

UKRAINIAN-CHINESE COOPERATION OF INDUSTRIAL ENTERPRISES ON INNOVATIVE PRINCIPLES

Olena Boiko^{1*}, Nataliia Vasiutkina², Oksana Kondratiuk³, Iryna Stoianenko³

¹Department of Innovation Policy, Economy and Organization of High Technologies, State Organization "Institute for Economics and Forecasting,

Ukrainian National Academy of Sciences", Panasna Myrnoho Street 26, 01011 Kyiv, Ukraine ²Department of Management and Marketing, Faculty of Economics and Management, Private Higher Educational Establishment "European University", Akademika Vernadskogo Blvd. 16-V, 03115 Kyiv, Ukraine

³Department of Economics and Business Finance, Faculty of Economics, Management and Psychology, Kyiv National University of Trade and Economics, Kyoto str. 19, 02156 Kyiv, Ukraine

*e-mail: bhelena@ukr.net

Abstract

For more than 25 years, Ukraine and China have been strategic partners. This opens up opportunities for deepening cooperation and implementing joint projects for socio-economic development, in particular in the direction of improving industrial policy. This is a significant tool for removing artificial regulatory obstacles to the development of business of the two countries. It also contributes to the creation of favorable conditions for attracting investment from China to the Ukrainian economy. This is possible by improving the regulatory framework, attracting capital to modernize domestic production, including through the creation and development of special forms of organization of innovative activity (clusters, industrial parks, special economic zones, etc.).

The research information base was made up of materials from the State Statistics Service of Ukraine and China. Using analysis, monitoring of Ukrainian and Chinese enterprises in the food industry on an innovative basis was carried out. For this a significant array of info-base was applied. Based on the application of various approaches (systemic, structural), the existing problems and prospects for further cooperation between Ukraine and China in the direction of the implementation of the large Chinese project «One Belt, One Road» are identified.

The study identified common and distinctive features, problems and risks of creating, developing special forms of organization of innovative activity (industrial

parks, clusters, technology parks, etc.) of food industry enterprises in Ukraine and China. The proposals of Ukrainian-Chinese cooperation in the direction of developing special forms of organization of innovative activity of food industry enterprises have been developed. The analysis of the current regulatory framework for the functioning of special forms of organization of innovative activities of food industry enterprises in Ukraine and China is carried out. The strengths and weaknesses of their activities, as well as opportunities and threats are identified. Institutional and legal foundations of the development of food industry enterprises in the field of functioning of special forms of organization of innovative activity (special economic zones, clusters, industrial parks and other similar structures) in Ukraine and China are disclosed. Proposals have been developed to improve the regulatory framework for the innovative activity of food industry enterprises in the framework of cooperative relations between Ukraine and China.

Based on the analysis of the development of innovative activities of the PRC, it should be noted that in recent years, the country, unlike Ukraine, has been able to create a unique innovation system. It focuses on stimulating innovation through the active use of cluster policy; the state invests heavily in the development of human capital and scientific, scientific and technological development. The state has reoriented efforts towards the development of an innovative initiative,

stimulating small, medium, and venture entrepreneurship. Experience for Ukraine means that the ability to absorb new knowledge and technology depends on the level and quality of education. The creation of a highly qualified link in the field of education and in the scientific and technical sector is a priority for the formation of a highly developed country. Chinese experience also shows that it is necessary to focus on the development of small and medium-sized businesses, venture capital businesses, as well as provide government support for their functioning. Thus, cooperation between Ukraine and China may become a promising direction in creating joint forms of organization of innovative activity.

Key words: *Cooperation, Cluster, Industrial park, Venture business, Public-private partnership.*

1. Introduction

For more than 25 years, Ukraine and China have been strategic partners. This opens up opportunities for deepening cooperation and implementing joint projects for socio-economic development, in particular in the direction of improving industrial policy. This is a significant tool for removing artificial regulatory obstacles to the development of business of the two countries. It also contributes to the creation of favorable conditions for attracting investment from China to the Ukrainian economy. This is possible by improving the regulatory framework, attracting capital to modernize domestic production, including through the creation and development of special forms of organization of innovative activity (clusters, industrial parks, special economic zones, etc.).

Based on the analysis of the development of innovative activities of the People Republic of China (PRC), it should be noted that in recent years, the country, unlike Ukraine, has been able to create a unique innovation system. It focuses on stimulating innovation through the active use of cluster policy; the state invests heavily in the development of human capital and scientific, and technological development. The state has reoriented efforts towards the development of an innovative initiative, stimulating small, medium, and venture entrepreneurship. Experience for Ukraine means that the ability to absorb new knowledge and technology depends on the level and quality of education. The creation of a highly qualified link in the field of education and in the scientific and technical sector is a priority for the formation of a highly developed country. Chinese experience also shows that it is necessary to focus on the development of small and medium-sized businesses, venture capital businesses, as well as to provide government support for their functioning. Thus, cooperation between Ukraine and

China may become a promising direction in creating joint forms of organization of innovative activity.

The purpose of the work is to study the state, identify problems of development of food industry in Ukraine and the PRC. Recommendations on further Ukrainian-Chinese cooperation in the field of enterprise development based on innovative principles have been developed.

2. Materials and Methods

The research information base was made up of materials from the State Statistics Service of Ukraine and China. Using descriptive statistics, monitoring of Ukrainian and Chinese enterprises in the food industry on an innovative basis was carried out. For this a significant array of infobase was applied. Indicators were used to analyze the innovative development of food processing enterprises in the PRC and in Ukraine. Among them are: number of enterprises and special forms of organization of innovative activity; number of employees; innovations introduced in the production process, and regulations in the innovation sphere. Based on the application of various approaches (systemic, structural), the existing problems and prospects for further cooperation between Ukraine and China in the direction of the implementation of the large Chinese project "One Belt, One Road" are identified.

3. Results and Discussion

3.1 Identification of the main characteristics, problems and prospects of innovative activity of food industry enterprises in Ukraine and China

According to the State Statistics Service of Ukraine, most sectors of manufacturing in 2015-2017 went through a difficult period of economic crisis and have not yet reached the pre-crisis level of production in Ukraine. At the same time, it can be stated that some sectors show relatively good production recovery rates. Of particular importance are economic activities such as the production of food, beverages and tobacco.

Manufacture of food, beverages and tobacco is the most important sector of the economy in Ukraine. It brings together 22 specialized industries [1]. They comprise more than 40 major industries, which account for the largest volume of manufactured products and high competitiveness. These are: dairy, meat, sugar, oil-fat, flour-grinding, confectionery, canned fruits, alcohol, and wine production industries. By comparison, China's food industry also includes more than 40 industries (more than 65.5 thousand enterprises). Among them, the leading role belongs to the processing of cereals and oilseeds. Production of meat products, sugar, and canning industry is gradually expand-

ing. The tobacco industry occupies a prominent place. It is mostly developed in the southwest of the PRC, and the enterprises of the sugar and dairy industry in the northeast.

