

## World Practice of Financing Science and Innovation

Oleksandr BOHASHKO

Pavlo Tychyna Uman State Pedagogical University, Uman, Ukraine  
bohashko.o@udpu.edu.ua

Correspondence should be addressed to: Oleksandr BOHASHKO; bohashko.o@udpu.edu.ua

\* Presented at the 38th IBIMA International Conference, 23-24 November 2021, Seville, Spain

Copyright © 2021. Oleksandr BOHASHKO

### Abstract

In the current conditions of the development of the world economy, it is radically changing and financial support for science and innovation is becoming increasingly important. New, complex financing mechanisms are emerging. In the context of growing expenditures on scientific and innovative activities, and at the same time – reducing state budgets, cooperation and networking are becoming important in this area.

The purpose of the study is to analyse the tools of effective state support for innovation. To achieve the goal, it is envisaged to consider the basic concepts and evolution of mechanisms for financial support of science and innovation, as well as the tools used by the state to improve them.

It was found that the leading role in financing still belongs to the state. However, due to the increase in spending on science and innovation, and at the same time the strengthening of budgetary constraints, government grants and subsidies are giving way to more complex schemes.

Only a detailed analysis of the national innovation system within the framework of such a context is able to identify the “levers” that ensure an increase in the efficiency of innovation and enhance the competitiveness of the economy. In this regard, the article discusses the basic concepts of mechanisms for financial support for innovation. The current and future trends in funding science and innovation are presented.

**Keywords:** Financing of Innovative Activity; Financial Instruments; Tax Incentives; Project Financing.

### Introduction

The intensification of scientific activity and the development of the innovative potential of the modern economy is a priority of the state, regardless of social, economic, political or other conditions. The development of innovation in Ukraine is one of the key tasks in strategic plans at all levels of the national economy. After all, increasing the competitiveness and ensuring the stable and stable functioning of economic entities is possible only if the constant introduction of innovations in the production process, development of innovation plans and projects, stimulation of research and development within a particular enterprise, industry or region.

In this regard, a thorough study and analysis of trends and factors influencing the state of innovative development of the country, its effectiveness is extremely important. In modern conditions, special attention and thorough research need issues of current and future trends in financing innovation.

Early models of innovation were based on the assumption that innovation arises in a linear process, the impetus for which is given by basic research, which is replaced by stages of design, engineering, production, marketing and sales. According to this logic, the intensification of scientific activity leads to a natural increase in the production of innovative products and technologies (OECD, 1997a). Simplified linear representations also applied to the financing of science and innovation. The initial stage of the innovation process (basic research) was usually supported by the state, and the stages of dissemination

(marketing and sales) – by the private sector. Intermediate levels (applied R&D, production) were financed by both business and the state.

With the spread of systematic approaches to the study of technological development, the innovation process is no longer considered as a linear sequence in which each subsequent stage begins after the completion of the previous one. Innovation is the result of the complex interaction of stakeholders with constant feedback at any stage of the innovation process. Stakeholders in this study refer to companies, public and private research and development centres, universities and knowledge transfer institutes that interact at different levels. As the knowledge intensity of the economy grows, the number of entities representing business, the state and the education sector involved in the creation and dissemination of innovations increases. The efficiency of knowledge collection and use becomes the most important factor determining national competitiveness (OECD, 1997a). As a result, the complexity and coverage of innovation financing mechanisms is growing on the basis of advanced concepts that take into account the growing economic value of knowledge and their flows and aimed at improving innovation, development of cooperation and cooperation at regional, national and international levels.

In this regard, the article provides consideration of the following tools for financial support of science and innovation:

- formal measures such as tax policy and government subsidies;
- financing of long-term projects by the state and business;
- budget allocations of universities, research institutes, libraries and other organizations involved in the process of knowledge creation and innovation;
- programs implemented by international and regional organizations;
- targeted funding distributed by specialized institutions;
- implementation of individual initiatives through project financing mechanisms.

The study of theoretical and practical aspects of innovative economic development occupies a leading place in the works of both foreign and domestic scientists (Murray and Marriott, 1998; Seidl da Fonseca and Pinheiro-Veloso, 2018). However, today there is a need for further substantiation of the fundamental factors of organization and development of the innovation process, the need to create a clear, logically sound, effective comprehensive system of financing science and innovation.

