

Report

Startup Central Eurasia Ecosystem Ranking 2023



Our partners:



Introduction

This report will stimulate the development of successful entrepreneurial communities, will foster technology start-ups that prosper and create jobs, support the growth of small and medium enterprises, and encourage new public-private and regional partnerships that fuel digital transformation and capacity growth.

The International Telecommunication Union (ITU), the lead United Nations agency for information and communication technologies (ICTs), has a key role in ensuring that Member States are able to navigate technological changes. ITU has created the framework, tools, and methodology to analyze the innovation ecosystems and their building blocks. The outcome has often been used to lay the foundation for national strategies and policies that foster innovation growth and a sustainable enabling environment.

This report is a practical toolkit for stakeholders to undertake rapid innovation ecosystem assessments and develop projects that effectively nurture innovation and the startup ecosystem.

Bridging the Digital Innovation Divide:

A toolkit for developing sustainable ICT-centric ecosystem projects



What is a Startup ecosystem?

ITU defines an ecosystem as a system or network of interconnecting and interacting organizations and stakeholders, from multiple sectors, who come together and address the problems people are facing within their communities. The previous toolkit defined six key stakeholder groups, each with an important role to play at every stage of the innovation journey.

Stakeholders of Startup Ecosystem:

Entrepreneurs: Entrepreneurs stimulate innovation by building companies that deliver novel solutions. They participate in all stages of the innovation lifecycle, from ideation to scale.

Academia: This group includes primary, secondary and tertiary institutions; research institutions and training centers.

Entrepreneurial support networks: These are the organizations within the ecosystem — such as innovation hubs, incubators, accelerators and associations — that support entrepreneurs.

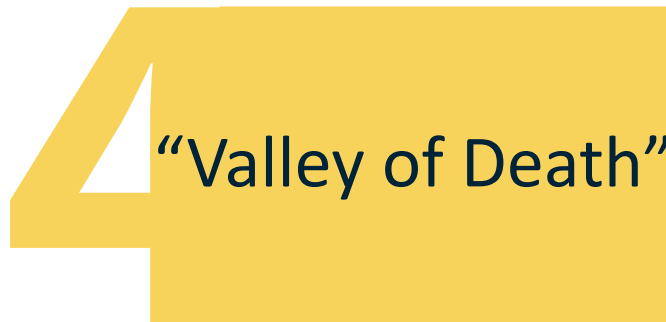
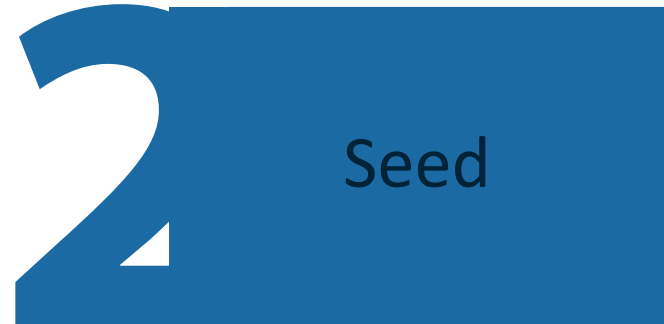
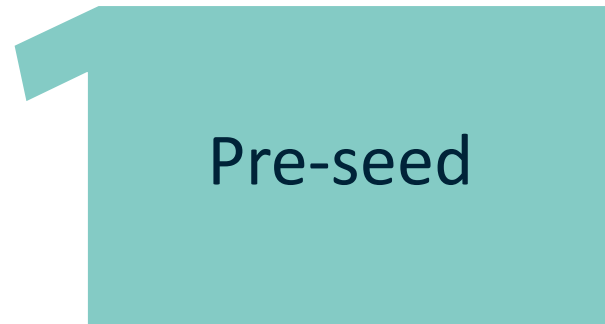
Financiers: This category includes investors that support the different stages of the startup lifecycle, from prototyping to initial public offering (IPO) for more mature companies.

Private sector: This sector includes large and mature corporations, established SMEs and groups that represent the interests of the private sector, such as chambers of commerce.

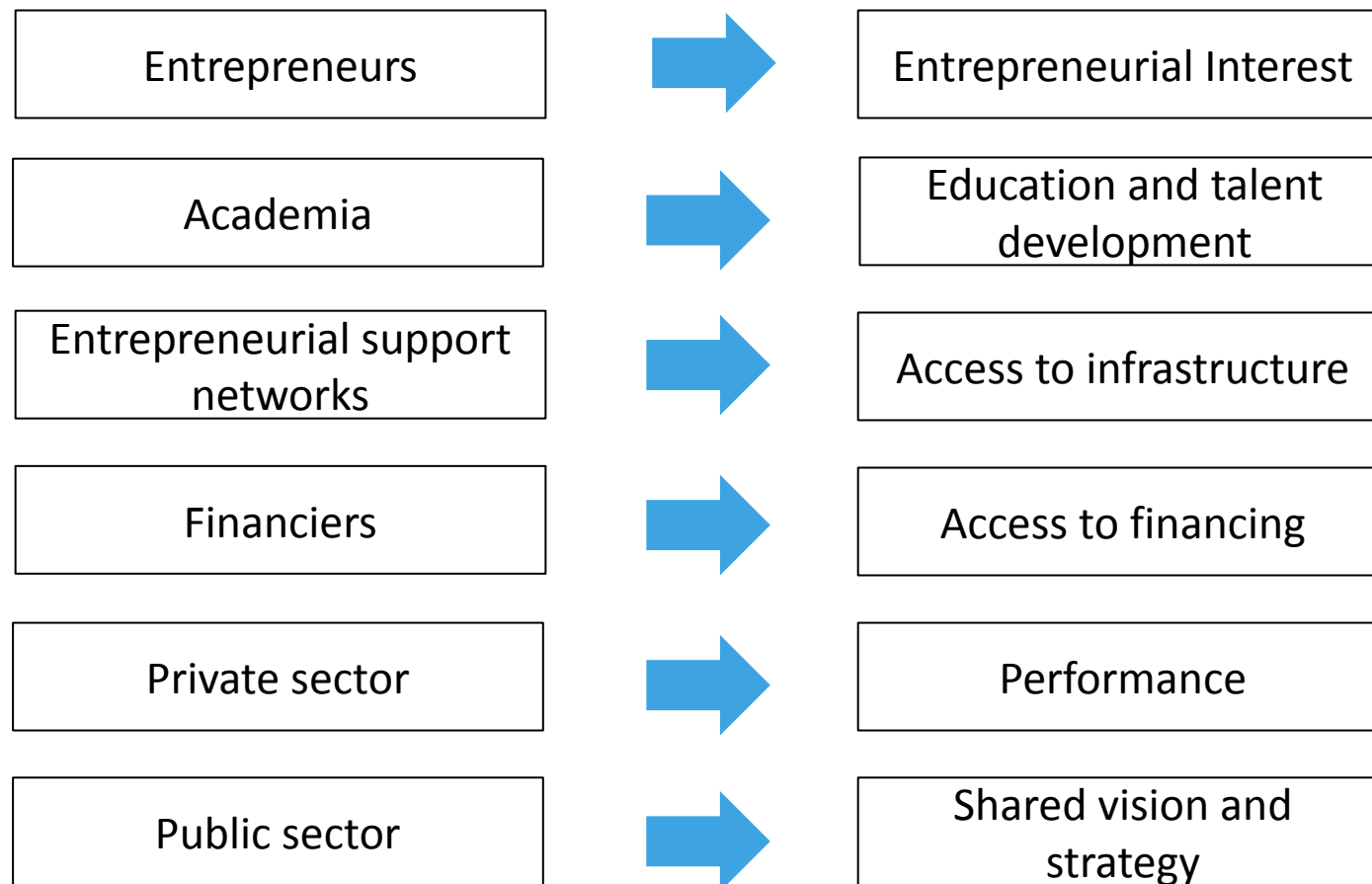
Public sector: This stakeholder group includes policy-makers and regulators who are active in the innovation ecosystem, along with other actors such as international organizations and civil society groups.

Methodology

Startup ecosystem stages:



Methodology



Methodology

Entrepreneurial Interest

Pre-seed: Before creating a startup, potential innovators should be interested in entrepreneurship and understand the characteristics of technological entrepreneurship and current technology.

Seed: Entrepreneurs should discover and focus their work on relevant problems when they come up with an idea for a new innovation (including understanding how to create original products relevant to the global market or considering the context of their country's problems).

Access to financing

Pre-Seed: research funding: need to provide resources for basic research that will lead to innovation and provide access to early investment (including angel investment).

Seed: Early-stage, high-risk investments, usually less than \$100,000, are needed to launch a startup. They come from a variety of sources, including investors, public and private sectors.

Shared vision and strategy

Pre-seed: vision and strategy: Government should provide a clear vision and strategy for the innovation ecosystem and bring stakeholders together to support them.

Seed: Public policy should support IP rights and R&D through funding, legal protection, and other measures. Including legal frameworks for the transition to digital transformation (regulatory sandboxes, regulation of the crypto segment, crowdfunding, venture capital and investor protection guarantees) should be created.

Education and talent development

Pre-seed: entrepreneurial inspiration: Universities must create environments and communities that inspire and foster new entrepreneurs.

Seed: Basic research: Basic research contributes to the idea creation process by working on practical problems and developing valuable innovations.

Performance

Pre-seed: success stories: Successful innovators should be visible and available to young entrepreneurs as mentors and inspirers.

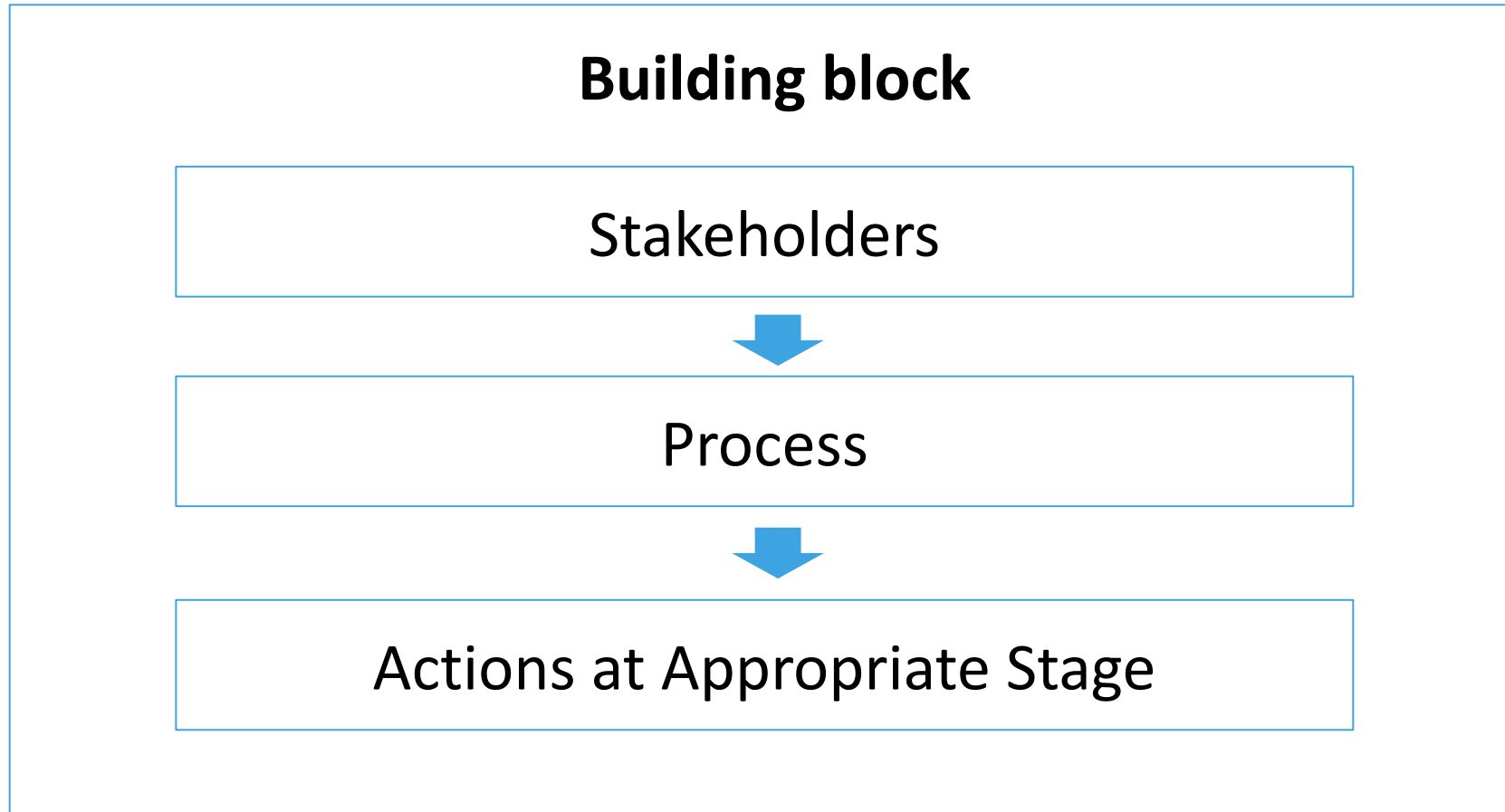
Seed: Funding and support for R&D by private firms is often a major source of support for upcoming innovations, both inside and outside the firm.

