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Innovative development of key sectors of economy based on the creation of technological parks in the Republic of Azerbaijan

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Abstract

The priorities of stabilisation of the Azerbaijan economy require the search for approaches to the organisation of production and economic activities on a new technological basis within the framework of the construction of structures of the Techno park type. This article is devoted to issues of innovative development of key sectors of economy on the basis of digitalisation and creation of technological parks in the Republic of Azerbaijan. This article examines the current situation of the digital economy, its characteristic features, analyses the state of Techno parks and various approaches to the use of the digital economy, as well as the prospects and trends of its development in the Republic of Azerbaijan. The aim of this article is to develop theoretical and practical issues related to the innovative development of key sectors of the economy on the basis of the introduction of scientific and technical structures of the Techno park type. The main result of this work is the allocation of opportunities for the further successful development of key sectors of the economy on the basis of the creation of technological parks in the Republic of Azerbaijan. The article considers theoretical and practical aspects of innovative development of economic sectors on the basis of introduction of scientific and technical structures of Techno park type. It is determined that one of the main problems of development of the country and its individual regions' increase of investment attractiveness and innovation activity. It is proved that insufficient use of the scientific and technological potential of the country has been shown to be due to lack of organisational resources and organisational innovation.

Keywords: Technopark, digital economy, innovative infrastructure, information technologies.

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1. Introduction

The potential of productive forces lies primarily in the sphere of innovation. It is innovation that is becoming a driving force that can significantly influence the competitiveness of the national economy, which can be defined as the ability of a country to shape its place in the international division of labour according to the latest developments in science and technology and, on this basis, to support the sustainable economic and social development of the country and individual regions. Innovation contributes to ensuring economic security, forming and maintaining competitive advantages of the country in the system of international relations.

The scientific complex of Azerbaijan is able to produce world-class results effectively, but the scientific and technical sphere does not serve as a source of economic growth. Therefore, among the main problems of development of the state and its individual regions is increase of investment attractiveness of regions and their innovation activity. The main problems of scientific, technical and innovative activity in Azerbaijan are:

- Inconsistency of state measures in the sphere of formation and implementation of innovation policy;
- The mismatch between the pace of development and the structure of demand for advanced technologies on the part of the country;
- Lack of financial resources;
- Low application of world-class scientific results in the economy through the business sector's resistance to innovation;
- Loss of highly qualified personnel in the scientific and innovation spheres;
- Reduction and ageing of the material and technical base of science; and
- Absence of a full market of innovative products.

Innovative projects in the sphere of high technologies worldwide are one of the most profitable and promising types of business, but in Azerbaijan this type of activity is not a priority for investors today, which testifies to the inappropriate level of its attractiveness. The lack of use of the scientific and technological potential of the country indicates a lack of organisational resources and, consequently, organisational innovation. An important factor in the development of innovative infrastructure is the creation of fundamentally new scientific and technological structures of the Techno park type.

Technology parks of Azerbaijan are the only real functioning and state-controlled type of innovation organisation. At the same time, with significant potential for innovation development, Azerbaijan has only six Techno parks, of which five were recently established and only four actually operate. Thus, the creation and development of technological parks in Azerbaijan is a significant problem in the development of innovation activities in Azerbaijan.

Many researchers paid attention to the problem of the development of the economy and its individual industries based on Techno park structures (for example, [6], [7], [8], [11], [15], [16], [18] [21]. But these studies either deal with the problem of building Techno parks in other countries – in particular, Russia, China [17], [22], [24], which does not allow to take into account the specifics of innovative infrastructure and peculiarities of its formation and development conditions in the Republic of Azerbaijan. Or the research is devoted to the development of innovative activity of Azerbaijan as a whole, without special attention to the construction of structures of Techno park type in the Republic [2], [3], [20], which does not allow to fully assess the possibilities of development of TechOf TechIn in the Republic. On this basis, the aim of the article is to develop theoretical and practical issues in the Republic of Azerbaijan concerning the innovative development of key sectors of the economy on the basis of the introduction of scientific and technical structures of the Techno park type.

