НАПРЯМИ ТРАНСФОРМАЦІЇ ПОДАТКОВОЇ СКЛАДОВОЇ ПІДПРИЄМНИЦЬКОГО СЕРЕДОВИЩА ДЛЯ РОЗВИТКУ РИНКУ ІННОВАЦІЙНИХ ТЕХНОЛОГІЙ В УКРАЇНІ

Актуальність. Закономірним є питання про те, як стимулювати інноваційні процеси в українській економіці. З одного боку, бюджетні можливості в нашій державі на іншому етапі розвитку дуже обмежені, з іншого, об’єктивною закономірністю є зменшення загальнодержавної інноваційної діяльності. У зв’язку з цим при побудові ефективної моделі інноваційного розвитку та державної інноваційної політики слід акцентувати увагу не на прямому бюджетному фінансуванні, а на непрямих методах, які відповідають сутності ринкової економіки та конкуренції, більш прогнозовані та зможуть служити для суб’єктів господарювання, потребують меншого обсягу адміністративних витрат, сприяють зменшенню впливу корупційної складової. Традиційним інструментом непрямих методів державного регулювання інноваційних процесів є податкове регулювання, визначення напрямів трансформації якого є найбільш актуальним для розвитку ринку інноваційних технологій.

Мета та завдання. Метою статті є визначення проблем і напрямів щодо вдосконалення податкової складової підприємницького середовища для розвитку ринку інноваційних технологій в Україні.

Результати. Означено основні тенденції застосування податкових інструментів з метою стимулювання науково-дослідних та дослідно-конструкторських розробок (НДДКР) економічно успішними країнами світу. Представлена загальноєвропейські тенденції в розподілі податкових пільг на НДДКР в залежності від розміру та виду діяльності суб’єктів господарювання. Визначено основні проблеми, що заг ликують розвиток ринку інноваційних технологій в Україні. На основі порівняння аналізу структурних елементів ціни продукції, виготовленої за допомогою традиційних та інноваційних технологій, виявлено превалювання в структурі ціни продукції, виготовленої за допомогою інноваційних технологій, новоствореної вартості. Запропоновано зменшити податкове навантаження на фонд оплати праці та прибуток суб’єктів господарювання, які впроваджують інноваційні технології, шляхом зменшення ставки єдиного соціального внеску на фонд оплати праці, які впроваджують інноваційні технології, встановлення інвестиційного податкового кредиту та податкового режиму Патентної скриньки. Представлено порівнянну характеристику об’ємної та прирістної схем інвестиційного податкового кредиту, що стимулюватиме розширення кваліфікованих витрат підприємників на НДДКР.

Висновки. В статті охарактеризовані податкові інструменти, що сприяють зменшенню податкового навантаження на підприємців, які впроваджують інноваційні технології. Впровадження податкових стимулів сприятиме зменшенню витрат підприємців до моменту отримання прибутку, стимулюватиме розширення інноваційних технологій та збільшення активність суб’єктів господарювання.

Ключові слова: інноваційні технології, податкові стимули, податкові інструменти, інвестиційний податковий кредит, об’ємний інвестиційний податковий кредит, прирістний інвестиційний податковий кредит, єдиний соціальний внесок, податковий режим Патентної скриньки.
DIRECTIONS OF TRANSFORMATION OF THE TAX COMPONENT OF THE ENTREPRENEURIAL ENVIRONMENT FOR THE DEVELOPMENT OF THE MARKET OF INNOVATIVE TECHNOLOGIES IN UKRAINE

**Topicality.** The question of how to stimulate innovation processes in the Ukrainian economy is natural. On the one hand, budget opportunities in our country at this stage of development are very limited, on the other hand, — objective pattern is the reduction of state involvement in innovation as we approach the stage of commercialization in the life cycle of innovation. In this regard, when building an effective model of innovation development and state innovation policy, the focus should not be on direct budget financing, but on indirect methods that correspond to the essence of a market economy and competition, are more predictable and transparent for business entities. relatively lower administrative costs, help reduce the impact of the corruption component. The traditional tool of indirect methods of state regulation of innovation processes is tax regulation, the definition of directions of transformation of which are the most relevant for the development of the market of innovative technologies.

**Aim and tasks.** The purpose of the article is to identify problems and areas for improving the tax component of the business environment for the development of the market of innovative technologies in Ukraine.

