IMPLEMENTATION OF PUBLIC-PRIVATE PARTNERSHIP IN THE FIELD OF EDUCATION IN UKRAINE AND ABROAD

ABSTRACT

The global economic crisis has led to a decrease in the number of financial resources directed to the scientific and educational sphere of the national economy, although the most developed countries, including the EU countries, which have not reduced such funding, see this sector of the economy as a guarantee of ensuring high competitive status. Developed countries often use the financing of universities in order to subsidize the final recipients of competitive advantages – enterprises through the public-private partnership mechanism (PPP). The purpose of the study is to determine the peculiarities of the implementation of PPP mechanisms in Ukraine and abroad using comparative analysis methods. To achieve this goal, the article uses general scientific (analysis and synthesis) and specific (observation, description, graphic interpretation, grouping) methods of scientific research. The main results of the study include generalized and supplemented by the authors the main socio-economic interests of authorities, business and higher education institutions (HEI), which are implemented in PPP projects and ensure the development of higher education; improved typology of PPP development levels in the field of education; systematized state initiatives of some foreign countries in the development of the interrelationships of "HEI – business structure"; isolation of the main types and clusters of forms of interaction between higher education institutions and business structures in the world and domestic practice. The authors summarized and substantiated the most effective PPP models in the field of education in Ukraine and identified the main directions of cooperation between higher education institutions and the business environment in the model of PPP projects implementation. The practical value of the research results lies in the development of proposals for improving the effectiveness of partnerships between the higher education system and business structures.

Keywords: public-private partnership, financing models, higher education system, business environment, public-private partnership projects

JEL Classification: A23, D24, F38

INTRODUCTION

As the level of education increases from primary to higher, there is a gradual shift in the balance between its social and economic functions. The better education performs an economic function, the less there is a need to involve the state in its development because the intellectual capital formed in universities is able to reproduce itself and generate income or other socio-economic effects. The economic essence of PPP in the field of education is manifested in its implementation as an institution for mutually beneficial cooperation between the state, business and public sector in the field of human capital reproduction in order to ensure coordinated and balanced development of the labor market and educational services market.

The purpose of implementing PPP mechanisms in education is to increase the intellectual, technological potential of education and science as a condition for sustainable economic growth and modernization of the economy. The introduction of PPP in education implies that the private sector will clearly control the targeted and efficient use of in-
vested resources, and the state will not allow businesses to over-commercialize education and science, which together should ultimately lead to the maximum possible socio-economic effect.

LITERATURE REVIEW

Peculiarities of public-private partnership, methodological bases of its formation and development are devoted to the works of domestic and foreign scientists: A. Akintoye [35], J. Allan [36], V. Varnavsky [9], L. Hrytsenko [11], D. Grimsey. [38], A. Zeldner [20], S. Klymenko [26], K. Pavliuk [30], V. Puchkov [32], O. Hart [39], D. Hodge [39] and others.

Organizational-economic, institutional and methodological aspects of PPP were analyzed and developed in scientific publications by M. Avksentiev [2], O. Baliuk [6], Yu. Bahliuk [4], I. Brailovskyi [8], S. Greve [37], O. Dluhopolskyi [13], L. Dmytrychenko [14], T. Iefymenko [16], V. Zhuk [18], O. Liakhovych [28], O. Pyltiai [31], O. Solodovnik [34] and others.

Mechanisms of PPP implementation in the field of education and tools of financing educational projects on the basis of PPP became the subject of research and controversy of A. Avksentiev [2], N. Bondarchuk [7], N. Duna [15], O. Raievnieva [33], R. Khusainov [42] and other scientists.

Despite a large number of publications, the imperfection of the legislative and adequate theoretical framework for the processes of organization of partnerships between the state, higher education institutions, business structures, and civil society institutions in Ukraine slows down their implementation and narrows funding opportunities for educational and scientific strategic programs and projects. The article is devoted to the solution of these topical issues taking into account the international experience.

From a neo-institutional point of view, there are three main configurations in the positioning of universities, businesses, and government institutions relative to each other [7]:

1. state, where the state plays a leading role (Russia, China, some countries in Latin America and Eastern Europe);
2. non-interference configuration - characterized by limited state intervention in the industrial economy (the USA, some Western European countries), and the role of other actors in innovation is limited: the university supplies qualified human capital and intellectual resources, the government - regulates social and economic mechanisms;
3. a balanced configuration, typical for the knowledge economy, when universities act in partnership with business and government.