2. Review of literature

Techno park structures are recognised as effective tools of innovation infrastructure in the country. That is why scientists and economists are beginning to pay attention to the problems of the development of Techno parks. In particular, L. M. Borsch analysed the influence of Techno parks on innovative development [5], E.V. Goncharov covered the main problems of Techno parks [10], [22] and [24] determined the essence and purpose of technological parks. Thus, according to [22], the technological park is a scientific and production territorial complex, the main task of which is to create the most favourable environment for the development of small and medium-sized knowledge-intensive innovative firms [22].

As M. A. Kochetkov and Meshalkin R. S. within the realisation of Techno park structures note the investment obligations provided by contracts between separate subjects of business activity and local governments are slowly fulfilled [15]. Thus, it can be noted that incompetence and lack of activity of local authorities play a rather negative role in the initial phase of the operation of zones with a special investment regime. But this mainly applies either in general to technological parks and their organisation, or to Techno park structures in other countries – in particular, in Russia.

R.M. Jabiyev gives interesting information about the development of Techno parks in the Republic of Azerbaijan [12]. He claims that dozens of investment and innovative projects have been implemented by Azerbaijani technology parks during the 5 years of its existence, and several thousand new workers have been created. Technological parks exported products worth 1.7 million dollars [12] which confirms the high quality and competitiveness of the high-tech products produced. According to [12], it was in these technology parks that new samples of unique medical equipment, welding machines of the new generation, methods of welding of living tissues, unconventional energy sources, medicines and diagnostic systems meeting international standards were created [12]. At the same time, it should be noted that [12] has not identified practical problems that are present in the innovation sphere of the Republic of Azerbaijan with no ways to solve them.

But not all researchers note only positive aspects. A. G. Taghiyev and I. B.Amirov noted that ‘unfortunately not all technological parks have become regional poles of growth’ [20]. Thus, according to researchers, certain technological parks of Azerbaijan hardly use their potential, which does not allow to modernise and update the material and technical base of scientific institutions and educational institutions, to improve the system of control of technological processes in production, to create new devices for the development of nano- and biotechnologies and the like. Nevertheless, based on the work of [20], it is possible to predict that if the regional network of technological parks is expanded, they can ensure the creation and production of high-tech products in Azerbaijan for both domestic and external markets. At the same time, researchers do not highlight ways to improve the innovation sphere in the Republic of Azerbaijan nor the possibility of developing Techno park structures for this purpose.

[21] consider the aspects of development of Techno parks in Tajikistan, while comparing it with the situation in Azerbaijan. Thus, the researchers note that the regions of Azerbaijan have significant differences in the level of innovative potential [21]. Despite the absence of statistical and other concrete confirmation of these claims in the article by [21], this can be agreed with scientists, as most regions do not have the necessary prerequisites for their creation, namely the existence of large research institutions in the region; a sufficient number of highly skilled manufacturing professionals with experience in the implementation of new technologies and technologies; and the necessary infrastructure.

Thus, the issues of scientific and methodological support the creation of technological parks and the stimulation of their development are not sufficiently investigated.

3. Research method

The methodological basis of this study is the integrated use of all-philosophical, popular scientific and special methods, which allowed obtaining reasonable and reliable scientific results as follows:

Methods of general communication and development allowed to analyse the relationship between the development of Techno parks and the growth of efficiency of economic sectors, as well as to justify the need for further development and support of the development of Techno park structures;

System analysis contributed to the consideration of the subject matter of the study in the form of a system that is simultaneously part of the larger system – innovation in the country;

– Comparative analysis provided clarification of the dynamics of technological parks development in different countries;

– Structural and functional analysis contributed to research of the place and role of Technoparks within the framework of further development of innovation activity in the Republic of Azerbaijan;

– Analytical and prognostic analysis made it possible to draw a number of certain conclusions and generalisations and to formulate theoretical and practical recommendations to support the development of Technoparks in the country.

