ESTIMATION OF THE FACTORS’ INFLUENCING ON EXPERTISE OF THE PROJECTS OF INTERNATIONAL COOPERATION PROGRAM

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In economically developed countries high schools and universities are funded in various ways and from different sources, which often do not belong to the state. Large corporations, companies and individuals are interested in increasing of the scientific potential of their countries. They provide targeted support to the Universities for concrete real projects, which stimulated the rapid development of non-governmental international financial organizations, whose budget is replenished by attracting private and corporate capital. The governments of these countries, feeling all the attractiveness and profitability of such organizations, are increasingly inclined to the same interaction with educational institutions, triggered by the integration processes that have recently emerged in Western Europe and the United States. State support for the "third sector", involved in the development of universities and science, allowed him, according to the research of John Hopkins University (USA), to take the leading position in the amount of money spent. International organizations, located mainly in Europe, United States and Japan, show an increasing interest in cooperation with universities and scientists of the CIS countries, seeking to integrate into the world community and to obtain additional sources of funding for their activities. Since 1992, many of them have started to operate in Ukraine, which along with state financing and payment of works under direct contracts with enterprises has become a kind of additional source of funds.

The purpose of this work is to analyze the activities of existing international financial organizations and to identify possible options for obtaining of additional financial and technical resources for Ukrainian universities, using the example of telecommunication specialists.

Analysis of recent researches and publications

Today, the domestic universities, at first glance, have all possibilities for obtaining funds from abroad. This is a deceiving opinion, because if the goals, objectives and problems of educational institutions of Ukraine are well known to their higher organizations, the long-term relations with which they are established and function clearly, for western countries not defined enough. In addition, work with such organizations is built according to previously clearly defined and stipulated rules on the principles of free competition, in which the strongest wins. Therefore, any higher education institution that wants to receive funding must carry out its activities in accordance with the following stages:
— definition of own goals;
— study of the types, objectives and priorities of the activities of international financial organizations;
— determination of ways of interaction with them with possible adjustment of the University’s own goals.

Goals consist in selecting one or several areas of activity that require the attraction of financial resources in accordance with the specialization. For example, the University that aimed at training of specialists in the field of
management of innovation and information technology, should search organizations for cooperating with educational institutions of this profile. Preliminary results of such search are given in Table 1.

Table 1. Innovation and information technology funds and programs

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Line of activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM</td>
<td>Fund</td>
<td>Grants for payment of higher education, obtaining a scientific degree, training, participation in conferences and symposiums for individual participants.</td>
</tr>
<tr>
<td>East-West</td>
<td>Fund</td>
<td></td>
</tr>
<tr>
<td>DAAD (Germany)</td>
<td>Fund</td>
<td></td>
</tr>
<tr>
<td>Batchel Foundation (USA)</td>
<td>Fund</td>
<td></td>
</tr>
<tr>
<td>USAID</td>
<td>Fund</td>
<td></td>
</tr>
<tr>
<td>Alexander von Humboldt Foundation (Germany)</td>
<td>Fund</td>
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<td>Fund</td>
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<tr>
<td>Alexander von Humboldt Foundation (Germany)</td>
<td>Fund</td>
<td></td>
</tr>
<tr>
<td>The Gotlib Daimler and Karl Benz Foundation (Germany)</td>
<td>Funds</td>
<td>Grants for individual research in institutions, universities and laboratories with the possible acquisition of equipment for a scientist from the CIS.</td>
</tr>
<tr>
<td>The European Science Foundation (EU)</td>
<td>Funds</td>
<td></td>
</tr>
<tr>
<td>German Research Society (Germany)</td>
<td>Funds</td>
<td></td>
</tr>
<tr>
<td>The Earhart Foundation (USA)</td>
<td>Funds</td>
<td></td>
</tr>
<tr>
<td>The European Science Foundation of Universities (EU)</td>
<td>Funds</td>
<td></td>
</tr>
<tr>
<td>NATO</td>
<td>Programmes</td>
<td>Conducting joint research on the basis of cooperation of scientists from different countries, purchasing equipment.</td>
</tr>
<tr>
<td>INTAS</td>
<td>Programmes</td>
<td></td>
</tr>
<tr>
<td>CORDIS (FP 5)</td>
<td>Programmes</td>
<td></td>
</tr>
<tr>
<td>EUREKA</td>
<td>Programmes</td>
<td></td>
</tr>
<tr>
<td>CRDF</td>
<td>Programmes</td>
<td></td>
</tr>
<tr>
<td>HORIZON – 2020</td>
<td>Programmes</td>
<td></td>
</tr>
</tbody>
</table>

*Source: Own elaboration*

After that it is necessary to make an analysis of the types of foreign organizations, as this determines the decision on the future policy of interaction.