Access to infrastructure

Pre-seed: events for innovators and potential innovators spread the entrepreneurial culture and provide the support needed to start the life cycle of an entrepreneur.

Seed: hackathons and contests: Idea pitching processes and contests reward innovators for successfully pitching ideas and help build connections that foster the process.

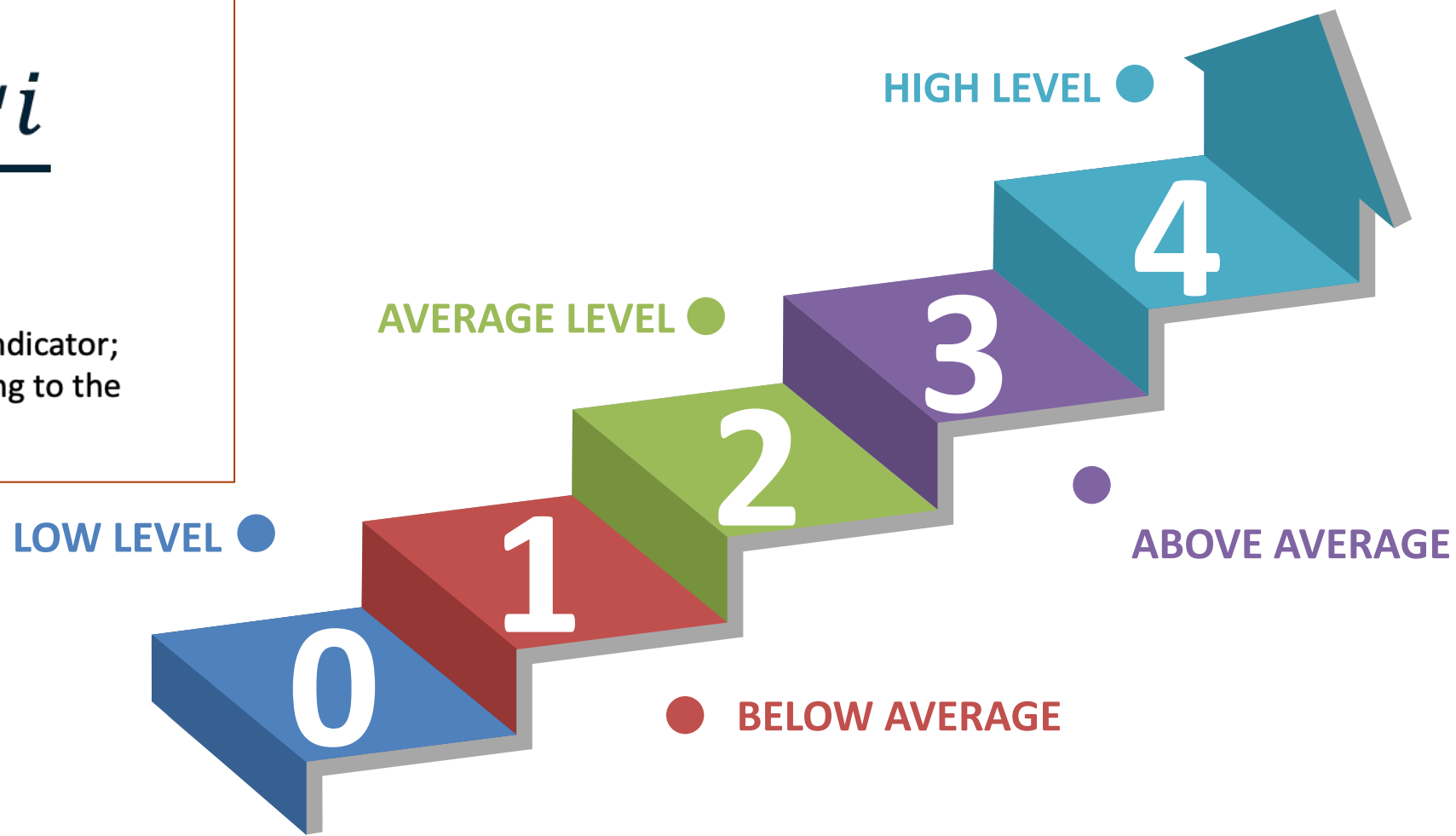
Methodology



Methodology

$$P_i = \frac{BL_i}{4}$$

where P_i – is the value of the i-th indicator;
 BL_i – is the assigned score according to the level.



Methodology

Pre-seed stage indicators:

Entrepreneurial interest:

- understanding the definition of a startup;
- support for technology businesses;
- use of a startup business model.

Performance:

- the number of startups that have attracted funding in excess of ten times GDP per capita per 1 million population over the past 3 years;
- the number of science-intensive startups that have attracted funding more than ten times GDP per capita per 1 million people over the past 3 years;
- percentage of knowledge-intensive startups relative to all startups that raised funding of more than ten times GDP per capita in the last 3 years.

Access to finance:

- average amount of initial financing;
- the maximum amount of initial financing.

Education and talent development:

- average experience of a startup founder;
- the average salary of a software engineer per year relative to the country's GDP per capita;
- percentage of startup founders with higher education;
- Percentage of startup founders with advanced degrees.

Access to infrastructure:

- percentage of the population covered by fixed broadband Internet access;
- percentage of the population covered by mobile broadband Internet access;
- number of startups accepted into incubation and acceleration programs per 1 million people

Shared vision and strategy:

- the level of quality of the national strategy for the startup ecosystem;
- the level of understanding and consensus on the main issues of the development of the startup ecosystem among stakeholders;
- the level of the country's competitiveness in terms of the startup ecosystem at the regional and global level.

Methodology

Seed stage indicators:

Entrepreneurial interest:

- startup focus on a specific market;
- priority areas for the development of startups;
- approach to participating in startups.

Performance:

- the total number of startups created over the past 3 years per 1 million people;
- the number of prototypes / MVPs created over the last 3 years per 1 million people;
- the number of registered patents for the last 3 years per 1 million people.

Access to finance:

- average amount of initial financing;
- the maximum amount of initial financing.

Education and talent development:

- availability of fundamental research to form ideas and create innovations in relation to the number of universities;
- the amount of money allocated to basic research to generate ideas and create innovations.

Access to infrastructure:

- the number of competitions held over the past 3 years per 1 million people;
- the number of programs implemented over the past 3 years per 1 million people;
- the number of hackathons conducted over the past 3 years per 1 million people;
- the presence of the main techno park / IT Park, which deals with key areas of development for technology startups.

Shared vision and strategy:

- the existence of regulatory legal regulation to meet the needs of stakeholders in the protection of their intellectual property;
- availability of legal regulation for modern technologies;
- availability of regulatory legal regulation for the venture sector.

Methodology

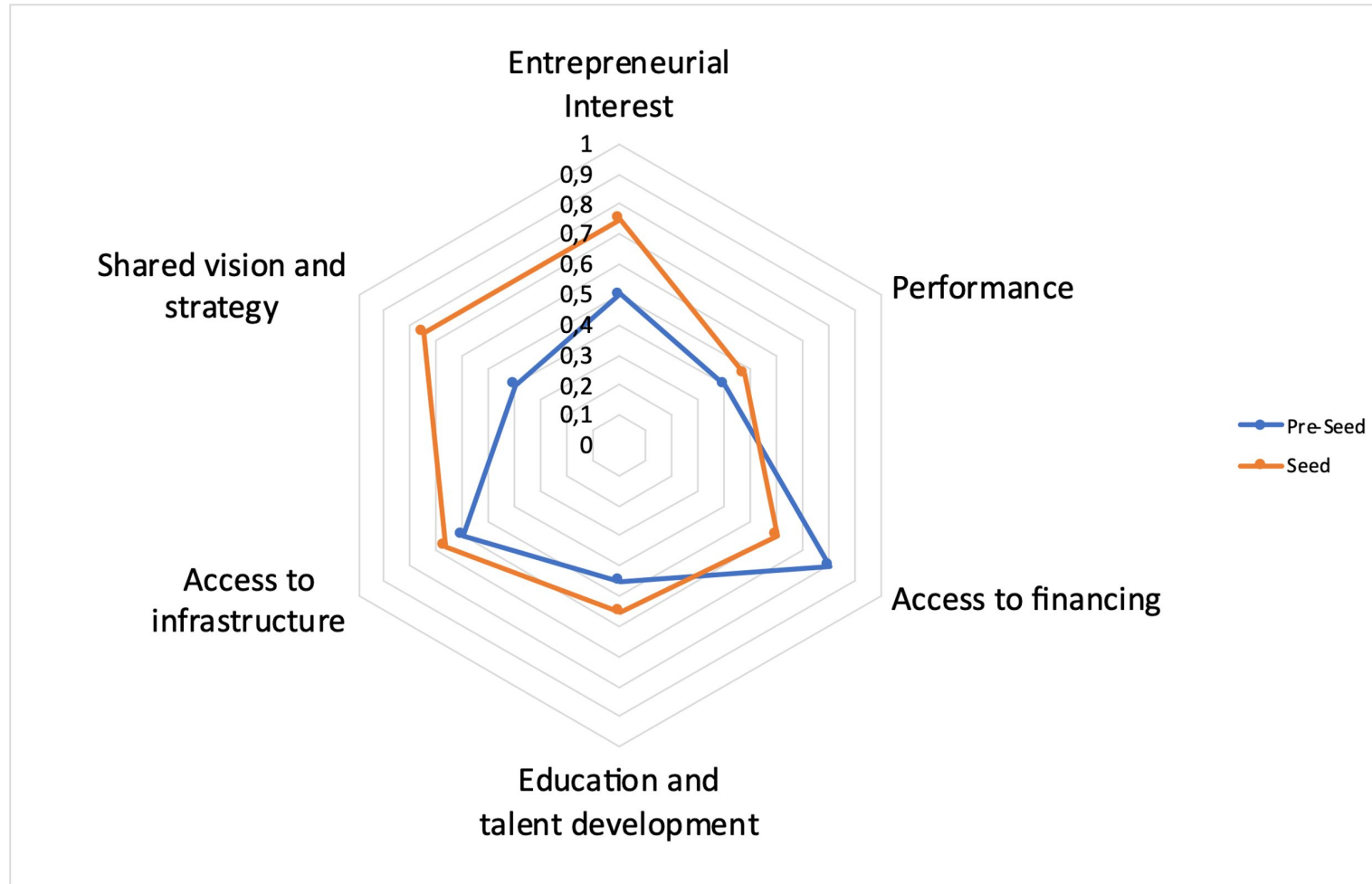
$$WC_i = \frac{1}{n} \sum_{j=1}^n IP_j$$

where WC_i – is the value of the i -th weight coefficient;
 IP_j – is the value of the importance of indicators for the j -th expert;
 n – is the number of experts.

$$I_k = \sum_{i=1}^m P_i \times WC_i$$

where I_k – is the value of the k -th index;
 m – is the number of indicators.

