

Analysis of Experience and Modern Trends of State Support the Creation and Operation of Technology Park

მვრობული ინოვაცია და
სამართლებლო

ეკონომიკისა და ბიზნესის
აქტუალური პრობლემები
გლობალიზაციის
თანამედროვე პირობებში

საერთაშორისო სამეცნიერო-
პრაქტიკული კონფერენცია

თეორია, მეთოდოლოგია,
სისტემური პრობლემები

Marina Baranovskaya

PhD, Associate Professor, ONEU, Ukraine

Inna Ukhanova

PhD, ONEU, Ukraine

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Features of state support for the establishment and operation of technology parks in developed countries. If we consider the peculiarities of state support technoparks' structures in the United States, there is a practice of interaction between scientific and industrial areas on the basis of state orders and contracts to universities and companies that make up the parks, allocated significant amounts of funding. During its development, the US industrial parks are various kinds of government support, funding their activities at the expense of funds established universities and charitable organizations, local municipalities, federal agencies and ministries, industrial companies, as well as their own. Reconsideration of the role of public institutions in economic development contains two main elements:

- creation of basic preconditions of increasing business activity and efforts to improve the business climate. Tax reform has been done: a systematic reduction in of the tax burden, the new system of tax credits – investments in new businesses, purchase and leasing of equipment allowed to claim the tax credit. In the 80-ies. In the United States introduced a

special tax break, stimulating initiatives and increasing efforts in R & D companies, called «tax credit for R & D growth.» This discount (20%) is a deduction from income tax of additional R & D expenditure compared with the corresponding average annual expenditure for the previous (baseline) period;

- organizational reform of state cooperation and economic sectors, the main purpose of which was the maximum orientation of the system of state institutions to the needs of industries and markets.

Present increasing role of the private sector in making decisions about investing through extensive use of private-public agency, which brings together private and public resources on parity basis, a significant number of activities which oversees the Department of Economic Development.

State support of technology parks in Western Europe. In Western Europe, the state supports technology parks in all phases of activities, including the use of centralized funding and tax incentives. For example, in the UK share of public spending on building construction, building and infrastructure development of science parks is

about 60% in Germany, France and the Netherlands – about 75%, and in Belgium – almost 100%. [Карцев 2002; Driving Regional Innovation and Growth Rthe: Prepared for Association of University Research Parks (AURP) by Battelle Technology Partnership Practice. Access mode].

In the UK, to support of technology parks has the following programs: the program guarantees for loans; a program of business expanding – tax incentives to investors as compensation for risk; promotion grants program for achieving small firms in Science and Technology; supporting the development of new products.

Almost all industrial parks established on the initiative of the German government land (Bavaria, Baden-Württemberg, Berlin etc.) and in most cases their financial participation, although some are funded by private capital (technology park in Stuttgart). The main goal of budget funding is to promote small and medium-sized businesses and create new jobs, especially in the priority areas of high technologies [Driving Regional Innovation and Growth Rthe: Prepared for Association of University Research Parks (AURP) by Battelle Technology Partnership Practice. Access mode].

France is trying to decentralize its financial system, provides assistance in the economic development of the regions. amortization policy, legislation provides a special procedure for accelerated amortization equipment used in technically advanced areas and equipment used by companies to research and development.

Japan has provided significant benefits for project participants to encourage the development of knowledge-based industries. Within five years of the adoption of the program in the fields of high technology the system of accelerated amortization, which allows companies to write off the first year to 30% of equipment and 15% of the houses and buildings. Typical sources of funding and techno parks in Japan the following: 30% – state funding, 30% – municipalities, 30% – companies and individuals, 10% – foreign investors [Мазур 2009].