**Research results.** The main trends in the use of tax instruments to stimulate research and development (R&D) by economically successful countries are identified. The global trends in the distribution of tax benefits for R&D depending on the size and type of economic activity of business entities are presented. The main problems that hinder the development of the market of innovative technologies in Ukraine are identified. Based on a comparative analysis of the structural elements of the price of products manufactured using traditional and innovative technologies, the prevalence in the structure of the price of products manufactured using innovative technologies, the newly created value is identified. It is proposed to reduce the tax burden on the social security contributions and profits of businesses that implement innovative technologies by reducing the rate of single social contribution to the payroll of employees who implement innovative technologies, to establish an investment tax credit and the tax regime of the Patent Box. The comparative characteristics of the volume and incremental schemes of investment tax credit are presented and the expediency of introduction of the volume scheme of investment tax credit in Ukraine is substantiated, which will stimulate the increase of qualified expenses of entrepreneurs for R&D.

**Conclusion.** The tax instruments that will help reduce the tax burden on entrepreneurs, who implement innovative technologies, are described in this article. The introduction of tax incentives will help reduce the costs of entrepreneurs until they make a profit, will stimulate the reinvestment of profits in new innovative technologies and patent activity of business entities.

**Keywords:** innovative technologies, tax incentives, tax instruments, investment tax credit, volume-based investment tax credit, incremental investment tax credit, social security contribution, tax regime of Patent Box.

**Problem statement and its connection with important scientific and practical tasks.** The problems of tax regulation of the economy are inexhaustible due to the complexity and diversity of economic systems in a dynamic environment. Thus, chronic socio-economic problems (including the problem of budget deficit) in Ukraine were exacerbated by the COVID pandemic, which, in turn, led to the formation of a layer of new problems that overlaid with existing imbalances. In this regard, it is important to find new ways to solve the accumulated and exacerbated problems. In such conditions, accelerating the development of innovation should become a lifeline, and the state, in turn, should look for ways to accelerate the development of innovation.

**Analysis of recent publications on the problem.** The luminaries of economic science in matters of tax regulation of the economy are such prominent domestic and foreign scientists as Z. Varnaliy, J. Keynes, A. Laffer, A. Smith, M. Tugan-Baranovsky, A. Harberger and others. Issues of tax incentives for innovation are of interest to many scientists, including: Z. Varnaliy, V. Geets, M. Kyzym [1], Y. Mazur [2, 16, 17] and others. Issues of tax incentives for economic activity at the level of territorial communities are covered in the works of B. Burksinsky [3], O. Laika [3, 4, 5], T. Umanets, N. Shlafman [4] and others. V. Vyshnevsky, A. Vetkin, V. Chekina studied the issues of tax regulation of industrial development in Ukraine and the world [6]. Today's challenges related to the slow pace of economic development necessitate the study of tax regulation in the context of stimulating innovation activities of economic entities.

**Allocation of previously unsolved parts of the general problem.** Problems related to tax relations in various perspectives (legal, economic, social, etc.) have confused the minds of theorists and practitioners in various fields of knowledge for centuries. However, the issues of tax regulation of business entities engaged in the development and implementation of innovative technologies have not been systematically studied. This fact is due to a number of reasons, including the lack of legislative enshrinement of the category of preferential taxation of transactions for the production and circulation of innovative technologies. In the scientific literature some tools of tax regulation of innovative activity, world experience of their application
are investigated, however in complex research of questions of tax regulation of innovative activity of subjects of business activity introducing innovative technologies, there are gaps.

Formulation of research objectives (problem statement). The purpose of the article is to identify problems and areas for improving the tax component of the business environment for the development of the market of innovative technologies in Ukraine.

An outline of the main results and their justification. The global trend over the last twenty years shows that the number of countries that use tax instruments to encourage businesses to perform R&D is increasing. Thus, if in 2000 in the countries of the Organization for Economic Cooperation and Development (OECD) the governments of 20 out of 37 countries, and in the countries of the European Union (EU) the governments of 11 out of 27 countries offered tax benefits for R&D, in 2020 32 out 37 OECD countries, 21 of the 27 countries in the EU area rely on tax support to encourage R&D by businesses (Fig. 1). Among OECD countries, four did not offer R&D tax breaks between 2000 and 2018. These are Germany, Estonia, Luxembourg and Switzerland.