Methodology

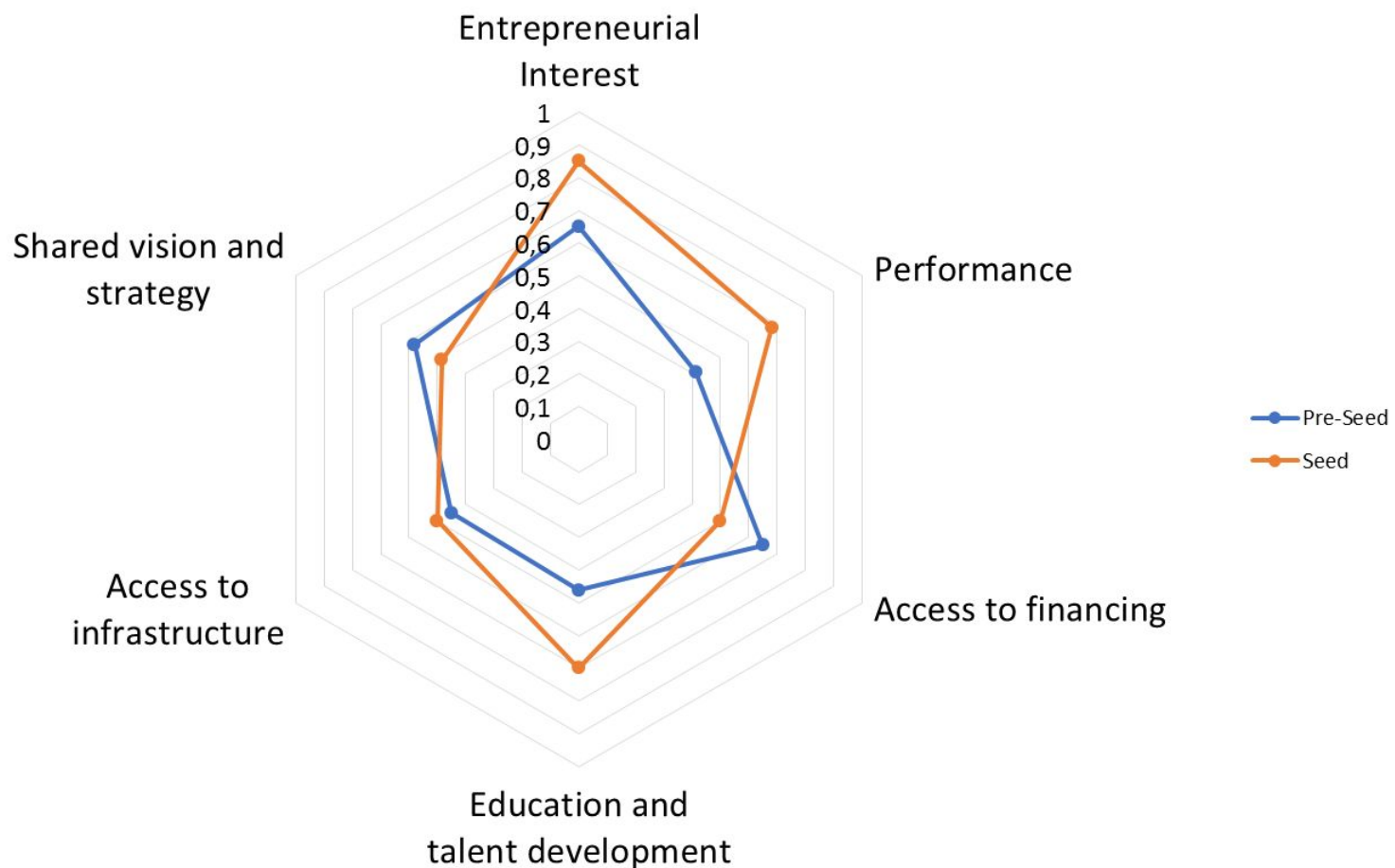


Methodology

$$R_h = \frac{1}{l} \sum_{k=1}^l I_k$$

where R_h – is the value of the rating of the h-th country at a certain stage;
 l – is the number of indexes.

Azerbaijan



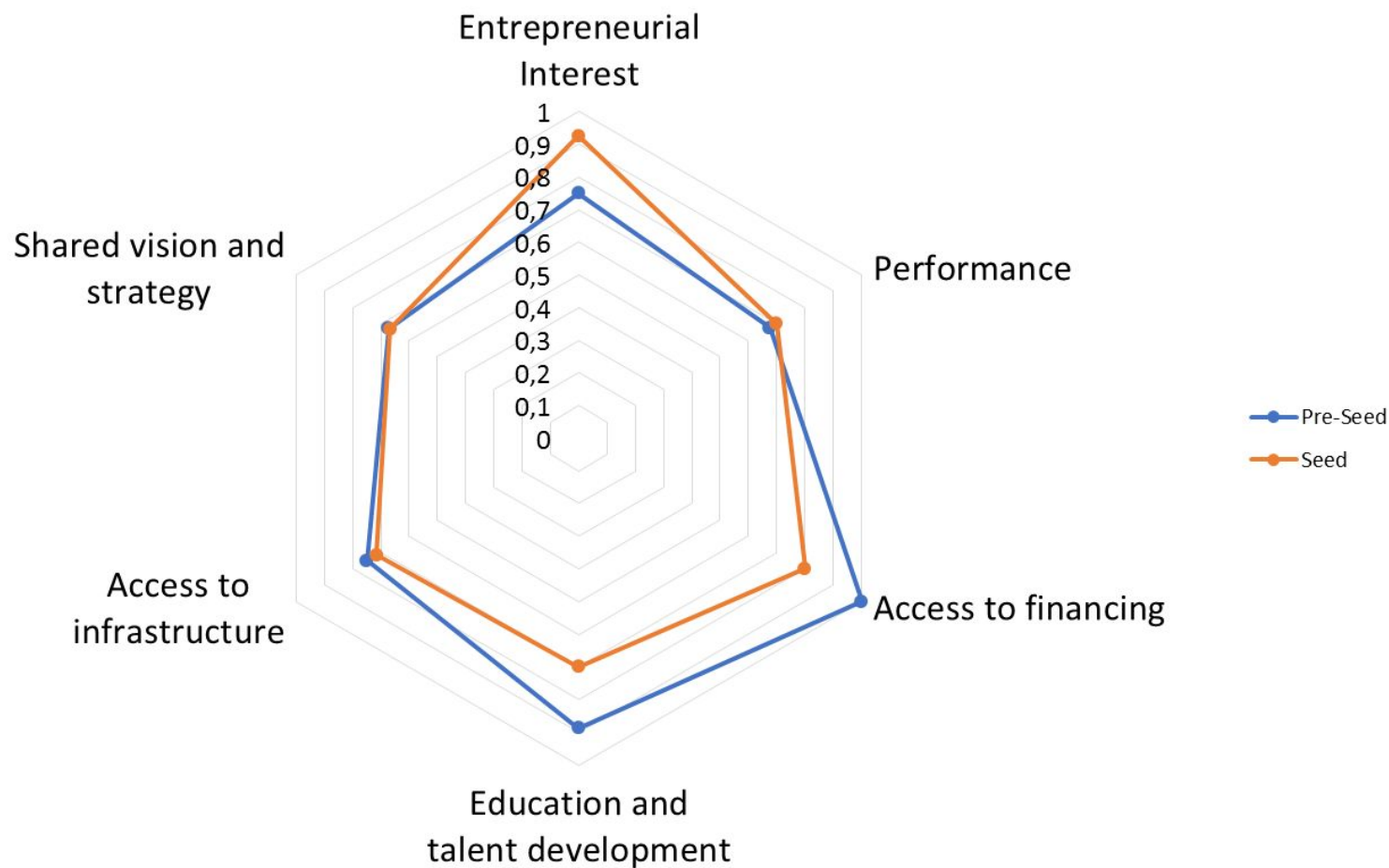
The main advantages:

- ✓ Entrepreneurial Interest is growing fast
- ✓ the main number of startups are oriented on the international market;
- ✓ venture fund, angel club, created for the access to finance
- ✓ acceleration programs and venture studio

Need to continue work on:

- ❖ improving the understanding of the definition of a startup;
- ❖ increasing the number of business angels and venture funds in the country;
- ❖ creation of university startup communities and entrepreneurial education;
- ❖ creation and development of qualified IT specialists.

Armenia



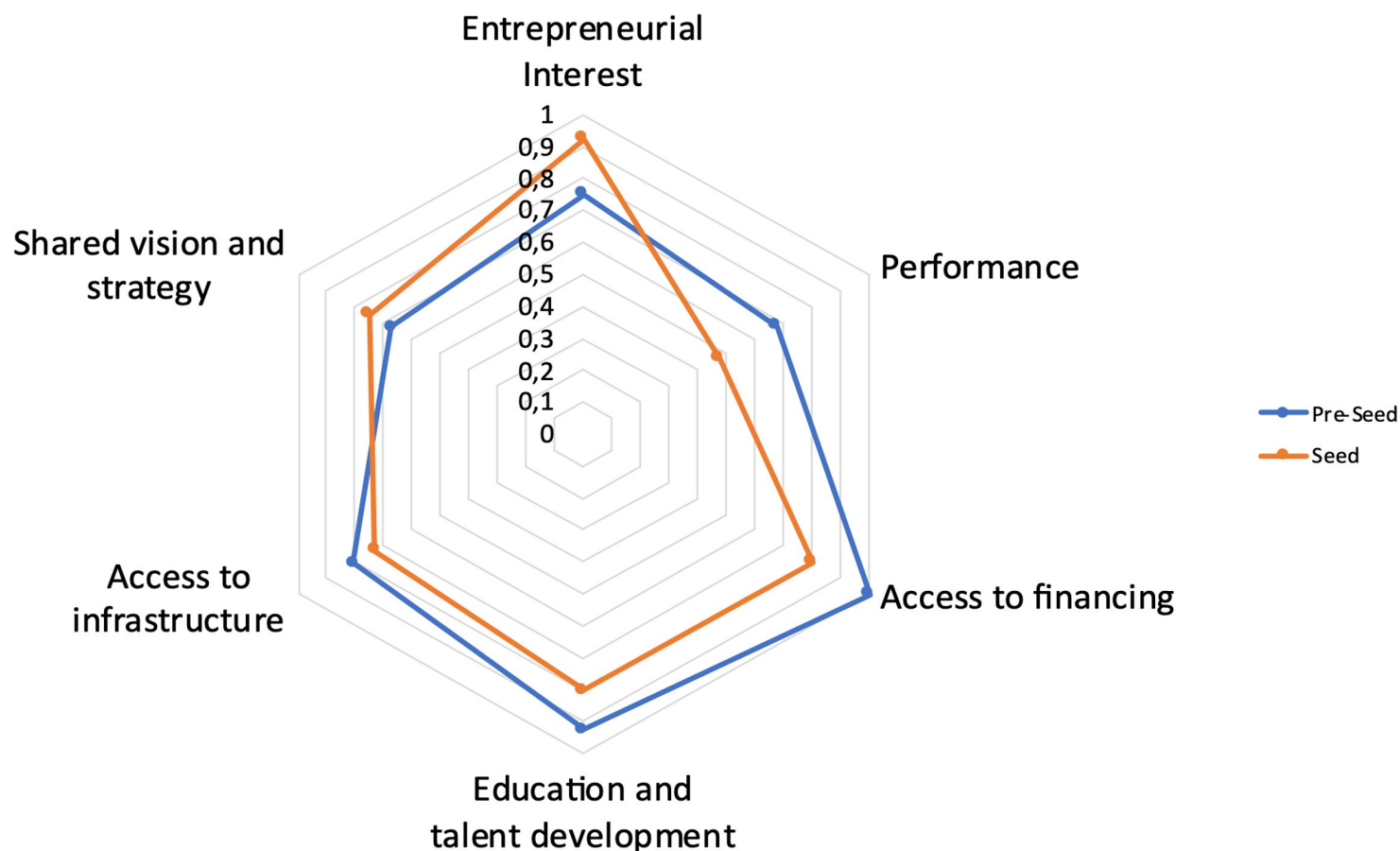
The main advantages:

