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A. Kiva*, *T. Moiseienko

DOMESTIC STARTUPS FINANCIAL ASSISTANCE IMPROVEMENT IN THE CONDITIONS OF INTERNATIONAL INTEGRATION

The authors presented in the publication reflect the directions of startups financial assistance improving, that are applicable to domestic startups and relevant in terms of international integration. The article singled out the main stages of the startups formation and systematized stages of their development. Emphasized the fact that each stage of development involves a startup investments that have certain characteristics, depending on the stage, allowing authors to create sources of funding for the development stages of such projects. Attention is paid to each of the startups financing approaches. Based on the selected authors for ways to improve, the algorithm of financial assistance startups at early stages of development and during scaling. Singled out a number of features, following which allows Ukrainian startups to integrate into the international business ecosystem successfully.

Keywords: *innovation, investment, international business ecosystem, startup, financial support.*

Ківа А. А., Моісеєнко Т. Є.

УДОСКОНАЛЕННЯ МЕХАНІЗМУ ФІНАНСОВОГО ЗАБЕЗПЕЧЕННЯ ВІТЧИЗНЯНИХ СТАРТАПІВ В УМОВАХ МІЖНАРОДНОЇ ІНТЕГРАЦІЇ

Автори у представленій публікації відображають напрями удосконалення фінансового забезпечення стартапів, які є застосовуваними до вітчизняних стартапів та актуальними в умовах міжнародної інтеграції. У статті виокремлено основні етапи утворення стартапів, а також систематизовано стадії їх розвитку. Наголошено на тому, що кожен етап розвитку стартапу передбачає залучення інвестицій, які мають певну *специфіку, залежно від обраної стадії, що дозволило авторам сформувати джерела фінансування за стадіями розвитку таких проектів. Приділено увагу кожному з підходів до фінансування стартапів. На основі обраних авторами шляхів удосконалення, запропоновано алгоритми фінансового забезпечення стартапів на ранніх стадіях розвитку та на етапі масштабування. Виокремлено низку особливостей, врахування яких дозволяє українським стартапам бути успішно інтегрованими у міжнародну підприємницьку екосистему.*

Ключові слова: *інноваційна діяльність, інвестування, міжнародна підприємницька екосистема, стартап, фінансове забезпечення.*

Кива А. А., Моисеенко Т. Е.

УСОВЕРШЕНСТВОВАНИЕ МЕХАНИЗМА ФИНАНСОВОГО ОБЕСПЕЧЕНИЯ СТАРТАПОВ В УСЛОВИЯХ МЕЖДУНАРОДНОЙ ИНТЕГРАЦИИ

Авторы в представленной публикации отражают направления совершенствования финансового обеспечения стартапов, которые являются применяемыми к отечественным стартапам и актуальными в условиях международной интеграции. В статье выделены основные этапы образования стартапов, а также систематизированы стадии их развития. Отмечено, что каждый этап развития стартапа предусматривает привлечение инвестиций, которые имеют определенную специфику, в зависимости от выбранной стадии, что позволило авторам сформировать источники финансирования по стадиям развития таких проектов. Уделено внимание каждому из подходов к финансированию стартапов. На основе выбранных авторами путей усовершенствования, предложены алгоритмы финансового обеспечения стартапов на ранних стадиях развития и на этапе масштабирования. Выделено ряд особенностей, учет которых позволяет

украинским стартапам быть успешно интегрироваными в международную предпринимательскую экосистему.

Ключевые слова: *инновационная деятельность, инвестирование, международная предпринимательская экосистема, стартап, финансовое обеспечение.*

Statement of the problem in general form and it's connection with important scientific or practical tasks. Intellectual and innovative component of the economy and business plays a significant role in the formation of entrepreneurial activity. Analyzing statistics and experiences of entrepreneurial activity, it should be noted that this startups, as an innovative form of business, begin to form the basis of the competitiveness of enterprises, regions and countries in general and characterize its innovative activity. An important task in the development of Ukraine business sector innovative activities is the search for non-traditional investments in innovations and startups, as carriers of the innovation component, in particular. One of the possible solutions to this problem may be the development of venture capital industry in Ukraine, because it is venture capital, under certain conditions, should be considered as an effective source of funding for startups, research and development, as well as the creation of innovative products.