In 2018, in OECD countries, the average tax support was 11% of total support provided for R&D. Relatively important role is played by tax incentives in the overall efforts of governments to develop R&D in France (33%), Portugal (33%), Ireland (32%), the United Kingdom of Great Britain and Northern Ireland (31%), Italy (27%), Australia (26%). In these countries, tax incentives play a key role in R&D incentive policies.

The size and activities of firms determine their interests and the extent of participation in tax incentives R&D. Traditionally, R&D is concentrated in large enterprises. In New Zealand and Latvia, the share of small and medium-sized enterprises in R&D tax support is 100%, in Italy – 80%, in Canada – 50%, in Hungary – 10%, and in Japan – 7% (Fig. 2).
In terms of economic activities, tax support for R&D prevails in the sphere of production (Fig. 3). Production accounts for almost 100% of R&D tax incentives in China, 80% in Japan, 60% in France, 30% in Iceland, and 4% in Colombia.

**Fig. 3. Distribution of tax benefits on R&D depending on the type of economic activity of firms in 2018, % of total support**

Source: [7].

Innovatively active enterprises, introducing innovative technologies, invest significant amounts of financial resources and the share of added value in the price of their products is much higher compared to products manufactured using traditional technology. As a result, these companies carry greater risks and have a higher tax burden (Fig. 4).

**Fig. 4. Comparison of structural elements of the price of products produced using traditional and innovative technology**

A comparison of the structural elements of the price of traditional products and products whose production was carried out using innovative technology, shows that in the price structure of the latter, the share of newly created value is greater because the cost of labor is higher. Workers who implement
technologies have special knowledge, the ability to think, education, that is more resources spent on their preparation for work. When creating new knowledge, the cost of mental work and time is much higher compared to the process of creating a traditional product. Entrepreneurs, engaged in innovation, consciously bear great risks and make significant investments in order to increase (or not lose) their profits. As a result, the high share of the wage fund of workers implementing innovative technologies and the profit of the entrepreneur in the price structure of products, the production of which was carried out using new innovative technology, is quite natural.

Therefore, from the above we can draw the following conclusions:

1. Material costs in the structure of the cost and price of products are subject to regulation by business entities. Optimization of material costs is an internal influence of economic entities through the use of modern technologies and materials.

2. The transfer of the value of fixed assets to the price of finished products in the form of depreciation deductions is regulated by the state in order to prevent tax evasion by economic entities. State assistance to entrepreneurs engaged in innovative activities is expressed in the possibility of accelerating depreciation in the face of fierce competition and accelerated scientific and technological progress, which increases the risks of depreciation of fixed assets. In most countries of the world, governments provide the opportunity to apply the methods of accelerated depreciation (an accelerated depreciation) to innovative enterprises.

3. Indirect taxes are the lever of the state's influence on the absorption capacity, ie on the consumption of innovative products and technologies by society. Preferences for value added tax, excise duty, duty should be studied in the context of stimulating the consumption of innovative products and technologies.

4. The wage fund, profit (form of manifestation of factors of production, labor and capital, respectively) are the points of contact of private and public interests, the state levers of regulation of innovatively active enterprises.

The unpredictability and complexity of innovation processes in the changing modern conditions requires state support in various forms.

Thus, the Commercial Code of Ukraine states that the state uses various means and mechanisms for regulating economic activity to implement economic policy, implement targeted economic and other programs and programs of economic and social development. One of the main means of regulatory influence of the state on the activities of economic entities is the provision of investment, tax and other benefits [8].

According to the order of the Cabinet of Ministers of Ukraine "On approval of the Strategy for the development of innovation for the period up to 2030." Among the variety of possible tools that can accelerate innovation growth, those should be used that, firstly, best meet the obstacles that most hinder the innovation process in Ukraine, and secondly, require the least budget expenditures and fiscal resources, but are able to bring tangible results with minimal investment, and thirdly, the least vulnerable to corruption and other abuses [9]. This document states that for the development of startups it is necessary to reduce the tax burden on payment and income of individuals, and the problems of entering mass production can be solved, including through the introduction of a mechanism to support enterprises in the introduction of new technologies.