Although the role of the state in financing innovation is fundamental, traditional and simple grants and subsidies are giving way to more sophisticated tools. Given the increase in operating and infrastructure costs for science and innovation, the state is more active in using mechanisms for joint investment with the private sector (do Canto, 2007). Public-private partnerships are emerging in all countries (Bogashko, 2020; Bohashko, 2020) in the format of project financing (EIB, 2021). Financing of firms through venture capital remains a common phenomenon (Christofidis and Debande, 2001).

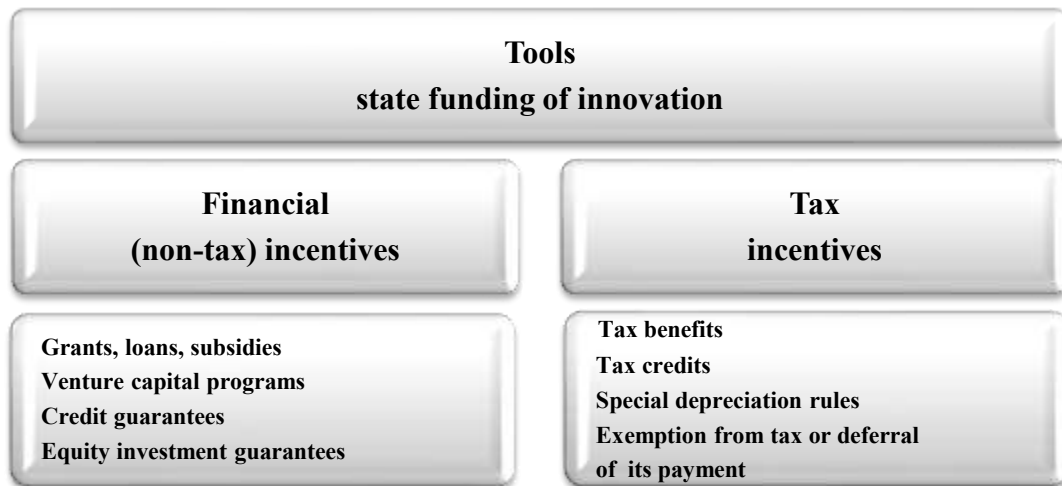
Despite the significant results of various studies on the problems of financing innovation, their level remains low, and the structure is imperfect, which requires further scientific consideration. It is necessary to assess the sources of funding, including domestic, and identify the sources that have the greatest positive impact on funding for science and innovation.

The problem of finding sources of financing and lending for innovative development has become especially acute today and requires comprehensive research in this direction. In this regard, the purpose of the article is to analyze the tools of effective government support for innovation. To achieve this goal, consideration of the basic concepts and evolution of mechanisms for financial support of science and innovation, as well as tools used by the state to improve them.

The theoretical and methodological basis of the study consists of the fundamental provisions of economic theory and practice, as well as general and special methods of cognition of economic reality. The main methods that were used: structural-logical (in the construction of logic and structure of work); comparative (when considering different approaches to the areas of financial support of innovation and their analysis); method of detailing and synthesis (to study the sources of financial support for science and innovation).

## **State funding of innovation**

Elements of public policy, such as legal norms, taxes, financing, competition promotion and intellectual property management, significantly affect the movement of knowledge flows and the interaction of players in innovation systems (OECD, 1997a). By supporting innovation, the state applies financial and tax incentives in various combinations. Financial incentives are implemented in the form of grants, subsidies, loans at reduced rates, guarantees and venture investment programs. Tax benefits include related benefits and loans, accelerated depreciation of assets, full or partial exemption from capital gains taxes, preferential taxation and other mechanisms to reduce the cost of innovation (European Commission, 2001). In fig. 1 shows the main tools of public funding of innovation.



**Fig. 1. The main tools of public funding for innovation**

Source: (European Commission, 2001), (Seidl da Fonseca and Pinheiro-Veloso, 2018)

### Financial incentives, government loans

They are provided at a reduced rate or with an extended repayment period or in the form of non-repayable loans to venture funds and small businesses.

In the first case, the borrower is offered a subsidized interest rate below market level.

