РОЗДІЛ 5
РОЗВИТОК ПРОДУКТИВНИХ СИЛ І РЕГІОНАЛЬНА ЕКОНОМІКА

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INFORMATION-ANALYTICAL SYSTEM FOR THE FORMATION OF INNOVATIVE BUSINESS INFRASTRUCTURES IN THE ODESSA REGION

The article analyses the current state of business innovation infrastructure in the Odessa region. Also analysed the current state of innovation and investment infrastructure in Ukraine. Revealed problems in the functioning of the existing regional innovation and investment infrastructure. Proved the efficiency of creating innovative business infrastructure in institutions of higher education, innovation centres, science parks, innovation incubators, technology transfer centres, innovative production and technology clusters and other innovative structures.
Key words: innovative business structure, innovation centres, business incubators.

Problem of research. Insufficient attention to the development of scientific and technical sphere leads to structural deformation economy and the dominance of low-tech industries that adverse to scientific advances and cannot provide increasing economic competitiveness.

Analysis of the recent research and publications. The questions of the formations of innovative business structures were researched in the works by such scientists: Bajan Yu, O. Amoshi, L. Antoniuk, N. Dobrova, Z. Varnaliya, M. Yavorsky, V. Geytsa, G. Zaharchin etc.

Unsolved part of general problem. Imperfect or general lack of motivation of enterprises to create and implement innovation as a way to combat competition and weakness of innovation and investment infrastructure.

The aim of the article. To examine the fundamental innovative business structures of the Odessa region, to identify the problems of their use in foreign economic activity of companies.

Research methods. The following general scientific and special methods were used: morphological analysis, system and structural and logical analysis, formalization, the method of analogy, comparison and integration, tabular method.

The main results of the study. Enhancing innovative enterprise development and current state of the economy led to increased demand for more accurate and efficient planning of their activities. One of the priorities for sustainable operation of the Odessa region is the transition of the regional economy on an innovative path of development in the reform of intergovernmental relations, expansion of autonomy and increased responsibility of managing the pace of socio-economic growth. Effectiveness in this direction requires the formation of regional innovation policy-oriented trends of the world economy. Thus the basic role of government should be to create mechanisms and specific measures to ensure the formation of innovative infrastructure and development of innovative entrepreneurship.

Innovation and investment infrastructure is a set of production and social institutions that are interconnected and adequate implementation of effective innovation and investment activities and its implementation. In innovation policy innovation and infrastructure investment is the main tool. It links the country and the business sector, the results of research and market.

In 2015 innovative activity in the industry involved 824 enterprises, or 17.3% of the surveyed enterprises.

The main source of funding for innovation expenditures are own funds – 13,427.0 million (or 97.2% of total expenditure on innovation). The funds of the state budget received 11 enterprises, local budgets – 15, the total of which amounted to 589.8 million (0.7%); funds received 9 domestic investors, foreign – 6, generally their volume amounted to 132.9 million (1.9%); loans benefited 11 companies whose volume amounted to 113.7 million(0.8%) (Table 1) [1].

Table 1

Sources of financing innovation

	Total expenditure	Including the funds, mln.			
		own	state budget	foreign investors	other sources
2000	1757,1	1399,3	7,7	133,1	217,0
2001	1971,4	1654,0	55,8	58,5	203,1
2002	3013,8	2141,8	45,5	264,1	562,4
2003	3059,8	2148,4	93,0	130,0	688,4
2004	4534,6	3501,5	63,4	112,4	857,3
2005	5751,6	5045,4	28,1	157,9	520,2
2006	6160,0	5211,4	114,4	176,2	658,0
2007	10821,0	7969,7	144,8	321,8	2384,7
2008	11994,2	7264,0	336,9	115,4	4277,9
2009	7949,9	5169,4	127,0	1512,9	1140,6
2010	8045,5	4775,2	87,0	2411,4	771,9
2011	14333,9	7585,6	149,2	56,9	6542,2
2012	11480,6	7335,9	224,3	994,8	2925,6
2013	9562,6	6973,4	24,7	1253,2	1311,3
2014*	7695,9	6540,3	344,1	138,7	672,8
2015*	13813,7	13427,0	55,1	58,6	273,0

Source: the authors

* Data a represented excluding the temporarily occupied territory of the Autonomous Republic of Crimea, Sevastopol and the zone of the antiterrorist operation.

