The Impact of Preferential Taxation on the Stimulation of Investment Processes in Ukraine in the Context of the Experience of EU Member States

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Abstract: In modern conditions, one of the main tasks of the fiscal mechanism is to create favorable conditions for maintaining and activating investment processes at the micro level. Thanks to tax incentives as a leading element of the fiscal mechanism, the state influences the amount of financial resources that are at the disposal of taxpayers − legal entities and individuals - and can be used for investment. Therefore, the purpose of the study was to evaluate the use of tax incentives to ensure the investment development of enterprises and households in EU member states and in Ukraine; to conduct SWOT analysis of investment tax incentives, and to find opportunities to further improve of their management. The study substantiates the content of tax incentives and the conditions of their use to activate investment processes at the micro level. The experience of EU member states in the use of different ways of tax stimulation of investments of legal entities and individuals is generalized. The tax incentives introduced in Ukraine are considered and the key problems of their existence are described in the context of stimulating the investment activity of taxpayers. SWOT analysis of investment tax incentives was carried out, which helped to identify the positive and negative impact of the external and internal environment on their implementation. The necessity and principles of management of investment preferential taxation are established. Improvement of the management of providing investment tax incentives in Ukraine is proposed on the basis of taking into account the experience of EU member states. It has been proven that the purposeful use of tax incentives stimulates the investment activity of households and economic entities, so Ukraine's use of the experience of EU countries to solve the problems of providing tax incentives to individuals and legal entities will eventually lead to the intensification of investment processes at the micro level.

Key-Words: fiscal mechanism, investment processes, tax incentives, investment tax deductions, investment tax credit, management of investment preferential taxation

Received: October 26, 2022. Revised: May 22, 2023. Accepted: June 22, 2023. Published: July 18, 2023.

1 Introduction

The fiscal mechanism allows regulating the state's financial relations with taxpayers. The effectiveness of investment activities, the development of investment initiatives, and the satisfaction of the basic investment needs of taxpayers depend on the adequacy of the tax component of this mechanism. The tax component

of the fiscal mechanism of regulation of investment processes is aimed at ensuring a balance between the fiscal and regulatory functions of taxes and is primarily reflected in the provision of tax incentives. The latter create conditions for the investment development of households and enterprises, for expanding production and increasing the level of public welfare.

In modern conditions, the EU member states, thanks to the use of tax incentives, set themselves an important goal, that is to achieve such a level of investment by individuals and legal entities, which allows to ensure the growth of production and consumption of products, which can subsequently lead to the acceleration of the socio-economic development of states. The task of increasing the investment activity of the population and enterprises becomes a priority for Ukraine as well, and therefore taking into account the experience of the EU member states when establishing and providing tax incentives is extremely relevant.

The purpose of the study is a comparative analysis of the use of tax incentives for investment development of households and business entities in the EU member states and in Ukraine; identifying positive and negative aspects of their application and opportunities for further improvement of their management.

2 Problem Formulation

Tax incentives are tools of the fiscal mechanism that have a wide range of uses to influence investment processes at the micro level. Therefore, there is no unity in the understanding of their content among foreign and Ukrainian scientists. One group of scholars examines tax incentives from the standpoint of the state, which through taxation influences the investment behavior of taxpayers. Thus, S. Adamu interprets tax incentives as the use of state expenses and tax policy to influence the level of national income [1]. P. Dotun defines tax incentives as all measures taken by the government to manipulate the tax system intentionally in favor of a potential taxpayer [2]. A. Brodzka defines tax incentives as special elements of the tax code, which are implemented to participate in the projects of choosing corporate sites and to encourage certain types of behavior [3]. The second group of scientists highlights the essence of tax incentives from the point of view of taxpayers who receive certain incentives from the state to intensify investment activities. In particular, O. Yu. Timartsev claims that tax incentives are incentives given to individual taxpayers, including the opportunity not to pay tax or to pay it in a smaller amount [4]. S. James considers tax incentives as quantifiable economic incentives that governments offer to specific economic entities or groups of enterprises in order to direct investment to desired sectors or regions, or to influence the nature of such investment [5]. V. O. Shvadchenko emphasizes that tax incentives are to a certain extent privileges that the state grants to certain categories of taxpayers who meet the established criteria [6]. However, the most numerous is the third group of researchers, who define tax incentives as the easing by the state of the tax liability of taxpayers. Thus, Yu. V. Sybirianska, A. S. Volochai characterize tax incentives as an exemption based on the use of funds to increase investment and production volumes, create additional jobs, etc. [7]. J. B. Obayori, D. T. Briggs, and O. L. Yusuf view tax incentives as a reduction in the actual tax burden on a privileged activity compared to that normally imposed on it, in the hope that the reduction in government revenue will be compensated by an expected expansion of the national economy and, ultimately, an increase in total revenue from such activities on an expanded economic base [8]. A. M. Sokolovska and O. I. Lunina point out that tax incentives are a deviation from the regulatory requirements of taxation provided for and regulated by tax legislation (if there is a taxable object), which occurs in the form of a full or partial exemption of tax payers from paying it in order to ease the tax burden [9]. K. O. Deyganto outlines tax incentives as ways of reducing taxes for taxpayers and encouraging them to engage in socially responsible behavior that incentives society [10]. A similar interpretation of the concept of "tax incentive" is enshrined in the Tax Code of Ukraine and means "provided by tax and customs legislation, the exemption of the taxpayer from the obligation to calculate and pay the tax and fee, the taxpayer's payment of the tax and fee in a smaller amount if there are grounds defined by the legislation" [11]. We agree with the definition of the essence of tax incentives presented in the Ukrainian legislation, but we consider it appropriate to add to it the ultimate goal of providing tax incentives, which is to interest taxpayers in conducting activities in those areas that meet public needs.