The extended payout period eases the financial constraints that companies often face in the start-up phase. R&D strategic projects are secured by non-repayable loans in case the borrower fails to obtain the desired results. Public lending can be an additional burden on the national budget, as the risk of default of the borrower is cyclical and unpredictable.

### Venture capital programs

Designed to assist companies at various stages of development - from creation to expansion and restructuring of production. In most countries, such programs are most relevant for startups that have difficulty attracting funding from the private sector (OECD, 1997b).

Unlike other forms of financing, venture investments are exposed to higher risk and are characterized by lower liquidity. The state can stimulate the development of the venture industry directly, by creating venture funds or incubators, or indirectly – through the improvement of appropriate infrastructure (OECD, 1996).

In the table. 1 presents the main mechanisms implemented at the European and national levels (Christofidis and Debande, 2001).

**Table 1: policy initiatives to support the venture capital market**

Policy initiatives to support the venture capital market		
	Stimulating demand	Stimulation offers
<b>Direct interventions</b>	<ul style="list-style-type: none"> <li>• State incubators</li> </ul>	<ul style="list-style-type: none"> <li>• Venture funds established or sponsored by the state</li> </ul>
<b>Indirect interventions</b>	<ul style="list-style-type: none"> <li>• Management and qualified personnel</li> <li>• Stimulating entrepreneurship</li> <li>• Business incubators, technology parks, clusters</li> <li>• Tax incentives</li> </ul>	<ul style="list-style-type: none"> <li>• Minimization of weaknesses / shortcomings</li> <li>• Maximizing benefits</li> <li>• Financing of current expenses</li> <li>• Tax incentives</li> <li>• Networks of business angels</li> </ul>

Source: (Seidl da Fonseca and Pinheiro-Veloso, 2018)

The reserve for innovative development is financing through such non-traditional (alternative) instruments as venture funds, business incubators, business angels, crowdfunding.

**Table 2: comparative analysis of non-traditional (alternative) sources of funding**

Method of investing	Limitation	Benefits	Disadvantages
Venture funds	selection of projects based on business plans	activities aimed at the most risky investment	the possibility of the company losing control over its own project
Business incubators	mentors of small and medium business	invest intellectual capital	do not assist in finding direct investors
Business angels	required return on investment or share in the capital (blocking package)	optimize the current business model, determine the place and prospects of the project in the market	insignificant contribution to capital
Crowdfunding	interaction takes place on the Internet on specialized platforms or social networks	attracting non-refundable, free investments with simultaneous advertising of an innovative product	for lack of the announced amount, the project does not receive funds because they are returned to investors

Source: (Seidl da Fonseca and Pinheiro-Veloso, 2018), (Bohashko, 2020)

## Guarantee mechanisms

A guarantee is defined as an assumption of responsibility for the payment of a debt or the realization of another obligation if the party who has assumed these obligations is unable to fulfill them. The objects of insurance in this case are participation in capital, political risks and loans, including exports. Guarantees of participation in capital and crediting are of special importance for technological and other startups.

Guaranteed equity programs encourage investors to participate in high-risk projects (OECD, 1997b). They are relevant primarily for small venture funds in conditions where the write-off of a significant share of the portfolio can “Reduce the level of balance of operating funds below an acceptable threshold” (Murray and Marriott, 1998).

Guaranteed participation in the capital “can be realized in the form of a mechanism of insurance coverage by the state of investment costs” in the amount of up to 75% of total capital. In this case, as a rule, the maximum amount of such investments is set for each portfolio (Christofidis, Debande, 2001).

Such guarantees are potentially dangerous because they reduce the ability of venture players to make informed investment decisions.

Credit guarantees are best for those countries where venture financing is not yet sufficiently developed. Here, financial institutions and commercial banks are often the only source of capital for startups and high-tech companies, as they usually do not have a credit history or collateral to cover bank loans. By applying guarantees, banks compensate for losses in the event of a borrower’s default, reducing the overall level of risk. The state usually provides guarantees on a paid basis (OECD, 1997b). In this scenario, lenders have incentives to finance start-up companies and at the same time – full or partial responsibility for assessing the creditworthiness of potential borrowers. Thus, the state benefits economically as the need for direct budget allocations decreases. At the same time, credit guarantees can reduce the motivation of borrowers to fulfill all the conditions of loan agreements.