Types of international financial organizations. As usual, organizations that provide support to higher education institutions are of the type shared by the Funds and International Cooperation Programs and operate in the territory of Ukraine through special offices located in their country or representative offices registered with the Department for International Development and European Integration under the Ministry of Economy of Ukraine. For the Program such registration is mandatory, because their activities involve the acquisition of equipment and require the application to the tax and customs services for obtaining tax benefits.

The objectives of foreign organizations. Defining their goals, the Funds and Programs are guided first and foremost by the interests of their sponsoring organizations, companies, individuals and the priorities for the development of science and education of their own countries. The activities of the Funds are more often aimed at developing and supporting of higher education for individual participants. The programs are aimed at helping groups of scientists and educational institutions in general, since in the CIS countries they are the intellectual base in which scientific thought is concentrated.

Priority areas of activity include: humanitarian, legal and economic development of the society; environment protection; problems of employment; fundamental research in the field of physics, chemistry, biology, mathematics; information technology and much more.

The aim of the article is:
— to analyze the possibilities of cooperation
— review features of participation in competitions
— to determine easy ways of passing the selection
— compile a summary table.

The main part

After conducting a preliminary analysis, the institution needs to explore the market more carefully. Depending on the choice that was made, there may be an adjustment of the objectives, which will require additional information about the work of the organization, as well as the methods of obtaining financing and its types.

If the educational institution aims to increase the intellectual level of its teachers or graduate students, then the most appropriate for this will be the appeal to the fund (see tab. 1, paragraphs 1-11).

The funds provide assistance in the form of grants – the amount of funds allocated to the recipient, who has all the rights to spend them in accordance to the application submitted to the fund. Grants are provided for:
— payment for higher education abroad, advanced training or internship for scientists with a scientific degree from bachelor to doctor of science, participation in scientific conferences, seminars, symposia, publication of
scientific literature abroad (MacArthur Foundation, Andrew Mellon Foundation, IREX and others (see tab. 1, paragraphs 1-6));
— carrying out scientific research in the institutes and laboratories of Western countries, acquiring equipment, which may later be left to the participant (the Bradley Foundation, the National Center for Scientific Research of France, the Royal Society of Great Britain, the European Research Center and others (see tab. 1, points 7-11).

If the scientific potential of the university is high enough and can be claimed at the international level, it makes sense to turn to international cooperation programs. This will partially improve the technical base, which is used for scientific research.

International cooperation programs operate on the principle of financing projects carried out on the basis of cooperation of groups of scientists from different countries. The concept of granting "funding" differs radically from the concept of granting "grants" and consists in allocating funds to consortia of scientists or organizations for scientific research for subsequent distribution in accordance with a predetermined budget, which takes into account the fees of Western experts or scientists, payment of their visits to Ukraine to monitor the implementation of the stages of work, in special cases – the acquisition of equipment. The activities of the programs are aimed at:
— the involvement of Ukrainian scientists in the implementation of certain stages of research on fundamental and applied research conducted by western scientists (the UNESCO Program and others (see tab. 1, paragraphs 12-14));
— providing of Ukrainian scientists with the opportunity to sell scientific research to western companies, in particular applied research, capable of bringing commercial income to firms in developed countries (see tab. 1, paragraphs 15.16));
— technical assistance (USAID, Canadian International Development Agency and others (see tab. 1, paragraph 17));
— assistance to domestic scientists who worked for the military-industrial complex to reorient their research to peaceful purposes (the US Department of Nuclear Energy Program);
— consulting and transfer of experience and "know-how" from the EU (for example, THE BRITISH COUNCIL), etc.

To receive technical assistance, Ukrainian participants may not bother to look for them, but rather contact the Department for International Development and European Integration at the Ministry of Economics of Ukraine, since one of the areas of its work is assistance in selecting international programs in Ukraine and supporting applications for participation. It should be noted that all these programs are organized at the governmental level and interact with Ukraine on the basis of signed cooperation agreements.

Having compiled a summary table of priority funds and programs, an institution that wants to receive additional funds for development can more clearly formulate the purpose of its appeal to these organizations and begin drawing up a primary appeal.

Form of circulation to funds and programs. The initial opinion about a possible participant is formed precisely on the basis of the submitted preliminary appeal, therefore it is necessary to approach it with special care.

