THE PROBLEMS OF FORMATION OF REGIONAL INNOVATION STRATEGY IN AZERBAIJAN

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Abstract

The article describes the analysis of specifics of regional innovation strategy's formation, regional and industrial development problems, responsibilities and principle of innovation policy of the government. At the same time the article provided information about the realization of various measurements based on regional development modules, basic formation stages of regional innovation strategy and the role of entrepreneurship in formation of this strategy.

Key words: the economics of regional innovation, special economic zones, the innovation policy of the government, regional innovation strategy, the regional innovation strategy of entrepreneurship.

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Introduction

In recent years the economy of Azerbaijan switched from raw material basis to innovation. Nowadays in order to develop the suitable conditions for development of competitive industry based on innovations and high technologies the projects like necessary measurements in respect of implementation of Decree on "Establishment of Sumgayit Chemical Industrial Park" and "Establishment of Balakhani Industrial Park in Baku" were realized. Notwithstanding this fact most

of the regions are not able to utilize fully their scientific opportunities. The main reason for this phenomenon is that the products of scientific activities are not always competitive enough. The distortion of relations between the scientific organizations and the business brought about the larger gap between these sectors. From this point of view the development of regional innovation strategy is quite important.

1. The specific of formation of innovation economics in regions.

If the economy is raw material based, it brings about not only slow development but also hampers the development of innovations. The macro-economic strategy of Azerbaijan, which enables it to be categorized as developed country, is based on innovative information technologies. From this point of view, development of innovations especially in the regions is of high priority. The practice of the most developed economies shows that the development strategy is directed to acceleration of technical development, increase of competitiveness of the products and welfare. We would like to note that there is no precise innovation strategy in Azerbaijan and allocation of funds to this realm is made based on "residue" principle. We should always remember that the level of development of technologies identify the level of efficiency of economic forces. In its turn this process reflects the achievements of technology progress.

The republic of Azerbaijan is characterized by the unequal allocation of productive forces. Thus in 2010, 23% of total population, which lived in Baku produced more than 78% of gross domestic product and 90.7% of industrial products. From this point of view development of technological and innovative potential of the regions turns into the most important directions of national social-economic development strategy. As a result of implementation of "State program on social-economic development of regions in 2004-2008", the enhancement of welfare and life standards of population in the regions, development of non-oil sectors of the economy turned into the most important points into agenda of the government. During implementation of the program 8 electric stations were put into the service, out of which 6 were located in the regions. Module electric stations were installed in Astara, Sheki, Nakhchivan and Gas-Turbine Station and Vaykhir Elecric station were constructed in Nakchivan. As a result of gasification of the regions, the level of gas supply was increased from 62% in 2003 to 85% in 2008. At the same time, projects for enhancement of water and sewerage system were implemented. During 2004-2008 water pipelines at length of 723.5 km, sewerage pipelines at length of 209.3 km, 23 water reservoirs and 214 artesian wells were constructed. During 2004-2008 in order to improve the heating system the government constructed 75 new boiling-houses and 72 existing boiling-houses were restored. At the same time the government implemented the number of

projects for improvement of transportation infrastructure. Thus during 2004-2008 1037.0 km of highway were constructed and restored, 615.6 km and 2728 km of republic and local importance roads were restored, 69 bridges were built and 34 bridges were renovated. During the indicated period modern airports were established in Nakhchivan, Ganja, Lankaran and Zagatala. In general during the implementation of the state program on social-economic development of the regions 766,277 new work places were provided, out of which 547,573 were permanent. 80% of total newly established work places were established in the regions.

Nowadays successful implementation of oil strategy generates sufficient funds for economic development of the regions. As a result the President of Azerbaijan Republic signed "State program on social-economic development of regions in 2009-2013" on April 14, 2009. The aid of this program is development of non-oil sector of economy, diversification of economy, sustainable regional and social-economic development and further improvement of welfare of population. In order to realize the set above goals following principles should be considered:

- Development of non-oil sector by efficient utilization of natural and human resources;
- Continues development infrastructure

- Creation of necessary conditions for development of entrepreneurship and continues support for this realm;
- Continues involvement of investment into the economy
- Encouragement of production of export-oriented products
- Creation of modern infrastructure and modernization of already existing one
- Provision of population with all modern conveniences
- Increase of employment and related measurements
- Decrease the level of poverty

In our opinion, the improvement of financing mechanism of investment-innovation activity in the regions is essential for implementation of principles mentioned above. As professor Mehdiyev said, investment into the human capital provides sustainable development of economy. As a result, the improvement of the quality of human capital brings about increase in productivity and provides the grounds for development of innovative activity.