For the effective use of tax incentives in the context of stimulating investment processes, quality management is necessary, which should be accompanied by uniform approaches to the provision of tax incentives to the relevant categories of taxpayers based on the most objective and justified calculations..

3 Problem Solution

3.1. The practice of providing investment

tax incentives in EU member countries and in Ukraine

Tax incentives are a stimulating element of the fiscal mechanism for regulating investment processes. As noted by E. Yu. Shaptala, they are characterized by the following features [12]: 1) the grounds for applying and types of tax incentives established by the current tax legislation; 2) the purpose of application is to reduce the tax burden on taxpayers; 3) relate to only one component of the tax obligation, that is the payment of taxes or fees (the legislation does not provide for incentives from tax accounting or submission of tax reporting); 4) act as one of the manifestations of ensuring the balance of the interests of the obliged and the powerful parties in tax legal relations; 5) an element of the legal tax mechanism; 6) perform encouraging (motivational) and supporting functions; 7) is the right of the relevant taxpayer, the implementation of which requires the performance of certain actions defined by legislation (confirmation of the conditions under which the relevant tax incentive is granted).

As noted by D. Chen, P. A. Harris and E. M. Zolt, the general use of tax incentives is justified by the need to: 1) correct market inefficiencies associated with the external effects of certain economic activities; 2) focus on new industries and mobile investments that are subject to tax competition; 3) create a certain form of agglomeration economy or external effects of concentration; 4) subsidize enterprises during a decline in their industry [13]. In fact, developed countries usually use tax incentives for investment purposes, in particular to promote scientific research activities, export activities and support the competitiveness of national enterprises in the world market; while developing countries use them to attract foreign investment and development of the national economy.

Many EU countries and Ukraine introduce various incentives that stimulate investment activity of households. We have grouped these incentives into several groups, namely:

1. Deduction from the object of taxation by personal income tax of interest on mortgage loans for the purchase of own housing. This incentive has been introduced in Belgium (only in relation to regional personal income tax), Bulgaria, Estonia, Italy, the Netherlands, Germany, Portugal, the Czech Republic [Worldwide Tax]. This incentive also applies in Ukraine, because in accordance with Art. 166 of the Tax Code of Ukraine, the taxpayer has the right to include a part of the amount of interest paid by such a taxpayer for the use of a mortgage housing loan in the tax incentives in the reduction of the taxpayer's taxable income as a result of the reporting tax year [11].

2. Deduction from the object of taxation by personal income tax of expenses for the construction (acquisition) of a new house/apartment or renovation of one's own home. This incentive is valid in Austria, Bulgaria (only in relation to the costs of improvement (repair) of housing), Poland (only in relation to the costs of reconstruction (renovation) of dwellings of historical value) [14]. In Ukraine, such a tax incentive is not provided.

3. Deduction from the object of taxation by personal income tax of costs for energy- and heat-efficient modernization of housing. This incentive is used in Spain, Poland, Finland, France [14]. Such a tax incentive has not been introduced in Ukraine.

4. Deduction from the object of taxation by personal income tax of expenses for the purchase of shares of newly established or operating, usually innovative, small and medium-sized enterprises. This incentive has spread in Belgium, Cyprus, Greece, Spain [14]. There is no such tax incentive in Ukraine.

5. Deduction from the object of taxation by personal income tax of other investment-oriented expenses. Thus, in Cyprus, individuals who invest in audiovisual infrastructure and technological equipment related to audiovisual infrastructure are entitled to a 20% deduction from the object of taxation by personal income tax of the value of such investments for compliance with certain criteria and conditions. In Ireland, there are tax incentives of personal income tax aimed at promoting employment and investment (EII), support for start-up entrepreneurs (SURE) and incentive for start-up capital (SCI). EII incentives are granted for investments in certain types of activities and allow an individual to deduct from the object of taxation by personal income tax up to €250,000 per year in each tax period (€500,000 for those who invest for a minimum period of seven years). SURE-type incentives are aimed at citizens who leave work to start their own business. The maximum tax incentive that can be qualified as SURE is a deduction of €700,000 (€100,000 per year for the previous six tax years and €100,000 in the current year) from the object of taxation by personal income tax. SCI-type incentives were introduced for 2019-2021 and are aimed at micro-enterprises at a very early stage; SCI aims to ease special conditions for micro-enterprises in early-stage of capital attracting to start a business. Moreover, a micro-enterprise is a business entity with less than 10 employees, which turnover and/or

balance sheet is less than 2 million euros. Lifetime deduction from the object of taxation by personal income tax is 500,000 euros [14]. In Ukraine, such a tax incentive is not provided.

To ensure the investment development of business entities in EU member states and in Ukraine, fiscal support is also provided in the form of tax incentives. We have combined these incentives into several groups, namely:

1. Establishment of investment tax deductions that reduce the tax base by corporate income tax. Thus, in many EU member states such deductions include: the percentage of research and development costs (Austria, Denmark, Lithuania, Poland, Portugal, Romania, Slovenia, Slovakia, Finland, France, Czech Republic); the percentage of costs for development and acquisition of intangible assets (Belgium, Italy, Cyprus, Slovenia, Hungary, Czech Republic); the percentage of costs for energy saving, energy efficiency and the implementation of other climate neutrality standards (Belgium, the Netherlands, Slovenia); the percentage of costs for the acquisition of shares or corporate rights in newly created innovative enterprises (Hungary); the percentage of costs for robotics, in particular the purchase of robots and cobots, accessories and software for them (Poland); the percentage of costs for trial production and launch of a new product (Poland); the percentage of costs for the acquisition of enterprises in a difficult economic situation (Portugal); the percentage of costs from depreciation of equipment related to Industry 4.0 (Slovakia); the percentage of costs on digital transformation and green transition (Slovenia) [14].