- ✓ many successful startups, including the unicorn;
- ✓ Ministry of High-Tech Industry implementing a lots of supporting programs;
- ✓ business angel networks and early-stage funds in the country;
- ✓ funds supporting science-based startups.

Need to continue work on:

- ❖ more innovative startups in the B2G segment;
- ❖ increase the number of university-based business incubators and accelerator, university startup project financing;
- ❖ Increase funding and support for R&D from the private sector;
- ❖ increase the number of students and, accordingly, programs for the IT specialties.

Georgia



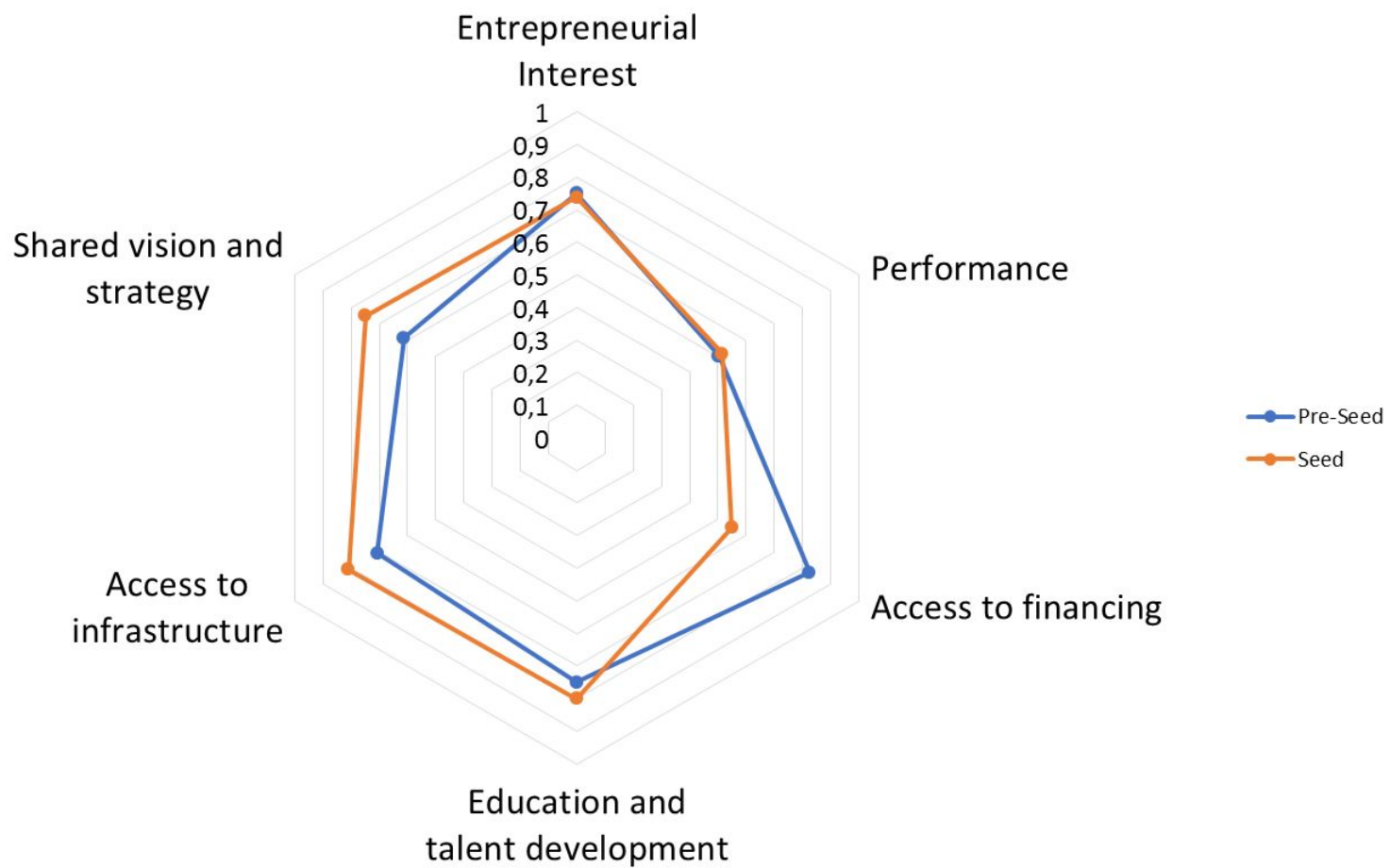
The main advantages:

- ✓ many successful startups;
- ✓ sufficiently developed incubation and acceleration programs (including, 500 Georgia);
- ✓ the venture capital part of the ecosystem is developed
- ✓ strong governmental support of innovation ecosystem

Need to continue work on:

- ❖ shape the mindset of the entrepreneur so that grants are seen as a means of development rather than a goal;
- ❖ Increasing the knowledge of business angels for investment;
- ❖ Increasing the number of mentors and advisors for startups;
- ❖ Increasing the IT talent pool to scale the startup internationally.

Kazakhstan



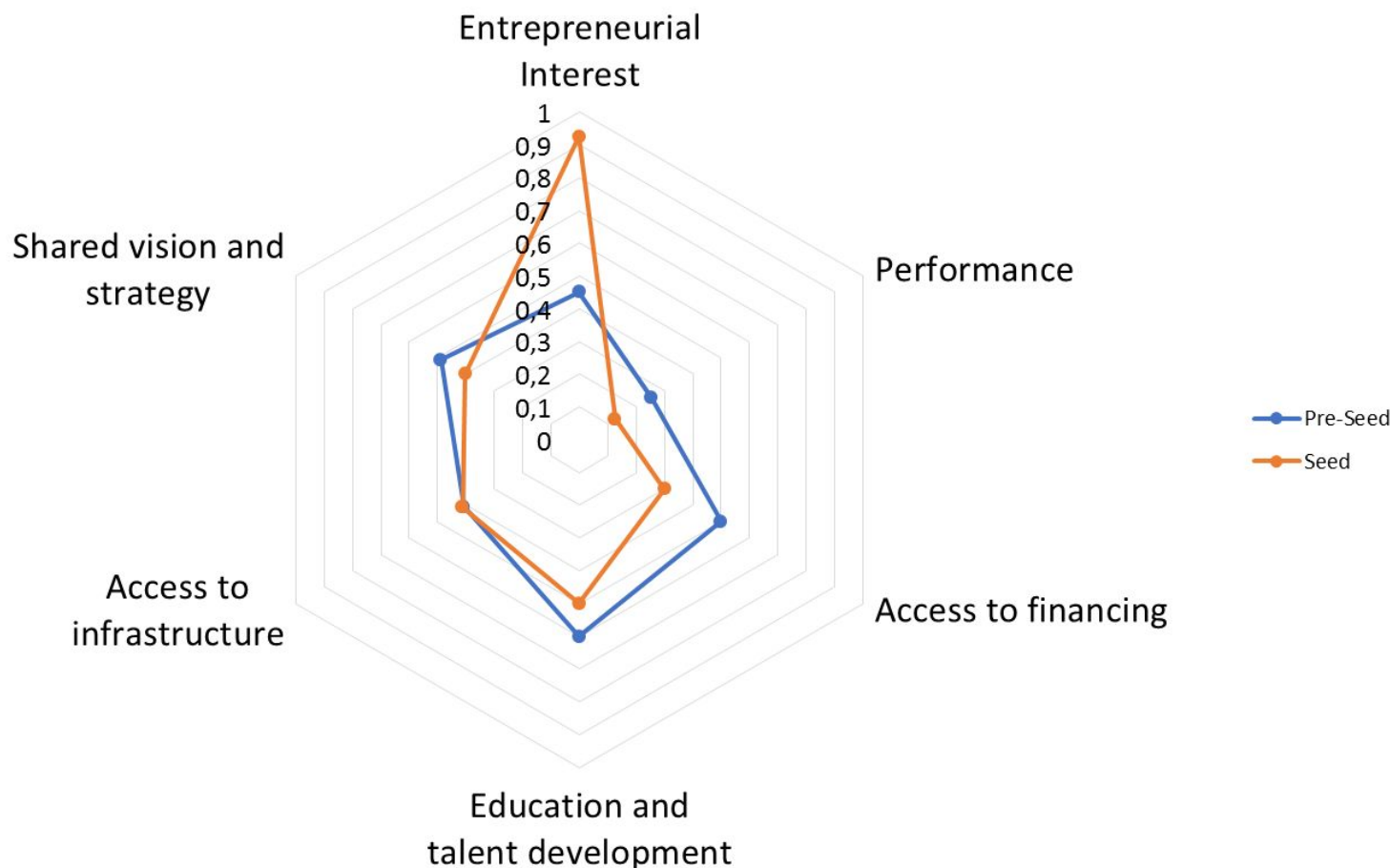
The main advantages:

- ✓ availability of a technopark responsible for providing acceleration, technological business incubation services;
- ✓ venture clubs and venture funds have been established;
- ✓ availability of the Astana International Financial Center (AIFC) for establishing VC funds;
- ✓ business incubators are operating in the country

Need to continue work on:

- ❖ increase the number of science-based startups;
- ❖ Improve entrepreneurs' knowledge to globally scale startups;
- ❖ create conditions for the development of angel investments, raise the level of confidence in startup investments;
- ❖ decentralization of governmental support, more involvement of the private sector

