

## Waldemar Szczepaniak

Czestochowa University of Technology  
e-mail: waldemar.szczepaniak@wz.pcz.pl  
ORCID: 0000-0003-2608-1534

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### ANALYSIS OF BARRIERS IN THE PROCESS OF APPLYING FOR EU FUNDS BY PUBLIC UNIVERSITIES

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### ANALIZA BARIER W PROCESIE APLIKOWANIA O ŚRODKI UNIJNE PRZEZ UCZELNIE PUBLICZNE

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**Summary:** The main objective of the study was to analyse and assess barriers hindering public universities from acquiring EU funds for their development. The study uses methods of literature sources analysis and quantitative research with the use of questionnaire distributed among managers of EU projects implemented in public technical universities. In the course of research it was concluded that internal barriers at university regarding the provision of funds necessary to finance own contribution and the insufficient number of adequately prepared staff are of key importance. The identification of the key barriers in obtaining EU funds should enable the necessary management actions to be taken at universities that increase their absorption capacity. As part of project management, the impact of the project environment should be taken into account and, by strengthening internal universities, it is necessary to effectively limit barriers to public universities applying for EU funds.

**Keywords:** barriers, university environment, EU projects, project environment, public universities.

**Streszczenie:** Głównym celem opracowania była analiza i ocena barier utrudniających uczelniom publicznym pozyskiwanie środków UE służących ich rozwojowi. W opracowaniu zastosowano metody analizy źródeł literaturowych oraz przeprowadzono badania ilościowe z wykorzystaniem kwestionariusza ankiety wśród kierowników projektów unijnych zrealizowanych w publicznych uczelniach technicznych. W toku badań stwierdzono, że kluczowe znaczenie mają bariery wewnętrzne w uczelni dotyczące zapewnienia środków niezbędnych do sfinansowania wkładu własnego oraz niewystarczającej liczby odpowiednio przygotowanych kadr. Identyfikacja kluczowych barier utrudniających pozyskiwanie środków UE powinna umożliwić podjęcie niezbędnych działań zarządczych na uczelniach podnoszących ich zdolność absorpcyjną. W ramach zarządzania projektem należy uwzględniać wpływ środowiska projektowego i poprzez wzmocnienie wewnętrzne uczelni skutecznie ograniczać bariery utrudniające publicznym uczelniom aplikowanie o środki UE.

**Słowa kluczowe:** bariery, otoczenie uczelni, projekty unijne, środowisko projektowe, uczelnie publiczne.

## 1. Introduction

Public technical universities in Poland have actively participated in the implementation of EU projects in the financial perspective 2007-2013. Due to the eligibility period of the previous perspective, these projects ended not later than on December 31, 2015. At present, public technical universities will carry out EU projects as part of the financial perspective 2014-2020 until December 31, 2023; enriched with previous experience, but also under new Operational Programs and new requirements imposed on beneficiaries.

EU projects implemented by universities are mainly of a didactic or scientific-research nature. In both cases it is necessary to take into account the impact of the project environment on its implementation. Projects involving didactic classes require taking into account, first and foremost, the expectations of the final beneficiaries, which may be students as well as secondary and primary school students, as part of third mission programs of the university. In the case of research and development projects, which in the current financial perspective are mainly implemented as part of cooperation with industry, the expectations of companies implementing innovations and the final recipients of their effects need to be taken into account. In the case of applying for EU funds, an assessment of the impact of the environment on the project should take place at the stage of preparing the application for co-financing by the university.

Literature analysis shows that the main interest of researchers is focused on the analysis of the impact of the environment on the implementation of business projects by enterprises operating on the market [Carvalho et al. 2015; Grant, Pennypacker 2006; Isik et al. 2009; Joslin, Müller 2016; Todorović et al. 2015]. However, also public entities, whose functioning is heavily regulated by legal provisions, actively participate in the implementation of projects co-financed from EU funds [Chluska, Szczepaniak 2017]. Thus, one can point to the existence of a cognitive gap in the area of the identification and analysis of the impact of the environment on the implementation of EU projects by public entities. Therefore the main goal of the study was to analyse and assess the barriers to public universities acquiring EU funds for their development.