PPP is also one of the channels of knowledge movement and a mechanism for their exchange, which allows, on the one hand, avoiding the shortcomings of direct state regulation of the educational process, and on the other - taking into account the current needs of the labor market and employers. The main argument in favor of PPP is that both the education (public) sector and the economy (private) sector have their own unique characteristics and advantages, which, when combined, create the opportunity to act more effectively and achieve better results in education.

According to Yu. Sements', the main socio-economic interests of the authorities, which are implemented in PPP projects and ensure the development of higher education, are [41]:

- improvement of the quality and accessibility of educational services for the population;
- development of the innovative activity of HEIs;
- expansion of the participation of HEIs in economic activities carried out by businesses;
- increase of the efficiency of the use of state property;
- increase of the efficiency of public spending on education, research, and development;
- reduce of the burden on state and regional budgets, which is associated with the financing of social infrastructure development projects;
- income growth of employees of higher education institutions (HEIs);
- emergence and development of corporate social responsibility.

It is also advisable to expand the main socio-economic interests of HEIs in the implementation of joint PPP projects, which R. Husainov identified as follows [42]:

- increase of the quality of educational services through the development of technology, research, and application;
- increase of the efficiency of the process of approbation of professional competencies of higher education applicants;

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increase of the level of demand/demand for HEIs’ graduates by business structures;
- development of the innovative activity of HEIs;
- commercialization of the results of scientific developments carried out by HEIs;
- expansion of the participation of HEIs in economic activities carried out by business structures;
- growth of incomes of employees of HEIs.

Regarding the main interests of the business as a participant in PPP projects that ensure the development of higher education, we agree with the opinion of N. Bondarchuk that such are [7]:

- improvement of the quality of labor resources;
- growth of innovative activity of business on the basis of formation and development of stable long-term connections with HEIs in the system “science-production”;
- expansion of the staffing of business renewal by involving applicants for higher education and teaching staff to perform research that is focused on solving problems of enterprises;
- provision of the business access to the results of research and development (R&D) carried out in the public sector of higher education;
- use of the infrastructure of innovation activity, which is in HEIs, in order to implement the tasks of innovative business renewal;
- receiving state support (financial, organizational, informational, etc.) by participating together with HEIs in the activities of promising innovative forms of economic organization (technology parks, clusters, special economic zones);
- obtaining and improving the image of the state partner in solving key problems of education system development;
- improvement of the image of the business, which is positioned as socially responsible.

Scientists A. Arkhipov, E. Shevchuk [3] believe that the most common today are the two main forms of PPP - institutional and contractual, which is confirmed by European practice. Institutional mechanisms include endowment funds and trust funds, institutions of public participation (public, governing, trustees, and other councils), technology parks, technology transfer centers, resource centers, joint educational structures, centers of collective use. Mechanisms of contractual form, in which the relationship between the parties does not require the formation of a legal entity, can take such forms as scholarship programs, grants, concessions, long-term leases, investment contracts, educational vouchers, educational loans, internships for higher education companies in future employment [10].

Latam M. identifies 7 main areas of PPP [43]:

- adoption and improvement of curricula;
- private charity, including elements of commerce;
- development of state potential at the expense of the private sector;
- outsourcing of management functions;
- public procurement programs;
- voucher programs;
- partnerships for the development of the infrastructure of educational institutions.

RESULTS

World experience shows that depending on the level of economic development and priorities identified in the country, different models of PPP development can be used (Table 1).

The whole set of forms of interaction between higher education and the business environment can be divided into two types depending on the entity from which the initiative comes:

1. from HEIs and enterprises, i.e. there is a private initiative;
2. from the state, provided that the state recognizes the role of HEIs in meeting the requirements of business structures for the purpose of economic development of the country.
Table 1. Typology of PPP development levels. *(Developed by the author on the basis of [47]*)

<table>
<thead>
<tr>
<th>Part of the state</th>
<th>Characteristics</th>
<th>The level of development of PPP</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 % state</td>
<td>Exclusively state system (regulation, financing, provision)</td>
<td>absence</td>
</tr>
<tr>
<td></td>
<td>Private institutions exist</td>
<td>occurrence</td>
</tr>
<tr>
<td></td>
<td>Subsidizing the costs of private institutions</td>
<td>becoming</td>
</tr>
<tr>
<td></td>
<td>Contractual conditions for the provision of part of education by private institutions</td>
<td>average</td>
</tr>
<tr>
<td></td>
<td>Private management of state institutions</td>
<td>growing</td>
</tr>
<tr>
<td>100 % private</td>
<td>Vouchers. Funding &quot;follows&quot; the student</td>
<td>integrated</td>
</tr>
</tbody>
</table>

Table 2 shows the state initiatives of some foreign countries in this direction.