In 2017, this type of economic activity in Ukraine amounted to 20.9% of the total industrial output. However, over the next few years, a situation has arisen due to the decline in innovation performance. In particular, in 2017, 18.9% of the total number of industrial enterprises engaged in the production of food, beverages and tobacco in Ukraine engaged in innovation. This indicates that the food processing enterprises of Ukraine have a relatively low level of innovation activity compared to the countries of the European Union. The average is 53% [2].

The total amount of financing of innovative activity of industrial enterprises for the production of food, beverages and tobacco from 2014 - 2017 (37 units of innovative enterprises in the statistical sample) increased by 0.6 times. It should be noted that in 2017, it reached 51,851,000 euros. The main source of financing for innovation costs in 2017 is food industry enterprises' own funds - 44,400,000 euros (90.9% of the total funding for innovation in the food industry). State budget funds and local budget funds were not allocated to relevant articles. The corporate loans amounted to 3,703,700 euros (8.1% of the total volume of innovations in the food industry).

In 2017, 158 units of innovatively active industrial enterprises (16.8% of surveyed industrial enterprises) of the food industry of Ukraine (2014 - 265 units) implemented 275 (2014 - 231 units) technological processes, including low-waste, resource-saving 96 units (2014 - 44 units). The downward trend is that the number of food companies that introduce technological processes is variable, and does not have a sustainable development trend. This is a consequence of the close interconnection of enterprise innovation activity and economic conditions.

Technological innovations that contribute to the development of food processing enterprises should include: development and implementation of technologies for storage of raw materials, which is the basis for the production of food products; introduction of resource-saving technologies, which are characterized by output of finished products, and minimization of waste due to the use of modern processing methods; improvement of technological processes that will reduce the time of the production cycle without losing the quality of finished products; development and implementation of own packaging lines that will meet the specifications of manufactured products; and improving packaging, packaging and transportation.

Food products are exported to the Ukrainian producers by the Chinese producers. In particular, these

are products made by 27 dairy enterprises. These are enterprises such as PE "Prometheus" branch "Mensky Cheese"; as well as the branch "Slavutskiy dairy factory"; PE "Ros" branch "Okhtyrsky cheese factory"; LLC "Mirgorod cheese factory" (hard cheese, demineralized whey powder); plant branch of PE "Ros" (butter, milk powder, cheese), subsidiary enterprise "Starokostiantyniv Dairy Plant" (milk powder, butter, cheese), OJSC "ZIMS" (milk powder and milk mixtures, casein, caseinates, whey protein concentrate), "TECHMOLPROM" (milk powder, milk powder, sg skim milk, cheese), "Zolotonsky butter and dairy factory" (milk powder, powdered milk, demineralized whey powder, partially skimmed milk powder), "Bashtansk cheese factory" (cheese, hard cheese), PJSC "Ichniansky milk and canning mill" (butter, canned milk, canned milk) skimmed milk powder, milk powder), Elitmol Kyiv LLC (milk powder and cheese production), etc. [3]. They have permits for exporting their products to the PRC, and the requirement for improving technological resources is the main requirement for almost all technological innovations in enterprises, and environmental performance of the processes being implemented. We have identified the main directions of technological innovations in the food industry that can be developed in the direction of strengthening Ukrainian-Chinese cooperation [4, 5]:

- Confectionery industry (development of resource-saving biotechnological methods for increasing the efficiency of industrial processing of agricultural raw materials).
- Butter and cheese production (increasing the shelf life of milk quality through the use of modern packaging materials; the use of differentiation of the temperature factor of antioxidants and preservatives).
- Dairy industry (improvement of the process of processing and drying of dairy raw materials in order to save energy and reduce the metal content of structures; development of technological regime for obtaining new types of dairy products with high value and stable in storage; mastering new types of domestic tarot packing materials; improvement of streamlining of dairy products with aseptic spill with extended shelf life).
- Meat industry (improvement of technological chain of cutting and salting of raw materials; improvement of processing and production of finished products).
- Processing of fats (biotechnological means of protein modification for creation of dietary easily digestible products on the cereals basis; development of the process of extraction of natural antioxidants from soybeans and possibility of their use for obtaining functional products; compatible technological scheme of the process of periodic and continuous hydrolysis in reactors of various types high quality glycerin and fat-

ty acids; technology for purification of straw glycerin water; technology for producing fats for confectionery industry).

- Baking industry (development of bakery products technology for long-term storage).

- Food biotechnologies (development of technologies for the utilization of waste products from the use of acid-forming bacteria; complex waste-free processing of grain for starch, ethyl alcohol and feed products; development of equipment and technological scheme for the manufacture of vodka, balms, alcoholic beverages).

According to certain directions of technological innovations in the food industry, they can be divided by cost and speed of implementation. This is evidenced by the indicator of urgency of introduction of technological innovations, which is short-term, medium-term and long-term. Short-term and medium-term innovations are relevant for the food industry. For example, short-term technological innovations include the introduction of new packaging lines or technologies for the disposal of production waste. The period of implementation of such innovations is conditioned by the installation and adjustment of the equipment with its subsequent start-up. This makes the introduction of such an innovation attractive. Especially since the packaging plays an important role in the presentation of the goods to the consumer, acting as the "face" of the company and the guarantor of product quality. Taking priority not only in the production process but also in the implementation phase, has become an important tool, which greatly influences the work of most branches of the food industry, the state of the consumer market and the quality of life of the population.

Medium-term technological innovations include those related to new raw materials processing technologies. They need not only installation and commissioning.

According to the implementation period, the cost of technological innovation also changes: the longer the implementation period, the higher the cost of innovation and implementation process. This leads to difficulties in financing the systematic introduction of technological innovations. Given the particularities of some food industries, it is advisable to introduce step-by-step implementation, which can be variable. The stage of implementation of systemic technological innovations depends on the availability of financial resources in the enterprise or the possibility of lending.

Maintaining a stable positive growth in the food industry requires a systematic technological update of the industrial base of enterprises. This is due to the insufficient level of technological base development inherent in many structural units of this activity. This is a problem that requires the activation of innovative

development, the use of levers that contribute to improving production efficiency. The most important component of this problem is the financing of innovative activities of scientific institutions and enterprises in the direction of the implementation of projects aimed at modernization of basic means of production and production, expansion of the range of food products and improvement of their quality. For example, the world's largest food company "Unilever" spends almost 2.5% of its sales on research. It consists of almost 400 trademarks. Among them are the famous "Calve", "Lipton", and "Hellmann's". Unilever's annual turnover is 40,783,368,000.00 €.

Analyzing the statistics of the State Statistics Service of Ukraine, it should be noted that the trend of increasing the number of names of introduced innovative types of products at industrial enterprises of the food industry from 2012 - 2016. Thus, in 2016, the figure was 885 units (in 2012 - 667 units). There is also an increase in indicators by categories: 191 new ones for the market (in 2012 - 71 units), including machinery, equipment, apparatus, devices - 37 (in 2012 - 5 units), of which 17 units are new to the market [2]. Of the total sales of innovative products, 33.9% were products that were new to the market, and 66.1% were products that were new only to the enterprise. The downward trend is associated with a decline in consumer demand and demand for industrial products driven by the financial and economic crisis. The majority of innovative products were sold on the territory of Ukraine, and only 15% of the innovative products of the food industry were exported in 2015.