2. The introduction of an investment tax credit as a deferment of income tax payment, which is granted to a business entity for a specified period to carry out investment activities with subsequent compensation of deferred amounts in the form of additional tax revenues due to the general increase in profits [15]. In EU member states business entities receive an investment tax credit which invest in: research and development (Belgium, Spain, Italy, Germany). new fixed assets (Italy, Luxembourg); design and aesthetic ideas for textile, footwear, eyewear, jewelry, furniture, and ceramic industries (Italy); technological and digital innovations related to Industry 4.0 (Italy); environmental investment projects (Italy, Luxembourg); creation or acquisition of intangible assets (Luxembourg); energy saving and energy efficiency (Italy, Luxembourg, Malta, Hungary); installation of plumbing and central heating in hotels and buildings used for social activities (Luxembourg); purchase of passenger cars powered exclusively by electric or hydrogen fuel cells (Luxembourg) [14].

3. Exemption from the payment of certain taxes and fees, which is understood as provided for and regulated by the norms of tax legislation in the presence of a taxable object, a deviation from the regulatory requirements of taxation, which occurs in the form of a full or partial exemption of taxpayers from the payment of tax in order to reduce the tax burden [16]. Thus, Spanish and European Economic Interest Associations (SEIGs and EEIGs) and Temporary Consortia of Enterprises (TCEs) are completely exempt from income tax in Spain. In Luxembourg, certain financial institutions, in particular investment funds, asset management companies, securitization companies, venture capital companies are completely exempt from income tax, municipal business tax and dividend income tax. In Romania, investments in innovative and research activities are completely exempt from income tax. In addition, in Romania, investments in technological equipment, electronic computing and peripheral equipment, cash registers and machines, control and exhibition machines and devices, as well as in software produced and/or purchased and put into operation if used for the purpose of economic activity are partially exempted from taxation. In Portugal, pension and educational savings funds, venture capital funds, real estate investment funds for rental housing are completely exempt from income tax [14].

4. The establishment of reduced tax rates, which occurs due to the efforts of states to find such a combination of them that would ensure the balancing of the regulatory and fiscal potential of taxes [17]. For business entities, reduced rates are mainly set for value-added tax and customs duties, but such incentives do not have a noticeable investment effect. However, some EU countries have introduced reduced income tax rates, which directly affect the investment development of business entities. Thus, in Croatia, a reduced rate of income tax is applied for investments aimed at modernizing business processes related to automation, robotization and digitization of processes in the manufacturing and processing industries. In the Czech Republic, there is a preferential income tax rate for investments in the manufacturing industry, as well as for the support of technology centers, strategic services, data centers and customer support centers. In Spain, a special rate of income tax has been introduced for investments of entities whose main activity is the rental of housing [14].

5. The use of accelerated depreciation methods, which, according to V. Ya. Plaksiienko and O. P. Pavlenko, contributes to the acceleration of the investment development of economic entities, because it makes it possible to update fixed assets and intangible assets more quickly, and also allows to significantly accelerate the process of formation of own financial resources at the expense of internal sources, i.e. contributes to the growth of returnable net cash flow in future periods; reduce the amount of income tax paid by enterprises, as it reduces the amount of profit from ordinary activities before taxation [18]. Such methods of calculating depreciation are most common in Spain, Luxembourg, Germany, France, Sweden [14].

In Ukraine, economic entities actively use the tax support of the state, because there are a large number of tax incentives (table 1).

Table 1. **The number of tax incentives in terms of taxes and fees according to the incentive directories in the beginning of the relevant year***

Index	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
The total amount of tax incentives **										
from corporate income tax	88	95	25	29	28	41	46	43	51	61
from the fee for the first vehicle registration	1	1	1	0	0	0	0	0	0	0
from the land fee	51	51	13	22	22	26	28	26	25	26
from value added tax	125	131	121	125	128	127	132	132	117	120
from excise tax	40	46	40	40	41	44	46	51	33	33
Total	305	324	200	216	219	238	252	252	226	240
The share of incentives from several taxes in the total number of tax incentives, %										
from corporate income tax	28,9	29,3	12,5	13,4	12,8	17,2	18,3	17,1	22,6	25,4
from the land fee	16,7	15,7	6,5	10,2	10,0	10,9	11,1	10,3	11,1	10,8
from value added tax	41,0	40,4	60,5	57,9	58,4	53,4	52,4	52,4	51,8	50,0
from excise tax	13,1	14,2	20,0	18,5	18,7	18,5	18,3	20,2	14,6	13,8

*Source: Compiled by the authors based on [19]

**Note: The incentive directories do not reflect incentives from import and export duties, as well as incentives for individual local taxes and fees established by local self-government bodies

According to the table 1 data, over the past 10 years, the total number of tax incentives in Ukraine has decreased. Moreover, from the point of view of the impact on the investment development of business entities, the quality of these incentives has deteriorated, because while the share of direct taxes has decreased, the share of indirect taxes in the total number of tax incentives has increased. In terms of income tax, the main types of tax incentives are the exemption from its payment for enterprises in certain branches of the national economy and a reduction in the rate for certain incomes and tax payers. It should be added that the Tax Code of Ukraine does not provide for the provision of an investment tax credit, which has become widespread in EU member states.

In general, the Ukrainian practice of providing tax incentives is chaotic and unreasonable and is characterized by a number of problems [20; 21; 22]:

1. There is no unified list of tax incentives, which makes it impossible to comprehensively assess the impact of tax incentives on the activities of taxpayers and the filling of state and local budgets.

2. There are no approved methods for calculating the expediency of introducing tax incentives, the expected results of their provision, and a system for monitoring the impact of incentives on certain industries and the economy as a whole, which makes it impossible to assess the effect of implemented fiscal support measures.

3. Tax incentives serve as a tool for lobbying political interests, a means of harmonizing the positions of government officials and legislators when adopting draft laws important to the Government (for example, the Law on the State Budget of Ukraine).