The functioning and development of the market of innovative technologies in the projection of tax relations faces certain problems:

First, the regulatory framework of Ukraine does not identify the category of preferential taxation of transactions for the production and circulation of innovative products and technologies. The criterion for the application of tax benefits in the innovation sector is a number of factors not connected with the knowledge-intensive products. In particular, equipment, materials and services, financial resources, works and services provided for the implementation of projects under certain agreements between the governments of Ukraine and other states or international organizations are exempt from taxation. Tax benefits are provided in the Agreement between the Cabinet of Ministers of Ukraine and the Government of the Italian Republic on technical cooperation [10], in the Agreement between Ukraine and the European Community on scientific and technological cooperation [11], in the Agreement between the Cabinet of Ministers of Ukraine and the Government of Turkey [12] etc.

Thus, the criterion of knowledge-intensive products is not decisive in the provision of tax benefits, the number of which in Ukraine is almost 200.

For example, they are exempt from value added tax:

- until December 31, 2022, operations on supply in the customs territory of Ukraine of vehicles equipped exclusively with electric motors (one or more):
subjects of space activity (which are subject to the Law of Ukraine "On Space Activity") for operations on supply in the customs territory of Ukraine of the results of research and development work performed for the needs of space activities;

- operations on supply and export in the customs regime of export of waste and scrap of ferrous and non-ferrous metals, as well as paper and cardboard for recycling (waste paper and waste) until January 1, 2022;

- operations on supply in the customs territory of Ukraine of medicines, medical devices and auxiliary means to them, which are purchased at the expense of the state budget until December 31, 2022 [13].

For example, the following tax preferences apply to income tax:

- until December 31, 2021, the zero interest rate is applied to income taxpayers whose annual income, determined according to the accounting rules for the last annual reporting period, does not exceed three million hryvnias and the amount of salary (income) accrued for each month of the reporting period each of the employees who are in a labor relationship with the taxpayer, is not less than two minimum wages, the amount of which is established by law, and which are formed in the manner prescribed by law after January 1, 2017;

- for the period up to December 31, 2021 the zero interest rate is applied for income taxpayers whose annual income, determined according to the accounting rules for the last annual reporting period, does not exceed three million hryvnias and the amount of accrued salary for each month of the reporting period (income) to each of the employees who are in a labor relationship with the taxpayer, is not less than two minimum wages, the amount of which is established by law, and which for three consecutive previous years received an annual income of less than three million hryvnias and whose average number of employees was 5-20 people;

- for the period up to December 31, 2021 the zero interest rate is applied for income taxpayers whose annual income, determined according to the accounting rules for the last annual reporting period, does not exceed three million hryvnias and the amount of salary accrued for each month of the reporting period (income) to each of the employees who are in a labor relationship with the taxpayer, is not less than two minimum wages, the amount of which is established by law, and which were registered by single tax payers in the manner prescribed by law before January 1, 2017 and in which for the last calendar year, the amount of revenue from sales of products (goods, works, services) amounted to three million hryvnias and the average number of employees ranged from 5 to 50 people;

- until January 1, 2025, the profits of enterprises - subjects of aircraft construction that fall under the provisions of Article 2 of the Law of Ukraine "On the development of the aircraft industry" are exempt from taxation.

Thus, preferences from the state to innovative enterprises are quite limited and, unfortunately, most innovative enterprises in Ukraine do not feel systematic state support.

The sphere of innovation is one of the elements of a complex socio-economic system, the problems and prospects of which should be considered in conjunction with other national and world problems. Tax incentives for innovative development in Ukraine should be harmoniously integrated into the mechanism of state regulation of the economy in order to achieve the strategic goals of economic development. Improving the level of welfare and education of the population, a favorable institutional environment, healthy competition, the absence of corruption, the development of innovation infrastructure and the banking sector are factors that will contribute to the development of innovation in Ukraine. An important condition for the development of the market of innovative technologies is the development of the potential for assimilation of technologies, which is determined by the ability of employees to understand and apply innovative technology in the work process [14]. It is necessary to create conditions under which the society will demonstrate the demand for innovations, and business entities will have incentives to engage in innovative activities with the consistent and systematic support of the state.

Secondly, the problem of chronic deficits of the State and local budgets of Ukraine is a deterrent in the process of finding ways to reduce the tax burden on innovative enterprises. The chronic deficit of the State and local budgets in Ukraine does not allow to determine effective compensators for budget losses in the introduction of tax benefits for enterprises implementing innovative technologies.

Third, our country is characterized by low innovation activity of economic entities. Over the last decade, there has been a steady downward trend in the number of innovatively active industrial enterprises, the number of industrial enterprises that have implemented innovations (products and / or technological
processes). In terms of the number of new technological processes introduced into production by industrial enterprises over the last decade, there has been a slight increase, but a steady upward trend has not developed (Fig. 5).