Thus, analysis of statistics on the development of innovation activity of industrial enterprises of the food industry shows that, despite the positive dynamics, Ukraine is significantly behind the indicators of the developed countries of the world. For a long time the development of the food industry has been hampered by the low level of logistical base of enterprises. The level of depreciation of fixed assets at domestic enterprises engaged in the production of food, beverages and tobacco in 2016 amounted to 51.1% (in 2014 - 47.2%) [6]. According to the State Statistics Service of Ukraine, in 2016, in the structure of production of foodstuffs, beverages and tobacco, the largest degree of deterioration of fixed assets in the production of the enterprises of the industry had the enterprises of the beverage industry - 61.1% (in 2014 - 62.5%)) and food production - 48.9% (in 2014 - 42.1%). The lowest level of depreciation of fixed assets was recorded by the enterprises for the production of tobacco products - 38.7% (in 2014 - 39.3%). In addition to these problems, there are also other problems, including rising prices for essential food; reducing the purchasing power of the population; import dependence of raw materials (milk, fish, cereals); rising prices and tariffs on the main components of the cost of production of food

industry (gas, energy); lack of state programs to support the development of food industry and state financial support, etc.

One of the main areas of crisis, stabilization and accelerated development of the food industry is such a feature as attracting direct investment. In recent years, their volume has increased slightly, reaching 2,049.54 million € in 2016 (in 2012 - 1,858.95 million €) [7].

In the structure of direct foreign investments in Ukraine, the investments of companies registered in the Netherlands predominate. At the beginning of 2016, their share was 25.6% of the total amount of foreign direct investment in the food industry.

It should be noted that in 2015 Ukraine exported 12.7% less food products than in 2014, which is directly related to the country's military-political and economic crisis. In 2016, the situation improved somewhat. The value of exports increased 4.9% compared to the previous year, reaching 12,872.61 million €. Deliveries to EU countries decreased by 30%. This is due to the fact that the majority of domestic production does not meet the requirements imposed by the European community on production technologies and product quality. At the same time, the prospects of increasing exports to the PRC, Egypt and other countries in Asia and Africa are opening. Some domestic companies have such positive experience. These are the enterprises in: tobacco, brewing, oil and fat, confectionery industries, and production of soft drinks. Their high competitive positions are ensured by the use of modern types of equipment, the development of innovative technologies, the introduction of modern methods of organization, production management, as well as the availability of effective development strategies based on the formation of integrated structures.

On the basis of the analysis of innovative activity of food industry enterprises, it should be noted that the main problems characteristic of all branches of food and processing industry are: lack of agricultural raw materials with certain qualitative characteristics for industrial processing; moral and physical deterioration of technological equipment, lack of production facilities; low level of competitiveness of food producers in the domestic and foreign food markets; undeveloped infrastructure for storage, transportation and logistics of the movement of food products; and export problems.

The main measures to stimulate the further development of the industry should include: expansion of competitive branches of the food industry producing finished products; creating a favorable investment climate for attracting Chinese and domestic investments; formation of joint Ukrainian-Chinese economic institutes that stimulate entrepreneurial and investment activity; creation of an efficient system of production waste disposal; providing the Ukrainian-Chinese

middle and lower level personnel training system capable of managing modern technological processes; introduction of innovative technologies in the processing industry, solving the problem of their staffing; expanding exports to the Chinese food market, thereby creating the necessary conditions for domestic economic growth; and ensuring intensive technical modernization of production facilities on the basis of resource-saving environmentally safe technologies. This accumulated potential of technology and investment will determine the sustainability of the food industry's sustainable development trends, with its reliance on the innovative vector of development as a major driver of economic growth.

3.2 The specificity of the development of special forms of organization of innovation in the food industry

Activation of innovation activity in Ukraine and the PRC is possible through the creation and development of organizational forms of innovation activity. The most common of these are special economic zones, clusters, industrial parks, technoparks and science parks and more. There are 5 Special Economic Zones in China, located in the cities of: Shenzhen, Zhuhai, Shantou, Xiamen, and Hainan. According to the existing regime in their territories, the administrations of the zones (governing committees) enjoy the rights of provincial governments in regulating economic development and developing a regulatory framework. In particular, they are independent in borrowing money in the world and domestic credit markets, as well as placing bonds abroad within the limits provided by the central government. They are responsible for their obligations at their own expense. The limit on foreign investment is set at 42,486,750.00 €. The foreign resident's investment must be at least 25% of the authorized capital of the enterprise being created.

As for enterprises resident in special economic zones, a preferential tax rate applies, five-year "tax holidays" are granted with full or partial tax exemption (the first two years - no tax, the next three years - 50% of rate). By 2008, the preferential income tax rate was 15% (for other Chinese companies outside the preferential zone, the rate was 33% at that time).

As of January 1, 2008, a document of the State Council of the People's Republic of China "on the transitional policy of granting the benefits for the income tax of enterprises" for enterprises-residents of special economic zones established a five-year transition period for new tax rates. Thus, in 2008 they made up 18%, in 2009 - 20%, in 2010 - 22%, in 2011 - 24%, and since 2012 - 25%. This applies to residents who were registered before March 15, 2007. Prior to that, they enjoyed a 15% preferential tax rate. As for residents who were registered after that

period, a single income tax rate of 25% was introduced for all Chinese enterprises. For residents who have previously benefited from a 24% income tax rebate (residents of border areas, open coastal cities), the rate has been increased to 25% since 2008.

Residents of special economic zones working in the processing, repair, and foreign trade sectors are subject to a 17% value-added tax rate throughout the PRC. However, value added tax and customs duties are not levied on imports of production equipment and materials imported by a foreign resident at the expense of their share in the enterprise.

Excise tax, personal income tax and other types of taxes existing in the PRC are paid at the same rates as in the rest of the country by special economic zones. According to the decision of local administrations, export-oriented or high-tech enterprises may be granted non-tax benefits (reduced rate or full exemption from payments for land, water, electricity, gas, Internet, rent of premises, etc.).

The maximum lease terms for land for residents of special economic zones are for: housing construction - 70 years; industrial use, construction of science, health, education, culture, sports facilities - 50 years; for trade, tourism, entertainment - 40 years; for comprehensive use - 50 years. The lease is granted after the market value of the land has been paid, no land lease tax is levied. After the lease expires, the contract may be renewed on an annual basis for an additional charge.

Residents of special economic zones have the right to buy real estate for ownership. Real estate tax is paid at the rate of 1.2% of its value, at lease - 12% of the rental value.