The methodological basis of the study is the theory of scientific knowledge and the means of system-structural analysis of objects, which determines its strategy. The tactics of research are based on key methodological approaches of modern science: systemic, synergistic and axiological.

A set of research methods has been used to achieve this goal and to carry out tasks at various stages of scientific search:

– Theoretical: system analysis of scientific literature on the problem of use and support of technological parks development,

– Study of teaching-methodical and instructional-normative documentation – for definition of conceptual-categorical apparatus;

– Empirical: observation, analysis of statistics – to study the current state of the use of Technoparks in innovation activities for the development of sectors of the economy of the country.

4. Innovative development of key sectors of the economy through the creation of technology parks (theory)

The modern technological park is considered as a form of territorial integration of science, education and production in the form of an association of scientific organisations, design offices, educational institutions, production enterprises or their subdivisions in order to accelerate the development and application of scientific, technical and technological achievements [8].

As a rule, the main structural unit of the Techno park is a specialised centre. The following centres are represented in the structure of Techno parks: innovation and technological; educational; consulting; information; marketing; legal; financial; economic; and industrial zone [4].

A technology park is a commercial or non-profit organisation (enterprise) founded in a certain organisational and legal form (joint venture, limited liability company, joint stock company, association, foundation, institution), having the status of a legal entity and contributes to the formation of an innovative environment.

In order to develop entrepreneurship in the scientific and technical sphere, technology parks are granted tax and other incentives [7]. Technology parks operate on the basis of venture capital and are aimed at creating fundamentally new technologies and samples of industrial products, contributing to commercialisation of the achievements of the technological revolution.

Technology parks operate within so-called umbrella structures. These structures, which, according to some reports, also include business incubators, innovation centres, engineering centres [23] are intended to serve start-up entrepreneurs, scientists, developers, engineers in order to ensure rapid and direct implementation of developments and business plans. The specifics of the Techno park are scientific, design and technological developments related to high technologies.

Technology parks can be viewed from several perspectives.

First, the Techno park can be considered as a special type of free economic zone, on the territory of which the development of knowledge-intensive products is actively developing, new personnel, technical and production zones are being formed. This understanding of the Techno park meets the requirements of the processes that are taking place in the world economy [14].

Second, science gives an incentive to the development of business, mainly small ones, which makes it possible to talk about Techno parks as a form of support for small enterprises, as the main factor in the development of the competitive environment in the country [18].

Third, it is in technology parks that science receives financial and other additional opportunities for basic and applied research [19], which means science is becoming more independent of state influence. In this regard, Techno parks are an attractive form of support for domestic science.

Technology parks form a legal environment for venture capital (risk) enterprises, an appropriate material base, which allows selecting projects on a competitive basis for the creation of new equipment and full tons

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Technology parks form a legal environment for venture capital (risk) enterprises, an appropriate material base, which allows selecting projects on a competitive basis for the creation of new technology and full technologies, training personnel oriented to entrepreneurial activity, carrying out applied research at the modern level, adjusting developed technologies and creating opportunities for their industrial development.

It is technological parks that can become those organisational structures where applied and fundamental scientific research is introduced into practice, favourable conditions are created for the implementation of the process of development of new ideas and inventions by scientists, engineers and inventors. Technological parks also contribute to the socio-economic development of the territory by creating new jobs, improving the use of the local resource base, improving the quality of infrastructure, increasing the incomes of the population and creating favourable conditions for investment activities.

It should be noted that the implementation of the Techno park concept of innovative development of regions is possible only with coordinated activity and cooperation of science, higher school, production enterprises of various forms of ownership and state and local authorities [3].