China. Persevering intervention by national and local governments to create and increase the number are the hallmark of Chinese policy establishment and operation of parks. In China, the government carried out primarily by tax incentives, as newly created innovative firms are exempt from taxes for two years, firms that use of innovations in pay 15% of the actual

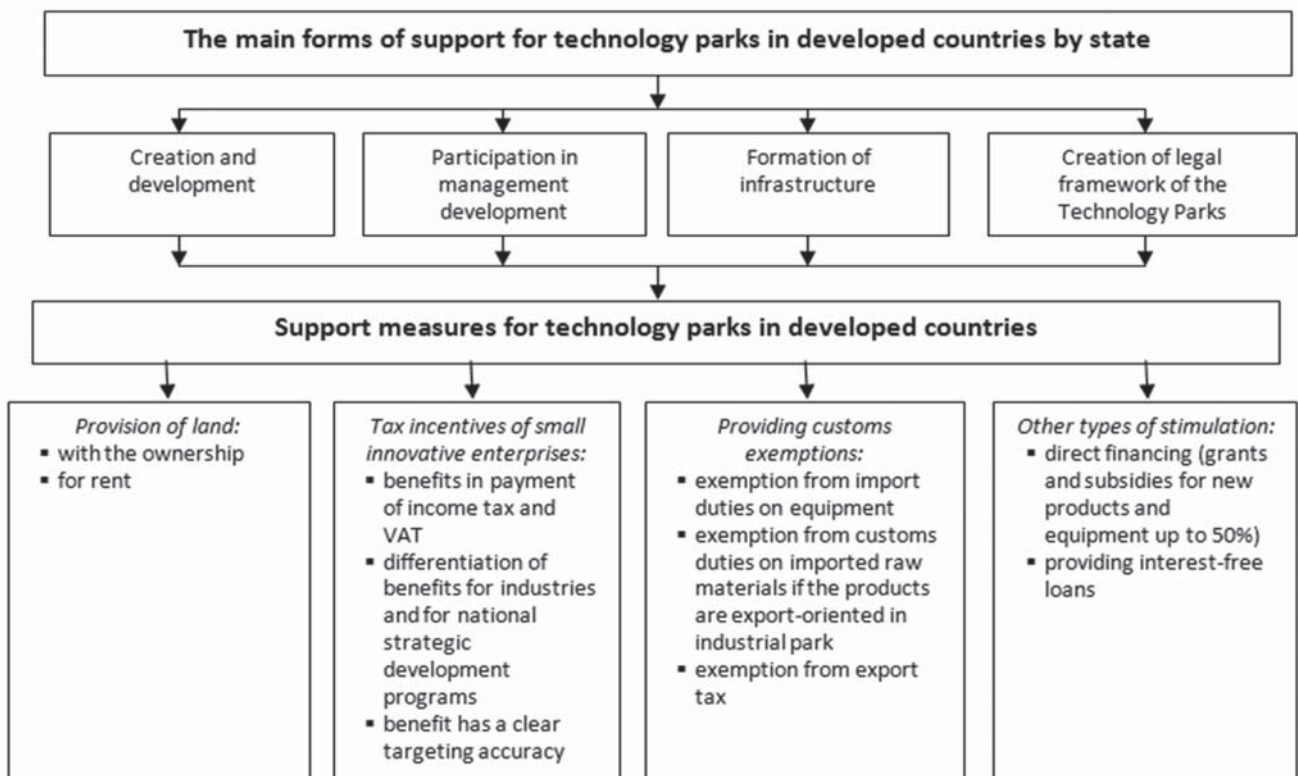


Figure 1. Forms and mechanisms of support technology parks in developed countries