In aiming to implement the determined research goal, a literature analysis was carried out accompanied by a questionnaire survey. The first part of the paper presents the theoretical aspects concerning the analysis of the unit's environment and project environment. The next part describes the research methodology. Then an analysis of the results of a survey conducted among the managers of EU projects completed in public technical colleges was presented. The last part includes a summary of the research results and indicates the directions of future activities increasing the absorption capacity of public universities.

## 2. Literature review

The implementation of each undertaking is determined by the number of internal and external factors that represent the environment of the project [Trocki, Grucza 2013; Youker 1992]. The environment, based on the theory of systems, means all the elements that are not part of the system, but affect it or constitute its object of influence [Koźmiński et al. 2014; Pawlak 2006]. An analysis of the project environment begins with analysing the environment in which the unit implementing the project operates. Within the unit's environment, it is possible first of all to distinguish the macro-environment (also known as the global environment, general or downstream environment) and the micro-environment (called the closer or competitive market environment).

Macro-environment analysis includes the general conditions of the organization's activities, which cannot be changed by the unit and therefore is forced to adapt to them. These include the following factors [Budzik 2018; Gajdzik, Jama 2010]:

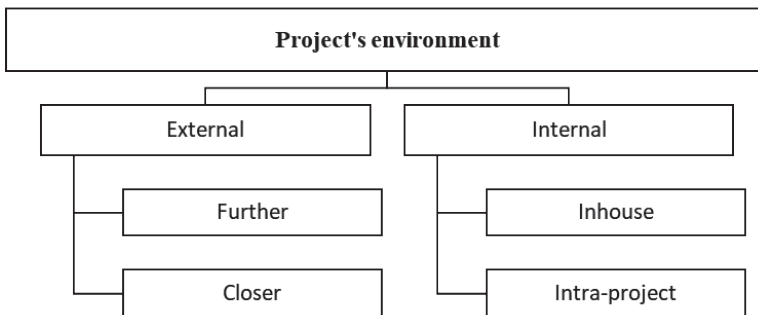
- economic, including interest rates, exchange rates, inflation rate, level of budget deficit and public debt, trade balance, structure of economy, economic growth rate,
- social and demographic, including social features, level of natural growth, rate of aging of residents, level of affluence, lifestyle, scales and nature of unemployment,
- legal and political, including the political system and its stability, binding legislation, the system of the state,
- cultural, including ethical norms, traditions, customs,
- technological, including the level and technical and technological changes, scientific innovations, know-how,
- natural and environmental, including resources and values of the natural environment, its degradation level, sources of pollution and their range, requirements in the field of environmental protection,
- international, including trends and directions of political, economic, legal, cultural and social changes on the international arena, global conflicts and economic crises.

The microenvironment, on the other hand, constitutes the majority of entities entering into direct relations with a given unit, these entities may affect the unit, but also may affect their operations. The strongest influences on the project are people or groups of people whose interest is the successful completion of the project called project stakeholders [Łada, Kozarkiewicz 2014; Mok et al. 2015; Oppong et al. 2017]. As part of the microenvironment, the following can be distinguished [Gajdzik, Jama 2010]:

- recipients (individual, institutional),
- suppliers (producers, brokers, wholesalers),
- owners (shareholders),

- competitors (other entities competing with the unit for clients and resources, including potential competitors),
- partners (cooperating organizations, jointly implementing a given project, allies, consortium members),
- regulators (institutions with powers to control, regulate or otherwise influence the practice and policy of the individual),
- employees,
- trade unions.

When considering the environment of the project, first of all the components of the socio-economic environment that interact with the project should be borne in mind. Therefore the project's environment is an entirety of phenomena and processes, as well as individuals and units influencing the project and subject to its impact [Knosala, Łapuńska 2015; Trocki 2014]. The division of the components of the project's environment is presented in Figure 1.



**Fig. 1.** Elements that represent project's environment

Source: self-elaboration on the basis of: [Trocki, Gruzca 2013].

A project's external environment can influence the project indirectly, and then it is called external further environment or directly, representing closer external environment. External further environment is created by legal, political, technological, economic and cultural environment, etc. On the other hand, external closer environment is formed by external entities that come into direct contact with the project, such as suppliers, customers and competitors. A project's internal environment is also subject to further subdivision. Hence, one can distinguish a project's in-house environment represented by organizational units of the entity implementing the project, which do not participate directly in its implementation, but interact with the project. These will include supervisory bodies, managers of individual organizational units and other employees. On the other hand, members of the project team who directly implement the project will create an intra-project environment [Trocki, Gruzca 2013].