The state has a decisive role in the development of technological parks, which forms a strategy for innovative development and implements a policy of encouraging innovation activity of economic entities. The state should ensure direct financing of venture scientific and technical projects, their preferential lending and taxation, the establishment of appropriate tariffs for utilities for scientific organisations, a special regime of foreign economic activity in the Techno park sphere and the like. It should be noted that the absence of conditions in the innovation environment with a special tax regime for technological parks does not contribute to improving the innovative potential of the regions and their social and economic development. The absence of real state support for science, innovation and high technologies leads to dependence of the economy of the country on imports of products and technologies.

5. Experience of developed countries

World practice leaves no doubt about the effectiveness and extreme usefulness of such types of free economic zones as Techno parks. These zones are characterised by a high level of innovation, a form of integration of science and production. Unlike other forms of FEZ, the activities of the technological park are connected and coordinated with well-known research centres and universities, as well as with the economy of the region. Thus, the main idea behind this type of organisational structure is to create an extremely favourable environment for innovation in a certain limited space [11].

Historically, the first technology parks were established in the United States and today this country continues to lead in a number of knowledge-intensive industries, and technology parks have a significant impact on the socio-economic development of the country, employment of the population, production volumes of high-tech and competitive products

Historically, the first innovative infrastructure facilities appeared in the United States in the 1950s. The first incentives for their emergence were the latest promising developments of local universities in the field of electronics, semiconductors and high technologies. The location of technology parks always determines: first, the availability of infrastructure capable of providing service assistance to innovative enterprises; second, the place of concentration of universities and research institutes capable of generating new ideas. Many venture capital firms, laboratories that the Federal Government provided direct financial support, emerged around the universities.

The US economy and innovation infrastructure has been a pioneer and continues to lead in a number of knowledge-intensive industries, primarily information and biotechnology. This is largely due to the vigorous development of the infrastructure of high-technology centres [6]

The largest in the United States is Stanford Science Park, located on the lands of Stanford University, under which in 1951 a scientific and technical agglomeration was created, which is called Silicon Valley [17]. Through the creation of this ‘scientific’ valley, backward areas of California have become some of the most developed in the country. In fact, it is the largest scientific and technical complex in the United States and the most famous in the world, which produces 20% of the world’s computer equipment. According to various estimates, about 15% of the industrial and 30% of the design potential of the entire IT industry of the world is concentrated here. The Government provides support in the form of tax incentives to innovative companies of the Technopark, state orders, creation of venture capital funds [13].

In the United States, there is a significant influence of Techno parks on the social and economic development of the country, employment of the population, on the volume of production of high-tech and competitive products and development of innovative technologies [1].

The success of technology parks in the United States lies primarily in the presence of a developed competitive environment, the institution of ownership, an extensive system of higher education, a high share of venture capital in the market, and their narrow specialisation. The American model of Techno parks is still there and remains basic throughout the world [16].

Experience of Western Europe (Great Britain, Germany, France, etc.). In Europe, technology parks began to be created in the 1970s. First, they arose in the UK, where the government began to allocate significant funds from the budget for their activities. The main sources of financing include: contributions of sponsors, value of land of the Techno park, subsidies from the state, provision of loans, as well as venture capital. A number of government programs have been launched for the development of Techno parks, such as ‘Loan Guarantee Program’ (1981), ‘Business Expansion Program’ (1983), ‘New Product Development Support Program’ (1991), etc. The main scientific and technological capacity is concentrated in the south-eastern and eastern regions of the country. The London–Oxford–Cambridge triangle plays the same role as Silicon Valley in the United States. The largest number of UK NTP companies is in the fields of computer and telecommunication technologies

(31%) and biotechnology (14%). Famous are Cambridge Science Park, Surrey Research Park, Limerick National Techno park [2], [12].

Small and medium-sized entrepreneurship is actively encouraged in Germany, as elsewhere in Western Europe. The German model of the Techno park is small innovative support centres for knowledge-intensive new firms. The main spheres of activity are electronics, computer technologies and biotechnology. As early as the 1980s, the 20th Article in Germany was introduced – 'Program of assistance to high-tech firms.'

