## Экономические науки, Менеджмент и маркетинг

## Doctor of Economic Sciences, professor Mukhtarova K.S.,

PhD student Zhidebekkyzy A.

Al-Farabi Kazakh national university, Kazakhstan

## Development and implementation of innovation policy: case of Kazakhstan

Development of the innovation infrastructure began in 2003 with the establishment of the Centre for Engineering and Technology Transfer, merged in to the National Innovation Fund in 2011, having founded the first technoparks in 2004. Until 2009, the technopark network included a total of seven regional and two national entities. Business incubation services have been included since 2010. Although technoparks were formally intended to develop all types of ISLs, their actual knowledge intensity and impact on the diffusion of innovation has been somewhat limited. Their facilities have been used largely for business centre style activities, and a recent evaluation concluded that technopark firms in Kazakhstan were not significantly more innovative than other firms. Key problems have included: weak or non-existent linkages with knowledge producing institutions, i.e. universities and research & development institutes in the technoparks; insufficient financial resources for technology commercialization; lack of expertise on the implementation of innovation projects; low levels of general management and innovation management capabilities; and non-effective stakeholder interaction mechanisms.

With the adoption of the policy of industrial-innovative development, Kazakhstan following the results of 2014 peaked in the growth of main innovation indicators. This positive trend mainly explained by successful results of the program SP FIID 2010-2014. As part of the reforms focus was on strengthening measures applied to stimulate innovation, as a result business and society began to show an increasing interest in innovation.

According to «Global Innovation Index 2014» co-published by Cornell University, INSEAD, and the World Intellectual Property Organization(WIPO, an agency of the United Nations, UN), Switzerland, the United Kingdom and Sweden

topped this year. Kazakhstan has moved 5 lines up and is ranked 79th out of 143 countries. Among Central and Southern Asia countries, Kazakhstan is placed between India (76th) and Butan (86th). Kazakhstan has seen the rise in some indicators. For example, innovation output indicator moved 5 lines up to the 101st line, and effectiveness indicator – 8 lines up to the 126th place. According to Munich-based Ifo Institute for Economic Research, despite some increase in its indicators, Kazakhstan is still at the stage of formation of its national system of support and innovation, this explains the lag behind the leading countries of the world [1].

**JSC** «National Agency for Technological Development» is actively involved in the development of innovation infrastructure in Kazakhstan. During the period of Agency's activity there have been established 9 regional parks, 4 industrial design bureaus, 2 international center for technology transfer, 15 offices of commercialization, 4 centers of commercialization.

**Regional technology parks (RTP) -** a legal entity established by the Agency, which on the right of ownership or legally owns the territory with a single logistics complex, where favorable conditions for the implementation of industrial innovation are created.

RTP have been establishing since 2004, presently there have been created 9 technoparks, 8 of which are in operation, 1 was liquidated in 2013.

**Industry Design bureaus (IDB)** – a legal entity that owns a logistics plex, established by the National Institute of Development in the field of technological development to promote the subjects of industrial innovation in the production of new or improved products. IDB are created to promote the subjects of industrial innovation in the development of new engineering products, including through acquisition, adaptation and technology transfer, development of design documentation and its subsequent transfer for a consideration to subjects of industrial innovation and through rendering services necessary to organize the production of goods based on it. Up to date 4 IDBs are in operation, In November 2013 the Instrument Design Bureau LLP was estalished.

**International centers of technology transfer** – since 2009, the Agency is considering various options to build the necessary infrastructure for practical implementation of the technology transfer. In 2009, the first such center was Kazakh-French technology transfer center, created in cooperation with French company CEIS (KFCTT)

**Commercialization offices** – as part of the formation of the technologies commercialization system in the country, the Agency in 2013-2014 carried out a competitive selection of offices of technology commercialization under research institutes and universities, as well as projects for further commercialization, there 6 commercialization offices and 1 regional centers for technology commercialization were created. Today there are 21 offices and 5 regional centers of commercialization are ready to give support and qualified help to scientists and innovators in the course of commercialization of innovations. In 2013 offices of commercialization processed 184 applications for commercialization, 28 projects were selected for further commercialization [2].

Also there has been held other activities for developing of commercialization system, such as:

- Methodology center of coordination of technology commercialization system has been established;

- Grant for technologies commercialization has been introduced in the list of innovative grants under the Law on State Support of Industrial Innovative Activities;

- The first national conference on technologies commercialization in Kazakhstan has been held;

- Six Memorandums of Cooperation have been signed with the following foreign partners: Yissum, Inno AG, CEIS, ISTC, Mobile Monday, HTSPE [3].

Improving the innovation impact of industry-science linkages (ISL) will require coordinated policy actions at all levels of the innovation system, employing a wide range of policy instruments as part of a systemic, comprehensive approach. ISL policy must reflect the specific characteristics of innovation agents on both the supply and demand sides of knowledge production and use. Policy support must be tailored to the specific context of Kazakhstan. Improved needs assessment would provide the basis for informed policy decisions [4].

The authorities should consider conducting an ISL mapping and evaluation exercise reflecting both international best practice and the specifics of the national innovation system. The main objectives of this exercise could be to:

- Identify bottlenecks and barriers, in particular concerning the interaction of actors from different institutional sectors and their motivations;

- Raise the attractiveness to private entities of participating in government financed projects or cooperation arrangements;

- Provide an independent evaluation of existing experience in ISL development and their support, based on a qualitative field survey of actual achievements and failures; and

- Provide recommendations for further concrete policy actions to address the above issues.

## **References:**

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2. Annual report – 2013. JSC «National Agency for Technological Development», Almaty, 2014.

3. Zh. Salimov. Innovation system of Kazakhstan. Materials of IncoNet EECA workshop "Innovating Innovation Systems" – Vienna, Austria. 2012.

4. Innovation performance review of Kazakhtan. United Nations. Printed at United Nations, Geneva (Switzerland), 2012.