The project manager plays a special role in the project management [Ahmed, Abdullahi 2017; Ramazani, Jergeas 2015], which during implementation of the

project can guide it from the task point of view, focusing on achieving the project results on time, within the adopted budget and assumed quality level, or from an organizational perspective focusing on creating value for the organization [Andersen 2016; Montequin et al. 2015]. In the case of EU project management, in which the condition of recognizing incurred costs is to be fulfilled, the objectives assumed in the application should prevail, the perspective of the task should dominate and the project environment should be analysed from this perspective. The contemporary environment (surroundings) of the project is determined by four main factors [Pawlak 2006]:

- high level of complexity,
- competitiveness,
- customer orientation (final beneficiary),
- complexity of applied solutions.

Project management is a complex process [Padalkar, Gopinath 2016], which in the case of EU projects begins at the moment of appointment of a team preparing the application for co-financing, i.e. the project implementation plan. Studying the project environment should take place at the planning stage of the project implementation. For this purpose the popular SWOT strategy analysis technique can be used, serving, among others, for [Trocki, Gruzca 2013]:

- determining individual components of the project environment,
- identification of risks related to implementation of the project within a given project environment,
- determination of activities strengthening positive interactions between the project and environment,
- determination of actions limiting negative interactions between the project and environment.

Through the proper understanding of the project environment and skilful cooperation with it, the likelihood of completing the project successfully, increases [Joslin, Müller 2015; Todorović et al. 2015]. Using the existing potential it is necessary to counteract the threats appearing in the environment and to eliminate the risk of failing to complete the project.

### **3. Research methodology**

The subject of research concerned public technical universities operating in Poland. Public technical universities include two Universities, two Academies and fourteen technical universities (polytechnics). Public technical universities in Poland have their headquarters in 13 voivodeships with the exception of the Lubuskie, Kujawsko-Pomorskie and Warmińsko-Mazurskie voivodeships.

Based on data from the National Informatic System SIMIK 07-13, it was specified that public technical universities within the framework of the financial perspective 2007-2013 carried out, by 31 December 2015, a total of 659 individual projects or projects in which they served as leaders in the framework of Operational Programs.

These projects represented the studied population. In the survey, the selection of deliberately-random respondents was used. Twenty percent of projects were randomly selected from each public technical university. The survey was prepared in Internet format and posted on the platform [webankieta.pl](http://webankieta.pl). An invitation to complete the questionnaire was sent to 132 project managers from the EU, of which 85 fully completed the survey in full, which gave a manoeuvrability of 65%. The questionnaire concerned one project and covered closed and semi-open questions.

#### 4. Research findings and discussion

As part of the survey, EU project managers were asked to indicate the main barriers they saw in the process of applying for EU funding. This question was semi-open, so that it would be possible to identify other barriers than those proposed by the author of the study. The obtained results are shown in Table 1.

**Table 1.** The main barriers to applying for funding by technical universities

What barriers make it difficult to apply for funding by technical universities	No of indications	Share (in %)
Own contribution	64	75.3
Lack of appropriate staff	37	43.5
Lack of specific procedures in the entity	17	20.0
Lack of proper infrastructure	25	29.4
No need	4	4.7
Reluctance of entity authorities	10	11.8
Other	15	17.7

Source: self-elaboration based on research,  $n = 85$ .

The most important barrier in applying for co-financing by public technical universities, in the opinion of EU project managers, is the need to provide their own contribution. This response was indicated by 75.3% of respondents. It should be remembered that public universities have limited possibilities to cover their own contribution required for some types of EU projects.

In second place, among the barriers impeding application for subsidies from EU funds by public technical universities, the respondents pointed to the lack of properly prepared staff. This response was indicated by 43.5% of respondents. At the same time, this confirms the importance of improving qualifications at universities, above all administrative employees, in the field of the preparation of EU projects and their subsequent coordination and settlement.

