

ROLE OF GOVERNMENT - TECH PARK - UNIVERSITY TRIANGLE IN DEVELOPMENT OF ENTREPRENEURSHIP

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SUMMARY

One of the important factors for the development of entrepreneurship in the experience of the advanced countries in the world is to ensure effective links in the triangle of government, technology parks and universities. This policy paper describes the current state of entrepreneurship development in the context of the government, technology parks and universities in the Republic of Azerbaijan, identifies major problems and offers recommendations for their elimination.

When analyzing the current situation, it has become clear that cooperation between government and technology parks is not at desired level in terms of forming an entrepreneurship ecosystem. This policy paper looked into the main problems in this area, studied best practices in the experience of developed countries, and put forward recommendations for the development of this area in the country.

1. INTRODUCTION

In the globalizing world, creating a competitive economic model is dependent on cooperation between the government, business and academia. It is known that countries with favourable entrepreneurial environment greatly contributes to the development of innovations, applied sciences and science in general. In recent years, a number of steps have been taken in this area in Azerbaijan, new technology parks were created and considerable work was carried out to improve the business environment. The National Strategy on Development of Science in the Republic of Azerbaijan for 2009-2015 was adopted by the Decree No 255 of the President of the Republic of Azerbaijan of May 4, 2009. The main objectives of the Strategy include the development and use of modern technologies in science and various fields of economy, creation and development of a competitive sector for scientific researches, support for the rapid integration of industrial and research sectors, development of infrastructure for innovation activity including technology parks, technology centers, expansion of the network of business incubators, allocation of state funding for innovation activities.¹ In addition, the Decree of the President of the Republic of Azerbaijan dated 5 November

¹ National Strategy on Development of Science in the Republic of Azerbaijan in 2009-2015, Baku, 4 May 2009, № 255, s.5.

2012 stipulates for establishing High Technologies Park with a view to ensuring sustainable development and competitive recovery of the economy, expansion of innovation and high technologies based on modern scientific and technological achievements, scientific research and creation of modern complexes for the development of new technologies.²

In addition, the Law on Science of the Republic of Azerbaijan was adopted on June 14, 2016 by the Decree 271-VQ of the President of the Republic of Azerbaijan. The Law specifies the priorities of science and scientific-innovation activity, integration of science, education and economy, integration into the global space of science as the main principles of state policy in the sphere of scientific activity. The main objectives of the state policy in the field of science are to adapt the institutional system and financing mechanisms of scientific activity to the world standards, ensure the effective use of scientific potential for developing all spheres of social life, identify and develop the main areas of scientific researches, including fundamental and applied researches, etc.

The paper also studied international experience in this area. For instance, entrepreneurial activity has been supported by the government in the United States since 1950.³ Universities and technology parks in the world's industrialized countries are seen as one of the key factors of economic development as well as entrepreneurship development. Countries such as the United States, England, France, Japan, Turkey, China, Korea, India and Finland attach great importance to supporting the value added in the business sector with research and development activities carried out by universities and technology parks. University students in developed countries are involved in carrying out researches funded by state and other programs in technology parks, and seeking for new solutions for industrial development. The Chinese government's experience of putting forward programs geared towards business development at universities is quite interesting. The government has been taking steps in the frame of various youth programs to boost the spirit of entrepreneurship in the country.⁴ In the case of Poland, the government and business sector support the entrepreneurial activities carried out within the framework of university and industry cooperation.⁵ In addition, South Korea's approach can be considered as a useful and important example for addressing the problem. In order to develop innovation ecosystem in Korea, the government provides financial support to various researches on industry sectors that are in line with the interests of the private sector. It benefits the country's future economic development and promotes competition in the domestic market.⁶

This paper mainly serves to answer the following questions:

² <http://www.e-qanun.az/framework/24574>

³Katz, J. A. (2003). The chronology and intellectual trajectory of American entrepreneurship education: 1876–1999. *Journal of business venturing*, 18(2), 283-300.

⁴Gnyawali, D. R., & Fogel, D. S. (1994). Environments for entrepreneurship development: key dimensions and research implications. *Entrepreneurship theory and practice*, 18(4), 43-62.

⁵Kurowska-Pysz, J. (2016). Opportunities for cross-border entrepreneurship development in a cluster model exemplified by the Polish–Czech border region. *Sustainability*, 8(3), 230.