Analysis of the latest research and publications, which initiated the solution of this problem and on which the authors relies. The problem of finding ways to finance startups is a topical issue not only for the scientific but also for the business sector of Ukraine and the world. The issue of startup projects is in the spotlight of investors, entrepreneurs, innovators and domestic and foreign scientists, namely Isenberg D. [1], R. Babiachok [2], Yu. Bazhal [3], S. Blank [4], R. Brown [5], C. Wessner [6], P. Gramm [7], H. Grimm [6], I. Kuznetsova [8], S. Legenchyk [9], K. Mason [5] , S. Moyson [5], J. Moore [11], D. Odreshch [6], G. Pylypchyk [9], E. Rise [11], K. Shchytinina [12].

Highlighting the previously unresolved parts of the general problem to which the article is devoted. Peculiarities of venture financing are covered in the works of P. Drucker, K. Campbell, I. Kuznetsova [5], I. Repina, L. Smolyar, R. Hofat, R. Schmidt. Despite considerable interest in issues related to the essence of venture capital and financing mechanisms for startups, these issues because of its novelty and the high level of urgency require further study, in addition, the issue of identifying the characteristics of this type of financing and analysis of its state in the business environment of Ukraine remains unresolved and encourages scientists to further refine.

Formulation of the purpose of the article (statement of the problem). The purpose and objectives of the article are to finding ways to improve the financial assistance for startups, which are applicable to Ukrainian startups and relevant in terms of the process of international integration.

Statement of the main material of the research with full justification of the scientific results obtained. Considering the numerous, given the high level of relevance, views on the concept of "startup", in our opinion, accurate and appropriate term is the definition proposed by world-renowned American innovator, author of methodology for construction high-tech companies and startups, entrepreneur and founder of consumer development Steve Blank: startup – this is a temporary organization that is looking for a scalable, reproductive, rentabelnoyi business model [4].

According to S. Blank, as soon as a startup starts to grow and expand, finds its markets and the opportunity to make money on them, the innovative project changes its form and stopped to be a startup.

Startups are usually born by a founder or co-founder who has a way of solving a particular social problems. Founders of startup usually begin by market research surveys, identifying and constructing the minimum viable product is a prototype for the development and approval of their business models. The startup process can take a long period of time (by some estimates, three years or longer), and therefore, there is need for constant investment.

Attracting investment on an ongoing basis and in the long run is quite challenging due process inherent in such a high potential risks and uncertain results of prototype testing on the market.

The main stages of startup formation are shown in Fig. 1.

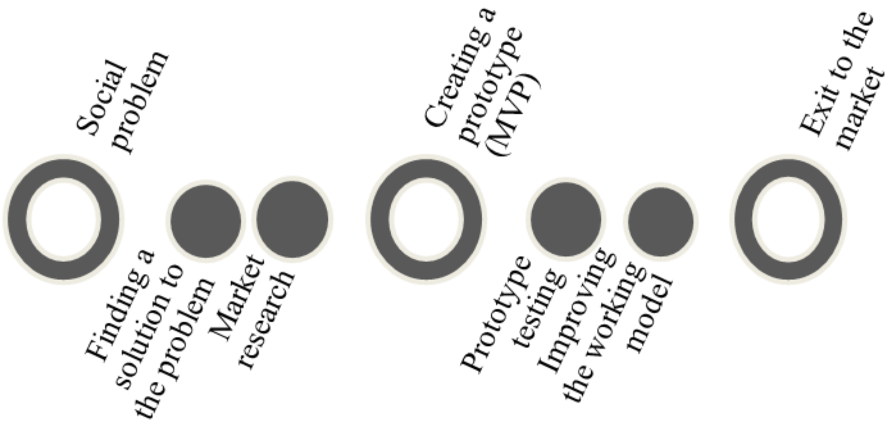

Fig. 1 The main stages of startup formation

**Created by the authors*

The universal approach to describing the process of startups is difficult to determine. Often, in the scientific literature and business practice, referred to reduced classification stages of start-ups or, as they are called, the stage of the investment process (Table 1).