4. Tax incentives usually go to enterprises in well-developed sectors of the national economy, which are indirectly related to representatives of political elites, and not to economic entities that really need fiscal support.

5. Tax incentives are usually introduced indefinitely, and even if there are deadlines for granting incentives with strong political support, the cancellation of such incentives can be regularly postponed. This demotivates taxpayers who receive incentives to make investments, ensure their own development and increase competitiveness.

6. The provision of tax incentives does not lead to a significant investment effect. Many economic entities use the released funds not for the

realization of investments, but for meeting current production needs, which is actually an irrational "eating up" of budget funds.

In Ukraine, tax incentives, the provision of which leads to the erosion of the tax base and budget losses, do not stimulate investment development, but are a factor in restraining economic growth. Taking into account the impossibility of complete elimination of tax incentives in Ukraine, it is necessary to introduce a transparent and effective practice of providing them in accordance with world standards and the accumulated experience of developed European countries.

3.2. SWOT analysis of investment tax incentives

At present, many states have introduced investment tax incentives that have little or no basis in economic theory or empirical evidence. Often, countries simply copy investment preferential taxation, responding to the measures taken by other states. This leads to the low efficiency of tax incentives, which cannot be a compensation or an alternative to a bad investment climate. In addition, such incentives can actually harm the country's budget, eroding resources for the real drivers of investment development, that is infrastructure, education and security.

Consideration of the feasibility and effectiveness of investment tax incentives will be incomplete without conducting a SWOT analysis, which helps to identify the positive and negative impact of the external and internal environment on the implementation of preferential investment taxation. Strengths and Weaknesses are the factors of the internal environment, Opportunities and Threats are the factors of the external environment, as shown in Fig. 1.

The performed analysis made it possible to outline strengths (these are the existing features that provide a basis for development), weaknesses (these are the existing features that complicate the conditions for development), opportunities (not existing, but such that may arise, be created or will be created in the future conditions favorable for development) and threats (not existing, but such that may arise, be created or will be created in the future, conditions unfavorable and even dangerous for development) of preferential investment lending. Identified strengths and prospects for the introduction of investment tax incentives will have a positive impact, while weaknesses and identified threats will have a negative impact on their introduction.

3.3. Necessity and principles of management of investment preferential taxation

According to research by D. Chen, P. A. Harris, and E. M. Zolt, due to the presence of significant advantages, tax incentives in recent years have begun to play a significant role in influencing investment decisions. First, investment tax incentives have become more generous than in previous years: their term of validity has increased and their coverage of tax payments has expanded. Second, the last few decades have seen significant trade liberalization and increased capital mobility. With the reduction of non-tax barriers, the importance of preferential taxation as an important factor in investment decisions is increasing. Third, economic agents have undergone transformations, in particular, they have made significant changes in organizational structure, methods of production and distribution, and the types of products produced and sold. As a result of improvements in transport and information infrastructure, the division of production has occurred: product components are often manufactured in several countries, which leads to increased competition between them. This stimulates competition between countries and territories, which is manifested in the provision of various investment tax incentives [28].

The COVID-19 pandemic also led to the active provision of tax incentives, first to prevent significant losses of enterprises and decrease in household incomes, and later to restore and develop investment processes at the micro level. In particular, incentives from certain taxes were introduced in the EU member states [29; 30]:

1) value added tax (all EU countries, except Denmark and Germany): to support the most affected sectors of the economy (public catering, tourism, culture, sports) and to reduce the cost of medicines and medical equipment to fight the pandemic;

2) corporate income tax (Austria, Belgium, Greece, Denmark, Ireland, Spain, Italy, Cyprus, Latvia, Luxembourg, Germany, Poland, Portugal, Slovakia, Slovenia, Hungary, Finland, France, Croatia, Czech Republic): to prevent deterioration the financial condition of enterprises and the activation of their investments;

3) individual income tax (Greece, Denmark, Ireland, Spain, Cyprus, Latvia, Luxembourg, Germany, Poland, Portugal, Romania, Slovakia, Slovenia, France, Czech Republic): to compensate for the loss of household income, to ensure their normal life activities and investment recovery.