## Tax incentives

Using the category of incentives, the state targets certain areas of innovation. In some countries, targeted tax incentives are applied in the following areas (European Commission, 2001):

- costs of companies for research;
- capital expenditures on R&D;
- technology transfer;
- industrial design and technological design;
- quality certificates;
- e-commerce, information and communication technologies (ICT);
- software;
- patenting;

- staff training;
- research contracts;
- cooperation of companies with research institutes and universities;
- acquisition of shares of new or innovative companies.

Certain tax benefits that apply to any type of business can help increase innovation by reducing barriers, encouraging staff training, attracting researchers on a contractual basis, cooperation of companies with research institutes and universities, the creation or financing of innovative enterprises, acquisition of their shares (European Commission, 2001).

In some countries, most tax incentives for innovation are part of corporate tax regimes. Companies can write off current R&D expenses from the tax base for the relevant year. To further reduce costs, additional tax benefits are used, permission to write off more than 100% of the cost of creating innovations from the tax base, tax credits and special depreciation rules (European Commission, 2001).

The tax credit allows companies to deduct part of the cost of innovation from the tax base. When using the gross scheme (fixed rate), all investments made during the financial year are credited to the loan account.

Special depreciation rules accelerate the deduction of significant amounts from the value of assets used for innovation. With free depreciation, companies can immediately deduct up to 100% of the value of such assets. Accelerated depreciation makes it possible to quickly write off a significant (compared to normal practice) part of the value of assets. Non-tax tax incentives include (European Commission, 2001):

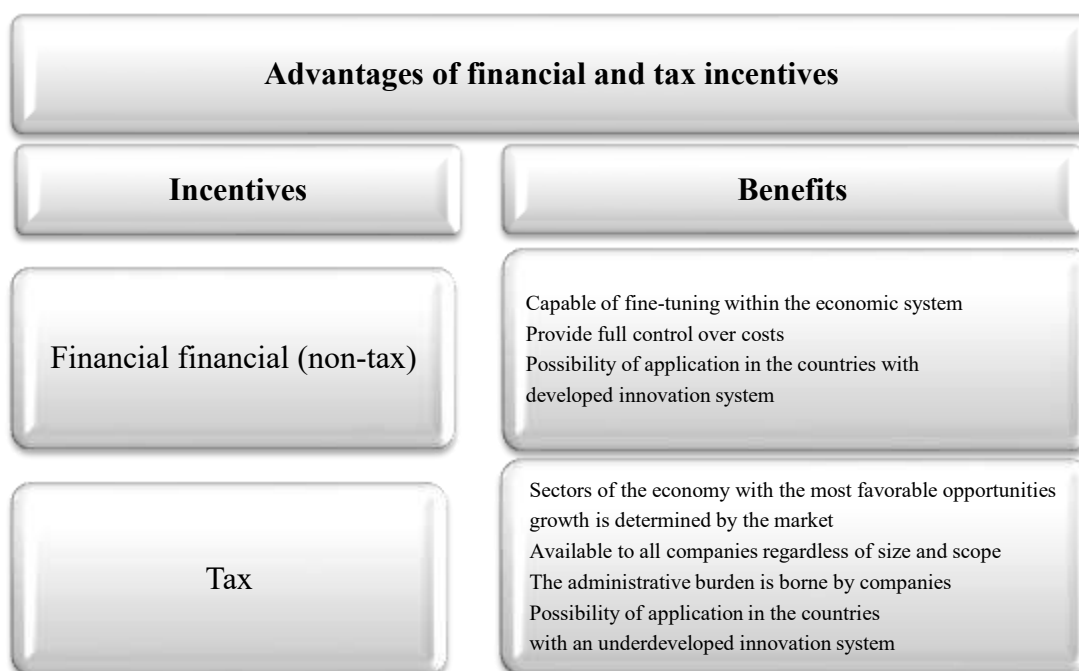
- reduced rate of capital gains taxation;
- deferral of payment of capital gains tax;
- partial or complete exemption of capital gains from taxation;
- preferential taxation of dividends on certain venture investments;
- preferential income tax rates for researchers.

## **Comparison of financial and tax incentives**

The main difference between the considered categories of incentives is related to the entity that has the right to choose the most promising areas of activity to provide support. In the case of financial incentives, this prerogative is owned by the state, tax – the market.