To receive support, a potential participant should contact the selected organization with a preliminary application, which reflects the goals and capabilities of the recipient beneficiary. The selection system is usually multistage. There are several stages of selection. As you progress through the stages, the application is supplemented with new information, which can include: a detailed description or autobiography of the beneficiary, the results of testing for knowledge of a foreign language, the existence of previous contacts with programs and funds, a business plan or budget for the project, an estimate for the equipment to be acquired and much more.

The most important and essential condition for most funds and programs is the availability of a preliminary agreement with a future foreign partner. At the same time, the authority of a foreign partner can sometimes have a decisive influence on the decision to allocate funds. It is important to note that applications and project proposals are compulsory. The funds do not set a strict timeframe for the submission of proposals, or the acceptance of proposals is carried out at certain times several times a year. Programs, often announce the final date for submission of proposals, after which they may even be closed for the duration of the projects (from 1 to 3 years).

The results of the examination carried out in the funds and programs of international cooperation depend on many factors. Therefore, their impact requires careful study and analysis by potential applicants.

In the funds that award individual grants, experts usually carry out the examination in two stages: anonymous expert evaluation and discussion at the expert council, where the final decision is made. There are funds where the final decision is made by the official after studying all the assessments and recommendations of experts, and funds in which the final decision is made on the basis of an additional interview with the applicant.

Examination of draft international cooperation programs is more complex, requires consideration of a number of factors and circumstances. In general, the positive evaluation of the project consists of three components:
1. Preliminary negotiations with the leadership of the program of international cooperation, where the applicant (the beneficiary) was able to convince him of the need to implement the proposed project and benefit to the foreign partner.
2. Non-interference of various kinds of force majeure circumstances.
3. Criteria of project validity.

The first two components are almost impossible to estimate, because they are the result of individual relationships and a combination of circumstances. The eligibility criteria for the project are clearly mathematical in nature, so studying their impact requires more attention.

The aim of the work is to identify and analyze the factors that can influence the results of the examination and develop a methodology for their evaluation from the perspective of a potential applicant wishing to participate in international cooperation programs.

The most attractive for Ukrainian applicants at the moment are two types of international cooperation programs: joint research programs and technical assistance programs. The main condition for the admission of the project to the competition and the examination is its compliance with the Criterion of eligibility – the main factor, which is determined by the management of the programs. The eligibility criterion is the sum of a number of internal factors that we will investigate for each of the types of international cooperation programs. Maximum compliance of internal factors with the requirements of the examination is the maximum criterion of eligibility of projects for financing.

In international cooperation programs aimed at joint scientific research (for example, INTAS, CRDF, NATO, EUREKA, etc.), the availability of connections of scientists from the CIS countries with a foreign partner is considered as a factor of "quality" of the applicant [1]. Some joint research programs allow domestic applicants to carry out scientific activities paid for through project financing. Of these programs, INTAS, CRDF and NATO work on this principle. In this regard, they are of the greatest interest to us from the point of view of organizing and conducting an examination. We study the conditions for admission to the project examination, the eligibility criterion, the evaluation procedure and the coordination of results in such programs.

Proposals must meet the following conditions for admission to the examination:
- be within the appropriate invitations-announcements of the competition;
- have significant research novelty;
- minimum number of partners;
- to correspond to the amount of allocated financing, to established procedures for submitting a proposal;
- have a fixed duration (from 24 to 36 months).

The compliance of the submitted project proposal with these conditions allows the program management to accept the project for the examination [2].

Expert evaluation is conducted confidentially by independent experts, the number of which is not less than three people. Experts assess their answers to questions on the project proposal in points, which include: the conformity of the presented scientific goals, the opinion on the scientific and technical program, the possibilities of the Consortium of applicants and the organization of the examination. We study the conditions for admission to the project examination, the eligibility criterion, the evaluation procedure and the coordination of results in such programs.

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summated up, the results are agreed upon, and on the basis of this final selection of projects. The results of the recent competitions showed [1] that such parameters as scientific fad, the personal prominence of the scientist, the level of development of individual scientific directions in different countries, and, accordingly, the degree of interest in Their funding by joint efforts, are extremely important. They can sometimes dominate the standard selection criteria, such as novelty, significance, feasibility of the project, etc., that is, the "quality" of the proposal submitted. In particular, the results of the competition showed that the choice of this or that project will depend on the sponsoring country. Europeans will find it relevant not that Americans or Japanese and vice versa. These informal factors are also more important than the known announced project selection priorities, i.e. Support of regions, women, young scientists. Part of this is the so-called "infrastructure effect", which is a product of ideology and does not coincide with the natural development of science [1].