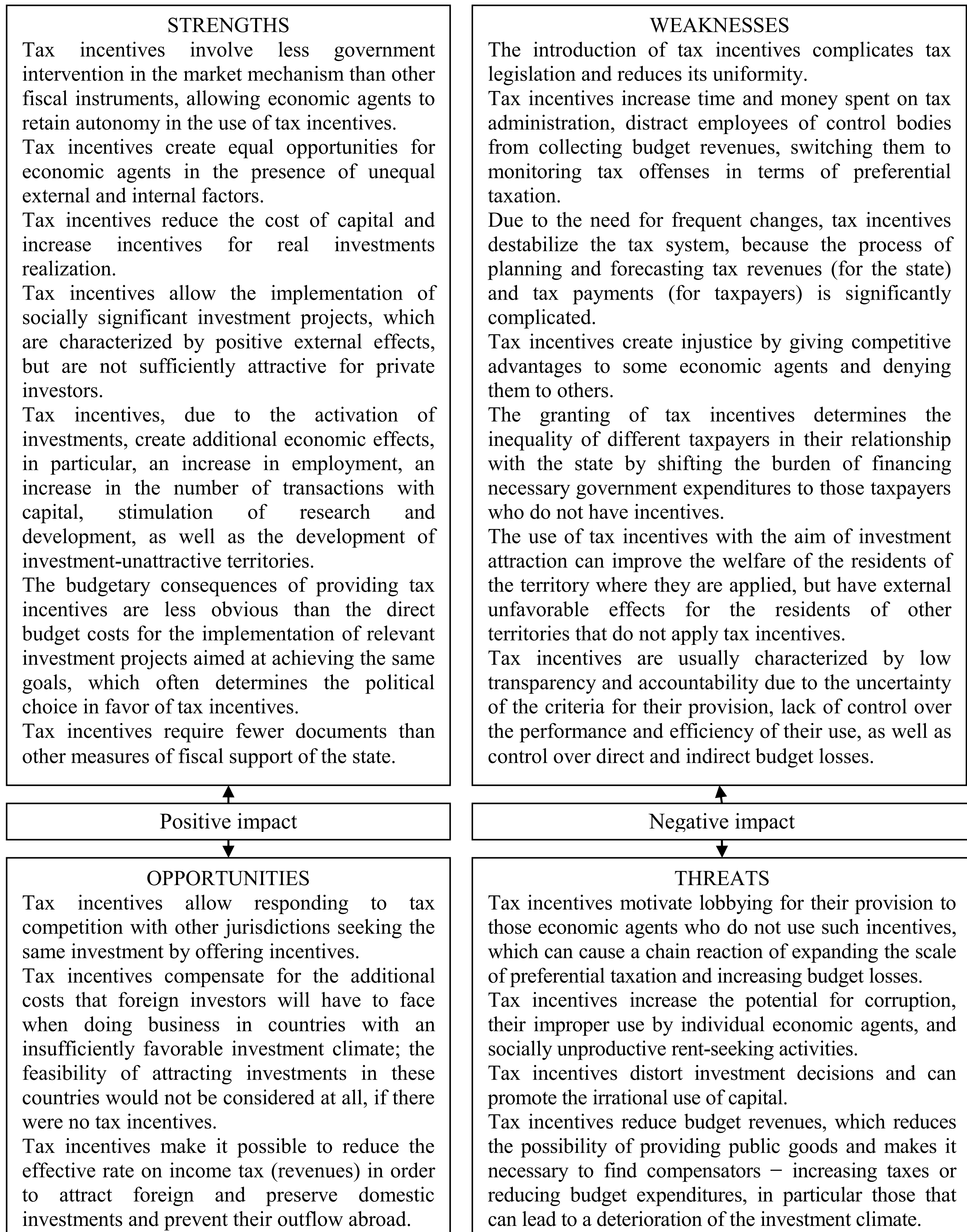

Fig. 1**. SWOT analysis of investment tax incentives ***

*Source: Compiled by the authors based on [23; 24; 25; 26; 27]

As for Ukraine, the threat of loss of budgetary resources has led to the insignificant use of preferential taxation to combat the consequences of the COVID-19 pandemic. Thus, tax incentives for enterprises in response to the corona crisis included only a temporary exemption from paying

real estate tax and a single social contribution. Tax incentives from VAT and import duties were granted for the production and supply of medical products intended for the treatment and prevention of the infection of COVID-19.

At the same time, preferential investment taxation overburdens the tax system, which ideally should provide for the application of simple, fair and efficient taxes. Tax incentives risk undermining the basic principles of taxation to the extent that they complicate the tax system, create horizontal inequality and distort the efficiency of production. Also, they can lead to the loss of budget revenues, which could be used more productively. Therefore, in order to eliminate a significant number of shortcomings and contradictory consequences of the use of tax incentives, it is necessary to take measures for their effective management. These measures should be based on the defining provisions proposed by scientists and implemented by practitioners, which are the principles of granting tax incentives (table 2).

Table 2. **Principles of investment preferential taxation in American and European theory and practice***

American theory and practice	European theory and practice
Tax incentives should be implemented within specific programs aimed at mitigating the unwanted indirect effects of economic growth.	Publication of a declaration of all tax incentives and their purposes within the framework of the management system.
Tax incentives should be part of a comprehensive state economic development program that includes carefully designed supply and demand policies.	Systematic data collection to support tax loss reporting and monitoring of overall impact and effectiveness of individual tax incentives.
Tax incentives should be general and not specific, that is, available to all economic agents who meet the eligibility criteria, and not act as an attraction to lure a particular economic agent.	Conducting a periodic review of the extension of existing tax incentives by assessing the extent to which they meet the stated objectives.
If the goal is economic growth measured by the level of employment, tax incentives should subsidize the cost of labor, not the cost of capital.	Ratification of tax incentives by the legislature body or parliament.
Tax incentives should be aimed at economic agents of basic, not non-basic sectors of the national economy.	Consolidation of all tax incentives under one government authority where possible.
Tax incentives should be consistent with the goals of economic development of the state, and the latter should be based on a careful assessment of the needs, strengths and weaknesses of the state.	Calculating the amount of lost budget revenues related to tax incentives and publishing a report on tax losses.
Tax incentives programs should contain provisions to reduce potential revenue losses.	Administration of tax incentives in a transparent manner.
Tax incentives programs should incentive all economic agents in the target industry groups.	Highlighting the biggest beneficiaries of tax incentives in the regular tax loss report where possible
For periodic monitoring of the incentives and costs of each tax incentive, it is advisable to use effectiveness evaluation methods.	Providing tax incentives only through tax legislation.
Efforts should be made to publicize tax incentives in order to ensure that economic agents are aware of them.	Expanding regional cooperation to avoid harmful tax competition.

*Source: Compiled by the authors based on [31; 32]

Taking into account the basic principles makes it possible to solve a number of tasks related to the management of investment preferential taxation: optimization of tax incentives; establishment of criteria for granting tax incentives; construction of a complete monitoring system of tax incentives; development of more advanced methods of assessing their effectiveness. Based on the results of the analysis of compliance with the main principles of investment preferential taxation, decisions are made by the state on the withdrawal or transformation and extension of existing tax incentives, and on the part of taxpayers - on the use or non-use of the right to a certain tax incentive (preference). It also makes it possible to make a reliable assessment of the loss of tax revenues due to the use of tax incentives and their consideration as tax expenses of the state when planning (developing) budgets.