States that do not have significant achievements in innovation, first of all, use incentives that promote its development in all areas of the economy, rather than in any specific sector. Therefore, when using tax incentives, the distribution of funds is in accordance with market conditions. Conversely, countries with developed innovation systems use financial incentives, choosing to support specific sectors or technologies (European Commission, 2001).

The strengths of both types of incentives are presented in Fig. 2. Critical factors that determine the success of their implementation are shown in table. 3.



**Fig. 2. Advantages of financial and tax incentives**

Source: (Seidl da Fonseca and Pinheiro-Veloso, 2018)

**Table 3: factors influencing the effectiveness of financial and tax incentives in science and innovation**

<b>Instrument</b>	<b>Factors</b>
Government lending	<ul style="list-style-type: none"> <li>• The ability of the borrower to service the debt</li> <li>• Opportunities to limit the state share of funding</li> <li>• Expert capacity and lobbying resources of the private sector</li> <li>• Marginal interest rate level</li> <li>• Loan default statistics and related effects</li> </ul>
Government venture investment programs	<ul style="list-style-type: none"> <li>• Focus on filling the shortage with share capital of technology startups</li> <li>• Ensuring the optimal size of the venture fund budget</li> <li>• Attracting experienced venture investors to fund management</li> <li>• Management, strategies and financial support of portfolio companies</li> <li>• Contribution to the formation of a market with commercial potential</li> <li>• Ensuring attractiveness to the private sector</li> <li>• Limited duration of state participation</li> </ul>
Guaranteed equity programs	<ul style="list-style-type: none"> <li>• Risk allocation</li> <li>• Additional benefits from use in combination with non-guaranteed investments</li> <li>• Failure planning in case of failures</li> <li>• Additional economic effects from the involvement of qualified specialists</li> <li>• Joint or individual investments to control risks</li> </ul>
State credit guarantee programs	<ul style="list-style-type: none"> <li>• Risk sharing with creditors</li> <li>• Types of loans to be guaranteed</li> <li>• Fee for the guaranteed part of the loan</li> <li>• Personal guarantees / mandatory direct participation of the borrower</li> <li>• Project evaluation</li> <li>• Average default rate</li> </ul>
Tax incentives	<ul style="list-style-type: none"> <li>• Compromise between different goals and priorities</li> <li>• Going beyond targeted support for innovative projects, taking into account aspects such as technology transfer and contracting with researchers</li> <li>• Clarity of fiscal legislation in defining activities that are supported by specific incentives</li> </ul>

Source: (OECD, 1997b), (European Commission, 2001), (Seidl da Fonseca and Pinheiro-Veloso, 2018), (Bogashko, 2020)

## Project Financing

This set of financial mechanisms is structured, aimed at supporting individual projects, provides credit and investment components. Unlike the standard approach, in which lenders and investors assess the overall financial situation of the borrower, project loans or investments are provided on a targeted basis, based on cash flow analysis. The structure, the order of realization of the project, risks connected with its realization and reception of profit, financial agreements between investors, creditors and other parties are studied in detail.

Project financing assumes that investors or project sponsors who provide capital expect to make a profit if it is successfully implemented.

The structuring of project financing is to determine the optimal ratio of credit and investment component.

From the point of view of investors, the larger the leverage of the project, the higher the profit.

Project funding is formed from various sources:

- public sector (budget);
- state and commercial banks;
- investors and other investors (for example, pension funds);
- financial institutions;
- bond issuers, investors operating in the capital market;
- leasing financing;
- user payments;
- income from sales of products / services;
- rights to new intellectual property (in the case of R & D and innovation).

Such financing requires a reliable and stable income to achieve a balance of costs and benefits, in other words, the payment of dividends and debt service. In the implementation of projects, profit is mainly associated with the implementation of rights to new intellectual property, participation in the commercialization and exploitation of research results embodied in products or services.

Funding and cash flow management mechanisms are used throughout the economic cycle of the project, ensuring its viability.

As part of project financing, a special company is usually created to implement the project. It is a subject in various contracts, including financial, where it is assigned the role of borrower (EIB, n.d.). Thus, a "security package" is provided for project management and financial risks. The project company enters into at least two types of basic agreements - concession and sponsorship.