Source: authors

Country	Financial support	State support of technology parks
USA	Prevailing private sector R & D funding in early state stimulation	<p>Creation and development of technology parks in the framework of the program of technical and economic development of the state. The transfer of administrative functions from the federal government to various authorities. Financing techno park local municipalities, federal agencies and ministries. Infrastructure software technology park territory with the support of federal and local budgets. The adoption of laws that stimulate the activity of technology parks, tax, depreciation policy of the state.</p> <p>R & D expenses directly deducted from taxable income or recorded as an asset and for at least 5 years should be amortized;</p> <p>«tax credit for R&D growth» (20%);</p> <p>tax credit for investments in R & D (10-15%);</p> <p>reduction of income tax;</p> <p>tax cuts on dividends (5,95%).</p> <p>The concentration of funds at the regional venture funds (the ratio of public and private capital 1: 3-1: 5).</p> <p>Incentive contracts and sub contracting, the formation of public contracts for R & D.</p> <p>Providing guarantees for loans.</p> <p>Creating private-public agencies on an equal footing.</p> <p>Training program for industry professionals.</p>
The countries of Western Europe	Create investments by central, regional and local government subsidies from central EU funds	<p>Main part of funding for technology parks receive from the state, the state's share in the UK - 62% of the construction costs and infrastructure in Germany - 78%, France - 74% in the Netherlands - 70%, in Poland - almost 100%. Amortization policy, legislation provides for a special procedure for accelerated depreciation of equipment used in technically advanced areas and equipment used by companies to conduct R & D (depreciation and equipment is more quickly and at higher rates).</p> <p>Tax incentives that encourage innovative initiatives in the field of R & D companies.</p> <p>The adoption of laws on innovation.</p> <p>Implementation of programs to encourage small and medium enterprises and the development of modern technology.</p>
Japan	Mainly public funding, relatively small role of venture capital.	<p>Creating technology parks - strategic target state, developing under the clear plans and programs, creating Science Tsukuba city, Techno polis program and research program "cores".</p> <p>State Funding main part of the cost of creating technology parks (60%).</p> <p>Tax benefits (reduced depreciation of buildings and equipment (15% and 30% of the cost for the first year), providing preferential tax land ownership).</p> <p>Bold grants and loans (by 7.8%) from the local budgets, the sale of land in the technology parks at discounted prices.</p> <p>Subsidies for its participants (of 1/3 of investments for R & D projects in collaboration with the Prefectural laboratories and small firms).</p>
China	State stimulation	<p>National Scientific and Industrial Program "Torch", focused on the commercialization and industrialization of high technologies. Most technology parks created as a structure of national importance.</p> <p>The state takes responsibility for the creation of a modern material base of R & D.</p> <p>Annual government loans and investments in infrastructure.</p> <p>Tax incentives (income tax of 15% to 10% of export-oriented firms, newly created innovative enterprises are exempt from taxes for 2 years, with construction due to internal capital investments are not taxed on the building, the company shall be exempt from export taxes on sales to foreign markets).</p>

Table 1. Features and directions of state support for technology parks in developed economies

Source: authors on the basis of [Капуев 2002]

value of the income tax, which led to the creation of around 2,500 innovative enterprises that developed and commercialized in the market around 4000 species of high-tech products.

For development of technology parks infrastructure government annually allocates loans and investments, the government aims are development of venture capital funds (including attracting foreign capital), providing access to scientific entrepreneurs to bank loans, these sources of funding should gradually replace budget.

The main forms of state support features and technology parks in developed countries given in the following diagram (Fig. 1).

Formation mechanism of state support technology parks, as the experience of developed countries associated with the implementation of the basic functions of government in terms of planning, as well as stimulating and monitoring innovation projects.

The main features of the development and direction of state support technology parks in developed countries can be summarized using Table 1.

Lets analyze the state support for technology parks in Ukraine. The first three industrial parks in Ukraine began to exist when the Parliament of Ukraine adopted the Law "On Special Investment and innovation of technology parks". It should distinguish stimulation of technological parks, which

Law of Ukraine № 991-XIV from 16.07.99	Law of Ukraine №3333- IV from 01/12/06
Article 3. The special regime introduced for technology parks for 15 years	Article 3. The special regime for innovation introduced technology parks for 15 years. Article 5. Certificate of registration of the project technopark issued for the period of this project, but not more than five years, and is the basis for the introduction of a special regime of innovation
Article 4. The amounts of value added tax and the amount of tax on profits not paid to budget, and is referred to special accounts	Article 6. Financial support for projects introduced technology parks budget support program activities. The projects of technological parks ... defined funds directed to: Full or partial (50 percent) interest-free loans; Full or partial compensation of interest on loans technological parks projects.
Article 6. Raw materials, machinery, equipment, components are exempt from customs duties and value added tax	Article 7. ... targeted subsidies in the form of: Exemption from import duties on importation ... of new equipment, machinery, components, materials ...; The tax bill on tax liability accrued in accordance with the law of Ukraine "On Value Added Tax" when importing new machinery, equipment, components, maturing in 720 days, when imported materials ... with a maturity of 180 calendar days; Income tax ... These taxes ... not transfer to the budget and enrolled in special accounts parks. Article 10 Accelerated depreciation of fixed assets.
Article 7. Payments for export-import operations ... held within a period of 150 calendar days. Funds received in foreign currency from sales of technology parks are not subject to compulsory sale.	Article 11. Payments for export-import transactions ... carried out within a period of 150 days. Funds received in foreign currency from sales of technology parks ... are not subject to compulsory sale. Section III p. 2. innovation and investment projects of technological parks, special regime of innovation, which suspended the Law of Ukraine "On Amendments to the Law of Ukraine" On State Budget of Ukraine for 2005 "and some other legislative acts of Ukraine" (2505-15), extended the term of their performance on a time interval of 31 March 2005 to the date of entry into force of this Law.