When assessing the technical quality of the project proposal:

— "Priorities" – the coincidence of the project objectives with the priorities of the technical assistance programs;
— "Needs analysis" – thoughtful preparation and in-depth needs analysis;
— "Project goal" is a clearly formulated and realistic goal;
— "Dissemination of results" – clearly defined results and consistency between the goal and the expected results;
— "Project Monitoring" – well-planned activities, in accordance with the expected results, a system of internal and external evaluation of the quality of the results;
— "Project Management" – meaningful strategy for dissemination of project results, sustainability of project results, rational management structure, well-thought-out internal decision-making process, clear division of responsibilities, active participation of each member of the Consortium and regular monitoring of the work done;
— "Project schedule" – careful planning of all practical aspects of the project;
— "Project Budget" – a detailed and real financial request prepared in accordance with financial and administrative requirements;
— "Future planned work" is the most complete and thoughtful list of results and methods of their distribution, which, in effect, relieves the programs of refinancing of similar projects; Desire of partners to continue working together after the end of the project.

The institutional assessment focuses on the factors:

— "Consultant Organization" is the authority of a foreign partner wishing to transfer know-how to the Ukrainian side, the large scale of its activities, prior to participation in technical assistance programs, communication with experts from the European Commission;
— "Beneficiary Organization" – proof of the Ukrainian side that it is really not in a position to independently solve the tasks;
— "Project Background" – the relevance of the purpose and content in relation to the system in which the beneficiary beneficiary functions, in the context of national reforms and in relation to the subject area; Experience and competence of the Consortium.

Based on the results of institutional peer review and technical quality assessment, a graded list of the best projects is compiled. After this, the European Commission takes a final decision on the projects to be financed. In addition, at this stage of selection, the European Commission can take into account the distribution of projects between institutions and regions in the partner countries (CIS). At this final stage of selection, the recommendations of the competent authorities of the partner countries can also be taken into account.

The methodology for assessing the factors influencing the examination of projects on international cooperation programs is to determine the degree of their impact on the result, i.e. Criterion of validity. Upon reaching an agreement with the management of the programs prior to submitting the project proposal and not interfering with force majeure circumstances, its maximum compliance with the requirements of the tender is considered as a positive outcome of the examination – the project is accepted for financing.

Let’s compile a summary table of eligibility criteria for projects on international cooperation programs (tab. 1). The factors presented in the table will be evaluated according to the degree of their influence in such a way that the evaluated estimate characterizes the maximum degree of influence of the factor on the result both according to the aspirant’s assumptions and by the expert’s decision.

Proceeding from this, the maximum criterion of validity is determined by the dependence:

$$G_{\text{max}} = \sum_{i=1}^{n} m_i$$  (1)

where, $m$ – the degree of influence of the factor on the results of the examination,

$n$ – the number of factors.

We will assess the degree of influence by importance from 1 to 5, where 1 is not enough, 2 is medium, 3 is strong, 4 is very strong, 5 is maximum (see tab. 1).
However, an expert studying the project can evaluate the importance of the information provided on the basis of its own subjective point of view. Then the degree of the influence of the factor does not necessarily coincide with ours. In this case, it is necessary to talk about the current eligibility criteria for the project.

The ratio of the current eligibility criterion to the maximum criterion is the coefficient \( k \) that characterizes the decision of the project expertise:

\[ k = \frac{G_{\text{tech}}}{G_{\text{max}}} \leq 1, \]

If \( k = 0.8 \ldots 1 \), then the results of the examination can be considered as positive.

Table 2. Maximum eligibility criteria for projects for international cooperation programs

<table>
<thead>
<tr>
<th>Joint Research Programs</th>
<th>Technical Assistance Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factors</td>
<td>The degree of influence of the factor ( m ), score</td>
</tr>
<tr>
<td>Priorities</td>
<td>4</td>
</tr>
<tr>
<td>Compliance with the timing of submission of proposals</td>
<td>5</td>
</tr>
<tr>
<td>Scientific partners abroad</td>
<td>4</td>
</tr>
<tr>
<td>The scientific authority of a partner from Ukraine</td>
<td>5</td>
</tr>
<tr>
<td>Novelty of offers</td>
<td>3</td>
</tr>
<tr>
<td>Scientific Fashion</td>
<td>4</td>
</tr>
<tr>
<td>The degree of development of the scientific direction in Ukraine</td>
<td>5</td>
</tr>
<tr>
<td>Technical quality of proposals and financial plan</td>
<td>3</td>
</tr>
<tr>
<td>Project realizability</td>
<td>4</td>
</tr>
<tr>
<td>Age or sex of scientists</td>
<td>2</td>
</tr>
<tr>
<td>Project monitoring</td>
<td>5</td>
</tr>
<tr>
<td>Age and sex of project participants</td>
<td>1</td>
</tr>
<tr>
<td>Maximum shelf life, ( G_{\text{max}} )</td>
<td>39</td>
</tr>
</tbody>
</table>