3.4. Management of the provision of investment tax incentives in Ukraine based on the experience of EU member states

Management of preferential investment taxation is aimed at stimulating investment processes by creating such conditions in which both individual economic agents and the entire socio-economic system in general can function successfully. Such management helps the state to actively use the fiscal mechanism to attract taxpayers interested in investing and put their capital in socially beneficial sectors of the national economy.

Management of preferential investment taxation in Ukraine, in our opinion, should cover several stages from the preliminary assessment of the feasibility of their introduction to the maintenance of statistics and the publication of the results of their use (Fig. 2).

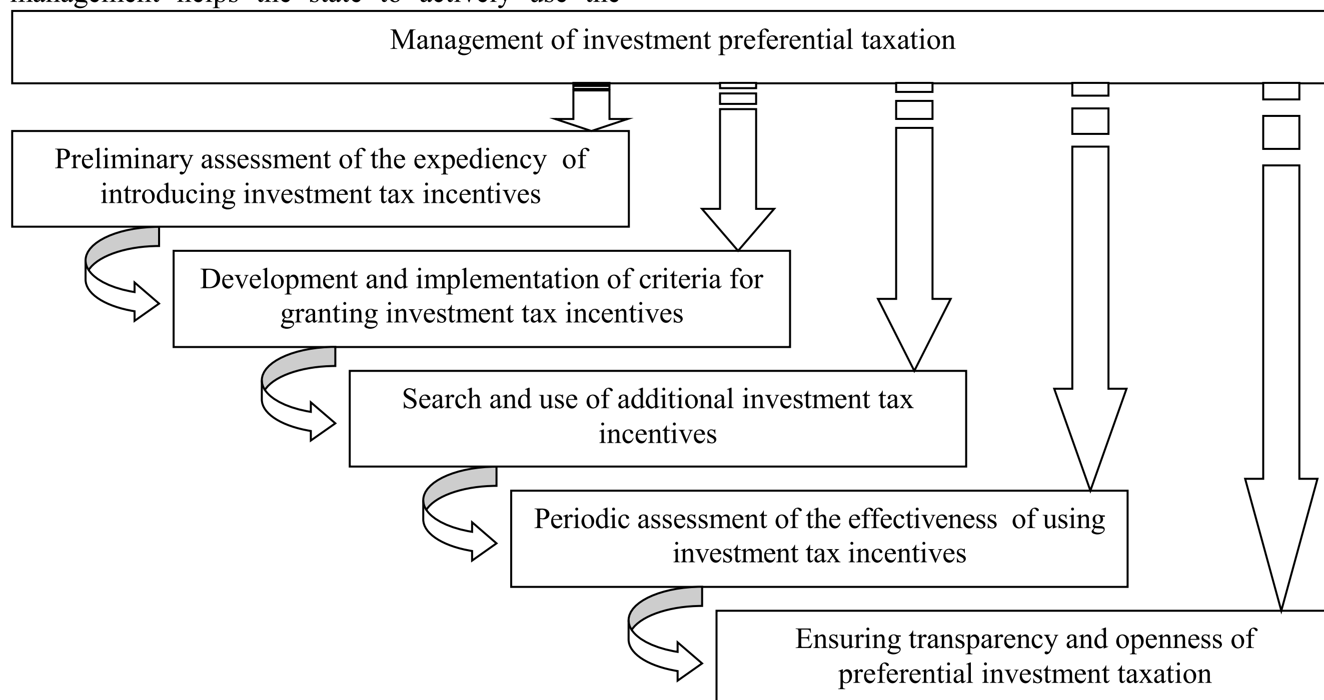

Fig. 2. **Infologic management model for the provision of investment tax incentives in Ukraine***
*Source: Compiled by the author himself

A preliminary assessment of the feasibility of introducing investment tax incentives should be based on the neutrality of taxation. Accordingly, the application of tax incentives should be an exception and should be extended only to those branches of the national economy, the stimulation of investment development of which can ensure the stabilization and growth of the entire economy. Currently, the use of tax incentives in Ukraine can be justified primarily for subjects of high-tech spheres of activity and/or separate branches of the economy, which ensure the competitiveness of products on the domestic and foreign markets. At each specific moment, priorities in the implementation of tax incentives must be clearly defined, because their simultaneous action for various branches of the national economy is ineffective from the point of view of the economy in general.

R. M. Bird claims that tax incentives can improve investment indicators only in the case of a better solution to the problem of the organization of production by state authorities and/or local self-government than by private investors, while the success of preferential taxation means that the volume of attracted investments will grow in those regions and countries that apply it, compared to those that do not introduce tax incentives [33].

Based on R. M. Bird's research, we can say that investment tax incentives are likely to be ineffective in the presence of non-tax factors affecting investment decisions. Accordingly, before the introduction of tax incentives, they must be carefully studied. In the presence of most of the factors, the investment preferential taxation should be abandoned. Such factors include [28; 34]:

- political stability;
- consistent and stable fiscal policy;
- adequate physical, financial, legal, and institutional infrastructure;
- effective, transparent, and accountable public administration;
- qualified workforce and flexible labor legislation that regulates the relationship between the

employer and the employee;

− availability of adequate mechanisms for resolving business disputes;

− convenient foreign currency exchange rules and the possibility of profit repatriation;

− favorable linguistic and cultural conditions;

− the size and efficiency of production factor markets.

A preliminary assessment of the feasibility of introducing investment preferential taxation should include an analysis and consideration of tax costs, because there is a high probability of overspending funds for the provision of tax incentives over the incentives received from the implementation of investments. D. Chen, P. A. Harris and E. M. Zolt include such costs [28]:

1. Income costs include lost income from projects that would have been implemented even if the investor did not receive any tax incentives, and lost income from investors who illegally claim incentives or move income through related legal entities which have the right to preferential taxation.