Figure 2. The volume of budget support of technology parks in Ukraine, 2001-2013, mln. USD

Source: compiled by the author on the basis of [Єророва]

was fixed in the relevant legislation in the form of appropriate incentives and government support for such activities that took place until 2005, when the Law "On State Budget of Ukraine" was canceled a preferential activity. On Amendments to the Law of Ukraine "On State Budget of Ukraine for 2005" from 25.03.2005. № 2505 – IV. On Amendments to the Law of Ukraine "On Special Investment and innovation Technology Parks" from 12.01.2006. №3333 – IV. Table 2 shows the comparison of state support measures adopted in the legal framework to 2005 and the Law of 12.01.2006. [Лазарева 2012].

The law of 2006 deleted the exemptions in the VAT on the sale of innovative products. This is 2-3 times reduces the amount of state support projects. On the whole period of the technology parks in Ukraine of state support under the special regime of innovative activity was 762.0 million USD (Fig. 2) of which about 90% (697.1 million UAH) Came in the form of indirect support, the volume of payments to the state trust funds amounted to 943.6 million UAH [Єророва].

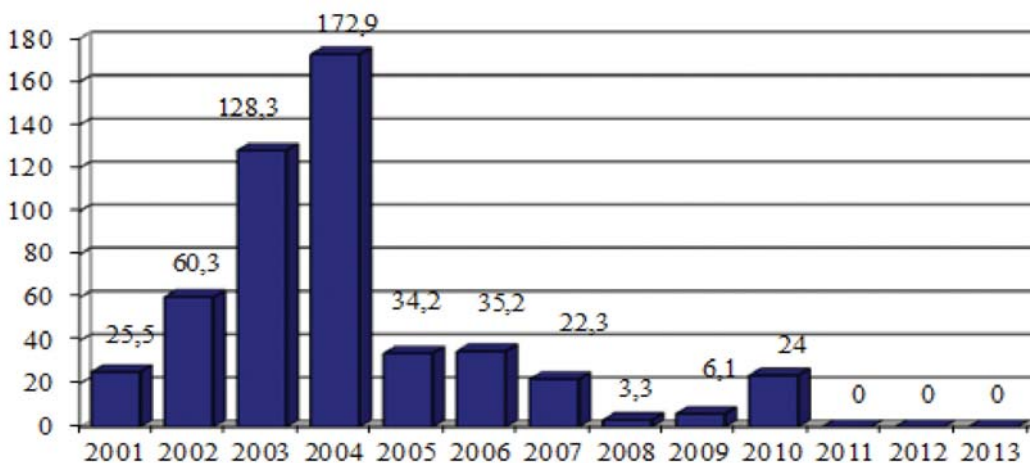


Table 2. Comparison of types of state support of technology parks structures [4]

Thus, state support technology parks significantly reduced, from 2005, at the time such support is reduced to zero, although the experience of developed countries shows that state support for 1.5 – 2.0 g. Accelerates the timing of innovation.

It should be noted that the positive results of operation of technology parks was the result of indirect state aid measures. However, since the beginning of 2006 there was a sharp decline in state support parks, which led to the fall in their work, so for example, if in 2004 the share of technology parks in the volume of sales of innovative products was about 10%, in 2009 there was a decrease to 1, 1% [Єрובה]. Details correlation between reduction of state support and contributions to the budget of the technopark next chart shows.