The state formulates the goals and objectives of the project. Concludes a concession agreement with its executor, selected on a competitive basis. Such a mechanism emerged as a form of public-private partnership based on experience and taking into account the needs of the infrastructure and manufacturing sectors.

Project funding has been practiced since the 1990s. It was first used by the UK government in implementing the Private Finance Initiative program in education (schools, universities and libraries) and science (laboratories, science parks, technology parks, etc.).

The purpose of project financing was to involve business in the design, creation, maintenance and operation of state infrastructure for efficient and high-quality provision of services to taxpayers.

Among the advantages that determine the success of the use of project financing schemes, OECD experts highlight (OECD, 2014):

- distribution of costs, risks, results and intellectual property rights between participants at all stages – from initial research to commercialization of results;
- maximum involvement of small innovative companies;
- support for international and cross-border research programs;
- competitive approach to the preparation, financing and implementation of projects;
- achieving financial stability, overcoming the tendency to under investment, stopping unfair practices.

According to the authors of the report, the focus of project financing should be:

- 1). Priority areas for establishing a state partnership with the private sector – health, transport and environment;

- 2). Accessibility for business of scientific infrastructure and results of public sector research;
- 3). Reduction of technological and financial risks in the early stages of the project.

Thus, innovation will remain among the main drivers of economic and social development. Given the further increase in costs for this type of activity, the support and overcoming of financial difficulties require modern effective tools.

### **Strategic contribution of the state in the form of grants and fiscal incentives**

The state is an important source of support for science and innovation. After all, it is responsible for the creation, expansion and preservation of knowledge and cultural potential, mobilizes scientific and technological knowledge to improve the welfare of the population.

### **International financing and project preparation**

The internationalization of the innovation sphere is also important, but international financing mechanisms are still few and the actions of different countries are practically uncoordinated. Prospects for the further development and expansion of global funding schemes are linked, for example, to the development of mechanisms such as the Kyoto and Montreal Protocols.

Increasing importance is attached to the project approach. Given the complexity of forecasting the results and profitability of innovative projects, the stringent requirements of national and international investors and banks, developers and managers of such initiatives are increasingly seeking financial support during the project preparation and pre-investment phase. Taking this trend into account, international financial institutions, including the World Bank (World Bank, 2017), the European Bank for Reconstruction and Development and the Asian Development Bank, have developed special mechanisms – loans to prepare projects to help borrowers. Demand for such services is also growing due to the spread of a competitive approach to the allocation of public and private resources in the GDR.

### **Private financing and management**

The dynamic development of some technological areas has led to the emergence of new forms of organization and management of STI. The activity of private laboratories, cooperation between the state and business is intensifying. Private organizations can manage research institutes and centers directly or jointly with public or private universities and other research organizations. The main source of income are projects implemented under contracts with industrial enterprises and government agencies.

### **Bank investments**

In search of promising, progressive areas, financial institutions are expanding their comprehensive support for research laboratories, high-tech companies and innovative projects. Bank mechanisms for financing STI programs have emerged, with a clear structure, including soft loans from development banks, long-term loans, trust funds, refinancing schemes for R&D projects, and combined credit-investment models.

### **Public-private partnerships**

Based on the successful experience of public-private partnerships in various areas of mutual interest for the state and business, we can expect the active spread of this format in the field of STI. At the global and national levels, there is a clear trend towards the formation or improvement of relevant treaty and legal structures. The World Bank and other international financial institutions make a significant contribution to this process.

### **Research contracts: emphasis on intellectual property**

The intensification of the development of science-intensive products and services leads to the fact that the agreements on the implementation of R&D increasingly prescribe mechanisms for the use of intellectual property rights. Their protection on a global scale is able to provide the necessary legal basis for the preparation of effective contracts for the commercialization of R&D results, in which such rights serve as a guarantee of loans and investments.

### **Venture capital and business angels**

High-tech sectors are increasingly attracting angelic and venture capital, supporting startups to maturity. Private investors buy shares of new technology companies in exchange for dividends and market value. At each stage of enterprise

development, various formats are used, including funds, angel rounds with seats on the board of directors, up to the stage of initial public offering.

## Crowdfunding and e-financing

The active development of social networks has contributed to the emergence of new investment mechanisms, including crowdfunding and e-financing. They are designed to support socially significant initiatives in areas such as health, education, mobility and the environment. Some STI areas have unlimited potential to raise funds through such mechanisms.