Source: Own elaboration

In the table there is a coincidence of some factors in the programs of joint research with the factors of technical assistance programs, however, the difference in program objectives is reflected in the varying degree of influence of these factors on the result. Technical assistance programs interact with commercial enterprises, and this activity is fraught with financial and other risks, so the number of factors, their requirements and the degree of their influence is much higher than in joint research programs. Thus, with successfully conducted preliminary negotiations with program manuals and absence of influence of force majeure circumstances, the project will be necessarily financed if the maximum criterion of validity will be a total score of 39 or 47 for joint research and technical assistance programs, respectively.

As mentioned above, depending on how complete and correct the applicant will make his project proposal, he can count on an unhindered and rapid passage of the examination process and decision-making on the financing of the project. Therefore, the proposed methodology for assessing the factors influencing the examination of projects, which is based on the experience of real interaction and has a recommendatory nature, is, in our opinion, an important and integral component that requires attention and an individual approach when drafting proposals by Ukrainian applicants.

It should be noted that in addition to the above are quite unusual for the domestic universities stages of interaction with international funds and programs, there are a number of conditions that must be taken into account:

1. Priority areas of activity of these organizations are relatively rapidly changing, which is caused both by the evolution of the world trends in the development of society, and by the economic and political interests of their investors in this or that region.

2. Ukraine, referring to the so-called, New Independent States, Partner Countries or Eastern European countries, in most cases acts as a recipient of "know-how" or information assistance, which deprives it of a number of rights. For example, in programs of international cooperation, the payment of labor of domestic scientists or experts is not provided, the Ukrainian side can not independently submit applications for participation, lead consortiums of scientists and dispose of money.

3. The activities of international financial organizations are aimed exclusively at attracting domestic scientific potential for the development of the economies of Western countries.
Conclusions

Nevertheless, today, higher education institutions in Ukraine have the opportunity to additional funding for their activities. Therefore, in order to achieve the goals, HEIs need to constantly conduct research, carefully analyze and compare their own needs with the priorities and objectives of international financial organizations, which will allow:

— Raise the authority of domestic science, raise its intellectual level, establish closer contacts with foreign universities, scientific organizations and companies.
— Thanks to technical assistance, to raise the level of training qualitatively, to modernize the laboratory and technical base, to introduce new information technologies in the training process in order to prepare competitive specialists.

Abstract

International organizations, located mainly in Europe, United States and Japan, show an increasing interest in cooperation with universities and scientists of the CIS countries, seeking to integrate into the world community and to obtain additional sources of funding for their activities. Since 1992, many of them have started to operate in Ukraine, which along with state financing and payment of works under direct contracts with enterprises has become a kind of additional source of funds.

The purpose of this work is to analyze the activities of existing international financial organizations and to identify possible options for obtaining of additional financial and technical resources for Ukrainian universities, using the example of telecommunication specialists.

Formulation purposes of Article. Aims are:

— to analyze the possibilities of cooperation
— review features of participation in competitions
— to determine easy ways of passing the selection
— compile a summary table.

To receive support, a potential participant should contact the selected organization with a preliminary application, which reflects the goals and capabilities of the recipient beneficiary. The selection system is usually multistage. There are several stages of selection. As you progress through the stages, the application is supplemented with new information, which can include: a detailed description or autobiography of the beneficiary, the results of testing for knowledge of a foreign language, the existence of previous contacts with programs and funds, a business plan or budget for the project, an estimate for the equipment to be acquired and much more. The results of the examination carried out in the funds and programs of international cooperation depend on many factors. Therefore, their impact requires careful study and analysis by potential applicants.

The aim of the work is to identify and analyze the factors that can influence the results of the examination and develop a methodology for their evaluation from the perspective of a potential applicant wishing to participate in international cooperation programs.

There is a coincidence of some factors in the programs of joint research with the factors of technical assistance programs, however, the difference in program objectives is reflected in the varying degree of influence of these factors on the result. Technical assistance programs interact with commercial enterprises, and this activity is fraught with financial and other risks, so the number of factors, their requirements and the degree of their influence is much higher than in joint research programs. Thus, with successfully conducted preliminary negotiations with program manuals and absence of influence of force majeure circumstances, the project will be necessarily financed if the maximum criterion of validity will be a total score of 39 or 47 for joint research and technical assistance programs, respectively.

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