Table 2 Directions of state policy of foreign countries on the development of relations "HEIs - business structures". *(Developed by the author on the basis of [15; 25; 29]*)

<table>
<thead>
<tr>
<th>Country</th>
<th>Measures to integrate higher education and the business environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>An increase in the student places in the HEIs, especially in the field of technology. Establishment of bodies that coordinate the cooperation of universities with business representatives, conduct promising research on staffing needs, the presence of employer representatives in each HEI. Establishment of technological institutes at universities, training in which is focused on the acquisition of professional knowledge in the field of engineering and technology; graduates of these institutes can after two years of study receive a diploma and immediately join the working life. Monitoring the content of training programs by national administrations, which must include representatives of the industry.</td>
</tr>
<tr>
<td>Germany</td>
<td>Development of training of specialists outside the regular system of higher education - obtaining education, which is organized by enterprises and firms in cooperation with the relevant HEIs. The development of links between HEIs and the business environment takes place mainly at the level of individual HEIs and enterprises.</td>
</tr>
<tr>
<td>Belgium, the Netherlands, Spain, Italy</td>
<td>Strengthening ties with specific enterprises through the development of programs to adapt the content of education to the needs of industries, the introduction of at least one day in the learning process, when higher education students study at the enterprise and gain specific practical skills.</td>
</tr>
<tr>
<td>Mexico</td>
<td>Promoting the employment of HEIs graduates through targeted training of the necessary personnel. To coordinate activities, in this direction, special commissions are created, which include rectors, representatives of industrial complexes, and local administrations.</td>
</tr>
</tbody>
</table>
| China                                | Focus on training multidisciplinary highly qualified specialists. For this there were:  
  • a reduction in the number of specialties by almost half;  
  • HEIs received the right to self-regulation and improvement of specialties;  
  • applicants for higher education have the right to independently choose a place of employment.  
A "futures market for highly qualified professionals" has been set up, in which the "All-China employment information network" forms a database containing information on what kind of work HEIs graduates want to have. As an intermediary, the futures market provides this information to interested organizations, thus facilitating "alumni meetings with potential employers" and "mutual choice". |
| Japan                                | Introduction to improving the content of teaching new interdisciplinary subjects, knowledge of which is necessary for business management in the information society. Attracting experts to work in universities - employees of large companies, as well as scientists from research institutes of various companies, which allows training of qualified personnel with high intellectual potential. A closer connection between general and specialized training during the entire period of stay in HEIs is carried out. |

Of all the countries, the largest state initiative in the field of cooperation between HEIs and the business environment is observed in France, Mexico and China. This can be explained by the fact that France is one of the most developed countries in the modern world; Mexico and China are among the most successful countries in the last twenty years.

The whole set of specific methods of the interconnection of higher education and business environment, which are used in foreign countries, both within private and public initiatives, can be presented in the form of Table 3.
The most common methods of cooperation between HEIs and enterprises and organizations in foreign countries are:

- taking into account the requirements of the industry in the development of curricula;
- constant updating of knowledge and skills of specialists due to their aging;
- professionalization of education;
- reduction of specialties within the framework of multidisciplinary training;
- development of partnerships lyceum - college - enterprise;
- joint training programs for higher education institutions and companies (interaction at the stage of organizing the educational process);
- training at the enterprise as a key element of professional education (internship);
- various forms of employment assistance, which are considered to be the most developed method today, characterized by a variety of forms;
- conducting joint scientific and technical research.