In France, as early as 1982, the specialisation of each region and priority knowledge-intensive industries was defined. France is characterised by a decentralised system of financing Techno parks from municipalities.

Europe is famous for its centuries-old campus universities with advanced architecture and infrastructure. This creates favourable conditions for improving the improvement of scientific parks.

Thus, the essence of the European model of the functioning of Techno parks is the presence of significant financial support from the state, regional and local authorities. European Union grants also play a major role in financing Techno parks. The successful start of scientific parks was facilitated by the creation of special programmes for their development. In the European model, technology parks are the main factor in the creation of new jobs [9].

The difference between the Anglo-American model and the southeastern model, primarily Japanese, lies in the role and focus of the state's innovation policy. Thus, the Japanese government in its economic program of development of the country defined priority directions for the economy of the country of innovative development and stimulated and financed the organisation of infrastructure provision of business in these directions.

The sharp economic recovery observed in countries with previously backward economies, such as China, India, Malaysia, Brazil, Argentina, is largely due to the vigorous creation of effective innovative infrastructure in them in the form of scientific parks, Techno parks, technopolis, business incubators, innovative clusters [5].

So, in most developed countries of the world, technology parks are the main elements of the infrastructure that ensures the functioning of the innovative model of the national economy. The state authorities in these countries, aware of the important role of Techno parks, implement special economic policies for them, which include the provision of tax and credit incentives, targeted financing of certain developments, state order for innovative products. Therefore, in recent years in these countries, technology parks have become one of the most effective organisational and economic forms of integration of science and production.

As foreign experience shows, it is possible to remove Techno parks from the crisis, to reach the indicators of Techno parks of highly developed states only with significant support from the state, introduction of special programs for the development of Techno parks, availability of a solid legislative basis in the field of innovation and investment activity, appropriate tax policy, financing, attraction of foreign investors, allocation of more funds for research works of specialised institutions, higher educational institutions, development of innovation infrastructure.

By Decree of the President of the Republic of Azerbaijan Ilham Aliyev on 15 May 2014, the Model Regulation on Techno parks was approved in order to implement the Decree of the President of the Republic of Azerbaijan No. 736 'On the creation of the High Technology Park' of 5 November 2012 and it regulates the implementation of measures throughout the Republic [13].

These technology parks are integrated in a certain field and are equipped with the necessary infrastructure, material and technical resources and management structures to carry out research on the improvement of innovative products with the aim of applying their results in the future in industry, services and other fields. As the governing body of the Techno park, a state, commercial legal

entity is responsible for the organisation, management and development of the Techno park's activities. The operator of these technology parks is a legal entity that is selected on a competitive basis.

As an innovative or high-tech project, requirements for its specifications, capabilities and methods obtained through commercialisation of its results in industry, services and other fields receive early funding sources from the State. Comprehensive research, development and marketing studies are carried out to develop or improve innovative products or high technologies that rely on their human resources and indicate time frames.

The provision of innovative and high-tech projects to enterprises and individuals engaged in business activities without the status of a legal entity is important for the functioning and further development of business investors in the early stages of development. Of course, technology transfer, its introduction in industry, services and other areas should be commercialised through research and development in this technology park. Only then should the technology transfer centre have a Techno park unit providing technology transfer services and protection of the intellectual property rights of the resident.

The main tasks of the technological parks in the Republic of Azerbaijan are:

- sustained economic growth and product competitiveness;
- further expansion of the fields of innovation and high technologies based on modern advances in science and technology; and
- creation of modern scientific and technical complexes for possible scientific research and development of new technologies.

In this regard, the in-depth study of these activities in various countries in the field of formation of Techno park structures and the role of business in the development of innovation and investment infrastructure has given us the most effective infrastructure to support innovation activities, namely 'production' of innovative enterprises of small and medium-sized businesses. We understand that the production of innovative technologies and equipment is based on the efforts of Techno parks. Production, diversification of regional economies, innovative commercialisation of intellectual property, etc. [10].