In the sale of products on the Chinese market, residents of special economic zones, including foreign-owned enterprises, may act independently or through intermediary state-owned companies. When setting prices for their products, residents of special economic zones are obliged to take into account the recommendations of local agencies that control prices. Product prices should match those of other Chinese companies.

In modern conditions of development of the state economic policy of the PRC on an innovative basis its functioning is a function of clusters. A national cluster development program is being implemented, which identifies two areas of state support: initiating cluster creation at the expense of a country-wide project; support for existing clusters and bottom-up initiatives. A cluster strategy is developed and implemented (priorities are defined in the organization and development of clusters) and a cluster program (activities, deadlines, responsible executors, etc.) are defined. The cluster strategy is part of the national innovation strategy of the country where the importance of government is reduced to the

fixing of general economic rules, and the implementation of specific cluster initiatives belongs to the regional administration and municipalities.

Cluster policy in the PRC is formed by the municipal government and is coordinated by the central board of special areas for the development of high-tech industries. The central government selects firms that are granted with benefits (information sector and biotechnology). Much attention is paid to developing its own innovations and improving the technological level of products in order to reduce the gap between the competitiveness of the Chinese economy and developed countries, which has created a network of universities' technology licensing offices in the country's government. This situation contributes to the intensification of cooperation between business and academic and university science, promotes the commercialization of the results of research work, increasing competition.

In contrast to the People's Republic of China, drafts of normative-legal acts have been developed to form the basis of state policy in the sphere of clustering of the Ukrainian economy, including:

- Project "Concepts of cluster creation in Ukraine" (2008), which outlines the prospects of implementing a cluster approach in the economy, outlines the benefits of cluster production organization for the domestic economy, defines the conceptual principles for cluster development.

- Draft "Concepts of the national target program for the development of industry of Ukraine to 2017" (2008), the implementation of which provided for the introduction of a model of cluster organization of industry.

- Project "National strategy for formation and development of cross-border clusters" (2009), whose main purpose is to solve problems related to asymmetry of development of Ukrainian regions, outflow of labor, intellectual and other resources from the border regions of the country, as well as the backwardness of Ukraine from other European countries in terms of quality of life, level of investment attractiveness, competitiveness, and development of innovative environment. Overcoming these shortcomings is envisaged by the introduction of cross-border cooperation in the field of creation and development of cross-border clusters.

Therefore, the functioning of clusters occurs through interaction between state authorities and local self-government, business, science, education. There are variety of forms and methods for ensuring the development of clusters that differ in national features, and the concept of a cluster approach. The use of the cluster approach can be considered as a natural stage of development of the country's economy. Clusters stimulate the development of small and medium-sized businesses. Within the framework of existing legisla-

tion, certain tools are used to support the creation and development of clusters operating in the PRC: the creation of clusters is with the consent of the municipal authority and is agreed by the central board of special areas for the development of high-tech industries; the central government selects firms that are granted benefits (information sector and biotechnology). Much attention is given to developing their own innovations and increasing the technological level of products in order to reduce the gap between the competitiveness of the Chinese economy and the developed countries, thereby establishing a network of universities' technology licensing offices in the country's government. This situation contributes to the intensification of cooperation between business and academic and university science, promotes the commercialization of the results of research work, increasing competition.

Another component of cluster policy is the cooperation between the Chamber of commerce and clusters. According to the experience of the PRC, Chamber of commerce and industry (CCI) are active partners that are part of the cluster or contribute to creating a favorable environment for it. Forms of cooperation may be as follows:

- CCI is a member of its own structures, take part in the activities of the cluster, and provides part of the services to enterprises.
- CCI temporarily caters to the enterprises belonging to the cluster in different spheres (intellectual resources of the enterprise, innovative support, internationalization of enterprises, etc.).
- CCI engages its members in the cluster and explains the procedure for creating and operating the cluster.

Based on the analysis, we can draw the following conclusions: implementation of the cluster policy is based on the organization of interaction between public authorities and local self-government, business, science, education; there are a variety of forms and methods for providing cluster policy that are national in nature, the concept of a cluster approach; the use of the cluster approach can be considered as a natural stage of development of the country's economy; cluster policies, programs and projects in each country are individual in the clustering process; clusters stimulate the development of small and medium-sized businesses; within the existing legislation it is necessary to build relationships in the format of the triple helix: science - executive power - business.

Industrial parks are another effective way of enhancing the activity of industrial enterprises with 54 units in the PRC. In China, industrial parks are called industrial zones. They account for about 10% of gross domestic product, accumulate 30% of foreign direct investment, and generate 37% of the country's commodity exports.

They employ about 4 million people. The most famous in China and promising are industrial parks as [8 - 11]:

- The Chinese industrial park in Hangzhou (established in 1993) covers an area of 5 000 hectares. There are 180 companies operating in the Industrial Park ("IBM", "LG", "Pepsi", "Merck Sharp & Dohme", "Panasonic", etc.). It is dedicated to development of such economic activities as electronics, food production, mechanical engineering, and biomedicine.

- China Industrial Park "Lianyungang Xinpu" (Jiangsu Province), with the area of which is 4,800 hectares. The industrial park is specialized in: textile production, aircraft construction, shipbuilding, trade, marketing, research and development. Investment attraction is 4 billion yuan.

- China-Belarus industrial "Great Stone", with a total area of 112.5 km². The project is being developed in the framework of inter-state Chinese-Belarusian cooperation. Any company, regardless of the country of origin, can serve as a resident of an industrial park. A favorable investment climate has been created for the residents of the industrial park, guaranteed both by national law and by special international agreements and obligations. In particular, these are preferences such as the 10 + 10 preferential taxation (exemption from all corporate taxes for 10 years from the moment of registration as a resident of the park and reduction of the current tax rates by 50% in the next 10 years of activity in the park); free customs regime, which gives the right without payment of customs payments for import of goods; for employees of industrial park enterprises a fixed rate of individual income tax is set - 9%; permission to use foreign currency, securities and payment documents in foreign currency when making payments between residents of the industrial park and residents of the Republic of Belarus on currency transactions aimed at the design and construction of park facilities, etc. [12, 13].

- China-Singapore Industrial Park "Suzhou - Singapore", covering an area of 260 km². There are 330 companies operating in the industrial park. The number of employees is almost 35 thousand. The peculiarity of the industrial park is that it is a joint venture between the PRC and Singapore (52% of the shares are owned by a consortium of Chinese companies, 28% by a Singapore consortium, 10% by "The Hong Kong and China Gas Co., Ltd.", 5% - "Singapore CPG Corporation Pte., Ltd.", 5% - "Suzhou New District High-tech Industrial Stock Co., Ltd.").

The main types of state support for the development of industrial parks include: co-financing of investment projects (the investor represents the project of construction of the enterprise in the territory of the industrial park; the state partially commits to financing, including the provision of tax benefits, direct transfer, granting preferential lending and more); indirect re-

duction of investor costs, except for the maintenance of an industrial park (the state provides training, accommodation of highly qualified specialists, security of industrial facilities, partial social insurance); simplification of permitting and licensing procedures; granting tax and customs preferences.