![Fig. 5. Dynamics of indicators that characterize the state of innovation in Ukraine for 2010-2019, units](image)

Source: [15].

It is expedient to single out fiscal instruments that are successfully used in world practice and have prospects in our country, in particular, reducing the single social contribution rate for highly qualified employees of enterprises implementing innovative technologies, introduction of investment tax credit for income tax, introduction of Patent Box tax regime. Each tool has its own purpose (Table 1).

It should be noted that most countries provide compensation for corporate income tax, while tax benefits on wages and exemptions from social insurance are less common. Reducing the tax burden when innovation generates a profit is appropriate to encourage reinvestment of accumulated profits in the innovation process, but entrepreneurs engaged in innovation should be supported throughout the innovation cycle, especially when they invest and do not receive income. At the same time, the application of the above-mentioned tax instruments will contribute to the involvement of the business sector in innovation activities already at the stage of research and development.

Table 1

<table>
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<th>Tax instruments that stimulate the development of the market of innovative technologies *</th>
<th>Tools</th>
<th>Purpose</th>
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<tr>
<td>1. Reduction of the SSC rate for highly qualified employees of enterprises implementing innovative technologies</td>
<td>Reduce the costs of entrepreneurs implementing innovative technologies before making a profit</td>
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<tr>
<td>2. Introduction of investment tax credit for income tax</td>
<td>Reduce tax payments of entrepreneurs implementing innovative technologies, income tax at the stage of making a profit. Provide an opportunity to accumulate financial resources for reinvestment in new innovative technologies</td>
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<tr>
<td>3. Introduction of the tax regime of the Patent Box</td>
<td>Reduce the payments of entrepreneurs for income tax received as a result of successfully implemented projects</td>
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* Compiled by the author on the basis of literature sources [6], [16], [17].
At the stage of applied research, in addition to state research centers, large corporations, which include research units, are involved in the innovation process. The private sector is involved in the innovation process, usually at the stage of research and development and bears the costs without receiving some time of revenue and profits from sales. The period of time from the beginning of research and development work to the achievement of full return on investment is an innovation lag. During this period, the state should most actively support entrepreneurs by providing tax preferences [1]. As noted, in the price structure of the innovative product, a significant share is the cost of labor, and, consequently, payments for social insurance (Fig. 4). It is obvious that by the time revenues and profits are received by business entities, the state’s efforts should be aimed at reducing the tax burden on the payroll of highly skilled, highly paid workers who introduce innovative technologies.

In order to encourage entrepreneurs to introduce innovative products (technologies), the legislation of some countries provides for partial or complete exemption of entrepreneurs from paying social security contributions. These preferences apply in Belgium, France, Hungary, the Netherlands, Spain, Sweden and Turkey.

Analysis of the experience of developed countries has shown that the incentive to attract highly skilled workers by employers is through a partial or complete reduction of the contribution rate to social insurance. At the same time, certain restrictions are set, in particular, the share of staff to which a reduced rate can be applied (Turkey), the amount of salary within which a reduced rate of social security contributions can be applied (Sweden, Hungary), the minimum time spent as researchers until getting a discount (Spain).

It is advisable to set an upper limit on the salary to which the preferential contribution rate for compulsory state social insurance can be applied. For example, in Hungary, the salary should not exceed HUF 500,000, 200,000 - for graduate and doctoral students, but the rate of social security contributions can be reduced by 100%. It should be noted that according to official data from the Hungarian Central Statistical Office, the average salary in Hungary in 2020 was 367,800 forints per month. In Turkey, the marginal rate of social security contributions is 50%, but there is no limit on wages. At the same time, in Turkey, the share of staff who may be subject to a reduced rate of social security contributions may not exceed 10% of the total number of staff involved in R&D and employed full-time.

In Ukraine, it is advisable to set a reduction in the SSC rate for highly qualified employees of enterprises implementing innovative technologies by 50% and the maximum wage to which the preferential contribution rate for compulsory state social insurance can be applied.

It is advisable to reduce the tax liability of innovative entrepreneurs from the income tax by a certain percentage of R&D expenditures incurred during a certain tax period in the form of an investment tax credit. Investment tax credits are an effective tool to stimulate innovation, which allows businesses and individual entrepreneurs to reduce income tax liabilities by a certain percentage of eligible R&D expenditures. In essence, they are subsidies because they are non-refundable and gratuitous.