Table 1

Stages of startup development

Stage name	Characteristic
Pre-seed	The stage of the idea appearance, which is based on an innovative product able to satisfy the needs to improve and make consumers life easier. Funding is needed at this stage, and the amount of investment may be minimal. The personal funds of developers, their families and friends are most often used. If is necessary and possible, it makes sense for startups to contact a business incubator, where they can get support as office space with connected

	communications and various types of services, such as organizational and administrative, legal or consulting.
Seed stage	The working model is formed, created a complete team, were clearly defines the functional responsibilities of each of its members, the market is analyzed and a detailed strategy for promoting the project on the market is drawn up, legal entities are issued, a prototype is created and tested, the first steps in advertising and investors search were made.
Early stage	It is characterized by the presence of an operating company that makes a profit, occupies an important place in markets or other consumer environments and has popularity among product users.
Expansion stage	The startup is approaching the implementation of the business plan in the primary target market, analyzes new markets, formulates a strategy for promotion to other markets and begins its implementation.
Growth stage	Creation of working prototypes, their launch and involvement of consumers. The startup has a stable position in the markets and is moving to conquer the market. Investment risks at this stage are significantly reduced.
Exit stage	The company leaves the startups category, starts issuing shares and becomes a participant in the stock market. The availability of active investors will increase rapidly, but such investments profitability is lower than in previous stages. The loss of investment risk level is greatly reduced.

**Systematized authors based [4, 7, 13]*

Each stage of startup development involves attracting investment (Fig. 2). Sources of investment for their implementation are specific, given the high level of risk and novelty of startups. Note that, one of the unconventional but promising ways to finance startups is venture capital.

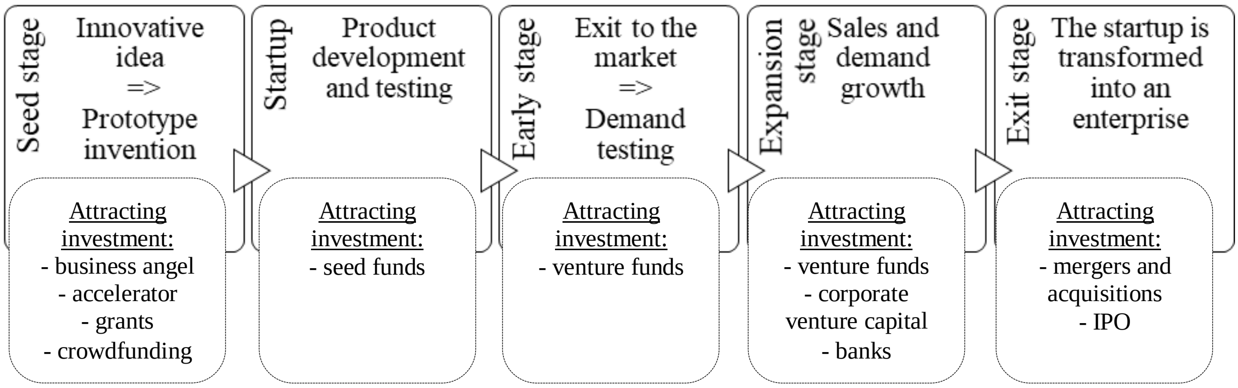

Fig. 2 Sources of funding for startups by stages of development

** Created by the authors*

The current practice of venture investment involves several stages of financing startups, each of which involves the company enough money to support the growth and reach the next investment round. As the investor receives income from the increase in the value of his share in the company's capital, the company is expected to grow several times between investment rounds, which makes the startup attractive to new investors.

Venture capital is a high-risk form of private direct investment, which is fixed in the semantics of the definition (venture – «risky business»). In essence, these investments characterize a particular system of investment projects.

The main and fundamental difference from traditional investing is that the necessary funds can be provided under the idea without a guaranteed provision of property or other assets of the entrepreneur. The only guarantee is a specially defined share of shares in an existing or newly created company.