In 201587.7% of innovative-active industrial enterprises introduced innovation (or 15.2% of the surveyed industrial).

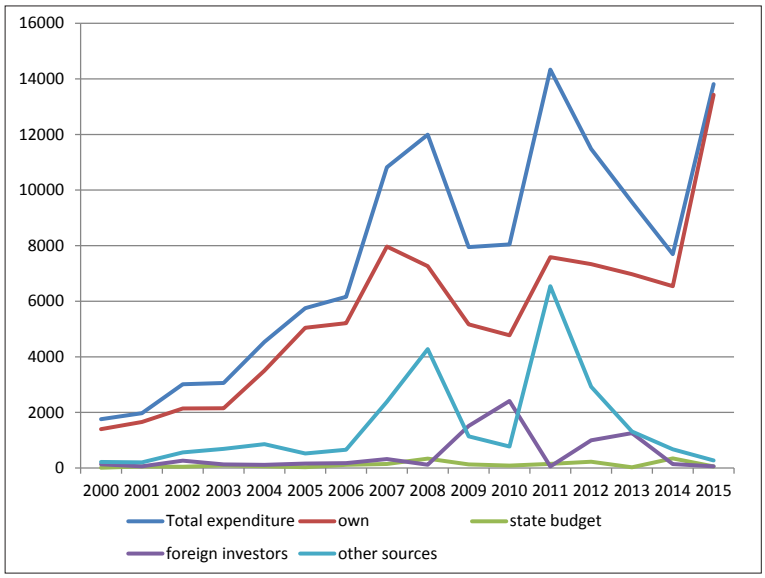

Fig. 1. Sources of financing innovation

In 2015 3136 industry implemented innovative products, of which 548 – only for new market in 2588 – only for the new company. Of the total number of products introduced 966 – new types of machinery, equipment, appliances, apparatus and so on. The greatest number of innovative products introduced at the enterprises of Ternopil (27.2% of all species introduced innovative products), Zaporizhya (12.7%), Lviv (8.0%), Kharkiv (6.6%) regions and the city. Kyiv (14.4%); of economic activity – by enterprises producing machines and equipment, not classified elsewhere (22.9%), paper and paper products (16.2%), food products (11.3%), metallurgical production (5, 5%) (Table 2) [1].

Table 2

Introduction of innovative technologies in industrial

	Proportion of enterprises that implemented innovations%	Introduced of new technological processes	including low-waste, resourcesaving	Introduced production of innovative products, items[1]	Including new types of technology
2000	14,8	1403	430	15323	631
2001	14,3	1421	469	19484	610
2002	14,6	1142	430	22847	520
2003	11,5	1482	606	7416	710
2004	10,0	1727	645	3978	769
2005	8,2	1808	690	3152	657
2006	10,0	1145	424	2408	786
2007	11,5	1419	634	2526	881
2008	10,8	1647	680	2446	758
2009	10,7	1893	753	2685	641
2010	11,5	2043	479	2408	663
2011	12,8	2510	517	3238	897
2012	13,6	2188	554	3403	942
2013	13,6	1576	502	3138	809
2014[2]	12,1	1743	447	3661	1314
2015[2]	15,2	1217	458	3136	966

Source: the authors

[1] to 2003 new products;

[2] figures are excluding the temporarily occupied territory of the Autonomous Republic of Crimea, Sevastopol and the zone of the antiterrorist operation.

Number of embedded innovation process (new and improved methods of processing and manufacturing) accounted for 1217, most of which have implemented enterprise Kharkiv (17.4%), Sumy (15.2%), Zaporizhya (9.4%), Dnipropetrovsk (6.3%) regions and Kyiv (12.5%); of economic activity – by enterprises producing machines and equipment not elsewhere classified (25.3%), other transport equipment (12.3%) and food (7.8%). Of the total number of implemented innovative processes 458 – low-waste, resource [1].

Formation of innovative investment model of development in the Odessa region – one of the most important factors by which to improve the competitiveness of the regional economy and the national economy as a whole. Consequently, almost all centers involved in the implementation and realization of regional socio-economic and scientific-technical programs and exploring innovative trends in information and analytical activities.

As the main industrial and scientific area that has the largest concentration in southern Ukraine branch and university science Odessa region in dire need of a complete and fully functioning integrated innovation and investment infrastructure.