Kyrgyzstan



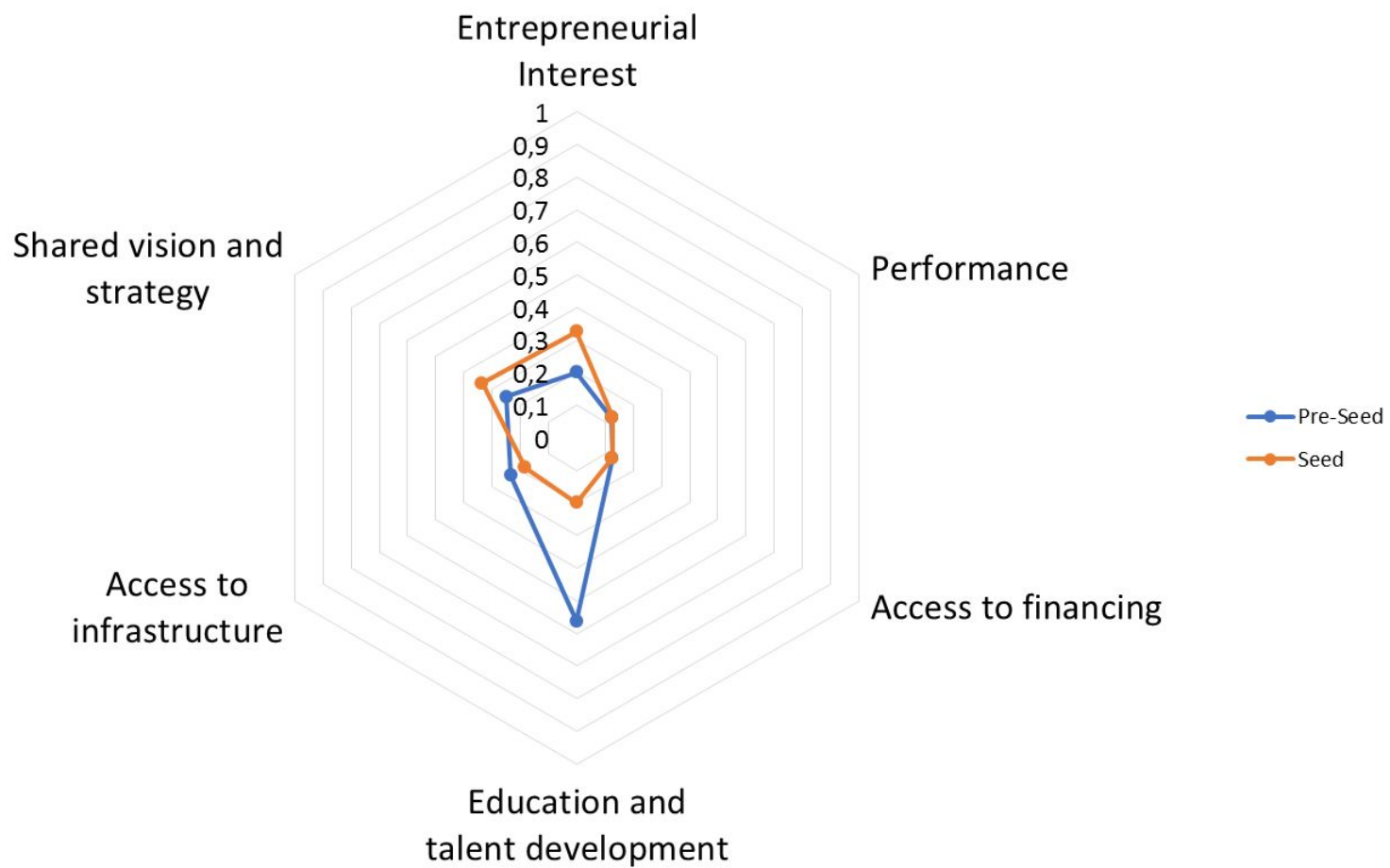
The main advantages:

- ✓ most of the startups are oriented on the international market;
- ✓ acceleration programs are available
- ✓ role of the High-Tech Park and Kyrgyzpatent in the field of infrastructure development
- ✓ availability of FabLab, services, trainings, access to tools for prototyping and testing innovative products.

Need to continue work on:

- ❖ improving the understanding of what is a startup as an innovation company;
- ❖ Increase access to investment, promote the creation of fund of funds, venture capital funds and angel clubs;
- ❖ increase startup education in the country;
- ❖ accelerate the adoption of legislation for the venture capital industry and the startup ecosystem.

Tajikistan



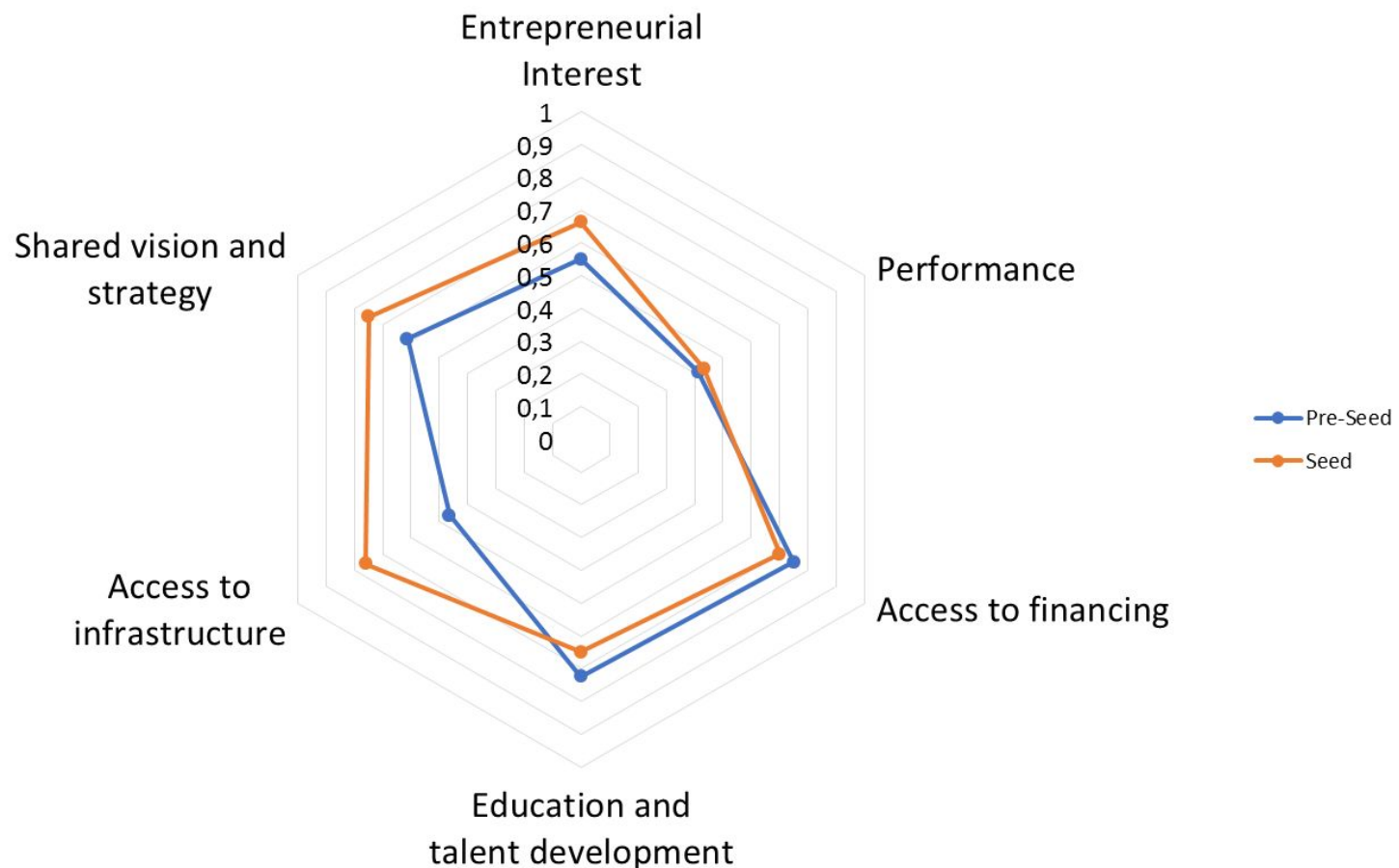
The main advantages:

- ✓ artificial intelligence startup Zypl.ai as a success story,
- ✓ competitions and incubation for startups
- ✓ the country has an Artificial Intelligence Council and has developed an AI strategy

Need to continue work on:

- ❖ improve the understanding of a startup as a technology business and how to scale it to the international market;
- ❖ create a special Governmental entity responsible for Startup and Innovation
- ❖ develop a culture of business angel financing, and a venture capital culture of investing;
- ❖ increase the number of qualified IT personnel, programs at higher education institutions for entrepreneurship education;

Uzbekistan



The main advantages:

- ✓ number of successful startups is growing;
- ✓ there is a high rate of infrastructure development, note the role of IT Parks in the country;
- ✓ great practice for IT personnel development One Million Uzbek Coders Project is being implemented;
- ✓ venture capital financing is starting to be implemented.

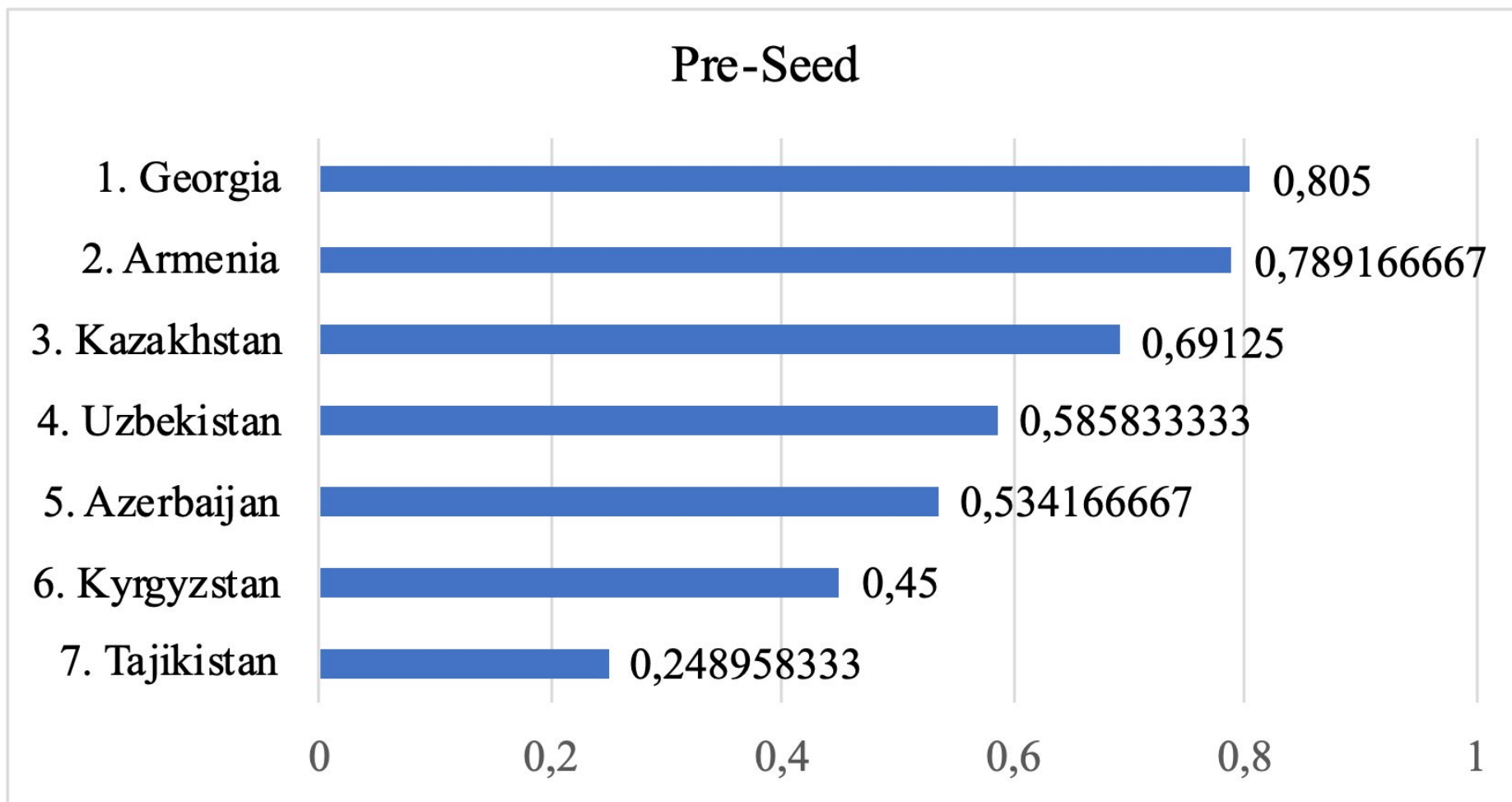
Need to continue work on:

- ❖ improving the understanding of the definition of a startup, as technology businesses;
- ❖ improving investment conditions for business angels and increase the involvement of the Fund of Funds in startup ecosystems;
- ❖ involvement of higher education institutions in the creation of startups;
- ❖ increase funding and support for R&D from the private sector, development of knowledge-intensive startup.