The process of venture investment can be described as follows. On the one hand, there is an organization that intends to implement its innovative idea, but is not able to finance its project independently and implement it. On the other hand, are either private venture investor or venture capital fund that is a financial intermediary, which invests in the implementation of innovative projects. To do this, he buys a share in the share capital or a block of shares, and after some time – sells. Typically, by the time of sale the business is much more expensive than at the beginning of its development, so the value of the investor's share is also growing.

Business angels are entrepreneurs who have access to a significant amount of financial resources. They invest in a business startup, usually in exchange for a convertible debt or stake in the company.

Given that they invest at the earliest stage of the project (after the founders), business angels invest resources in projects that have the potential to generate higher returns than can be obtained from traditional entrepreneurship.

Business angels can invest together, pooling resources and thus reducing individual risks. Usually they are the link between the stage of self-financing business and the stage, when the company needs financing amount, that venture investor has to offer [13].

Crowdfunding (crowdfunding, crowd – “community, group”, funding – “sponsorship, support”), that is, “community funding” – it is the collaboration of people who voluntarily pool their money or other resources together, usually over the Internet, to support the efforts of other people or organizations.

Public funding is designed to perform various functions – helping disaster victims, support from fans, support for political campaigns, funding for startups and small businesses, creating free software, and more. To start fundraising must be a declared objective agreed costs to achieve, and calculating all the costs and choice of method of financing should be open to the community as free access [14].

Nowadays business environment, there are several basic crowdfunding schemes [14]:

- no return: people just give money to support a business idea, without any commitment on the part of the old man;
- product pre-sale: funds are raised to organize a product pre-sale. This is usually true for gadgets and other physical things;

- equal distribution: all those who donated a certain amount to a business idea become joint owners of the sold product.

Business incubator – an organization that provides, under certain conditions and for a certain period of time, specially equipped premises and other property to small and medium-sized enterprises that are starting their activities, in order to assist them in gaining financial independence.

Business incubators – a structure that specializes in creating conditions for the effective operation of innovative firms that implement original scientific and technical projects [12].

Ukrainian business incubators are mostly funded by international donors. The sources of such funding is often funded by international funds and grants and only in small amounts – funds from local administrations and sponsors. To promote the development of business incubators in Ukraine, the Ukrainian Association of Business Incubators and Innovation Centers was established. Ukraine can be considered the most successful business incubators 1991Open Data Incubator, UNIT.City, Eastlabs, iHUB, Happy Farm, GrowthUp, Wannabiz, Voomy IT-park and Polyteco [12].

Business accelerator (also known as startup accelerator or seed accelerator) – institution of startups support. The conception describes how agencies and programs organized by their intensive development of companies through mentoring, training, financial and expert support in exchange for a share in the company’s capital [7].

One of the first accelerators is Y Combinator, founded by Paul Graham, Trevor Blackwell, Robert Morris and Jessica Livingston in Boston in 2005. Instead of long-term "incubation" of projects Y Combinator offered three-month group training programs and small seed investments. The second set to the Y Combinator accelerator took place in Silicon Valley. Accelerator brings together not only experts, coaches, mentors to support the development of startups, but also investors, business angels, investment funds in the process of startups investing.

In addition, the accelerator provides seed investments at its own expense and checks the startup business model effectiveness, recommends the startup to invest and thus guarantees the projects success, which inspires confidence, reliability in investors to invest startups that have passed pre-accelerator programs and / or accelerator.

Depending on the implementation of investment strategies and their conditions, investors can apply for different ways to profit from their investment. Among such methods are:

- receiving dividends;
- own share sale to investors;
- redemption of the investor's share by the enterprise;
- public offering on the stock exchange;
- loan interest (5-10% higher than the bank rate).

On average, after obtaining the status of publicity and listing on the stock exchange, at the time of liquidity of the venture business, the annual dividends of the investor are from 20% to 50% of the investment. The main return begins in the period after 5-7 years from the moment of the first financial infusions.

As a rule, investors are most attracted by startups, which have a strong team of co-founders, a balanced profile "risk / reward" (in which the high level of risk due to untested destructive innovations is offset by high potential profitability) and "scalability". Attractive startups tend to have a lower cost of founders self-financing, a higher level of risk and a high return on investment.