Taking all this into account, Sumgait Chemical and Industrial Park is an enterprise with the necessary infrastructure and management teams to produce competitive products using the latest technologies to improve and develop entrepreneurship. Production and processing of competitive products in petrochemical and other priority industries is carried out on the territory of the industrial park.

Sumgait Chemical and Industrial Park is located 33 km from the capital, in Sumgait and has a very good infrastructure, located on 505.65 hectares of land. In the industrial zone of Sumgit Chemical and Industrial Park, there are institutions engaged in agrarian medicine, household chemistry, construction chemistry, electronics and automotive industry, production of polymers and industrial equipment. The 16-storey building provides extensive opportunities for the efficient work of the residents of the park. The territory with an area of 21 hectares, is equipped in such a way that meets modern standards.

The revenue of Sumgait Chemical Industrial Park of the Republic of Azerbaijan in 2018 increased by 14.5% in Azerbaijani manat for the corresponding period of this year. Meanwhile, compared to 2017, wage costs increased by 4.9% and the cost of permits did not change. While security costs declined by 2.1%, insurance and social spending increased by 4.9%. Expenses on stationery increased by 26.9%, banking commissions decreased by 9.9%, communication expenses increased by 16.3% compared to the current year. Other expenses increased by 6.6%, total operating expenses decreased by 9.9% and the amount of other revenues increased by 217.7%, which may be a good indicator. Since the beginning of the year, losses have decreased by 9.5% and the total loss for the year has amounted to about 9.5%.

Therefore, the initiators of the techno-movement first began to deal with the problem of creating Techno parks in the system of higher education, and then these innovative structures began to form prototypes for the creation of innovative technological centres, business incubators, centres of technology transfer and commercialisation of research results. Subsequently, educational, scientific and innovative complexes were created on the basis of them. Technology parks have begun to push universities towards the spirit of innovation, the desire for innovation, the transformation of scientists, teachers and needs into something not only the result of scientific research, but also the special innovation demanded by the economy and the social sphere.

The technology parks created in our republic have recently produced certain results and their role in accelerating economic development is to form the structure of technology parks and develop innovative and investment infrastructure of business. The role of entrepreneurs and technology parks can be organised mainly in the following areas:

1. Organisation and conduct of international research
2. Development of the concept of the Techno park of the Republic of Azerbaijan;
3. Elaboration of provisions on technological, scientific, methodological, organisational and economic bases of the Republic of Azerbaijan for the creation and development of local industrial parks;
4. Training of managers and business groups in the field of science and technology, training in innovative management of Azerbaijani teachers, marketing for training in innovation in the Azerbaijani context;
5. Creation of technology parks and support mechanisms for small and medium-sized businesses.
6. Formation of mechanisms for financial support of Techno parks by both state and regional state bodies and existing agencies;
7. Formation of scientific and technical programmes to support Techno parks and other infrastructure elements in the higher education system.

In 2005–2017, the European Bank for Reconstruction and Development and the Eurasia Foundation allocated funds for international educational projects. Of course, most existing technology parks are not large-scale and efficient.

Research universities in the United States and Canada, science parks in the United Kingdom, technology parks and innovation centres in Germany, France and Finland play a crucial role in the economic development of their countries. Despite the problems, a number of technological parks of the Republic of Azerbaijan were able to work in the innovative complex of the country to ensure a good level of support for innovative entrepreneurship. Partners in this field, within the framework of their mandate, managers, founders, were able to create an effective system of financial resources to support small innovative businesses. They solve the socio-economic problems of the regions by attracting private capital in the field of innovative entrepreneurship and advanced technologies on a commercial basis.

Of course, Sumgait Chemical-Industrial Park is not limited in solving these problems and the role of public responsibility is increasing. Analysing the current situation, it is obvious that the value of fixed assets in 2018 increased by 32.4% compared to the previous year, and the volume of intangible assets decreased by 5.7%. The amount of advances paid for the acquisition of fixed assets increased more than 9 times in 2018 compared to 2017, and total long-term assets increased by 24.5% in 2018. The amount of prepaid taxes increased by 66.7% in 2018 compared to 2017, and inventory expenditures remained virtually unchanged.