Of particular importance with regard to the creation and development of industrial parks is the issue of the application of tax investment incentives, including preferential rates on income tax; exemption from import duties on equipment and equipment imported by participants of the industrial park; exemption from real estate tax; exemption from the land tax; exemption from land lease tax; exemption from environmental taxes and the like.

Unlike the People's Republic of China, in 2014, the Register of industrial parks (by Ministry of Economic Development, Trade and Agriculture of Ukraine) was established. According to the Ministry of economic development, trade and agriculture of Ukraine, 43 units were registered [14].

The largest among the existing industrial parks of Ukraine can be named Municipal Enterprise "Industrial park - Rogan" and Industrial park "Svema". At the same time, it should be noted that among the parks designed in Ukraine, most have local character, and their specialization is limited to 3 - 4 types of economic activity, one of which is directly related to a large enterprise in the region, whose activity is not effective today. Several industrial parks, such as "Svema", "Slavuta", "Cheksil", are characterized by multidisciplinary specialization and are of great importance not only for the development of the economy of the region, but also for the development of individual industries as a whole.

Prominent among the registered industrial parks in Ukraine is the Industrial Park "Industrial Forpost" (Dnipro), the arrangement of which is done at the expense of local and state budgets (10% of the planned amount of investments). However, it should be noted that this industrial park is an exception to the general trend of development of such forms in Ukraine.

The participants of the industrial park will be exempted from the payment of the land tax and the value added tax. The creation of such conditions will facilitate the placement on the territory of an industrial park of the production of electric machines (production of drones, robotics and other products of mechanical engineering for tracking of means of land transport, agroindustrial complex), electrical equipment, equipment (production of long-life rechargeable batteries), innovative production of metallurgical industry, production of the metallurgical industry, mineral products and computer services. It is also planned to create a business incubator in the "Industrial Forpost" industrial park and to open an exhibition center.

Initiators estimate the creation of the Industrial park "Industrial Forpost" to raise more than 125,367,625.00 € investment. This will contribute to the creation of around 2,500 jobs during the years 2020 - 2024.

Analyzing the peculiarities of the activity of industrial parks in the PRC and in Ukraine, we can conclude that [13; 15 - 17]:

- Objectives of their creation in different countries are determined by the priority of the tasks facing a particular country/region.

- Following approaches should be taken into account when creating an industrial park: "From the site" (there is a land plot on the territory of which industrial production is required); "From task" (site for specialized production and industrial park is selected).

- Characteristic features of IP formation and development are: location near the settlement, availability of large logistic centers, development of a unified concept of complex development, provision of modern communication services.

- Depending on the type of services provided to the residents of the park, the following types of industrial parks are distinguished: "Greenfield Park", "Brownfield Park", "Complex Park", "Eco-Industrial Park".

- Industrial park has clear sectoral priorities related to the historical development of the region and is oriented towards its investment attractiveness.

- Initiators of the creation of industrial parks are: state economic development bodies, management companies, owners of industrial real estate and industrial land, universities.

- Schemes for the creation of an industrial park are in operation: the purchase from an existing enterprise of land and buildings, leasing them to the same or a new enterprise in cash or after reconstruction, development and expansion of the territory for new users; purchase of land and construction of a facility for a specific enterprise under the guarantee of long-term lease, in particular "construction under obligation"; designing and constructing an industrial park, finding tenants or buyers for prepared sites and buildings.

- In most industrial parks there is a separate own professionally managed management company that deals with the search and attraction of investors.

- Functioning of Asian and American models of state support for the creation and development of industrial parks.

- It is necessary to distinguish models of management of industrial parks: they operate with the support of the development of the management company (providing the enterprises with territory for the location of production, development of infrastructure and other services); develop without a management company (enterprises that have located production in the industrial park pro-

vide the necessary services or involve other companies); one of the operating enterprises in the territory of the industrial park performs the functions of a management company. Of interest is the three-tier model of management of China-Belarus Industrial Park "Great Stone": an intergovernmental coordination council, the main function is to set strategic goals and coordinate support for the work of the park, addressing issues that require the participation of governments of the two parties; industrial park administration, function - prompt and high-quality comprehensive investor services (obtaining the necessary permits, approvals and other state services) on a "one-stop-shop" principle; an industrial park development company whose function is to build infrastructure and other facilities for business development, investor search.

- Status of an industrial park may be granted to a specific territory under the following conditions: the land is owned or leased by a management company that develops a plan for the development of the respective territory; engineering infrastructure is present, and the management company assists residents in the process of connection to communications, provides protection of the territory, fire safety, etc.; the management company assists the residents in setting up their own businesses, with some authority over the location of the facilities within the industrial park, acting as an intermediary between the investor and the regional administration; management company provides investors with business services (secretarial, courier, logistics, accounting, personnel search, etc.).

- Types of state support for the development of industrial parks: co-financing of investment projects (the investor represents the project of construction of the enterprise in the territory of the industrial park; the state partially commits to financing, including the provision of tax benefits, direct transfer, provision of preferential lending, etc.); indirect reduction of investor costs, except for the maintenance of an industrial park (the state provides training, accommodation of highly qualified specialists, security of industrial facilities, partial social insurance); simplification of permitting and licensing procedures; granting tax and customs preferences.

- Issue of the application of tax investment incentives, in particular preferential rates on income tax, becomes of particular importance for the creation and development of industrial parks; exemption from import duties on equipment and equipment imported by participants of the industrial park; exemption from real estate tax; exemption from the land tax; exemption from land lease tax; exemption from environmental taxes and the like.

Despite the common and distinct features of the establishment, operation of industrial parks, their numbers in the PRC and in Ukraine is constantly increasing. This is due to factors such as:

- Industrial parks contribute to increasing the investment attractiveness of domestic and foreign investors, in particular in the production of high-tech products.

- Development of industrial parks allows to concentrate industrial production on limited areas outside large cities.

- Industrial parks provide an increase in local budget revenues, primarily through the creation of additional jobs and an increase in the average wage.

- Support in carrying out modernization and restructuring of enterprises of all types of economic activity in order to increase their profitability and competitiveness.

- Creating conditions for improving the welfare and purchasing power of the region's population.

- State has a legitimate opportunity to "subsidize" investment activity, reducing the real costs of business, etc.

There are 16 techno parks in Ukraine. Among them the greatest activity is shown "Paton Electric Welding Institute", "Single Crystalline Institute", "Semiconductor Technologies and Materials, Optoelectronics and Sensor Technology". The peculiarity of the creation and functioning of national techno parks is that due to the lack of proper funding, they do not operate according to the traditional model (all participants are concentrated in a single house or common area), but according to the "techno park without walls" model (no significant primary ones are required investment).

The functioning of techno parks in Ukraine is characterized by problems. Among them, the most important are: the imperfection of contractual and legal relations in the regulation of the issues of land use of state and communal property; lack of a clearly defined list of activities that should be implemented within the techno park; imperfection of the norms of the current legislation, in terms of determining the optimum forms of stimulating the attraction of investments necessary for the arrangement of techno parks by exemption from payment of import duties on equipment, equipment and components thereto, etc.