Consider in detail the startups financial support mechanism at different stages of its development, according to P. Graham [7]:

1. pre-seed stage – this is the first stage of raising funds, which is most often invested by the founders of the startup, by people closest to the new owners, their relatives or friends. The concept of "3F" has become fixed, which describes the first investors of most startups – there are friends, family and fools. These funds cover the team's living expenses and business plan development. The money raised is used for initial expenses, and during this period the business operates at a loss. In addition, a minimal business analysis may have been conducted to date. In

exceptional cases, the seed investor is a venture fund, and the amount of investment increases significantly;

2. stage of seed investment includes financing of accelerators and business angels, crowdfunding, grants;

3. startup scaling – this is the project's entry into the international market, attracting investments from venture funds and corporations;

4. round "A" – this phase of fundraising venture fund to the company with product, customers and development plan. The amount of investment significantly exceeds the funds received earlier and the startup begins to build a formal sustainable structure. Round "A" may be followed by rounds "B", "C" and the consequent;

5. exit stage – the last stage of fundraising occurs when the business becomes public. The company's shares are sold on the stock exchange (IPO – initial public offering) or the company is merged or acquired. Through an IPO a business raises funds. At this stage, the company is no longer private.

We suspect, that an important aspect of the startups development and their integration into the international business ecosystem is attracting investment. Usually startups team has a technical education, which is often accompanied by a lack of knowledge in the field of finance, investment, management and marketing, and so on.

The success of famous companies such as Microsoft, Intel, Google and other, is due to investment in their development of venture investors at different stages of their life cycle. In the United States, venture capital investments used for over 60 years. The venture capital process is successfully used in the business space of many countries, such as Great Britain, Israel, Singapore, Finland.

Therefore, based on our research, we have identified the optimal scheme for the startups implementation and improved the startups financial assistance algorithm (Fig. 3).