In 2018, the amount of advance payments increased by 55.4% compared to the same period in 2018, and the amount of receivables increased by 108.8% in 2018 compared to 2017. The amount of cash and cash equivalents increased by 43.2% in 2018 compared to the previous year, and we see that

total current assets increased by 64.6% this year. Total assets increased by 24.8%, payables and other payments increased by 252.0%, and total current liabilities and total liabilities increased by 249.2%.

The authorised capital remained unchanged, in addition to net profit, amounted to 26.5% in 2018, and the accumulated deficit amounted to 35.6% this year. We see an additional 21.4% increase in total capital and a 25.8% increase in total liabilities.

All these results certainly make it clear that the formation of Techno park structures and the development of innovative and investment infrastructure of business are essential for the economic development of the republic. The main objectives of the creation of Mingyachevrir Industrial Park were:

1. Sustainable development of non-oil sector in Azerbaijan;
2. Support entrepreneurs working in this area;
3. Organisation of production of competitive industrial products based on modern world technologies;
4. Increase in the employment of the population in the production sector of the Republic.

Mingyachevir Industrial Park is aimed at application of progressive and promising technologies, creation of necessary infrastructure and management structures in order to increase business efficiency. Its main goal is to produce competitive products and services that can be exported to international markets.

The park is located on 14.8 hectares. Its foundation was laid on September 21, 2016, and the opening of Mingyachevir Textile LLC, which operates in Mingyachevir Industrial Park, was on February 27, 2018.

Of course, the experience of recent years clearly shows that the creation of Techno parks affects economic development and, therefore, the formation of Techno park structures and the development of innovation and investment infrastructure of business. The priority of today is to create new jobs

All industrial parks established in Azerbaijan are working together to create favourable conditions for entrepreneurs in order to create their own production facilities on the basis of modern requirements. These parks are divided into industrial sectors, and these sectors also cover priority sectors of the economy.

On the basis of the decisions taken in accordance with the 'State Program for Industrial Development in the Republic of Azerbaijan for 2015–2020,' Mingyachevir High Technology Park, Mingyachevir Industrial Park, Karabakh Agrarian Industrial Park and others, these works were successful. The creation of high-tech industrial zones in different regions of the Republic creates a positive trend of development with the development of industrial sectors of the economy and the increase in the share of workers in industry.

Since 2014, he has been entrusted to JSC 'Azerbaijan Investment Company' by the relevant decree of the President on organisation and regulation of production activities in the Republic. Taking into account that the main activity of the company is the creation of necessary infrastructure and a favourable business environment for the production of technological industrial products in high-tech industrial zones and the creation of appropriate services, brings about the implementation of high-tech industrial zones and, therefore, the transformation of industrialisation policies into life.

According to the order of the president of the Republic of Azerbaijan in 2015 on the creation of the first high-tech industrial quarter, the creation of the 'Neftchalinsky industrial quarter' was started. According to the order, the organisation and regulation of the activity of Neftchalinsky industrial quarter was carried out by the open joint-stock company 'Azerbaijan Investment Company.'

Of course, the importance of clusters working in this area is undeniable, with the same infrastructure, the same technologies, the single market, the labour force and services, which have the same geographical area of complementary activities operating in the same or similar sector. These are

several systems that consist of business objects that communicate and interact with each other, creating effective collaborative business relationships. These clusters provide both competition and collaboration between small and medium-sized businesses.

It should not be forgotten that entrepreneurs working in a similar area within a cluster compete with each other and operate in the same cluster in a market economy. In particular, economic entities and other participants work together to benefit from this competition. Given that their operation within this system allows small and medium-sized businesses to gain competitive advantages in the market. Eventually, this system will reduce costs for any business entity, which will expand its marketing capabilities, increase productivity, increase product exports, and stimulate scientific and technological research. It is the promotion of progressive goods to international markets, the creation of new companies, the increase of employment, the development of regions and the modernisation of infrastructure services.

