within the Armenian startup ecosystem that have adverse effect on the development of startup companies. As detailed in Table 7, two paramount issues stand out: the slow growth and limited global recognition of the Armenian startup ecosystem (37%), and the deficiency in fostering a creative entrepreneurial mindset within Armenia (35%).

Furthermore, 22% of the surveyed companies believe that a discernible strategy for advancing the Armenian startup ecosystem is absent.

Among the surveyed companies, a significant concern raised was the perceived ineffectiveness of university education (24%). In addition, universities are observed to lack startup-related education. Consequently, it becomes evident that upon university graduation, individuals often find themselves lacking of the necessary knowledge to initiate a startup company or navigate the intricacies of the startup entrepreneurial domain. This lack of knowledge contributes to a stagnation in the proliferation of startup ideas – one of the indicators of the maturity of the ecosystem [3].

A substantial majority of the participating companies (54%) express the viewpoint that the current frequency of events catering to startup companies in Armenia remains inadequate. The survey findings reveal a lack of international gatherings (28%), a scarcity of networking events (26%), and a general lack of event frequency (24%). This scarcity, unfortunately, hampers the exchange of

knowledge and experience, the networking, the identification of potential partners, and the facilitation of collaborations.

Table 7. Common Issues related to the Armenian Startup Ecosystem

Limited progress and recognition of the Armenian startup ecosystem	37%
Lack of creative entrepreneurial mindset	35%
Absence of startup ecosystem development strategy	22%
Small number of accelerators and incubators	11%
Limited opportunity to participate in foreign exhibitions	11%
Lack of startup education in universities and appropriate educational programs	9%
Lack of communication between the government and startup companies	9%
Immature investment culture in Armenia	7%

A small part of the surveyed companies (7%) also underscores the absence of events bearing regional significance. Such events are pivotal in fostering the diffusion of the startup entrepreneurship culture to regions, thereby fostering a well-rounded evolution of the Armenian startup ecosystem.

Conclusion

The analysis of the survey of Armenian startup companies allows us to conclude that while the Armenian startup ecosystem demonstrates consistent year-on-year growth, this trajectory is marred by geographical disparities that hinder the meaningful diffusion of the startup entrepreneurship culture across the

country. Moreover, the ecosystem's overall advancement fails to cultivate an environment conducive to the expansive operations of startup companies. The startup ecosystem grapples with a scarcity of adept technology specialists, coupled with a notable deficiency in skilled labor. This challenging situation, combined with high salaries, makes it difficult to create proficient teams – an important factor for the startup success. Compromised higher education standards and underutilization of foreign workforce potential further exacerbate the operational hurdles startups face. In terms of funding, insufficient financial resources, particularly needed for advanced-stage investments, impede the growth of startup companies. The scarcity of prominent international investment funds compounds this issue. Founders of startup companies also frequently grapple with a lack of pitching and effective business management skills that are vital for their progress. To tackle these multifaceted challenges, a set of recommendations is presented below to develop policies that can drive positive change:

- ✓ Facilitate the proliferation of the startup entrepreneurship culture across regions through the execution of initiatives such as events for knowledge-sharing, exchange of experience and ideas as well as implementing incubation and acceleration programs;
- ✓ Integrate courses on innovative entrepreneurship and startups into university curricula, while concurrently establishing university-affiliated incubators and acceleration programs. This

combined approach will play a pivotal role in fostering the generation of novel startup ideas;

- ✓ Initiate actions aimed at addressing the pressing issue of inadequate financial resources. This entails enhancing Armenia's investment climate, bolstering its appeal to global venture funds, and planning strategic state-backed collaborations to attract significant international investment into the country's startup ecosystem;
- ✓ Enact tailored tax incentives designed explicitly for startup companies. Simultaneously, streamline intricate legal procedures and rectify legislative gaps, fostering a more conducive regulatory environment for their operations;
- ✓ Create a mentoring network that involves accomplished local, diaspora, and international entrepreneurs.

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Քրիստինե Արշակյան

Երևանի պետական համալսարան, ասպիրանտ

Բանալի բառեր - ստարտափ ընկերություն, ստարտափ էկոհամակարգ, հարցում, զարգացման հիմնախնդիրներ

Ստարտափ ընկերությունները, լինելով դիսկային, հաճախ են բախվում տարբեր խնդիրների: ՀՀ ստարտափ ընկերությունները, թեև գրանցել են որոշակի հաջողություններ, այնուամենայնիվ, դեռևս չունեն լուրջ առաջընթաց միջազգային մակարդակում, իսկ հայկական ստարտափ էկոհամակարգն, ի տարբերություն այլ զարգացած էկոհամակարգերի, բավարար աջակցություն չի ցուցաբերում այս ընկերությունների կայուն զարգացման համար, ինչն անհրաժեշտություն է ստեղծում վեր հանելու և ուսումնասիրելու հայկական ստարտափ ընկերությունների զարգացման հիմնախնդիրները: Հոդվածվում ներկայացվում են հայկական ստարտափ ընկերությունների շրջանում հիմնախնդիրների բացահայտման նպատակով անցկացված հարցման արդյունքների վերլուծությունը և առաջարկություններ՝ ուղղված վեր հանված խնդիրների լուծմանը:

Submitted: 28.07.2023; Revised: 05.08.2023; Accepted: 10.08.2023