## Conclusions

The article analyses the mechanisms and incentives that the state can use to improve the innovation system, provides an overview of current and future trends in financing innovation.

Scientific and innovative activities are becoming more expensive, state budgets to support it is shrinking. The system of innovation production has become much more complicated, the importance of cooperation between its participants is growing. The dependence of productivity and competitiveness of companies on innovation is growing. In such a context, more efficient and comprehensive solutions using public and private funding are needed. In this regard, it is advisable to use a wide range of tools to support STI – from venture capital to public-private partnerships.

As innovation is characterized by a fairly high degree of uncertainty and risk, it is important to use a variety of funding sources to achieve their flexibility and adaptability to market demands. Each of them has its advantages and disadvantages, so decisions on their choice must be carefully justified. In turn, business entities should be prudent in choosing an investor, as it depends not only on the possibility of implementing an innovative project with the desired results, but also the prospects for enterprise development.

## References

- Bogashko, A.L. (2020), “The Nation’s Human Capital is a Major Resource of the State’s Innovation Potential”, *SOCIETY. INTEGRATION. EDUCATION*, Proceedings of the International Scientific Conference, Volume VI, Public Health and Sport, Researches in Economics and Management for Sustainable Education, May 22 th – 23 th, 2020, Rezekne, Rezekne Academy of Technologies, 2020, 544-553. DOI: [10.17770/sie2020vol6.5056](https://doi.org/10.17770/sie2020vol6.5056).
- Bohashko, O.L. (2020), “The «Knowledge Triangle» Is A Modern Concept for Managing the Development of Education, Science and Innovation”, *Proceedings of the 35th International Business Information Management Association Conference (IBIMA)*, ISBN: 978-0-9998551-4-1, 1-2 April 2020, Seville, Spain, 5964-5971.
- Christofidis, C. & Debande O. (2001), Financing Innovative Firms through Venture Capital, Luxembourg: European Investment Bank. URL : <http://www.eib.org/attachments/pj/vencap.pdf>.
- do Canto, O.A.M. (2007), Incentives to Support Innovation in the Private Sector: The Brazilian Experience, Rio de Janeiro: *Financiadora de Estudos e Projetos (FINEP)*. URL : <https://publications.iadb.org/handle/11319/4628>.
- EIB (n.d.), Project Finance, EPEC PPP Online Guide. URL : <http://www.eib.org/epec/g2g/annex/1-project-finance/>.
- European Commission (2001), Corporation Tax and Innovation: Issues at Stake and Review of European Union in the Nineties, Brussels: European Commission. URL : [http://www.cordis.lu/innovation-policy/studies/fi\\_study1.htm](http://www.cordis.lu/innovation-policy/studies/fi_study1.htm).
- European Commission (2015), RIO Country Report 2015: United Kingdom, Brussels: European Commission. URL : <https://rio.jrc.ec.europa.eu/en/library/rio-country-report-united-kingdom-2015>.
- Murray, G. C. & Marriott, R. (1998), Why has the investment performance of technology-specialist, European venture capital funds been so poor? *Research Policy*, Vol. 27, 947-976.
- OECD (1996), Venture Capital and Innovation, Paris: OECD. URL : <http://www.oecd.org/dataoecd/35/59/2102064.pdf>.
- OECD (1997a), National Innovation Systems, Paris: OECD. URL : <http://www.oecd.org/dataoecd/35/56/2101733.pdf>.
- OECD (1997b), Government Venture Capital for Technology-based Firms, Paris: OECD. URL : <http://www.oecd.org/dataoecd/14/7/2093654.pdf>.
- OECD (2014), Strategic Public/Private Partnerships in Science, Technology and Innovation, Paris: OECD.
- Seidl da Fonseca, R. & Pinheiro-Veloso, A. (2018), The Practice and Future of Financing Science, Technology, and Innovation. *Foresight and STI Governance*, vol. 12, no 2, 6-22. DOI: [10.17323 / 2500-2597.2018.2.6.22](https://doi.org/10.17323/2500-2597.2018.2.6.22)
- World Bank (2017), Project Preparation Facility: Increase in Commitment Authority and Enhanced Scope (Chair Summary), Washington, D. C.: World Bank Group.