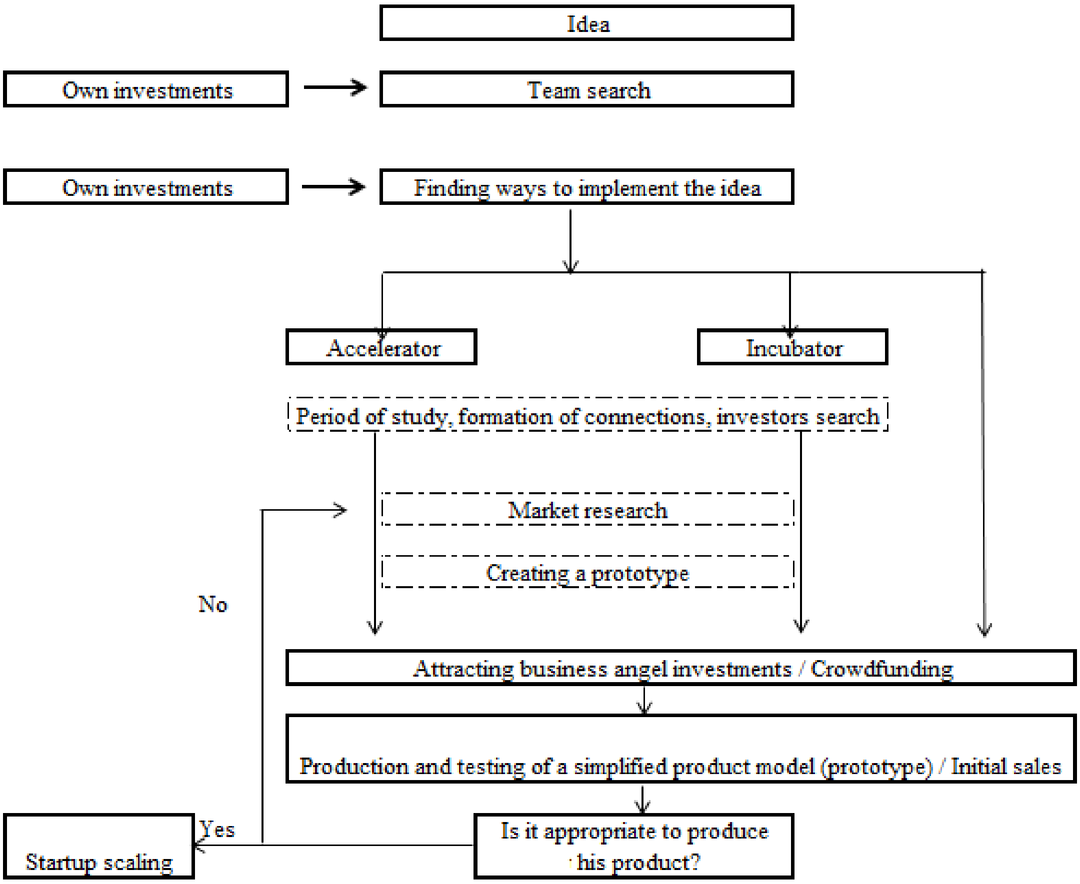

Fig. 3 The startups financial assistance algorithm in the early stages of development

**Created by the authors*

Thus, in the early stages of startup development, in our opinion, an appropriate way to attract investment in the project will be to participate in the acceleration program or incubator program. Because these institutions help the most in the project development through training and mentoring of startups, help the teams to improve theire ideas. Accelerators and incubators provide startapers and their teams with mentors, help analyze and research the market, find investors and funds.

With the help of found investors, usually business angels, a startup can create a prototype of its product with the simplest functions and test the demand for its own product.If the production of the product appears inexpedient, then startups, with their idea, again start from the stage of market research and improvement of the working prototype or refuse from their own ideas.

If the production of this product is expedient, then the process of scaling the startup begins. The project moves to new stages of attracting investment (Fig. 4).