In the Odessa region are some elements of innovation infrastructure. The region has 22 public higher education institutions III-IV accreditation level (19 state-owned, 3 – private) and 32 university-II accreditation level (19 public, 8 public universities, 5 private universities). Scientific and technical field system includes 43 branch research institutes, design and technological institutions with developed infrastructure that is able to meet the needs of industry innovation [2].

However, for the moment, the region observed adverse trend of innovation and investment. The main reason is imperfect, or even lack of motivation of enterprises to create and implement innovation as a way to combat competition and weakness of innovation and investment infrastructure.

Innovation and investment infrastructure in the region is not sufficiently developed, fragmented, functionally incomplete as it does not cover all aspects of innovation and investment process. Virtually no technology transfer centers and venture capital funds. The activities of scientists, inventors, innovators, virtually funded and is not supported. Educational and scientific potential not used in full and can be seen the lack of provision of regional experts in the field of innovation and business investment.

Considering, modern industrial and scientific potential of Odessa region, it becomes clear the need to develop programs that will promote the development of priority sectors and major investment and innovation production technological cluster area such as industry, transport and maritime economy, recreation and tourism, agriculture and manufacturing, health, communication and communications (Fig. 2).

To generate innovative investment structure of the region, it is necessary to develop scientific and methodological basis to maintain the current state and development of different types of organizations, companies innovative investment infrastructure (innovation centers, science parks, innovation incubators, technology transfer centers, innovative

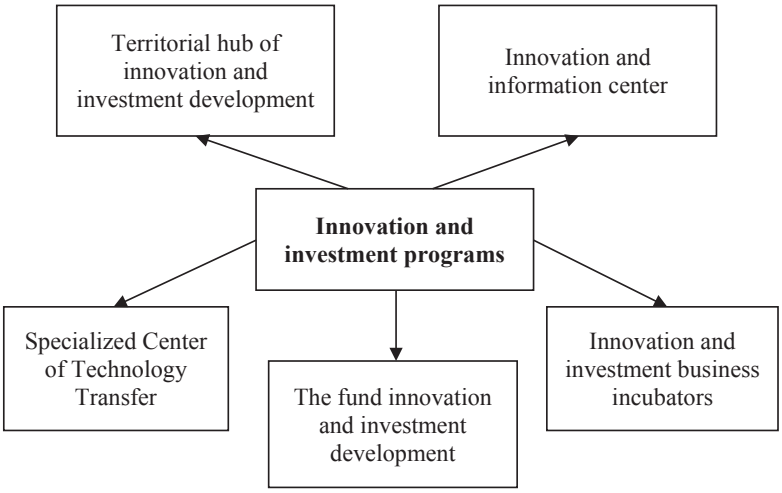

Fig. 2. Innovation and investment programs

industrial and technological clusters and other innovative structures).

Territorial hub of innovation and investment (THoII).

For uniform and balanced development of innovation and investment created THoII.

RCIDThe objectives include:

– The implementation of information and analytical support, financial and economic decision-making and program;

– Development and creation of proposals to improve the legal framework for the implementation of innovative investment activities Odessa region;

– Involving funding of national and local budgets, resources for the successful implementation of activity;

– Taking part, and to organize forums, exhibitions and other events innovative investment themes;

– Improve inter-regional cooperation system and internationally in the field of innovation and investment development.

The fund innovation and investment development (FIID)

FIID accordance with its constitutive documents provides selection and funding of innovative projects at all stages of the innovation process, promotes innovation infrastructure organizations through the use of various forms of support.

FIID main activities are:

– Development and improvement of a portfolio of innovative investment projects – competitive selection of innovation and investment projects examination and implementation of development projects of innovation and investment infrastructure that will seek funding through state and regional budgets;

– Allocation of funds for projects and implementation, development of innovative products and their implementation or implementation in production;

– Comprehensive support manufacturing companies and developers participating in exhibitions and presentations, innovative and investment projects;

– The allocation of money for investment projects related to technology transfer to foreign and domestic markets;

– Equity participation in the authorized capital of legal entities engaged in the commercialization of innovative projects that carry out innovation and investment, as well as dealing with the improvement of scientific and technical developments and innovative investment products Odessa region to foreign and domestic markets;

– Loans or loans for developers and enterprises involved in innovation and investment, implement innovative investment projects in the Odessa region.

Specialized Center for Technology Transfer (SCfTT).