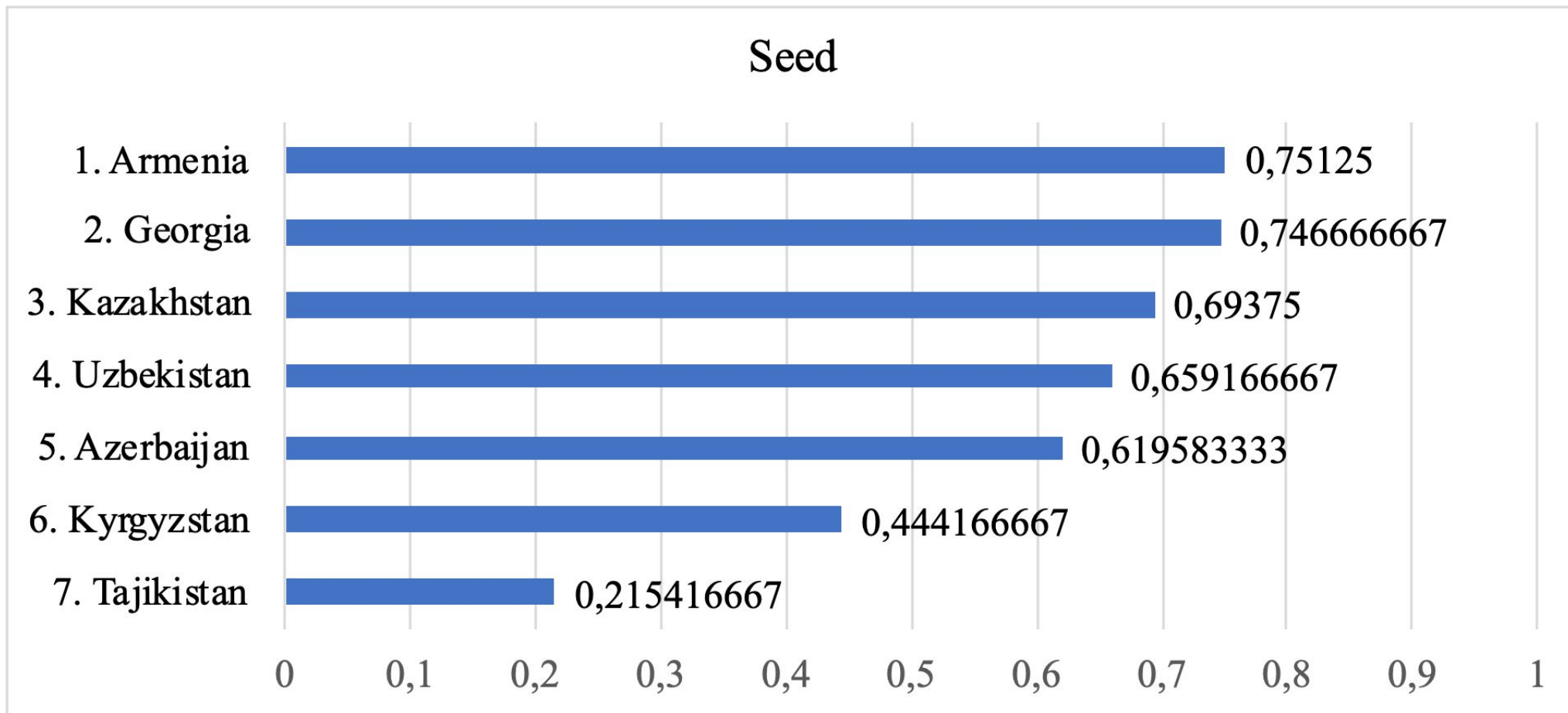
Ecosystem Maturity Map

	Entrepreneurial Interest		Performance		Access to financing		Education and talent development		Access to infrastructure		Shared vision and strategy		Ranking	
	Pre-seed	Seed	Pre-seed	Seed	Pre-seed	Seed	Pre-seed	Seed	Pre-seed	Seed	Pre-seed	Seed	Pre-seed	Seed
1. Georgia	0,75	0,925	0,675	0,475	1	0,8	0,925	0,8	0,8075	0,73	0,6725	0,75	0,805	0,746667
2. Armenia	0,75	0,925	0,675	0,7	1	0,8	0,8875	0,7	0,75	0,715	0,6725	0,6675	0,789167	0,75125
3. Kazakhstan	0,75	0,7375	0,5025	0,515	0,825	0,55	0,75	0,8	0,7075	0,81	0,6125	0,75	0,69125	0,69375
4. Uzbekistan	0,55	0,6625	0,4125	0,4325	0,75	0,7	0,725	0,65	0,465	0,76	0,6125	0,75	0,585833	0,659167
5. Azerbaijan	0,65	0,85	0,4125	0,6825	0,65	0,5	0,4625	0,7	0,45	0,5	0,58	0,485	0,534167	0,619583
6. Kyrgyzstan	0,45	0,925	0,255	0,125	0,5	0,3	0,6	0,5	0,4075	0,4125	0,4875	0,4025	0,45	0,444167
7. Tajikistan	0,2	0,325	0,12375	0,125	0,125	0,125	0,5625	0,2	0,2325	0,1825	0,25	0,335	0,248958	0,215417

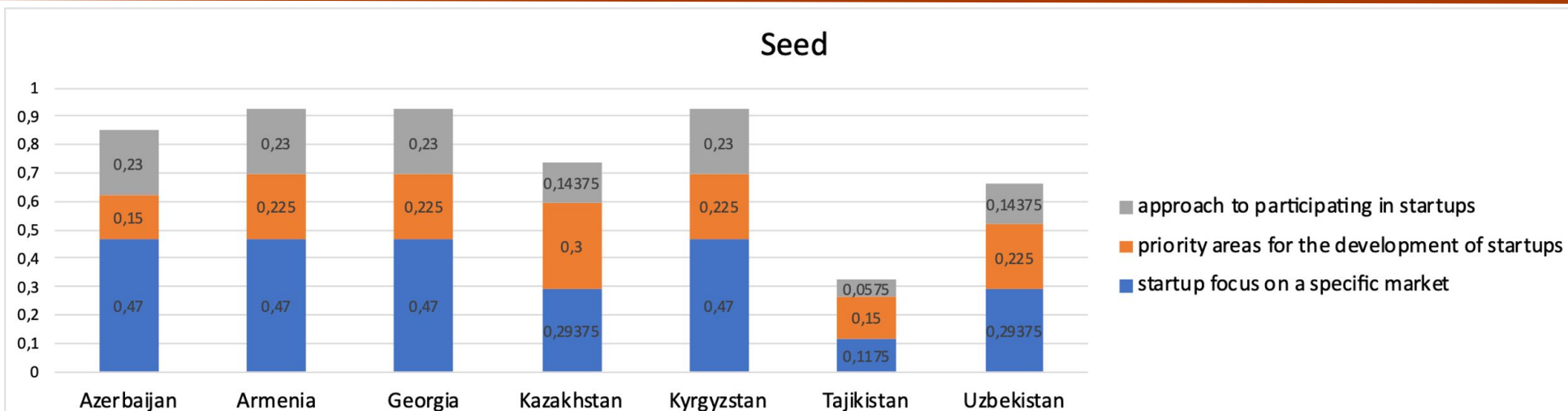
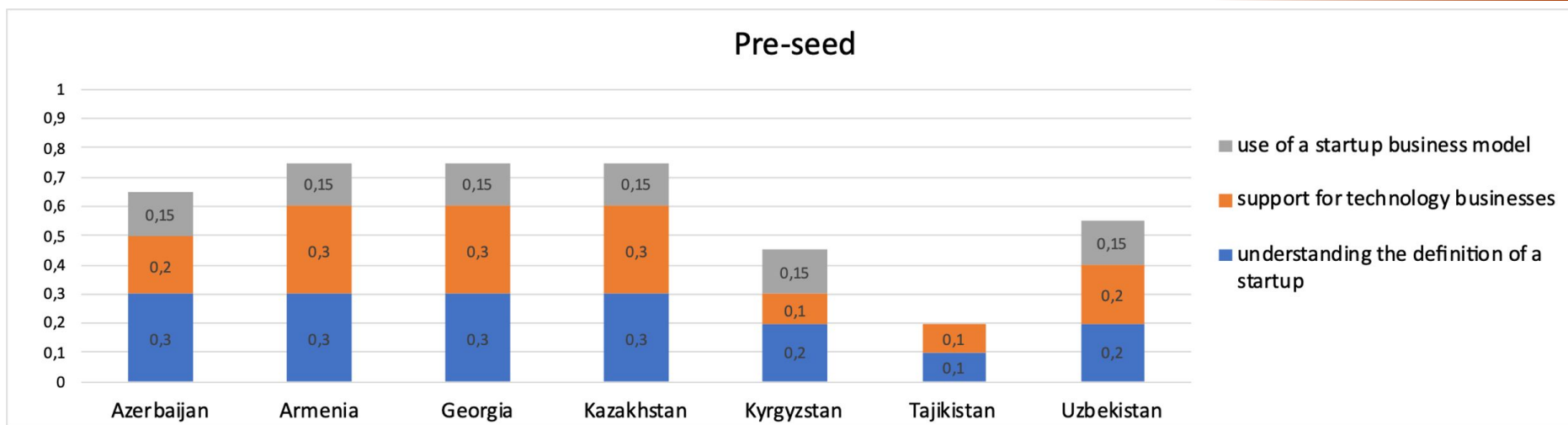
Ranking