### Table 3. Methods of the interconnection of higher education and business structures in foreign countries. (Developed by the author on the basis of [15; 23; 24; 25])

<table>
<thead>
<tr>
<th>Country</th>
<th>Methods</th>
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| USA           | 1. Constant contact of the university with the labor market in order to track its requirements and changes in the economy.  
                 2. Taking into account the requirements of the industry in the development of curricula. Constant updating of knowledge and skills of specialists due to their aging.  
                 3. Evaluation of the success of educational programs in preparing graduates for further life. Periodic studies of graduates' professional careers. The use of the results to evaluate and adjust programs.  
                 4. Programs of joint training of specialists by higher educational institutions and companies (interaction at the stage of organization of educational process). |
|               | **Different forms of employment promotion:**                                |
|               | ▪ providing employment guarantees to their graduates (compensation to the graduate of 2000 US dollars, if he is unemployed for 6 months from the end of HEI);  
                       ▪ assistance from university employment services |
| France        | 1. Constant updating of knowledge and skills of specialists due to their aging.  
                 2. Professionalization of education; reduction of specialties within the framework of multidisciplinary training.  
                 3. Development of partnerships lyceum - college - enterprise, including: organization of internships at the enterprise; the contribution of enterprises to the modernization of educational equipment; participation of professionals in the learning process.  
                 4. Training at the enterprise as a key element of professional education (internship).  
                 5. Participation of industry professionals in the management of state lyceums.  
                 6. Introduction of information structures.  
                 7. Creation of professional advisory commissions that develop the content of training programs in various specialties. The commission includes representatives of industry, educational institutions, government agencies, local administrations, and employees of enterprises.  
                 8. Different forms of employment promotion:  
                       ▪ search for an internship at HEI;  
                       ▪ distribution;  
                       ▪ assistance from university employment services |
| Italy         | Taking into account the requirements of the industry in the development of curricula |
| Germany       | 1. Professionalization of education; reduction of specialties within the framework of multidisciplinary training.  
                 2. Joint training programs for higher education institutions and companies (interaction at the stage of organizing the educational process) |
| China         | 1. Professionalization of education; reduction of specialties within the framework of multidisciplinary training.  
                 2. Various forms of employment promotion: data banks that contain information that job seekers and graduate students want to have after graduation, and provide this information to interested organizations |
| The Netherlands| Enterprise training as a key element of vocational education (internship) |
| Belgium       | Enterprise training as a key element of vocational education (internship) |
| Mexico        | Creation of professional advisory commissions that develop the content of training programs in various specialties. The commission includes representatives of industry, educational institutions, government agencies, local administrations, and employees of enterprises |
| Japan         | **Different forms of employment promotion:**                                |
|               | ▪ providing a “naiti” - an informal guarantee of employment by the company;  
                       ▪ use of "employment bulletins of companies" sent by employment firms ("free application");  
                       ▪ assistance of graduates of previous years, professors;  
                       ▪ agreement between HEIs and private companies on the terms of signing a formal employment certificate (any activity related to job search is still considered informal);  
                       ▪ assistance from university employment services |
In Ukraine, as shown by studies of leading experts [4; 5; 12; 17; 19; 21; 27], the most effective PPP models are following:

- advanced training of employees of the enterprise and teachers;
- creation of science parks, technology parks, and innovation centers;
- internship programs;
- training courses and laboratories from the enterprise;
- programs of student competitions from the enterprise;
- other models of interaction - excursions to the enterprise, target contributions to the development of HEIs (endowments), publication of textbooks and other educational literature, research support, preparation of dissertations, etc.

The experience of other EU countries is important, as about a third of PPPs at the EU level are implemented in the field of education, and this practice is especially common in the UK. Thus, the University of Cambridge proposes to consider PPP as a tool for overcoming poverty and social marginalization of society, and they actively use the opportunities of endowment funds [44]. A special place in the world experience of PPP development is occupied by the Netherlands, where from 1850 to 2000 the share of private schools gradually increased from 0 to 70%, and private schools themselves demonstrate the possibility of building a model that ensures accessibility and quality of education [46]. Indicators of PPP development of universities are used in compiling knowledge balances in Austria [45].

In the Gulf countries (Qatar, Saudi Arabia, and the United Arab Emirates) and in North Africa and the Middle East, where there are strong links with European and American universities, education has been used since the early 1990s for such basic purposes as overcoming illiteracy, diversification of energy-based economies and preservation of cultural unity [48]. It is widely believed that the production and distribution of knowledge requires the exchange of ideas, which are also based on certain cultural traditions, and conditions, including rights, trust, division of responsibilities between different knowledge partners, institutional regimes, strategies, and all other "social baggage", which makes it necessary to adapt the values of the knowledge economy in each country [47].

In Ukraine, the issue of PPP is assigned to the Department of Investment and Innovation Policy and PPP Development of the Ministry of Economic Development and Trade. However, as world experience shows, such functions can be assigned to individual performers. Obviously, the Ministry of Education and Science should also have such a department.