2. Distribution costs arise as a result of uneven differentiation of incentives, which can lead to too much investment in certain sectors of the national economy or certain territories or excessively low investment in other industries and regions that do not have tax advantages.

3. Implementation and compliance costs carried out by the state to ensure compliance with the provisions of the legislation on the provision of investment tax incentives, and taxpayers to comply with them. The more complex is the preferential taxation, the higher are the potential costs of implementation and compliance with the legislation.

4. Costs associated with corruption and low transparency caused to the great freedom of action of officials involved in the provision of investment tax incentives and the absence of clear criteria for their provision.

Investment tax incentives should be investigated before their introduction in the context of the possibility of their partial replacement with other, more acceptable means of the fiscal mechanism. Thus, it is appropriate to apply tax incentives when it is more important to maximize the number of beneficiaries than to minimize the number of excess claims for incentives. Otherwise, budget expenditures should be used. The latter are a more flexible and targeted tool, but they lead to the "effect of better accessibility" for large business entities that are more involved in interaction with the state. Moreover, there is often an informal exchange of financial support for obligations and restrictions for business structures, which further reduces the efficiency of the use of budget funds.

The development and implementation of clear criteria for the provision of investment tax incentives is carried out in order to determine the types of investments that the state seeks to attract and reduce budget costs for investment incentives. The working group on the development of the G20 identified three groups of criteria for granting investment tax incentives, which are usually used in combination [35]:

1. Scale criterion. According to this criterion, tax incentives are introduced for new investment projects (or investors) that exceed a certain stipulated investment value or those that create at least a certain stipulated number of new jobs. This, of course, is considerably attractive, particularly when the investment may be transformative for a country or region, or where financial and technical constraints hold back investment. Limiting incentives by large investments can also reduce the administrative costs of the state. This criterion is taken into account in the Law of Ukraine “On State Support of Investment Projects with Significant Investments in Ukraine” [36]. However, it is worth considering that discrimination in favor of large investments can also lead to manipulation, abuse and distortion. Thus, the substantial size condition is relatively easy to meet on paper, but extremely difficult to monitor and verify in practice. If an investor increases the amount of planned investment or the number of new jobs just to get a tax incentive, this means an inefficient use of resources, so the increase in marginal productivity may be very low or even negative. Discrimination can also distort competition and limit the growth of smaller domestic firms that do not incentive from incentives, even if they are more productive.

2. Criterion of sectorality. According to this criterion, preferential taxation is applied to certain branches of the national economy, which the state considers the most desirable and which are most likely to be affected by taxes. Among the activities that are usually favored are tourism, "offshore" financial centers, film production and manufacturing activities, as they are considered to have a more socially valuable indirect effect. Tax incentives are also sometimes limited to innovative industries, which can be defined in various ways, but always include those that are of strategic importance to the national economy. In Ukraine, the Law of Ukraine “On Stimulating Investment Activity in Priority Sectors of the Economy with the Aim of Creating New Jobs” was in effect, according to which tax incentives were granted to business entities that made investments in agro-industrial, housing and

communal and machine-building complexes, transport infrastructure and resort-recreational sphere and tourism [37]. In connection with the full-scale military invasion of the Russian Federation on Ukrainian territories, the specified normative legal document was canceled and the Law of Ukraine "On Amendments to Certain Legislative Acts of Ukraine Regarding the Basics of the State Regional Policy and the Policy of Reconstruction of Regions and Territories" was adopted, which does not provide for preferential investment taxation [38]. In the conditions of war, the cancellation of the application of the criterion of sectorality is expedient, because when it is used, the question always arises whether the service of personal investment interests coincides with the service of general public interests. This criterion puts non-priority branches of the national economy at a competitive disadvantage, which prevents them from developing thanks to fiscal support, even if they are more productive.

3. Zoning criterion. According to this criterion, investment tax incentives are aimed at special territories of priority development in order to eliminate geospatial inequality. In the EU member states, the practice of providing tax incentives within special economic zones (SEZ), free ports (FP), free zones (FZ), technology parks (TP) and other similar entities, which are geographically limited and specially managed territories in within the borders of the state, which are created to attract direct national and foreign investments for the expansion of trade, employment and industrial development. These territories, depending on their functional purpose, may provide for the provision of various tax incentives. The study shows that EU member states have made tax support within special economic zones central to their fiscal policy. However, a number of states have questioned the effectiveness of tax incentives within the limits of these formations on the investment development of business entities. In such countries, special economic zones are widely believed to create unfair competition and lower environmental and social standards, including through forced overtime, short-term contracts and lower wages. In some cases, business entities operating in such formations were accused of receiving illegal tax incentives. Therefore, special economic zones do not currently function in some EU countries, in particular Austria, Belgium, the Netherlands, Portugal, Slovakia, Hungary, and the Czech Republic.

In Ukraine, in the late 1990s, also began to actively create special (free) economic zones, on the territory of which a significant number of tax and customs incentives were introduced. Thus, there were 11 special economic zones in Ukraine. The high efficiency of the latter became evident already in the first decade of their operation. However, in the future, there was a sharp decrease in all their socio-economic indicators. According to O. O. Yehorova, the main reasons for such dynamics were [40]:

– change (deterioration) of the conditions of operation of special economic zones by the state contrary to the declared guarantees;

– the complication of the conditions of investment activities with the increase of restrictions, obligations and additional reporting and the leveling of fiscal incentives;

- non-fulfillment by the state of obligations to reimburse value added tax in terms of timeliness and completeness.