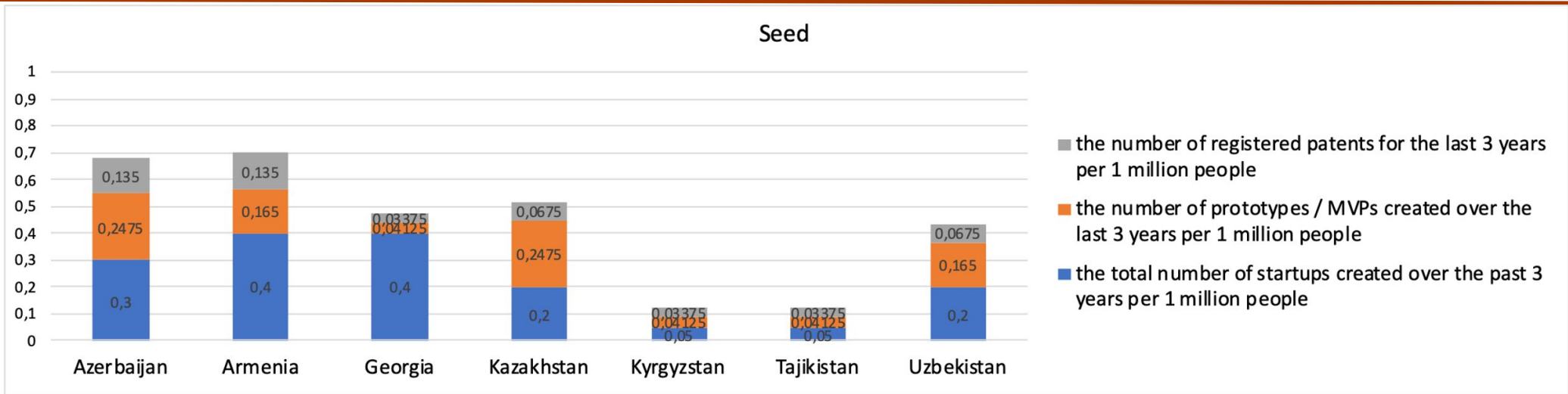
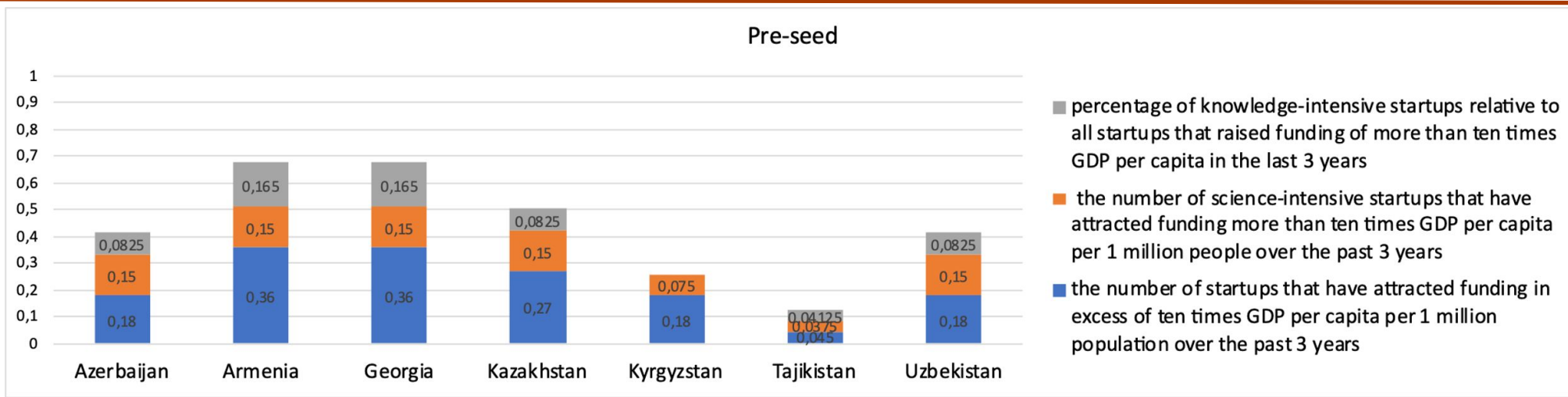
Ranking