The situation in the techno parks of Ukraine is extremely complicated. Therefore, in our opinion, it is necessary to take into account the experience of the PRC on the creation of similar structures. To do this, it is necessary to: improve the Law of Ukraine "on the special regime of innovative activity of techno parks" and introduce measures of state support for the development of techno parks (exemption from income taxes and value added from the sale of goods; exemption from payment of import duty; exemption from payment of tax on addition when importing goods, etc.); to promote the growth of human resources, especially to create the conditions for improving the skills of those engaged in the production of high-tech products and high technologies, etc.; apply the mechanism of state

financial support for the development of techno parks and updating of the material and technical base, etc.

Promising forms of scientific and technical cooperation are being implemented between Ukraine and the PRC as Ukrainian-Chinese centers and techno parks in Jinan (Shandong Province), Harbin (Heilongjiang) and Shanghai. Thus, the first Ukrainian-Chinese park of high-tech cooperation was opened in Jinan in November 2002. The main purpose of this structure is to create an effective mechanism for establishing mutually beneficial transfer of high technologies, joint development of scientific and technical projects and their introduction into production; creation of joint ventures for the sale of high-tech and high-tech products.

In January 2003, a Ukrainian-Chinese Center for Welding and Related Technologies was opened in Harbin (Heilongjiang Province) and an agreement was signed between the "Yevgen Paton Electric Welding Institute of the NAS of Ukraine" and "Harbin Institute of Welding".

Subsequently, in February 2011, a new Ukrainian-Chinese techno park was opened in Shanghai to cooperate in marine science and technology, biomedicine, new materials, aerospace, new energy sources and more.

In June 2011, a Memorandum of Cooperation was signed between the State agency for science, innovation and informatization of Ukraine, Ministry of science and technology of the People's Republic of China. According to the Memorandum, the parties should develop the "Yevgen Paton Electric Welding Institute of the NAS of Ukraine" and the "Guangdong industrial research institute" in the development of advanced welding technologies in medicine.

In November 2012, a Ukrainian-Chinese Center for the transfer of shipbuilding and ocean engineering, established at the University of science and technology (Jiangsu), jointly with Admiral Makarov national university of shipbuilding (Makarov) opened in Zhejiang (Jiangsu Province).

In June 2016, the Chinese-Ukrainian Center for scientific and technical cooperation was set up in Harbin, which is a platform for scientific cooperation in specific areas, in particular in the field of welding.

Strengthening Ukrainian-Chinese cooperation in the direction of organizing joint forms of innovative activity will not only preserve them in Ukraine, but will also promote their growth. They can act as a form of decentralization of industrial policy decision-making on an innovative basis; intensify bottom-up risky activity by supporting the development of small, knowledge-based firms and venture capital; to promote the qualification of specialists in the production of high-tech products and high technologies.

The development of the strategic partnership between Ukraine and the PRC is in line with the long-

term interests of the two countries and is aimed at strengthening their international positions, promoting sustainable development and increasing the competitiveness of national economies through deepening mutually beneficial cooperation in various fields of activity. From the standpoint of common interests, the main areas of bilateral cooperation are [18]:

- Strengthening of mutual business cooperation in the creation of transnational clusters in the transport, logistics and production spheres.
- Promoting the creation of high-tech industries, including networks of transnational industrial parks and clusters.
- Deepening and mutual integration of Ukrainian and Chinese producers through industrial cooperation, implementation of investment projects in the direction of joint ventures, in particular transnational industrial parks and clusters.
- Stimulating the attraction of Chinese direct investment into the Ukrainian economy, expanding other forms of financial cooperation, including credit instruments and providing technical assistance.
- Ensuring improved access conditions and expansion of mutual supply of goods and services, joint development of new niches in third-country markets.
- Formation of joint research and scientific-practical centers, joint development of branch science.
- Further deepening of direct Sino-Ukrainian inter-regional cooperation in the direction of creation and development of transnational industrial clusters and industrial parks, etc.

3.3 Chinese experience in reforming enterprise innovation

Researching the experience of modern socio-economic development of the PRC, one cannot neglect to leave the history of its development, the main directions of which are the scientific, technical and innovative development of the food industry. At the heart of this development is Den Xiaoping's theory of technological progress, which outlines several theses: science and technology are an important productive force; workers of intellectual labor, including workers of scientific and technological specialties belong to the working class, and their abilities should be remunerated, as well as the reform of management of science, technology aimed at liberalization of productive forces [18 - 23].

Starting from 1975-1978, the "incubation" stage began in the PRC, which is related to the implementation of the state innovation policy, the essence of which was the introduction of direct government orders for research, the purchase of foreign technologies (equipment sets for industrial enterprises).

A feature of the “experimental” stage (1979 - 1985) is the organization of contractual cooperation between government agencies, major institutional sectors not only within institutional sectors, but also between institutional sectors. The development of technological dualism, as well as the formation of a multilevel technological system, which retained the features of a combination of traditional and high technology, led to the liberalization of sources of funding for research and development. The partial removal of state control in the sphere of foreign economic activity allowed the industrial enterprises of the country to independently purchase foreign equipment and technologies. Special economic zones are being opened for the purpose of attracting foreign capital.

Carrying out structural reforms in the period from 1986 - 1995 contributed to the introduction of a project system for supporting the development of science, selection of research institutions.

At the stage, which lasted from 1996 - 2005, there is an increase in the scientific intensity of gross domestic product due to the active investment of the business sector. Privatization of industrial enterprises and scientific institutions was carried out. The issue of commercialization of newly created technologies for state educational institutions has been legislated. New forms of direct state financing of innovations are being developed by providing tax breaks for high-tech industrial industries and the like.

From 2006 to the present, the main goal of the country's economic development is to enhance the innovative perception of the use of science and technology, including in the food industry. Therefore, in the context of globalization, a key factor in China's economic development is the state regulation of innovation. It is related to the implementation of multi-level government, which consists of such development institutions as [24]:

- Central Committee of the communist party of the People's Republic of China which develops strategic directions for the development of science and technology, personnel policy).
- State Council of the People's Republic of China, represented by the State commission for science, technology and the Ministry of science and technology, which are directly involved in the development of innovation policy and implement it.
- Ministry of science and technology, which is today the main state institute that manages innovation activity in the PRC, implements state programs of innovative development in the field of basic and applied research.
- Chinese Academy of sciences and the Chinese Academy of social sciences which carry out the practical management of fundamental research.
- Academy of engineering sciences of the PRC which carries out scientific and technical expertise.

- Scientific and technical society of the PRC, which is uniting over 160 scientific and technical organizations, and promotes scientific knowledge.