2. The sector and regional problems of innovation economy in Azerbaijan

The results of the current researches indicate that the metallurgy industry should be renovated from technical and technological points of view. Except for Baku Steel Company the technical basis of the remaining companies is out of dated. Thus renovation of the existing entities or establishment of new ones instead of them is of high importance. As a result, construction of Ganja Aluminum

factory, Sumgait Aluminum factory and Ganja clayey soil factory based on updated technology is one more step ahead of development of metallurgy industry in Azerbaijan. Construction of Dashkesan Ore Refinery factory based on high level technological and environmental standards will contribute into the further development of metallurgy in Azerbaijan.

One more promising industry in Azerbaijan is oil machine construction realm. We believe that existing oil and gas reserves, neighborhood with oil and gas extracting countries and existence of historical experience in this industry creates the most favorable conditions for development of this industry. At the same time this development can be accomplished by the assistance of the foreign companies. Foreign direct investments are considered one of the most efficient ways of attraction and development of technologies in the country. Thus the government can develop the oil machine construction industry by establishment of joint ventures with the foreign companies by holding the major shares in them.

Currently Azerbaijan created all necessary conditions for development of such technological realms as electronics, equipment and car/machine production. The researches shows that the most efficient way for development of this direction is establishment of production on import of spare parts and assembly the final products on the territory of Azerbaijan. Considering that this realm is quite

diversified, we believe that long-term innovation measurements are required in order to establish the grounds for further development.

Considering that the scale of machine production is quite large we believe that its concentration is an important point. It is important to establish scientific basis for the development of this sector and encourage the creation of large entities. Thus establishment of large entity will provide the grounds for wider scientific and research activities. This is also effective from technologies attraction point of view. Thus the most effective way for attraction of technologies is acquisition of the foreign companies. This practice can be applied not only in this sector of economy. On other hand this practice can encourage the existing local companies to establish the joint ventures with the foreign counter-parties.

Recent researches indicate that there is a great experience in production of electric engines in Azerbaijan. Thus the merger of "Yeni BMEZ" OJSC and "Elektomashin" OJSC is the most efficient solution for the further development of the industry. Thus the area of only "Yeni BMEZ" OJSC is 16 hectares and the production area is 80 thousand square meters. We would like to remind that this entity was the only factory in former USSR, which produced 1.5- 100 kilowatt electric engines, which were utilized internally and exported to 54 countries outside of USSR. Nowadays the technical base of the entity is obsolesced. For example, some equipment in "Yeni BMEZ" OJSC has the useful lives more than

15 years and major part of them is older than 30 years. Thus in order to develop these entities establishment and development of new innovation strategy is required.

The modernization of agriculture is one of the most important parts of agricultural policy of the government. The technical basis of agricultural production was updated and new methods and technologies were applied. As a result of melioration large squares of land were brought into the usable condition, the production of grape was restored along with other products.

Further development of agriculture in Azerbaijan depends on improvement of its technical base. According to the specialists, in order to bring current agriculture to its condition in 1990 10 thousand ploughs, 6 thousand of cultivators, 7.5 thousand of seed distributor, 4 thousand mowers, 3 thousand grass compressors are required. During the recent years the financing of agriculture and related industry in the regions of Azerbaijan increased demand for agricultural equipment. The company which can produce such equipment would be able to provide necessary equipment.