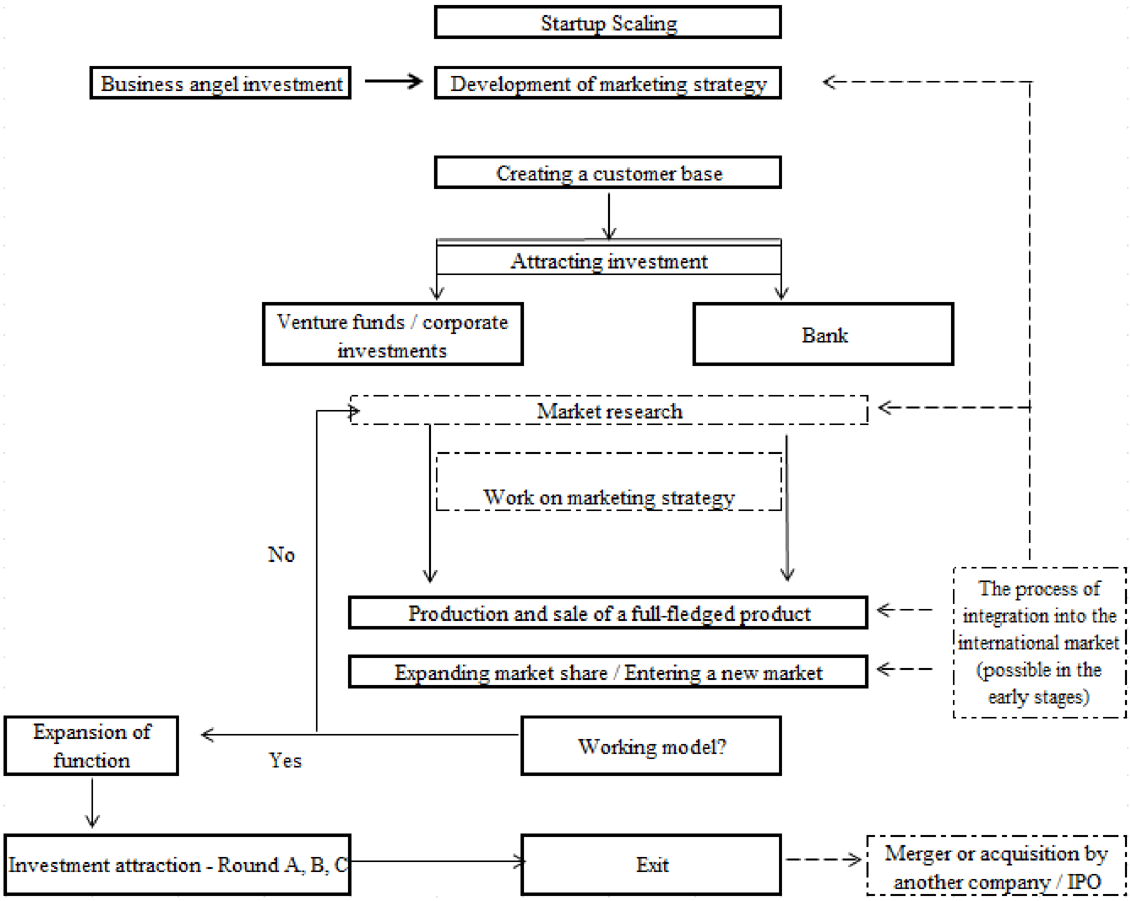

Fig. 4 The startups financial assistance algorithm in the scaling stage

**Created by the authors*

Using attracted investments from business angels or crowdfunding platform, the process of marketing strategy developing begins. This process is one of the main, because it depends on the strategy of product development and the company as a whole and market entry. The process of finding the first customers and creating a customer base is start.

With a complete market research and established marketing strategy, startups can attract investment from venture funds, private investors, corporate venture funds or apply to the bank. After attracting venture investments, the production and sale of a full-fledged product, the process of integration into the international market begins.

If such a model is working, then the startup enters the stage of attracting investments of round A, B, C, etc. to scale the project, market research, product improvement. Rounds of financial assistance may continue until the startup enters the initial public offering market – IPO (Initial public offering), either will not create a merger or sell its business project to another company.

Therefore, to integrate into the international business ecosystem and create a successful company, startups need to consider the following features:

- innovation only is not enough for a company. Market research and product improvement processes are carried out constantly and continuously, innovative processes and ideas must also appear on an ongoing basis;
- to ensure the continuity of the innovation process, startups have to work in most competitors pace constantly explore the market and customer needs. This feature is also important for the business ecosystem development, so it requires support for the startups ecosystem at the state level;
- continuous innovation process requires effective management and modern approaches to marketing to constantly and timely adapt the basics of the current business model (promotion channels, pricing, consumer needs, improve products, etc.) to market requirements.

Considering these features becomes especially relevant in the process of integration of domestic startup projects into the international ecosystem of startups.

Conclusions from this research and prospects for further developments in this area. After analyzing the materials, it was observed that the essence of startups formed as follows: the most accurate, in our opinion, is the definition of a "startup" as a temporary structure that is looking for ambitious, reproductive, profitable business model. The operating conditions of a startup are diametrically opposed to the conditions of the enterprise – it is in search mode, trying to find reproductive, profitable business model.

Startups financial assistance comes from venture capital, which is a form of private capital that usually comes from venture capitalists or funds, investment banks and other financial institutions, acceleration programs, etc. In contrast to the classic investments, which provide for a return of funds, the model of venture financing has a high probability of losing investment in each company.

In addition, it was noticed, that the venture investment process is often referred to as the classification of startups development stages.

The obtained results allow to distinguish optimal scheme of startup development, create algorithms with focus on investments attraction for the local startups integration into the international entrepreneurial ecosystem and improved financial assistance process of startup projects, because the main problem of startups is the difficulty of finding financial resources.

Also, based on research, we can note the impact of startups on the entrepreneurial ecosystem and the state as a whole.

Therefore, further startups research can be concentrated not only on the information technology sector development, but also branches such as medicine, industry, agriculture, etc.In addition, further research requires elements of the issue, such as intellectual resources, innovation, entrepreneurship and the public sector, which will provide modernization processes in all areas of life.

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Ківа А. А. (ORCID ID 0000-0002-6610-5898) – аспірант кафедри міжнародної економіки Національний технічний університет України «Київський політехнічний інститут імені Ігоря Сікорського»

Моісеєнко Т. Є. (ORCID ID 0000-0002-2074-8062) – кандидат економічних наук, доцент, доцент кафедри міжнародної економіки Національний технічний університет України «Київський політехнічний інститут імені Ігоря Сікорського»