⁶Jones, L. P., & Il, S. (1980). Government, business, and entrepreneurship in economic development The Korean case. *Harvard East Asian Monographs* 91.

- What other steps can be taken to improve the mechanisms for supporting entrepreneurship development?
- How to increase the effectiveness of technology parks for business development?
- What else needs to be done to increase students' entrepreneurial spirit at universities?
- What are the ways to increase the effectiveness of cooperation in the triangle of government, technology parks and universities?

2. JUSTIFICATION OF THE ISSUE

Entrepreneurship development is very important for the development of socio-economic welfare in every country. Today's entrepreneurs create products and services, and sell them in local and international markets, whereas the state creates favorable conditions for entrepreneurs and support entrepreneurship with various programs. In recent years, a number of steps have been taken in the field of entrepreneurship development in our country and reforms have been implemented. However, there still exist certain problems hindering development of the business environment. One of these problems relate to the low level of mutually beneficial cooperation between entrepreneurs as well as universities and technology parks. The studies show that the current situation in our country and the legislative base remain inadequate for the development of this sphere. First of all, it should be noted that the education system in a country should meet today's demands, that is, pay special attention to the training of qualified personnel required for entrepreneurship development in the country. Today, the level of cooperation between entrepreneurs and educational institutions in Azerbaijan does not suffice for the dynamic development of entrepreneurship in the country. Education policy in every country should pave the way for innovative thinking and contribute profoundly to entrepreneurship development. In this respect, universities and educational institutions can play an important role in the development of entrepreneurial culture in the country and society.

One of the important tools for entrepreneurship development is research and development (R&D). Science and technology parks with appropriate infrastructure provide great opportunity for young people to put theoretical knowledge acquired in educational institutions into practice.

The urgency of the issue has been the focus of attention of the President of the Republic of Azerbaijan Ilham Aliyev. In his speech delivered on April 15, 2013, President Aliyev touched upon the significance of the issue and emphasized the importance of establishing technology parks: "It is intended to introduce new rules for the promotion of industrial production, strengthen the activity of technology parks and take additional measures to strengthen their activities, grant concessions. Industrialization policy will lead to the sustainable economic development of

Azerbaijan."⁷ The establishment and functioning of technology parks is financed by funds allocated from the state budget, revenues generated by the organization in charge of management and other non-prohibited sources. Another aspect that the state attaches importance in the development of technology parks is related to developing information technologies to withstand international competition. To this end, the State Fund for Development of Information Technologies, established by the Decree No 2095 of the President of the Republic of Azerbaijan dated March 15, 2012 provides financial support for the promotion of activities in the field of ICT, application of innovation in this field as well as expansion of applied research works. The conditions created for the development of science and innovation in the technology parks indicate that personnel therein are involved in entrepreneurial activity.⁸

As a result of studying the challenges, it can be concluded that universities in the country don't adequately prepare future small, medium and large entrepreneurs nowadays. Preparing students in the spirit of entrepreneurship and fostering their entrepreneurial thinking in the educational institutions remain at a very low level. Our universities place little emphasis on researches of industrial importance, search for innovations and solutions that meet the real market needs. In order to create and maintain a competitive education environment in science and innovation, universities and technology parks actively need to support students in terms of innovation.

3. IDENTIFICATION AND EVALUATION OF ALTERNATIVES

1st Alternative

It is first necessary to improve the legislative framework to ensure sustainable and effective development of entrepreneurship and meet economic demand for skilled personnel. That is, the laws should stimulate entrepreneurship from theoretical and practical viewpoint, promote cooperation between various science centers and technology parks and encourage entrepreneurial involvement in this process. Adoption of publicly debated draft Law on Innovation Activity will be important for piloting promising scientific developments in the future. It could especially encourage entrepreneurs with ideas for technological innovations. Meantime, it is necessary to gather and maintain statistics in this area, identify objectives aimed to achieve in the future, and clearly define the powers and responsibilities of different stakeholders. In addition, the state policy in the sphere of education need to entail establishing a platform for entrepreneurship universities. Like developed countries, the state and local authorities should support embodying the concept of entrepreneurship university in Azerbaijan by employing special methods and resources.