According to experts, the development of technology in some particular area increases the efficiency of production and provides competitive advantages. According to researches, conducted by the World Bank Azerbaijan has competitive advantage in production of potato, sunflower, pea, tomato, cabbage, olive, orange,

apple, pomegranate, grape, beef, milk, lamb. We would like to notice that increase in quality of services provided by transportation, telecommunication, electricity and banking improves the professionalism of people serving there and as a result provided the competitive advantage. The development of agricultural industry depends on improvement of irrigation and drainage networks. In prior periods the irrigation and drainage systems were not in appropriate condition, as a result it brought about number of problems in agriculture. In addition, "The program on provision of population with agricultural products in 2008-2015" states that 47% of planting areas were eroded. Therefore 657 thousand hectares of land is needed the melioration. Thus, in order to develop the agriculture in Azerbaijan, development of irrigation, drainage system and application innovation is required.

Development of agriculture leads to development of light and food industries. It covers the weaving and leather industry. We would like to note that the development of these sectors is one of the priority directions for national Fund for Entrepreneurship Assistance. The Fund prefers to assist the development of meat and milk breading and meat and breeder poultry keeping, gardening, vegetable-growing and seed production. At the same time the other priority directions are establishment of infrastructure for keeping the agricultural products for a longer period and attraction of other technologies which support the sustainable development of agricultural and subordinating industries.

Researches show that development of agriculture and its conversion industries is possible in cases of expansion of exports. Thus in 1991 108.7 thousand ton of seedless raw cotton, 3355.7 thousand tons of clean wool, 11586,0 ton of cotton seeds, 30090,0 thousand ton of wine, 36897,0 tons of tobacco, 227249,0 tons of fresh vegetables, 13192 ton grape, 13772 ton tropic fruits, 4280 tons of natural tee were exported. Although in the recent years there were significant changes in export, there were not any crutial changes. Thus in 2010 Azerbaijan exported agricultural products in value of 250 thousand ton. In order to develop the agriculture in the country we need to improve its technical base. Thus if in 1990 one combine harvester was considered for 129.8 hectares of area where grain-crops are grown, in 2010 this figure was equal to 502 hectares, one potato collector was considered for 566.7 and 3290 hectares of land respectively. The opportunities for growth of agriculture in Azerbaijan is possible by the means of involvement of modern equipment, implementation of agro-technical measurements, provision of scientific grounds for the sector, increase of quality of services provided, formation of effective relations with agriculture conversion industries.

We believe that the opportunities of the government for optimal allocation of agricultural forces are great. Thus Agroleasing Ltd serving in number of regions is governmental organization. At the same time application of area based allowance system will be useful for implementation of optimal allocation of agriculture. In

our opinion, specialization of the regions over the specific type of product will bring about additional efficiencies. For example, production of tropic fruits in Lankaran-Astara, production of grape and wine in Jalilabad and Ganja-Gazakh, vegetable-growing in Lankaran-Astara, Guba-Khachmaz and other regions, gardening in Guba-Khachmaz, Sheki-Zaqatala. For example in order to develop the apple production in Guba-Khazmaz region we need increase the area of apple gardens, creation of warehouses for holding the products, for transportation of products acquisition of specialized vehicles, establishment of conversion industry for further development apple production.

According to researches, in cases when there is high level of specialization in the region, the relations between the industry realms as well as relations between the industry and agriculture itself is conducted in efficient and appropriate way. From this point of view formation of clusters in accordance with development level and structure of each region is of high importance. Cluster or industrial group is group of related entities and companies which are allocated close to each other from geographic point of view and their operations are close complete each other. In practice, establishment of specialized realm in the region creates specific relations between producer and customers and increase their competitiveness.

We would like to note that establishment of free economic zones plays the crucial role in establishment of clusters. The aim for establishment of free

economic zones is development of priority realms, increase in investment and innovation activity and increase of competitiveness of production and services within the industry. From this point of view, signature of President Decree on "Creation of free economic zones in Azerbaijan Republic" on 6 March 2007 is very important. The Law on "Free Economic Zones" was signed on 14 April 2009 and was enforced by the Decree of The President dated 3 June 2009. Thus there is legitimate basis for establishment of free economic zones in Azerbaijan. In our opinion, the establishment of free economic zones should cover not only provision of economic allowances, but also should consider the determination of industry to be developed, creation of necessary infrastructure (roads, electric energy, gas, water supply and etc.), preparation of specialized personnel. In order to establish the cluster based development strategy it is important to segregate the country into the industry zones. Such segregation can bring about the equal allocation of innovation; increase of production and competitiveness and as a result formation of realization companies.