The model of partnership between HEIs and the business environment in the context of PPP projects in Ukraine should include the following areas, as shown in Fig. 1.

Assessing the existing system of interaction between enterprises and HEIs through the prism of PPP projects, experts are divided into two groups: those who are satisfied with the existing system of interaction and assess it as quite effective (41%), and those who believe that this system can be more productive if it is improved (47%) [33].

Unfortunately, the relevant law "On Public-Private Partnership" does not specify that PPP can take place in the field of education, but still identifies areas that may be of interest to educational institutions, namely: culture and sports, real estate management, others scope of PPP [1]. Today, the representatives of HEIs state the lack of a regulatory framework that would ensure the participation of the private sector in the receipt of extrabudgetary funds by state universities, which
indicates their lack of autonomy in managing financial resources, limiting initiative and creativity. At the same time, the new law of Ukraine "On Higher Education" of 2014 establishes the principle of state assistance to PPP in the field of higher education.

CONCLUSIONS

There are a number of financial, economic, administrative and regulatory issues in the implementation of PPP projects in education, which are a deterrent to the inclusion of more incentives for private sector investment in education.

- In the course of the research it was revealed that the main reasons for the decrease in the efficiency of cooperation between business and HEIs are:
  - reduction of cooperation programs with HEIs in connection with the crisis;
  - high level of complexity and responsibility of work at the enterprise that does not allow to take trainees (graduates);
  - inconsistency of HEIs training programs with the technical needs of the enterprise;
  - reduction of the quality of training of young professionals;
  - complication of the determination of the level of qualification of the graduate in connection with the introduction of a two-tier education system;
  - reluctance of graduates to go to business due to low wages.

These problems cannot be solved only by the efforts of HEIs. The state, business and HEIs need to clearly define who is the entity that is really interested in training highly qualified specialists who are ready to be actively involved in the constant modernization of production. As the state tries to radically modernize domestic production in the coming years, it is important to create such incentives for domestic business that will encourage it to participate in the development and implementation of innovations in technology and technical systems.

Promising areas for further research to improve the effectiveness of cooperation between HEIs and the market are: a) consistent identification of existing established partnerships, which often do not find legal certainty; b) research of problems of PPP development; c) taking measures to stimulate PPP.

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Маслов В.О.

РЕАЛІЗАЦІЯ ДЕРЖАВНО-ПРИВАТНОГО ПАРТНЕРСТВА В СФЕРІ ОСВІТИ В УКРАЇНІ ТА ЗА КОРДОНОМ

Глобальна економічна криза призвела до зменшення обсягів фінансових ресурсів, що спрямовуються в науково-освітню сферу національної економіки, хоча найбільш розвинені країни, у т. ч. країни ЄС, які не скоротили такого фінансування, вбачають у цьому секторі економіки запоруку забезпечення високого конкурентного статусу. Розвинені країни доволі часто використовують фінансування діяльності університетів із метою субсидіювання кінцевих отримувачів конкурентних переваг – підприємств за допомогою механізму державно-приватного партнерства (ДПП). Метою дослідження є визначення особливостей реалізації механізмів ДПП в Україні та за кордоном за допомогою методів компаративного аналізу. Для досягнення поставлених мети в статті використано загальнонаукові (аналіз та синтез) і специфічні (спостереження, опис, графічну інтерпретацію, групування) методи наукових досліджень. До основних результатів проведенного дослідження належать узагальнені та доповнені авторами основні соціально-економічні інтереси органів влади, бізнесу та закладів вищої освіти (ЗВО), які реалізуються в проектах ДПП та забезпечують розвиток вищої освіти; удосконалену типологію рівнів розвитку ДПП в галузі освіти; систематизовані державні ініціативи деяких зарубіжних країн у розвитку взаємозв’язків «ЗВО – бізнес-структури»; визначені основні види і кластери форм взаємодії ЗВО та бізнес-структур у світовій та вітчизняній практиці. Автори узагальнюють основні напрями взаємодії партнерства ЗВО і бізнес-середовища в моделі реалізації проектів ДПП. Практична цінність результатів дослідження полягає в розробленні пропозицій щодо підвищення ефективності партнерських відносин між системою вищої освіти та бізнес-структурами.

Ключові слова: державно-приватне партнерство, моделі фінансування, система вищої освіти, бізнес-середовище, проєкти державно-приватного партнерства

JEL Класифікація: A23, D24, F38