The amount of corporate income tax is calculated by the formula [16]:

\[ T_t^k = \tau_t \cdot X_t - Q^k. \]  

\[ \text{de} \quad T_t^k \quad \text{– the amount of income tax of the entrepreneur for the period of time } t; \]
\[ \tau_t \quad \text{– entrepreneur's income tax rate;} \]
\[ X_t \quad \text{– прибуток підприємця до оподаткування;} \]
\[ Q^k \quad \text{– the amount of investment tax credit for R&D on income tax.} \]

It is important to note that in European practice and in the practice of some post-Soviet countries, investment tax credits are fundamentally different in essence and form. If in European countries the investment tax credit is a real reduction of tax liabilities, in some post-Soviet countries the investment tax credit is a form of changing the term of tax liability, in which businesses are given the opportunity to reduce tax payments with deferred payment of the loan amount and interest. Thus, we are talking about paid, repayable and urgent assistance. The question of the expediency of the existence and application of this form of investment tax credit is natural. The attractiveness of an investment tax credit from the point of view of...
business entities compared to a bank loan is due to the fact that it has a lower cost of borrowing and a longer maturity.

The right to use an investment tax credit should be granted to those businesses whose activities correspond to the list of priority thematic areas of research and scientific and technical development for the period up to 2021, approved by the Cabinet of Ministers of Ukraine [18]. The priority thematic areas of research and scientific and technical development for the period up to 2021 are defined as:

- fundamental scientific research on the most important problems of development of scientific and technical, socio-economic, socio-political, human potential to ensure the competitiveness of Ukraine in the world and sustainable development of society and the state;
- information and communication technologies;
- energy and energy efficiency;
- rational use of nature;
- life sciences, new technologies for prevention and treatment of the most common diseases;
- new substances and materials.

It is important to enable local governments to set a regional and local investment tax credit, which will be added to the national rate. By reallocating financial resources through this tool, local governments will have an effective tool to stimulate innovation on the ground. The right to use an investment tax credit should be given only to those entities that are registered in Ukraine.

In world practice, three-dimensional, incremental and hybrid schemes of investment tax credit are used. The hybrid investment tax credit scheme provides a combination of volume and incremental schemes. Volume and incremental investment tax credit differ in calculation methods, depending on market changes, cost to the state and functional purpose (Table 2). The complexity of applying a hybrid scheme of investment tax credit causes it to be less widespread.

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<th>Table 2</th>
<th>Comparative characteristics of volume and incremental schemes of investment tax credit</th>
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<td>Criterion</td>
<td>The essence of the criterion for:</td>
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<td>Volume investment tax credit</td>
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<tr>
<td>Features of use</td>
<td>technically easy to use</td>
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<tr>
<td>Dependence on market changes</td>
<td>relatively less dependent on market changes</td>
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<td>Expensive for the state</td>
<td>more expensive</td>
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<tr>
<td>Головна мета</td>
<td>increase in the total number of business entities engaged in R&amp;D</td>
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<td>застосування</td>
<td>government support for high-growth R&amp;D entities</td>
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* Compiled by the author

In the context of the socio-economic crisis, which is typical for our country at the present stage of development, it is advisable to use a large investment tax credit. The application of this scheme is appropriate, as the government's goal is to increase the overall level of quantity and quality of R&D in the country, in contrast to the incremental scheme used to support enterprises with high R&D growth. The incremental investment tax credit is effective for those enterprises that have high rates of R&D expenditures, ie working in highly competitive science-intensive industries and services. In addition, compared to the incremental investment tax credit, the volume investment tax credit is technically simpler, less prone to fluctuations. A large investment tax credit is more costly from a government perspective, but this shortcoming will be offset by an increase in the tax base in the long run.

In Poland, the total rate of investment tax credit is 100%, in Romania - 50%, in France - 30%, in China - 75%. It is important to note that there is a global trend of setting a higher rate of investment tax credit for small and medium enterprises compared to large ones. For example, in Ireland the rate for small and medium-sized enterprises is 30%, for large - 25%, in Japan for small and medium - 12-17%, for large - 6-14%. In addition, a special R&D tax credit for small and medium-sized enterprises was introduced in Colombia in 2020.