3. The basic duties and principles of state innovation policy

Based on international practice professor A.Musayev believes that the following basic measurements should be included into the innovation policy of Azerbaijan:

1. Provision of tax allowances for scientific-research and practice activities;

2. Establishment of special economic zones;

3. Provision of government assistance for development of research centers, universities, improvement and further development of research activities and preparation of qualifies personnel.

According to the economist, the fiscal methods for encouragement of innovation development are one of the most suitable tools for development of low level of innovation activity in the industry. In this program the government should define exact degrees and types of tax allowance for each type of innovation activity.

We believe that the duties of the government in innovation policy should be as follow:

- The identification of priorities of innovation policy;
- Provision of grounds for structural changes of the economy;
- Establishment and development of infrastructure for innovation;
- Protection of national innovations on foreign markets and provision of appropriate ground for development of foreign innovation on local market;
- Provision of conditions for collaboration between science, education, production and finance realms;
- Provision of efficient utilization of technical potential and equilibrium for further development of economy at normal expected temps and proportions.

In order to realize the duties mentioned above the government should apply the science based strategy. From this point of view the basic principles of state innovation policy could be described as following:

- Transparency in scientific works, democratization of scientific realm, formation and realization of scientific policy;
- Encouragement of fundamental scientific researches; protection and development of traditional national scientific schools;
- Establishment of appropriate conditions for health competition and entrepreneurship, encouragement of innovation activity and its support;
- Provision of necessary condition for development of innovation directed for national protection;
- Integration of science and education, creation of entire system for preparation of qualified personnel; protection of intellectual property;
- Protection and development of scientific-research organizations of any type of ownership;
- Provision of necessary conditions for application of scientific achievements; support the distribution of innovations in Azerbaijan;
- Increase the prestige of scientific profession and provision of appropriate social and economic conditions for people involved into the science;
- Application of the recent innovations to the economy of Azerbaijan.

4. Realization of measurements based on regional modules for development of innovation system

We believe that development of innovation system in Azerbaijan should be implemented based on regional modules. From this point of view the preparation and implementation of the following measurements is necessary:

- Preparation and realization of measurement on effective integration closed territorial units;
- Government support for establishment of scientific centers in each region as well as allocation of technology transfer centers;
- Identification of locations for research institutes and universities, which deals with innovations for directions of high priority for the government. Such organizations should be located in regions which are considered to be the "economic drivers" for the country.
- Development of production-technology infrastructure, innovation-technology centers, business centers in accordance with investment-innovation development program;
- Establishment of special economic zones (technical-application and industrial-production) on territory of Azerbaijan Republic.

5. Basic stages of formation of regional innovation strategy

We believe that after completion of State Program on regional development continues development of the further stages is required.

Following duties should be identified in respect of future development of this innovation program:

- Improvement of legislative basis for government intervention into the innovation program;
- Development of financial mechanisms and technologies for further development of innovation activity;
- During development of priority innovation project provision of government guaranty
- Application of unique information support for innovation process
- Preparation of highly qualified personnel for innovation realm;
- Transfer of innovation products to inter-regional markets;
- Expansion of foreign activities for entities dealing with production of innovation products;

The general innovation strategy acts as a basic tool for formation of innovation strategy in the regions.

During the first stage, by using economic analysis and assessment of region's opportunities we can identify the structure and basis for the innovation strategy,

which will suitable for the region’s requirements. The structural organizations of the region are classified in accordance with some strategy provides the opportunity for complex assessment of economy of the region and it`s prospective.

During the second stage of innovation strategy formation the duties of its organization and technological principles are identified. These duties can be summarized as follow:

1. Development of development concept of region’s economy. Based on the identification of priority directions for innovative development can be easily identified. This provides grounds for realization of reconstruction of economy from structural point of view and resolution of actual problems of reforming of market economy in the regions;

2. Formation of the basic principles of region innovation policy which brings about formation, accumulation and allocation of financial resources in the most optimal way.