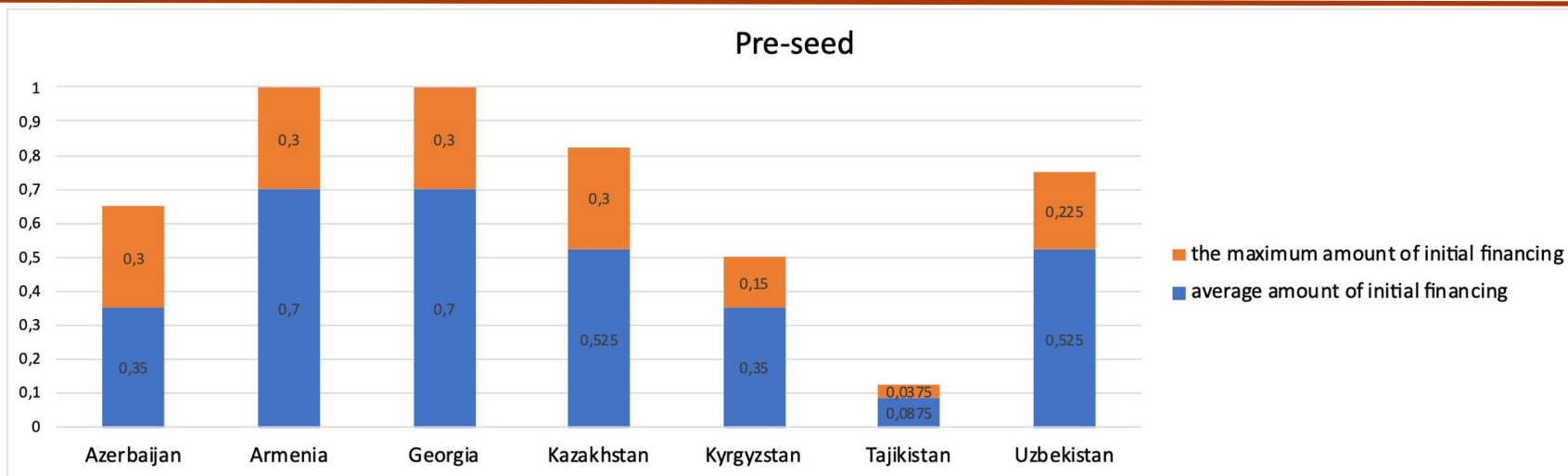
Entrepreneurial Interest



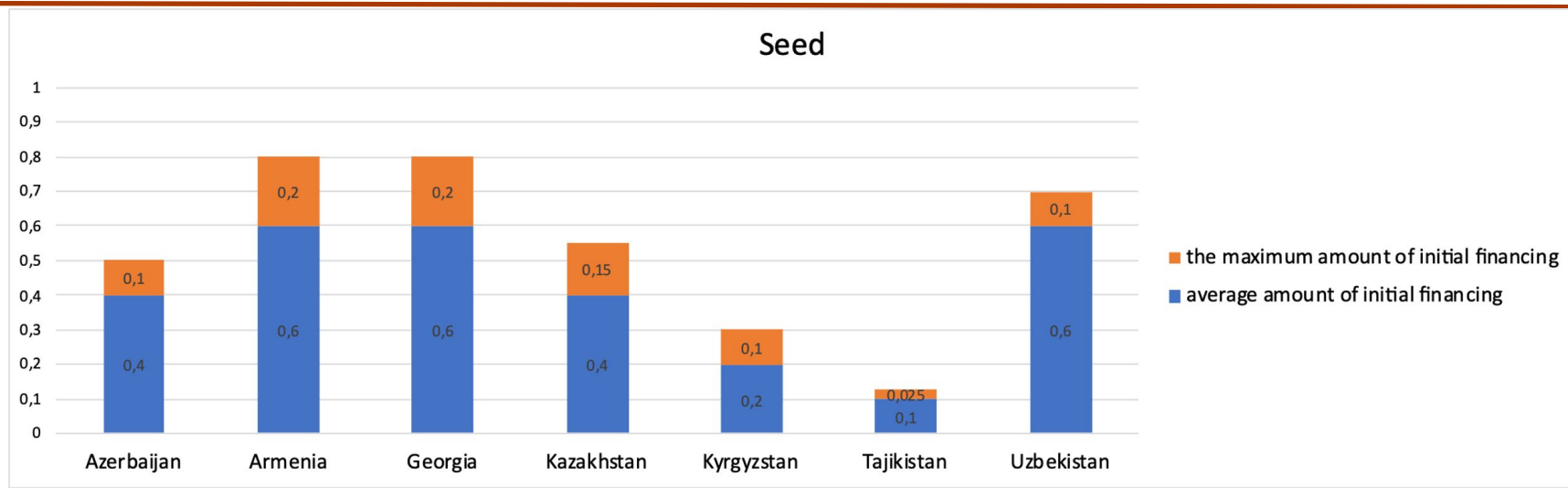
Performance



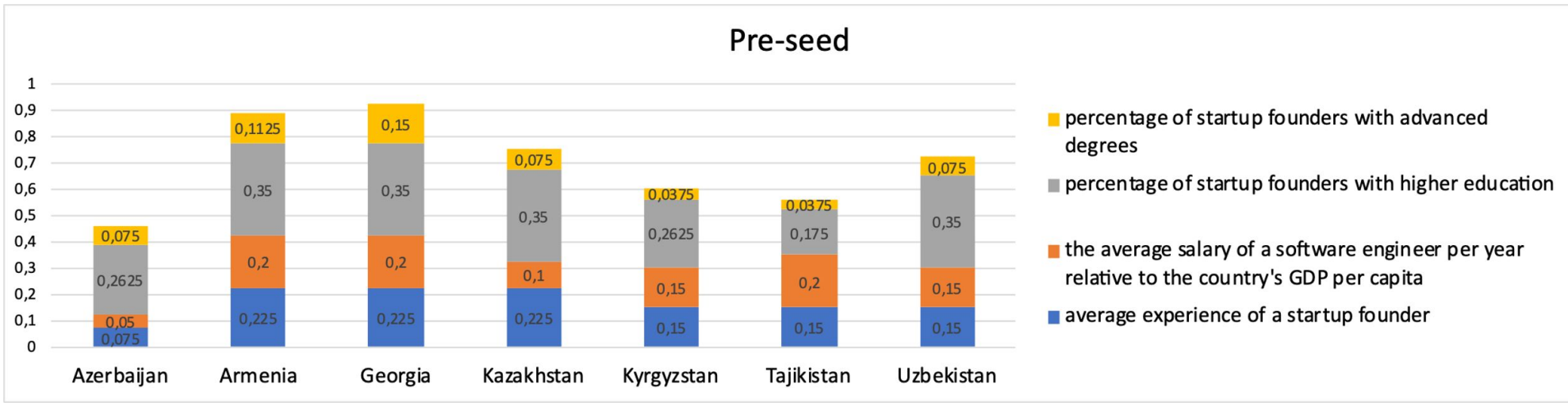
Access to financing



formula VC



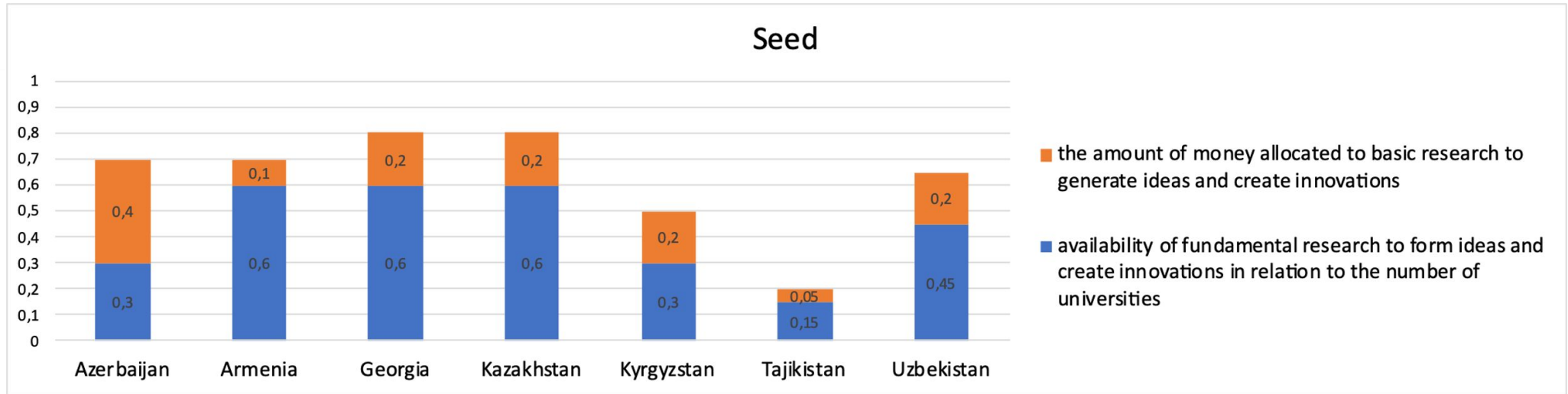
Education and talent development



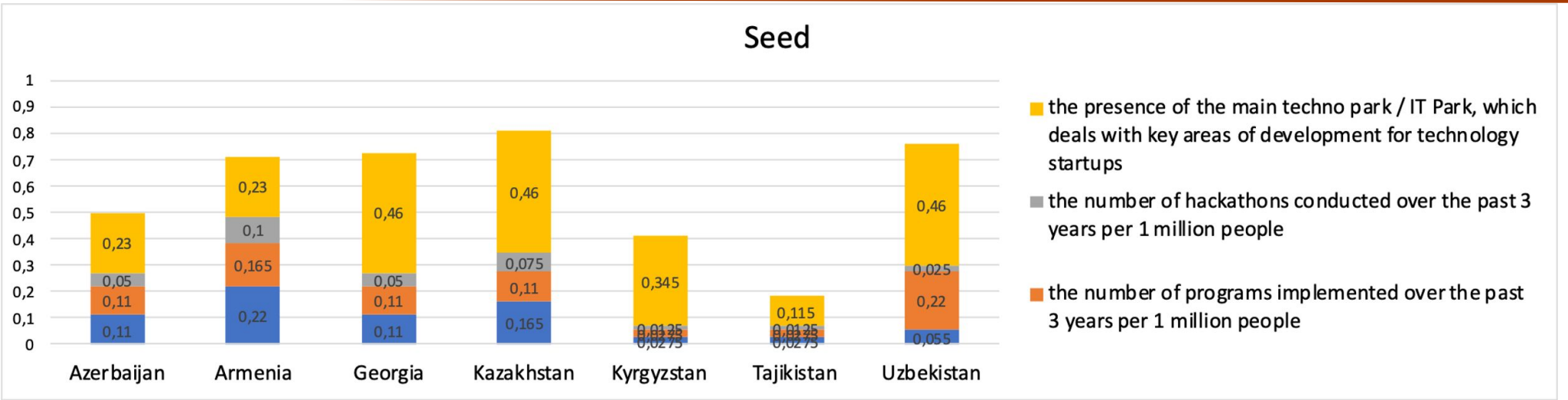
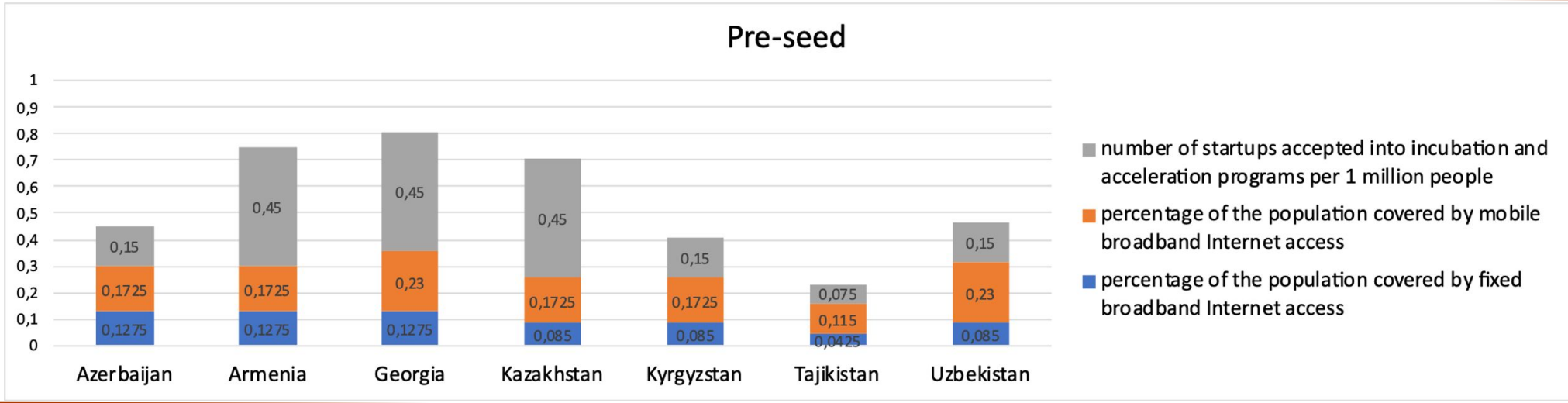
FAST DISCOVERING THE FUTURE

SABAH.HUB

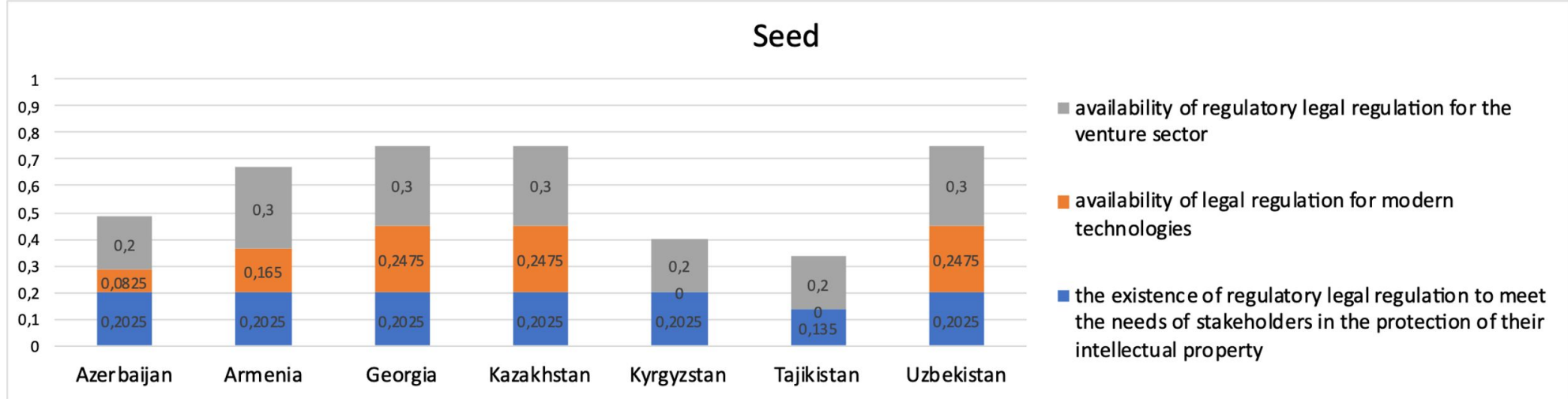
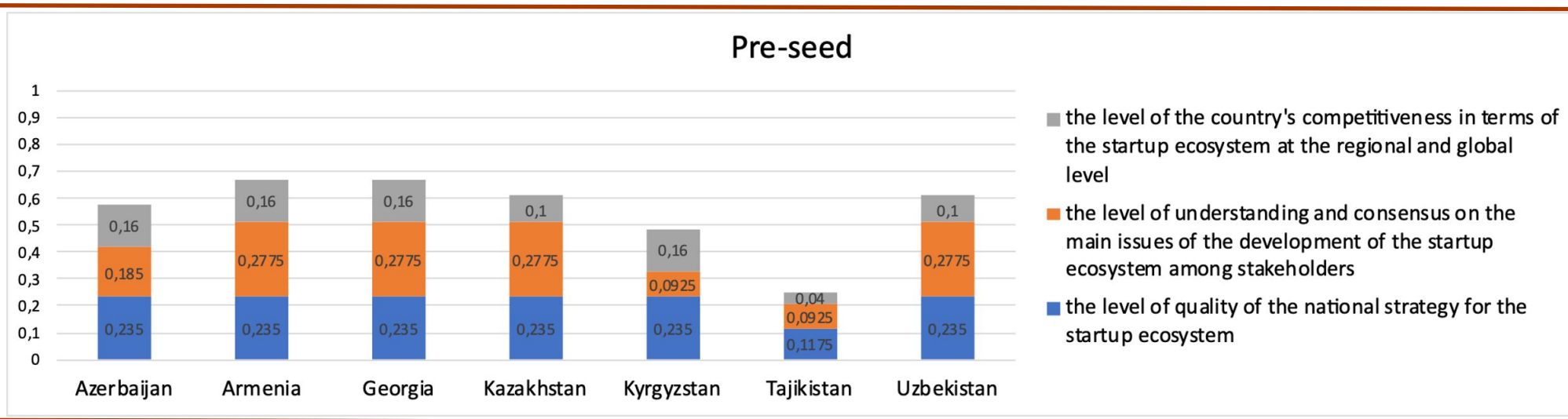
C.A.T.
Science Accelerator



Access to infrastructure



Shared vision and strategy



General recommendations

- ✓ The startup ecosystem consists of **building blocks**, the efficiency and interconnected use of which are conditions for the creation of full-fledged technology companies with the potential to enter global markets as well as increase the productivity of local industries.
- ✓ The main task of **state structures** in the process of developing a startup ecosystem should be to ensure the uniform and interconnected development of all its elements. To do this, the most important task is to monitor the current processes and analyze how much it is necessary for the state to continue to actively participate in the development of a particular “building block” of the startup ecosystem and whether there is already an appropriate critical mass of stakeholders in the private sector that can take on the development of this direction. In this case, the government can continue to act as a partner in the innovation process, providing both partial financial and consulting assistance.
- ✓ **Government agencies** need to continue active work to improve the quality of entrepreneurship education in higher education institutions by updating educational programs, improving the qualifications of teaching staff, promoting the creation of university acceleration programs integrated into the educational process (including appropriate incentives for teaching staff to increase involvement), and improving legislation that creates an opportunity to finance student start-ups.
- ✓ In terms of **developing infrastructure** for innovation, it is necessary to create technology parks and innovation centers not only in large cities but also in the regions. When developing a regional infrastructure for innovation, it is necessary to consider the specifics of the region and the direction of traditional business development to maximize the integration of start-up projects in the process of increasing the productivity of business forms and industry sectors developed in the region.
- ✓ In terms of **access to finance**, it is necessary to continue work on the creation and improvement of legislation in the field of venture financing, initiating by states the creation of a fund or funds to promote venture financing.
- ✓ It is important to improve the **competence of venture investors** themselves and potential partners of venture funds who are ready to transfer their investment resources to a venture fund for management. In the area of entrepreneurial interest, it is important to create conditions for the creation and development of **globally scalable start-ups**, considering trends in the field of increased use of computing technologies, artificial intelligence, process optimization, and an innovation wave driven by “deep science” (using R&D) based on breakthroughs in biotechnology, nanotechnologies, and the creation of new materials. Accordingly, in order to fully utilize the country's potential, it is necessary to increase the productivity of the economy through the introduction of innovations and the development of start-up projects, as well as increase the amount of resources allocated to research with the subsequent commercialization of these projects.
- ✓ To increase the competitiveness of the region, it is important to cooperate between ecosystems, implement joint projects to bring startups from the region to international markets, and develop the venture financing market, including raising capital to invest in local startups from the world's leading ecosystems.



About Startup Central Eurasia

Promoting Cross-Country Collaboration to Boost Startup and Innovation Ecosystems

Project is supported by: ITU

Startup Central Eurasia partnering with leading International Organization, National Administrations, Agencies and Techparks responsible for the Innovation and Startup Ecosystem development, Leading Venture Funds and private accelerators.

Thank you for your attention!

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