These reasons led to the adoption in 2005 of the Law of Ukraine "On Amending the Law of Ukraine "On the State Budget of Ukraine for 2005" and some other legislative acts of Ukraine" [41], which canceled all tax and customs incentives acted in special economic zones, due to their negative impact on the competitive environment, budget inefficiency and certain abuses by business entities. Such innovations by the state prompted most investors to stop beforehand the implementation of their projects in special economic zones. Although the fallacy of such a decision was recognized at the state level, no effective management decisions were made to correct the situation. In addition, during the martial law, the Law of Ukraine "On the General Principles of the Creation and Operation of Special (Free) Economic Zones" [42] has lapsed, although the laws that regulate the functioning of formally operating special (free) economic zones in Ukraine did not expire. As a result, special economic zones de jure allegedly existed, but de facto, being partially deprived of legislative regulation and fiscal support, did not work. Recently, the topic of revitalizing special economic zones has been raised, but not by restoring the functioning of existing ones, but by creating new ones, in particular, SEZ "Donbas" and SEZ "Tourist Transcarpathia". However, in Ukrainian realities, the issue of special economic zones affects the context of the territorial integrity of the state, so the activation of investment processes will obviously be in the background in this matter.

With the beginning of the full-scale military aggression of the Russian Federation, the issue of creating specially equipped zones for industrial development, in particular, industrial parks, became especially urgent. This is related to a number of advantages that industrial parks create for the economy. First, the increase in the number of industrial parks creates competition for attracting

investment, which leads to the production of quality products. Second, increasing urbanization and the growth of residential and mixed-use areas in or near industrial parks creates conditions for their better integration into the wider urban context. Third, digital transformation, especially in technologies related to Industry 4.0, opens up opportunities and challenges for enterprises that actively embrace this trend and try to be aware of productivity improvements.

That is why in 2012 Ukraine adopted the Law of Ukraine "On Industrial Parks", which regulated the creation and operation of industrial parks on the territory of Ukraine with the aim of ensuring economic development and increasing the competitiveness of the territories, activating investment activities, creating new jobs, developing modern production and market infrastructure [43]. In June 2022, amendments were made to the Tax and Customs Codes of Ukraine regarding the provision of tax and customs incentives to create favorable conditions for the operation of industrial parks in Ukraine.

Therefore, investment tax incentives cannot have an individual purpose, because they are based on the principle of equal taxation, accordingly, they can be granted only to categories of taxpayers grouped according to the criteria of scale, sectoral or zonal.

In general, the criteria for granting investment tax incentives should be clearly defined and easily verifiable to ensure a rules-based approach. Tax and customs legislation (and accompanying regulations) should define the conditions that an economic agent must meet in order to be entitled to a tax incentive, with as little space for subjective interpretation or negotiation as possible. The granting of investment tax incentives can then be largely automated by checking defined criteria. However, not all tax incentives can be granted automatically, because the law does not always determine eligibility under all possible circumstances. This often introduces some elements of uncertainty. However, the scope of discretionary powers of state authorities and local governments should be minimal, as there may be a risk of rent-oriented behavior of investors and corrupt behavior on the part of public officials. Setting excessive criteria can also signal poor management of investment preferential taxation and cause prejudice from the new investors.

When choosing options for granting investment tax incentives, preference should be given to cost-based incentives over income-based incentives. Thus, experts of the G20 Working Group on Development note that [35]:

1) cost-based tax incentives include special allowances related to investment costs, including accelerated depreciation methods, investment tax deductions, and investment tax credits. They are aimed at reducing the cost of capital and, thus, make investment projects more profitable in terms of margins, that is, they can generate investments that would not otherwise be realized;

2) income-based tax incentives reduce the tax rate applicable to taxable investment income, including tax holidays, preferential tax rates or tax exemptions. They cause the rejection of current tax revenues for the sake of increasing the future profitability of investment projects, which even without the use of incentives would be profitable and implemented.

It is worth saying that investment tax incentives based on costs are appropriate for the implementation of low-profit social investment projects. It is appropriate to use such incentives in the case of implementation of investment projects that are tied to the relevant territory (its natural resources, agglomeration or local market). At the same time, the implementation of foreign investments that are highly mobile in terms of movement between different jurisdictions is sensitive to both cost-based and income-based incentives.

4. Conclusions

Thus, the EU member states use a fairly large number of various tax incentives aimed at stimulating investment activity at the micro level. Most of them are used in domestic practice, but abroad they are more effective in stimulating investments, primarily due to constant updating and adaptation to the rapidly changing conditions of the economic environment. The domestic practice of the existence of tax incentives has proven that Ukraine does not have a clearly defined system for their provision, which currently does not allow achieving significant changes in the investment development of economic entities. Therefore, applying the experience of EU member states in managing the provision of tax incentives will significantly increase their investment effect.

We proposed to manage the provision of investment tax incentives in Ukraine in several stages: 1) preliminary assessment of the feasibility of introducing investment tax incentives; 2) development and implementation of criteria for granting investment tax incentives; 3) search and use of additional investment fiscal incentives; 4) periodic evaluation of the effectiveness of the use of investment tax incentives; 5) ensuring

transparency and openness of preferential investment taxation. The infologic management model for the provision of investment tax incentives developed by us will allow not only to solve the existing problems of preferential taxation of households and business entities, but also to turn tax incentives into an effective tool for the post-war investment development of Ukraine.

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Contribution of Individual Authors to the Creation of a Scientific Article (Ghostwriting Policy)

The authors equally contributed in the present research, at all stages from the formulation of the problem to the final findings and solution.

Sources of funding for research presented in a scientific article or scientific article itself

Victoriia Rudenko proposed the idea of the article and wrote subparagraphs 3.2 and 3.4.

Halyna Pohrishchuk provided general supervision of the study and wrote the introductory, problem formulation and concluding part of the article.

Olena Moskvichova was responsible for the analytical part of the article and wrote subparagraph 3.1.

Iryna Hryhoruk was responsible for the metodologycal part of the article and wrote subparagraph 3.3.

Conflict of Interest

The authors have no conflicts of interest to declare that are relevant to the content of this article.

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