The regional innovation strategy covers the following parts of scientific provisions:

- Development strategy for prospective of the region, development and priority systems of the strategy will be based on it;

- Basic directions of region's innovation strategy, it will provide the grounds for the further development. For this purpose, the precise offers for development of innovation policy are provided.

The researches on management of innovation strategies in Azerbaijan show that the major and traditional problem for their realization is absence of specific innovation strategies for the regions. Based on researches, we believe that application of analytical tools for planning of innovation strategy and methodology proposed by Europe TACIS EES expert services will enable establishment of comprehensive innovation strategy.

The main stages of project planning are the following:

- Implementation of economic and institutional audits of the regions;
- Analysis of economic realms of the regions;
- SWOT analysis for main aspects of regional development
- Identification of critical success factors for region's development
- Description of basic goals;
- Preparation of complex of strategic opportunities and their SWOT analysis;
- Identification of the best strategic approach;
- Short description of strategic approach;
- Identification of action points for each basic goal.

Application of this methodology will bring about restoration and development of regional complex and will help to identify the success factors for further development.

6. Theoretical and practical aspects of entrepreneurship in formation of regional innovation strategy

Each entrepreneur has his own development strategy. From this point of view consideration of individual strategies of entrepreneurs in the regions should be one of the most important points during preparation of overall region strategy.

Analysis of entrepreneurship shows that the most significant problems for development and implementation of individual innovation strategies is lack of external and internal debt capital, hampers for capital attraction and administrative issues during the implementation of the projects. Considering these points, we believe that preparation of entrepreneurship programs for regional innovation strategy is essential.

The main goal of this strategy is increase of competitiveness in the regions and prevention of decrease in population's welfare. It should be done in way, which will support the further sustainable development of the country and its regional integrations. Thus this strategy will cover the vast realm of social-economic activity of the society. Therefore, we believe that development of

regional entrepreneurship programs is the essential part of regional innovation strategy planning process.

We believe that the specifics of regional innovation strategy consist of the following:

1. It is a part of regional innovation strategy

2. The strategic selection of the entrepreneurship is considered as the central point in the regional innovation strategy. The basic requirements here as development of separate and consolidated strategies, consideration and allocation of limited resources.

3. It develops inter-related elements in strategies of coordinated realms and sectors of the economy;

Preparation of regional entrepreneurship development strategy plays important role in effective development of this realm. Regional entrepreneurship development strategy provides long-term innovation relations between separate structures of the region. It provides the ground for evaluation of real opportunities of entrepreneurship in the regions, maximization of utilization for innovation potential and effective allocation of resources. From this point of view accelerated realization of innovation opportunities became more realistic.

The existence of entrepreneurship development strategy gives an opportunity for further innovative actions, current and operational management of the process

and establishment of inter-realm relations. In the system of regional entrepreneurship development strategy the main decisions are made based on qualitative aspects.

In our opinion, during the process of regional entrepreneurship development strategies following basic principles are applied in strategic innovation decision making process:

- Consideration of entrepreneurship is self-established and organized open social-economic system;
- Consideration of regional development strategy as well as strategic basic activities;
- Formation of development system for entrepreneurship strategic innovation;
- Provision of flexibility of regional innovation strategy
- Provision of alternatives for selection of strategic innovation;
- Provision of continues utilization of the results of technological progress;
- Consideration of investment risks during innovation strategy related decision making;
- Direction of innovation managers involved into the realization of innovation programs to professionalism
- Provision of regional entrepreneurship development strategy prepared by businesses by respective organizational structures.

Following stages are considered in preparation of regional entrepreneurship development strategy:

- Identification of formation period for innovation strategy
- Selection of strategic goal for innovation activity
- Identification of innovation directions and financing sources;
- Identification of precise program and its duration;
- Assessment of the quality of the prepared innovation strategy;
- Re-consideration of strategy depending on changes in external and internal environment of business.

We believe that improvement of regions' from territorial, economic and social points of view, increase in education level and innovation opportunities of the economy, development of entrepreneurship environment and consideration of effective utilization of regions' resources is very important in preparation and implementation of regional development strategy in Azerbaijan Republic.

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