⁷<http://president.az/articles/7080>, 22.10.2013.

⁸<http://president.az/articles/7080>, 22.10.2013.

2nd Alternative

In order to stimulate the development of entrepreneurship in universities, it is expedient to embody the concept of science parks in the strategic plan of the Ministry of Education of the Republic of Azerbaijan. Establishment of campuses and technology parks within higher education institutions or cooperation frameworks with existing technology parks and similar entities can be thus defined in the strategic plan. It is necessary to reconsider preparing specialists in the educational, research and innovation centers of the higher education institutions in accordance with the country's socio-economic development needs. Quality of education and curricula designed to provide students with knowledge of entrepreneurship should meet today's demands. The curriculum should include substantial theoretical knowledge necessary for preparing entrepreneurs. It is essential to adopt guidelines for entrepreneurship education in universities and design special programs aimed at developing students' entrepreneurial knowledge. Such programs and trainings can help students raise entrepreneurship spirit and start new businesses.

3rd Alternative

Profile of technology parks created in the territory of the Republic of Azerbaijan with the purpose of expanding innovation and high technologies on the basis of modern scientific and technological achievements should be defined and sources of funding, location, management and organization of activities should be determined.⁹

Technology parks play a role in bridging the gap between universities and industry, they should be supported by the public and private sector. Supporting technology parks can be considered as an important alternative, as they can become indispensable for young entrepreneurs poised to start business and take risks. Young entrepreneurs should avail themselves of the opportunity to benefit from the technology park ecosystem with a view to realizing their innovative ideas. These benefits include services provided by technology parks such as research, marketing, accounting, mentoring, various laboratory facilities, cooperation with business circles, etc. Initial support provided by the technology parks will help young entrepreneurs grow their businesses to the extent they can compete in the real market. Evaluating alternatives for technology parks will be useful for the development of ecosystem. Technology parks can serve as an effective bridge between research centers and industry. Scientific knowledge accumulated as a result of university and tech-park collaboration should be further commercialized and used to increase the attractiveness of scientific work in higher education institutions. Limitations in the legislation impeding the development of technology parks should be considered and minimized by the government. These limitations include taxation of residents, resources and support services, and period required for their development.

Use of this alternative has the following advantages:

⁹ Decree of the President of the Republic of Azerbaijan No.1574 dated August 7, 2017 ("Xalq" Newspaper, August 8, 2017, No.170, Collection of Legislative Acts of the Republic of Azerbaijan, 2017, No.8, Article 1521)

- Declaring 2018 as the year of innovation will pave the way for rapid development of tech entrepreneurship.
- Add value to the ecosystem from the economic viewpoint.
- Can lead to dynamism to recover the labor market.

Use of this alternative has the following disadvantages:

- Significant changes to the legislation governing education and industry are required, but takes much time;
- It is a complicated process and sometimes requires regular monitoring of the markets, collecting and analyzing large amounts of data;
- Requires considerable investments by the state and industry.

4. CONCLUSION AND RECOMMENDATIONS

It should be noted that entrepreneurship development and innovative approach to business are not a one-sided process. As a matter of fact, it should embody university-industry cooperation. Creating effectively self-regulating environment in university-industry cooperation will be more sustainable with legally regulated and incentivized approach taken by the state. At present, training centers or academies are established in most large companies in Azerbaijan. One of the reasons is inability of university graduates to meet business demands when it comes to the issues of everyday practice. It is important to regulate legislative framework and embrace the concept of entrepreneurship university in order to address these issues. This policy model plays an important role in the development of entrepreneurship on national or international level. The concept of entrepreneurship in education, contemporary teaching methods and innovative approaches should be developed and reforms in the sphere of education should be effected. Close cooperation with technology parks in this respect is essential for improving the effectiveness of reforms.

Meantime, laboratory facilities at universities should be developed, and processes therein should be linked to the ecosystem of technology parks. In addition to incentives for universities and companies to develop technology parks, monitoring should be arranged and conducted based on the relevant legislation. Science and industry parks should be built in close proximity to higher education and research institutions. In this case, students, in other words future entrepreneurs, can be closely associated with entrepreneurial activities at an early stage. The use of public and private funds allocated to research within technology parks can considerably push reforms to facilitate entrepreneurship development.

Sources

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