The largest amount of tax benefits is provided to technopark in 2003, but a number of objective reasons (chief among which is the misuse of benefits) gradually decreased and these payments, despite the legislative recovery in a slightly modified form of tax preferences, the amount of benefits and significantly decreased There are 3 square meters. 2008 amounted to only 3 million USD. The reason for this can be considered as follows: since the recovery of tax incentives for technological parks directly connected with the activities of these structures, it is logical to assume that the reduction of activity will affect the amount of profits that are parks, and therefore the value of tax benefits. Elimination of tax preferences dealt a major blow to technopark of structures because of their yearly income volumes are still low. Tax incentives have effect only if the company operates relatively well and receives cash, and when it is in pre-bankrupt state, some tax benefits only tangible effect will not do. In order to now we have not seen a relentless decline in the dynamics of technology parks, for these entities would need to provide more public funding and their projects were made.

It should also be noted that government action to tackle corruption in technical parks, despite their predictable positive effects in the form of increased revenue as a result of these subjects deprivation of all privileges, and thus the possibility of their illegitimate use, eventually also had some negative effects: on the one hand in Ukraine really existed parks, whose members used their preference for the development of innovation and investment, but in some cases, technology parks perform tasks that were set when they

are created, that is successfully implemented innovative projects. Cancellation benefits led to a drastic reduction of performance of parks, reduced the number of projects and the amount of new jobs.

In order to resolve this situation the Law of Ukraine on 12.01.2006 № 3333 "On Amendments to the Law of Ukraine" On Special technological innovation parks "and other laws of Ukraine" was partially restored tax and customs exemptions for artists of projects. As part of a special regime of innovation it must be given targeted state subsidies. However, today these provisions do not apply to volume as it was declared.

The mechanism of state support technology parks in Ukraine is still in the initial stage of formation, and the measures taken in this area, not wearing a systemic nature, so there is need to strengthen support for the development of technology parks of the state, due to their importance to the economy of Ukraine during the period of market reforms.

It should be noted that the development of technology parks based on their total funding from the state budget is not possible, but it is believed that taxes for technology parks can be reduced, for example by full or partial exemption of these structures from income tax and from tax VAT. Certainly, it is considered necessary to establish clear criteria and system restrictions in the implementation of this kind of benefits. In order to fall under preferential treatment need to be real cooperation between enterprises, production and technology parks and universities, as well as the actual implementation of the results of such cooperation in production. The main goal of state support is to create an effective mechanism for maximum efficiency technology parks and promotes innovation sector of the national economy.

Summary. Thus, analysis of the creation and development of leading US technopark structures suggests a fairly strong government support for technology parks of the country, resulting in direct subsidies, tax, depreciation and other incentives to companies parks, creating regional venture capital funds, guarantees on loans making laws that promote activity parks, formation of state orders for innovations.

In Ukraine, the main purpose of government support should become an effective mechanism to ensure maximum effectiveness of technology parks and promote the development of innovation sector of the

national economy. Based on the goal, the formation mechanism of state support technology parks must be focused on the integration of science, education and production; concentration of resources on priority areas of scientific and technological development; legal protection of intellectual property technology parks; promotion of creative activity staff, development of international scientific cooperation.

Creating an effective mechanism for state support technology parks suggests the author's opinion, implementation of the following measures: – law specifying the role of technology parks in the scientific and educational and innovative complex of Ukraine; – specification of financial and economic support (direct budget financing free parks, expansion of assets

that provide competitive grant funding, exemption from customs duties on imported equipment, providing inventors and small innovative firms interest-free bank loans, the creation of reserve funds and innovative insurance risk, tax incentives); – support personnel; – information Security (creating a registration system performance technology parks); – monitoring of the parks.

In order to ensure effective public support for the establishment and operation tehnopark structures deemed necessary not only to create a state of science and technology, but also the manner of drawing budgetary funding innovative programs and projects.

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Marina Baranovskaya

PhD, Associate Professor, ONEU, Ukraine

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