In a properly functioning innovation and investment systems should operate one of the key components – structures that occupy the position between the developers of scientific and technical products and producers and provide innovative product transfer into production.

They provide:

– Research businesses in promoting innovative products to overseas and domestic markets, help with finding customers and in different areas of research (patent, marketing and technology);

– Small households innovation and investment in the creation of favorable conditions for the development of scientific and technological innovation, the creation of innovative technologies, establishment of pilot production, introduction of innovative products into production;

– Manufacturing test batch and preparing innovative product to mass production;

– Companies engaged in production in developing requests for identification of progressive, modern technologies;

– Carrying out technological audits.

Innovation and investment business incubators

One of the fundamental elements of innovation and investment infrastructure that has to be developed in the Odessa region is a network of innovation and investment business incubators, formed to provide favorable conditions for innovation and investment projects in the early stages of development when the risk is greatest and determine the likelihood of success is too difficult .

Innovation and investment business incubators have a staff of qualified professionals – economists, managers, accountants, lawyers and others. Innovation and investment business incubators provide services such as rental space, utilities, consulting professionals. These services will be provided on concessional terms for small incubated innovative investment enterprises.

Innovation and investment business incubators interact with the Foundation of innovation and investment on the support in organizing and placing in its territory projects were selected by means of competition.

Innovation and information center "IIC" (IIC)

IIC is the main organization that will provide open access to leading scientific electronic resources.

Odessa Information and Analytical Business Innovation Center will perform the following functions:

– To support researchers, innovators, inventors and talented young people;

– Assist in the creation of small innovative investment of households;

– To promote the commercialization of innovative products and their protection;

– To form effective environmentally friendly innovation projects.

Conclusion. Summarizing the above, we can conclude that the formation of an effective national innovation system, including at the regional level is a strategic way to ensure the country's competitiveness in the context of globalization and European

integration, the direction of all economic sectors that have significant social and economic impact.

Formation of regional innovation structure requires the creation of scientific and methodological basis for the support and development of various types of enterprises and organizations of innovation infrastructure, namely: innovative investment technology transfer centers, innovation and investment centers, science parks, innovation and investment business incubators, innovation and investment of industrial and technology clusters and other innovative investment structures.

References:

1. Державний комітет статистики України [Електронний ресурс]. – Режим доступу : www.ukrstat.gov.ua.
2. Яворський М.С. Стратегія розвитку центрів науково-технічної і економічної інформації (ЦНТЕІ) як базових елементів регіональної інноваційної інфраструктури / М.С. Яворський // Науково-технічна інформація. – 2010.
3. Масленніков Є.І. Методологічні та практичні засади дослідження системи управління фінансовою стійкістю промислового підприємства : [монографія] / Є.І. Масленніков. – Одеса : Прес-кур'єр, 2015. – 316 с.
4. Maslennikov E.I. Strategic assessment of the financial sustainability of the industrial enterprise / E.I. Maslennikov // Економіка: реалії часу. – 2014. – № 6 (16). – С. 111–115 [Електронний ресурс]. – Режим доступу : http://economics.opu.ua/files/archive/2014/No6/111-115.pdf.
5. Побережець О.В. Теоретико-методологічні та практичні засади дослідження системи управління результатами діяльності промислового підприємства : [монографія] / О.В. Побережець. – Херсон : Грінь Д.С., 2016. – 500 с.
6. Побережець О.В. Ідентифікація та класифікація нематеріальних активів та проблеми їх визначення / О.В. Побережець, К.В. Іванова // Економіка: реалії часу. – 2012. – № 2(3). – С. 98–104 [Електронний ресурс]. – Режим доступу : http: //economics.opu.ua/ files/archive/ 2012/No2/98-104.pdf.
7. Yuri V. Kovtunenko. Commercializationandtechnologytransfer: theprocesses'contentsandcorrelationintheinnovativeactivityofindustrialenterprise / Svitlana V. Filyppova, Yuri V. Kovtunenko // Економіка: реалії часу. – 2013. – № 2(7). – С. 33–38 [Електронний ресурс]. – Режим доступу : http://www.economics.opu.ua/n3.html.
8. Башинська І.О. Інноваційно-інформаційні технологій для забезпечення інтелектуально-кадрової складової економічної безпеки підприємства / І.О. Башинська // Інноваційна економіка: теоретичні та практичні аспекти : [монографія] / За ред. д. е. н., доц. Є.І. Масленнікова. – Херсон : Грінь Д.С., 2016. Вип. 1 – С. 607–635.
9. Башинська І.О. Використання методу експертних оцінок в економічних розрахунках / І.О. Башинська // Актуальні проблеми економіки. – 2015. – № 7(169). – С. 408–412.
10. Ломачинська І.А. Вплив конвергенції фінансового та реального секторів на розвиток національної економіки України / І. Ломачнська, А. Кравцова // Вісник Одеського національного університету. Економіка. – 2012. – Т. 17. – Вип. 2. – С. 139–146.
11. Ломачинська І.А. Бюджетно-податкове регулювання соціальних аспектів економічного розвитку / І.А. Ломачинська // Вісник Одеського національного університету. Економіка. – 2016. – Т. 21. – Вип. 4(46). – С. 188–191.
12. Методологічні підходи до класифікації інвестицій / С.В. Філиппова, О.С. Балан // Праці Одеського політехнічного університету. – 2011. – Вип. 3(37). – С. 80–86.
13. Борщ В.И. Анализ эффективности деятельности управленческого персонала / В.И. Борщ // Актуальные проблемы экономики и менеджмента: теория, инновации и современная практика : [монография] : в 3-х т. / Под ред. Э.А. Кузнецова. – Херсон : Гринь Д.С., 2014. – Т. 3. – С. 490–525.
14. Мельник Ю.М. Науково-методичне забезпечення побудови облікової підсистеми промислового підприємства при процедурі банкрутства / Ю.М. Мельник // Економіка: реалії часу. – 2015. – № 2(18). – С. 275–279 [Електронний ресурс]. – Режим доступу : http://economics.opu. ua/files/archive /2015/n2.htm.
15. Інноваційна економіка: теоретичні та практичні аспекти : [монографія] / За ред. д. е. н., доц. Є.І. Масленнікова. – Херсон : Гринь Д.С., 2016. – Вип. 1. – 854 с.