At the corporate level, in the process of functioning of innovative activity take an active part [24]:

- Large state-owned enterprises operating at the level of a joint-stock company and having their own research centers.
- Large Chinese and foreign companies of private ownership, which include centers of scientific and research work.
- Innovative small and medium-sized enterprises that are concentrated in the free trade area.
- Academic and university science.

Analyzing the management of innovation activity in the PRC, it should be noted that unlike other countries in the world, the main task is to isolate tasks and solve development problems. Therefore, according to Kovalev M. and Van Sina, [24], have established their own NIS within the country, the main purpose of which is to use the appropriate instruments of scientific and technical policy at several levels. This applies in particular to innovative scientific research; development and expansion of high technology applications; and basic research.

The main acts governing the development of innovation activities are the laws of China “on the implementation of scientific and technological achievements”, “on the promotion of science and technology”, and “on the promotion of medium and small enterprises”. In addition, in the field of innovation development in selected sectors of the Chinese economy, the following is approved:

- Order of the Office of the State Council of the People's Republic of China “on innovative management, improvement of service, formation of new powerful drivers of economic development, accelerated changes of new and old drivers of growth” (2017). Measures to shift the economy to new components of growth are envisaged (improvement of the quality of public service delivery, development of mechanisms of control loyal to innovative activity, stimulation of mobility of new production factors; development of mechanisms of support and application of a system of guarantees).
- Instruction of the Office of the State Council of the People's Republic of China “on institutional mechanisms for investing in innovative rural infrastructure” (2017). It is envisaged to create by 2020 a multi-subject financial investment mechanism and an efficient market order for the organization of construction, to unify the system of management of construction of rural infrastructure, to significantly improve its quality.
- Order of the Office of the State Council of the People's Republic of China “on the development of innovative

drivers of growth at the county level" (2017), the implementation of which will accelerate the transformation and modernization of production, the creation of powerful innovative enterprises, the concentration of innovative and entrepreneurial personnel, the creation of specialized sites, industrial sites, industrial techno parks, etc.), promoting the improvement of the situation in the social sphere at the county level, targeted support and overcoming poverty through innovative development, increasing popularity and the implementation of on-site programs of technological innovation.

- Order of the Office of the State Council of the People's Republic of China "on the organization of construction of the second stage of exemplary support centers for entrepreneurship and innovation" (2017) provides for the formation of the second stage of 92 such centers, including 45 territorial (in areas and zones of development of some cities), 26 - in higher education institutions and research organizations, as well as 21 in state-owned enterprises.

- Order of the Office of the CPC Central Committee and the Office of the State Council of the People's Republic of China "on the development of ecological agriculture based on innovative institutional mechanisms" (2017) provides for improvement of functional specialization and spatial placement of agricultural objects, strengthening of protection of resources and their economical use, strengthening of protection regulation of the environment in agricultural production sites, protection and restoration of the ecosystem in agriculture, formation of incentive mechanisms and removing restrictions on innovative development.

- The message of the Office of the State Council of the People's Republic of China "on expanding measures to support innovation" (2017) consists in implementing the initiative to create pilot zones for the comprehensive promotion of innovation reforms in such regions as: Beijing-Tianjin-Hebei, Shanghai, Guangdong Province (Pearl River Delta), Anhui (Hefei-Yushku-Bengbu), Sichuan (Chengdu-Deyan-Mianyang), Hubei (Wuhan), Shaanxi (Xi'an), and Liaoning (Shenyang). These are areas of financial and technological innovation, the formation of an innovative business environment, the involvement of foreign specialists, the coordinated development of the military and civilian industries.

- Instruction of the Office of the State Council of the People's Republic of China "on active promotion of innovative development and application of supply chains" (2017), which is expected to form by 2010 a set of new technologies and models of supply chain development, as well as to create about 100 enterprises-leaders in the global chain of networks supplies.

In addition to the existing legislative framework on the territory of the PRC in the field of innovation activity of industrial enterprises, the main priorities for the de-

velopment of this sector are defined in state programs, and the main aspects of which are listed in Table 1.

Having analyzed the peculiarities of implementation of regulatory support for innovative development of industrial enterprises of the PRC, which are capable of producing competitive products as a priority for the long term, we should consider [9, 12, 15, 18, 34 - 36]:

- Assistance to the state in the formation of high-tech industries, including in the direction of creating an effective system of technology transfer.

- Providing state support in the creation and development of modern forms of innovative infrastructure (clusters, industrial parks, special economic zones, techno parks, etc.) in the provinces of the country, which has a network of scientific and technological and industrial enterprises with high scientific and technological potential.

- Utilization of existing scientific and technical potential for development of priority economic activities (agricultural technologies, biotechnologies, nuclear and space technologies, etc.).

- Creation of favorable conditions for research in the field of scientific and technological development (chemical technologies and new materials, information technologies, etc.).

- Improving the regulatory framework in the field of development of scientific and innovative activity in the PRC;

- Integration into the global innovation sphere.

In contrast to the PRC in Ukraine, institutional support for the innovation activity of enterprises and organizational forms of innovation activity needs to be refined. Consider some points in more detail. Thus, in accordance with the Concept of industrial parks establishment (Decree of the Cabinet of Ministers of Ukraine № 447 of August 1, 2006), the mechanism and sequence of actions for the implementation of state policy in the field of creation and development of industrial parks are defined. Subsequently, the Law of Ukraine "on industrial parks" (2012) not only provided an explanation of what constitutes an industrial park, but also defined the mechanism of its activity, registration, etc. In order to further develop industrial parks in Ukraine, a legislative package (№ 2554 a-d and 2555 a-d), which introduces tax and customs investment incentives for new domestic industrial enterprises, was adopted as a first reading. But it still remains unacceptable to amend the bill. In order to facilitate the establishment and development of a network of industrial parks in Ukraine, we have proposed amendments to the legislative package, in particular:

- Implementation of large-scale infrastructure projects in Ukraine.

Table 1. State Innovation Policy Implementation Programs in China

| The name of the program for the implementation of state innovation policy | Basic aspects of the program |
|---|---|
| "Key Technologies" program | The program (1982) identified the priorities of China's innovative development, in particular in the field of knowledge, catching up with the policy of technological backlog in the field of industrial development. |
| Program for support of key directions for the development of fundamental science "Program 973". | Implementation of the program is managed and funded by the Ministry of science and technology of the PRC. The purpose of the program is to finance, support research, which are of major importance for the socio-economic development of the country. Support for basic research in the fields of energy development, new materials, agriculture, population and health is identified as priority areas. |
| "Torch" program | <p>The purpose of the program (1988) is to provide financial support to high-tech industries and commercialize technological innovations. The main priority types of economic activity are new materials, bioengineering, informatics, non-traditional energy, mechanical engineering and electronics.</p> <p>Due to the implementation of the program, industrial parks, business incubators and business development centers at higher educational establishments are created in the country.</p> <p>The program is financed through the business sector - over 72%, bank loans - 21%, government subsidies - 3%, as well as from other sources.</p> |
| "Spark" program | <p>The objective of the program (1986) is to support scientific and scientific-technical works in the field of agricultural development. Over 90,000 projects have been funded during the program, totaling more than 4,249,675,000.00 €.</p> <p>The "Spark" program solves the problem of poverty eradication in the PRC and provides food for residents of urban areas.</p> |
| "Made in China - 2025" program | <p>The purpose of the Program is to: create national manufacturing centers by type of research institutes and universities, modernize basic industries, introduce artificial intelligence into the industry, develop eco-friendly technologies, enhance the formation of Chinese brands and produce high value-added products.</p> <p>To implement the Program, a National investment fund for advanced manufacturing and a National integral fund have been established, to which 19,952,305,847.70 € have been invested.</p> <p>Priorities for financing are innovation-stimulating economic activities. The program assumes that government investment funds and development banks provide low-interest rate loans to companies in key sectors of the economy and provide research grants.</p> |

Legend: Compiled by the authors [25 - 38].