In Ukraine, it is advisable to set an investment tax credit rate of 50% for all types of enterprises. Given the instability in economic and financial activities against the background of political turbulence, the possibility of transferring the investment tax credit to future reporting periods in our country at this stage of development is impractical.
It is important to note that in early 2021, the Ministry of Strategic Industries of Ukraine developed and published for public discussion a draft Law of Ukraine “On State Industrial Policy” [19]. In Art. 11 of the draft law stipulates that economic entities in industry to implement innovative projects are provided with financial and other state support by public authorities and local governments by deducting from the amount of income tax of industrial enterprises the costs of R & D related to the development of new types of industrial products and the introduction of modern technologies. This preference will apply to a strategically important sector of the economy - industry, which will be the engine of innovative development, and in other sectors of the economy it is advisable to apply the rate of investment tax credit on income tax, which is equal to 50%.

New for innovative entrepreneurs in Ukraine may be the tax regime of the Patent Box, which should be applied after passing the payback point at the stage of profit. The Patent Box tax regime was first applied in 1973 in Ireland. In European countries, this tax regime became popular in the second half of the 2000s and today it operates in 14 of the 27 EU member states. These are Belgium, Cyprus, France, Hungary, Ireland, Italy, Lithuania, Luxembourg, the Netherlands, Poland, Portugal, Slovakia, Spain and the United Kingdom. Non-EU countries, Andorra, San Marino, Switzerland and Turkey have also introduced patent box regimes. The essence of the tax preference of the Patent Box is that companies have the right to tax income from the sale of patented products at reduced tax rates.

The tax regime of the Patent Box solves certain conceptual problems related to the taxation of innovation. First, it allows to establish a direct link between the effectiveness of innovation and the benefits derived from its implementation. Entrepreneurs who have really benefited from the innovation project receive a tax preference. Secondly, the Patent Box regime is a tool that will allow to benefit from the implementation of a particular innovative project directly to development companies, which very often do not benefit from the implementation of their developments. It was found that the real benefits from the implementation of innovative projects are the participating companies that are not directly related to innovation, intermediaries in the process of promoting patented products or end users.

The analysis of tax rates provided by the Patent Box regime in the EU countries showed that they range from 0-13.95%. The smallest reduction in the normal income tax rate is 50%, the largest 100%. As budget opportunities in Ukraine are chronically limited, it is advisable to use the experience of countries with the smallest reduction, which is 50%. Such countries are: Turkey, Slovakia, Portugal, Italy, Ireland and others.

From the state's point of view, the tax regime of the Patent Box means the loss of a certain share of tax revenues from income tax and the increase in administrative costs associated with the collection and control of this tax. The state will receive financial benefits in the long run, and the criterion for the effectiveness of the implementation of the Tax Box regime may be an increase in patent activity of economic entities. In our opinion, the tax regime of the Patent Box can be applied only to enterprises that implement innovative technologies that are to become drivers of economic development in Ukraine.

From the point of view of efficiency it is expedient to establish tax privileges for the limited periods of time, for example 5-10 years that will give the chance to correct them in due time in the dynamic conditions of uncertainty inherent in the modern world.

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Conclusions and perspectives of further research. Summarizing the above, it should be noted that tax incentives are a necessary but not sufficient condition to encourage entrepreneurs to develop the market of innovative technologies. It should not be forgotten that the most innovative countries in the European Economic Area (Switzerland, Denmark, Finland) prefer direct financing of innovation activities.

The sphere of innovation is one of the elements of a complex socio-economic system, the problems and prospects of which should be considered in conjunction with other national and world problems. Tax incentives for innovative development in Ukraine should be harmoniously integrated into the mechanism of state regulation of the economy in order to achieve the strategic goals of economic development. Improving the level of welfare and education of the population, a favorable institutional environment, healthy competition, the absence of corruption, the development of innovation infrastructure and the banking sector are factors that will contribute to the development of innovation in Ukraine. An important condition for the development of the market of innovative technologies is the development of the potential for assimilation of technologies, which is determined by the ability of employees to understand and apply innovative technology in the work process. It is necessary to create conditions under which the society will demonstrate the demand
for innovations, and business entities will have incentives to engage in innovative activities with the consistent and systematic support of the state.

Vectors of further research should be aimed at the formation of practical and methodological recommendations for tax incentives for entrepreneurs who implement innovative technologies, amendments to existing regulations in order to legislate these tax preferences.