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ІНФОРМАЦІЙНО-АНАЛІТИЧНА СИСТЕМА ДЛЯ ФОРМУВАННЯ БІЗНЕС-ІННОВАЦІЙНОЇ ІНФРАСТРУКТУРИ В ОДЕСЬКОМУ РЕГІОНІ

Резюме
У статті проведено аналіз сучасного стану бізнес-інноваційної інфраструктури в Одеському регіоні. Проаналізовано сучасний стан інноваційно-інвестиційної інфраструктури в Україні. Виявлено проблеми у функціонуванні наявної регіональної інноваційно-інвестиційної інфраструктури. Недостатня увага до розвитку науково-технічної сфери призводить до структурної деформації економіки та домінування низькотехнологічних виробництв, малосприйнятливих наукових досягнень, що не дає змоги забезпечити підвищення конкурентоспроможності економіки. Доведено ефективність створення бізнес-інноваційних інфраструктур на базі вищих навчальних закладів, інноваційних центрів, наукових парків, інноваційних бізнес-інкубаторів, центрів трансферу технологій, інноваційних виробничо-технологічних кластерів та інших інноваційних структур.
Ключові слова: бізнес-інноваційна структура, інноваційні центри, бізнес-інкубатори.

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ИНФОРМАЦИОННО-АНАЛИТИЧЕСКАЯ СИСТЕМА ДЛЯ ФОРМИРОВАНИЯ БИЗНЕС-ИННОВАЦИОННОЙ ИНФРАСТРУКТУРЫ В ОДЕССКОМ РЕГИОНЕ

Резюме
В статье проведен анализ современного состояния бизнес-инновационной инфраструктуры в Одесском регионе. Проанализировано современное состояние инновационно-инвестиционной инфраструктуры в Украине. Выявлены проблемы в функционировании существующей региональной инновационно-

инвестиционной инфраструктуры. Недостаточное внимание к развитию научно-технической сферы приводит к структурной деформации экономики и доминированию низкотехнологичных производств, малоблагоприятным научным достижениям, что не может обеспечить повышение конкурентоспособности экономики. Доказана эффективность создания бизнес-инновационных инфраструктур на базе высших учебных заведений, инновационных центров, научных парков, инновационных бизнес-инкубаторов, центров трансфера технологий, инновационных производственно-технологических кластеров и других инновационных структур.

Ключевые слова: бизнес-инновационная структура, инновационные центры, бизнес-инкубаторы.