- Exemption from payment of land tax for industrial purposes under the terms of "released funds" for modernization and development of production.
- Free connection to the engineering networks for the residents of the industrial park at the expense of the investment component of the tariff.
- Providing affordable long-term loans to producers and entrepreneurs (setting up a Bank for reconstruction and development with the involvement of international financial institutions to provide cheap and long-term loans to industrial producers.
- Providing state financial support to the industries of high-tech production and non-raw materials export at the expense of 3% of industrial-raw material levy on export of raw industrial raw materials.
- Providing financial support for non-commodity exports (setting up an Export credit insurance agency, guaranteeing export contracts and partial compensation of interest on export credits of producers).
- Introduction of incentives for reinvestment in industry and science - 200% depreciation of non-current

assets of industrial and scientific purpose for the enterprises of industrial parks.

- Giving preference to domestic products in public procurement (implementation of the program of import substitution in the public sector in accordance with the draft Law of Ukraine "Buy Ukrainian, pay Ukrainians!", etc.).

Implementation of the specified directions that will help to create and develop a network of industrial parks in the territory of Ukraine will intensify investment activity, promote the increase of direct investments, stimulate the development of the real sector of the economy, facilitate the creation of new high-tech industries and jobs, and increase the volume of production and volume of production.

It should be noted that, unlike industrial parks in Ukraine, there is no institutional and legal support for their functioning, so the main tasks of cluster policy in Ukraine include:

- Creation and development of clusters (development of legal framework for the creation and operation of

clusters, in particular to define at the legislative level the concepts of "cluster", "cluster policy", "clustering"; creation and implementation of state programs to promote cluster development; and creation of the Register of clusters in Ukraine).

- Development of cluster links and network cooperation (attraction of domestic and foreign investments in cluster priority economic activities; formation and promotion of cluster initiatives; development of human capital; economic education of cluster subjects and specialists of educational institutions; financing of creation of joint scientific researches; information field for cluster entities; development of supplier development programs; placement of state order for products of cluster enterprises; control as specific products and services provided by cluster producers under a public procurement program; competitive environment development programs; creation of infrastructure support for cluster links; interaction of local authorities with cluster entities; technology transfer within the cluster; forming cooperation within the cluster and others).

- Increasing the influence and responsibility of local authorities in the context of decentralization for ensuring cluster development.

- Implementation of an effective cluster policy is possible in the context of a set of measures to significantly improve the investment climate.

- Development of models of use of the PPP mechanism in order to attract non-state investment resources for cluster development, first of all providing the territory with the necessary infrastructure.

- Legislative definition of the mechanism of creation of transnational clusters. In particular, concluding bilateral agreements on the creation of transnational clusters at the level of governments of countries, agreeing strategies and plans for the development of national parts of transnational clusters. The experience of the functioning of such structures testifies to their positive impact on the socio-economic development and international cooperation of the participating countries, the stimulation of business activity, the inflow of investments and the solution of employment problems.

In Ukraine there are separate legislative acts that define the legal, economic and organizational principles of functioning of technological parks. In particular, the Law of Ukraine "on the special regime of investment and innovation activity of technological parks" № 991-XI of July 16, 1999 defined the legal, economic bases for the functioning of technological parks due to the introduction in their territory of a special regime of innovative activity. In 2005, some of the most important articles in the laws governing techno parks were abolished. Subsequently, the partial restoration of the

system of preferences is observed in such items as: exemption from income tax; exemption from payment of import duty; funds received in foreign currency from the sale of products are not subject to mandatory sale; payments for export-import transactions are made within 150 calendar days.

In our opinion, in order to develop technological parks in Ukraine, it is necessary to take immediate measures such as:

- Improvement of the current Law of Ukraine "on the special regime of innovative activity of techno parks" and introduction of such measures of state support for the development of techno parks, such as: exemption from income taxes and value added from the circulation of goods; exemption from payment of import duty; exemption from value added tax on the import of goods; funds received in foreign currency from the sale of products will not be subject to mandatory sale; payments for export-import operations, including materials (up to 180 calendar days), new equipment, equipment and components (720 calendar days); accelerated depreciation of fixed assets; financial support: full or partial (up to 50.0%) interest-free lending; full or partial compensation of interest.

- Enhancement of personnel potential (increase of the number of trained technological managers, preparation of custom-made techno parks for highly specialized specialists, improvement of skills of employees in the production of high-tech products and high technologies, etc.) creation and development of techno parks.

- Providing state financial support for the development of techno parks and updating of the material and technical base.

- Developing an effective mechanism for interaction between science and business power, including through e-government and creating an online service.

- Internationalization of domestic techno parks and their inclusion in global innovation networks by attracting foreign direct investment, technology transfer and development of cooperation with foreign techno parks.

- Conducting research on the prospects for the development of techno parks, developing programs and systems for evaluating the results of their operation, and so on.

Implementation of the proposed measures will not only save the techno parks in Ukraine, but will also increase their numbers. They can: serve as a tool for decentralizing decision-making in the field of scientific and technical policy, and intensify risk activity from the bottom by supporting the development of small, knowledge-intensive firms and venture capital; pro-

mote training of specialists in the field of production of high-tech products and high technologies; and assess the level of production in the breakthrough areas by the level of skills employed in the economy of any region of the country.

4. Conclusions

- Based on the analysis of the development of innovative activities of the PRC, it should be noted that in recent years, the country, unlike Ukraine, has been able to create a unique innovation system. It focuses on stimulating innovation through the active use of cluster policy; the state invests heavily in the development of human capital and scientific, scientific and technological development.

- The state has reoriented efforts towards the development of an innovative initiative, stimulating small, medium, and venture entrepreneurship. Experience for Ukraine means that the ability to absorb new knowledge and technology depends on the level and quality of education. The creation of a highly qualified link in the field of education and in the scientific and technical sector is a priority for the formation of a highly developed country.

- Chinese experience also shows that it is necessary to focus on the development of small and medium-sized businesses, venture capital businesses, as well as provide government support for their functioning. Thus, cooperation between Ukraine and China may become a promising direction in creating joint forms of organization of innovative activity.

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