6. Discussion

This discussion is to identify specific conditions for the successful operation of the Techno park type in the country. According to the author, this requires some industrial and social infrastructure, such as an international airport and comfortable hotels. The activities of such Techno parks contribute to the creation of a special infrastructure that provides communication between the scientific centre and the business, creating and supporting small high-tech enterprises at the start-up stage. At the same time, the issues for further study are measures to form conditions for attracting business to organised and already operating technology parks.

The special regime should be based on state support for Techno parks, which is carried out primarily in the form of preferential taxation. Techno parks, their participants, subsidiaries and joint ventures do not transfer to the budget amounts of value-added tax and profit tax, but credit them to special accounts. These means are used only on scientific and scientific and technical activity, development of own scientific and technological and skilled and experimental bases. The issues of controlling the targeted use of these funds are still unclear and require further study.

Technology parks, their participants, subsidiaries and joint ventures are exempt from payment of certain types of taxes, no tax is charged on the volume of sales of products in the framework of investment and innovative projects. The above benefits apply during each project, but not more than 5 years from the date of registration of the project. Whether this form of support for the development of Techno parks for the state and the budget of the country will be effective is still to be assessed.

It should also be noted that the work on the creation of Techno parks and business incubators in our country is slow. A large part of them remain at the level of projects and proposals. The main reasons for this condition are two: expectations of start-up public investment and an imperfect legal framework. If the first problem is solved by selecting more professional personnel, the second problem cannot be solved without the assistance of the state. In any case, the identified problems, as well as other factors that impede the development of Techno park structures in the Republic of Azerbaijan, need to be further assessed and eliminated.

7. Conclusion and recommendations

The modern technological park is considered as a form of territorial integration of science, education and production in the form of an association of scientific organisations, design offices, educational institutions, production enterprises or their subdivisions in order to accelerate the development and application of scientific, technical and technological achievements. Technology parks can provide Azerbaijan with the creation and production of high-tech products for both the needs of the domestic market and to increase its export potential, provided that their regional network is expanded.

The analysis of world experience shows that the economic growth of developed countries and their individual regions has long been based on the use of the sphere of knowledge and high technologies, and their effective combination guarantees the progressive development of the nation and mankind. One of the most successful forms of such integration is Techno parks.

The creation of Techno parks is of particular importance to our country. Acceleration of the recovery from the crisis state and achievement of the planned activities of the Cabinet of Ministers of Azerbaijan 'reforms for welfare' of the economic growth rate are impossible without innovation. This truth is recognised by all levels of government, businessmen and scientists.

In order to intensify the innovation processes in the economy on the basis of the Technopark concept, it is necessary to increase the competitiveness of scientific research and development and to ensure the integration of the domestic research sector into the world research space.

The first form of state support for investment and innovation activities is the credit policy of the state, which provides for the priority of projects to attract loans provided under state guarantees by foreign states, banks, international financial institutions and other financial and credit institutions.

The second form of state support is budget financing in the form of attracting funds from the State Innovation Fund and its regional branches for investment and innovative projects carried out in priority areas of technological parks.

The third form is granting privileges when importing goods, equipment, raw materials, materials, accessories and other objects used by technological parks. All the listed objects, which are not produced in the Republic of Azerbaijan or produced but do not meet technical characteristics and international standards, are exempt from import duty and value-added tax when imported into Azerbaijan for use by technological parks.

The fourth form is granting of privileges in the currency sphere: funds received from foreign currency from the sale of products of technological parks, their participants, subsidiaries and joint ventures are not subject to mandatory sale.

Thus, the direction of domestic, scientific and technical potential to ensure the real needs of innovative development of Azerbaijan's economy and the organisation of production of high-tech goods and services requires state support and budget financing.

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