As an important barrier to applying for co-financing, 29.4% of respondents indicated the lack of adequate infrastructure. Unfortunately, despite high support that public universities received in the previous perspective, not all universities managed

to fully develop the necessary infrastructure. The situation is so bad that in the current financial perspective emphasis has been placed in the Operational Programs to use infrastructure purchased under the funds for 2007-2013. Currently, the funds allocated for development of infrastructure have a very small share in available allocation.

Procedural issues also constitute an important source of barriers to applying for EU funds by public technical universities. In the case of 20% of the respondents there are no specific procedures at the university, therefore the process of applying for EU funds cannot proceed smoothly. However, this barrier may be offset relatively quickly, unlike those mentioned earlier.

Other barriers impeding application by public technical universities for co-financing were, in the respondents' opinion, much less significant. However, 11.8% of respondents indicated the reluctance of the authorities of the entity as one of the barriers hindering application for EU funds which may be worrisome. However, this may be due to the lack of funds to contribute or to concerns related to the subsequent sustainability of these projects. The lack of such a need, which was indicated by only 4.7% of the respondents as a barrier to applying for funding, may be the reason for the reluctance of university authorities to engage in the implementation of some projects.

Since the question about barriers was a semi-open question, the respondents had the opportunity to indicate other answers than those proposed by the author. The respondents when asked about the barriers, indicated among others the overload of scientific and scientific-didactic employees with administrative work, which effectively prevents them from engaging in other undertakings, or the bureaucratic obstacles related to the number of formal requirements, the fulfilment of which is a prerequisite for applying for funding. The respondents also pointed to adverse changes that took place in the PO WER Program, where project management costs were transferred to indirect costs, which may mean that these funds will be insufficient to provide remuneration for employees coordinating these projects.

The main barriers related to the implementation of EU projects are related to the need to guarantee the necessary funds to provide own contribution. In addition, the implementation of a large number of projects involves the possibility of ineligible costs and in the case of infrastructure projects also with the need to ensure their durability within five years of project completion, which will also require the involvement of the university's financial resources. Unfortunately, unfavourable demographic changes mean that the financial possibilities of public universities are decreasing. It is necessary to look for alternative sources of financing university's activities rather than funds from the state budget.

In the new financial perspective, it may be particularly worrying that participation of beneficiaries in project financing is increasing. For example, in PO WER, universities will have to provide each time their own contribution at the level of 3% of the project value. Moreover, in the case of transferring project management costs to the category of indirect costs, it means that in reality public universities will be forced to cover not only 3% of own contribution, but also part of the costs related to proper project support in a situation when indirect costs will be insufficient.

## 5. Conclusions

Public universities in Poland receive funding for their activities mainly from the state budget, they can also raise funds from student fees. After Poland's accession to the European Union, funds from European funds became an important source of financing public institutions' development. Therefore, it is necessary to raise the absorption capacity of public universities with a simultaneous increase in the efficiency of using EU funds.

The project environment is a set of conditions in which the project is implemented. The environment cannot only, but should be, managed in the same way as any other aspect of the project being implemented. The project implementation unit, in particular the team of contractors with the project leader at the forefront, by shaping positive relationships with the environment, may affect the speed and efficiency of the project implementation.

The receipt of co-financing from EU funds by public universities is often associated with the need to contribute. With the increase in value of the project and its duration, the risk of recognizing part of the project costs as ineligible increases. This risk can be limited, however it cannot be completely eliminated. It should also be remembered that bearing ineligible costs is often independent of the project management team. This is why it is so important to look for extra-budgetary sources of income for universities, which could be used to cover not only their own contribution but also ineligible costs. Staff shortages and insufficiently developed university infrastructure also constitute important barriers to the effective application for EU funds.

The identification of key barriers to obtaining EU funds should facilitate taking the necessary management actions at universities that will increase their absorption capacity. The allocation of funds from the current financial perspective directs universities to implement projects within the scientific and industrial consortia. In this way, universities using their research and development potential can acquire significant financial resources from the commercialization of the research results. These funds should be used to finance further projects and develop the university infrastructure.

As part of the project management, the influence of the project environment should be taken into account and, by strengthening internal universities, it is necessary to effectively limit barriers to public universities applying for EU funds. Regarding directions of future research, the need to build a coherent theory regarding the effectiveness of obtaining and using EU funds by public universities should be pointed out.



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