**ЛІТЕРАТУРА**

5. Буркинський, Б.В., Лайко, О.І., Талпа, В.П. (2020). Податкові інструменти забезпечення економічного розвитку і співробітництва територіальних громад. Економічні інновації. № 2 (75). С. 7-16.

**REFERENCES**


2021 
ЕКОНОМІЧНІ ІННОВАЦІЇ 
Том 23, Вип. 3 (80) 
389
Ukraine. [Tax incentives for R&D in world practice and stimulation of innovation in Ukraine]. Jekonomika 
promyshlennosti – Industrial economics, 3, 5-20 [in Russian].

ekonomicchnoho rozvytku i spivrobibntystva terytorialnykh hromad [Tax instruments to ensure economic 
development and cooperation of territorial communities]. Ekonomicni innovatsii – Economic innovations, 
2(75), 7-16 [in Ukrainian].

podatkovoho rehuliuvannia ekonomichchnoho rozvytku v umovakh reform [Strategic directions of tax 
regulation of economic development in the conditions of reforms]. Ekonomicni innovatsii – Economic innovations, 
1(78), 115-125 [in Ukrainian].

ekonomicchnoho spivrobibntstva v umovakh hlocalizatsii ta reformuvannia missevoho samovriaduvannia 
[Tax stimulation of regional economic cooperation in the conditions of glocalization and reform of local self-

6. Vyshnevskyi, V.P., Vetkyn, V.P., Chekyna, V.D. et al. (2014). Formyrovanye y realyatsiya 
nalohovoi polytky v sfere upravleniya rozvyتفكlenosti [Formation and implementation of tax 
policy in the field of industrial development management] Donetsk: Institut jekonomiki promyshlennosti [in 
Russian].


Ukrainian].

9. Rozporyadzhennya Kabinetu Ministriv Ukrainy Pro sxvalennya Strategiyi rozvytku sfery 
inovacij noyi dijalnosti na period do 2030 rok.: prynjatyi 10 lypnya 2019 r. № 526-r [Order of the Cabinet of 
Ministers of Ukraine. On approval of the Strategy for the development of innovation for the period up to 
2030 from July 10 2019, №526-r 40-IV] [in Ukrainian].

10. Ugoda mizh Kabinetom Ministriv Ukrainy ta Uryadom Italijskoi Respubliky pro techniche 
spivrobibntcztvo vid 25.11.2003 # - 1335-IV.

11. Pro ratyfikaciyu Ugody mizh Ukyrayinoyu ta Yevropeyskim spivtovarystvom pro naukove ta 
texnologichnie spivrobibntcztvo : Zakon Ukrainy vid 25.12.2002 # 368-IV.

12. Pro ratyfikaciyu Ugody mizh Kabinetom Ministriv Ukrainy i Uryadom Tureckoi Respubliky 
pro techniche i finansove spivrobibntcztvo : Zakon Ukrainy vid 18.09.2003 № 1194-IV.

13. Dovidenky # 103/1 podatkovy razvyтky, sho ye vtratamy doxodiv byudzhetu. Retrieved from: 

V.V. et al. (2020). Teoretychni zasady formuvannia rynku innovacijnix tehnologij [Theoretical principles of 
market formation of innovative technologies]. Odesa: IPRED NANO [in Ukrainian].

zbirnyk. [Scientific and innovative activity of Ukraine]. Kyiv: Derzhkomstat Ukrainy. [in Ukrainian].

napravlenija reform dija Ukrainy [Tax incentives for R&D in an emerging economy: directions of reforms 
for Ukraine.]. Jekonomika promyshlennosti – Industrial economy, №2, 61-74 [in Ukrainian].

perspektivy [Investment tax credit in the legislation of Ukraine: present and prospects]. Ekonomika ta pravo – 
Ekonomika ta pravo, №1 (4), 47-53 [in Ukrainian].

18. Postanova Kabinetu Ministriv Ukrainy Pro zatverdzhennya pereliku priorytetnych tematychnych 
napryamiv naukovyx doslidzhen i naukovo-technichnych rozrobok na period do 2021 roku : prynjatiy 4 ver. 
2011 roku № 942 [Resolution of the Cabinet of Ministers of Ukraine About the statement of the list of 
priority thematic directions of scientific researches and scientific and technical developments for the period 
till 2021] [in Ukrainian].