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Funding scientific research in Romanian economic universities

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Abstract
Knowledge has always been a never-ending growth space where the more we discover, the more there is to be discovered. Within this framework, research has played an enormous role as an organized and clearly determined space that generated fundamental change for everyone involved. The increasing number of discoveries has happened simultaneously with the increasing number of research areas that awake interest. But since the same research funds were insufficient in covering the new research topics, various funding alternatives have emerged in the recent years. And the biggest question that emerges relates to researchers' familiarity with all the available opportunities in terms of research funding. In this context, the current research was developed, aiming to tackle with Romanian researchers' awareness, interest and future plan when referring to winning a research grant. Major findings of the current research show that, despite extensive general research experience, Romanian researchers lack experience in applying for international grants and, to some extent, they even lack awareness about the available calls they could apply to. This finding opens the door for a shift in communication strategy about these grants, and also a new perspective in terms of institution's research strategy.

Keywords: scientific research, international funding, economic universities.

JEL classification: I23, M31.

1. Introduction

Scientific research has been long known as the engine for societal development in every area of life and for a long period of time it was the only path for generating evolution. Within this longstanding tradition of scientific research, the increasing specialization of university centers has also led to research areas expansion towards areas like Economics. This expansion has also led to an increase in funding options for scientific research projects, in all areas, including Economics. Even though external funding options are becoming more popular, there is little to no research in how the academics are perceiving these funding sources and, more importantly, how they intend to act about them when thinking about their own research interests. In this context, the present paper aims to fill the gap in the literature on scientific research projects and their external funding options in economic universities. After a brief evaluation of previous papers on similar topics, a direct research among academics is presented and discussed.

2. Scientific research

A country's progress has been a purpose of multiple human endeavors, out of which scientific research stands out as a way of determining evolution that is important to policymakers (Kovac, et al., 2018). Actually, previous studies have showed the positive effect of participation in R&D consortia compared to the performance of non-participants due to the complementarity or knowledge spillovers among participants (Nishimura, Okamuro, 2018). Given the high impact of any type of research that is well acknowledged by virtually everyone, policymakers have developed multiple ways of funding these initiatives and had to decide within limited country's budgets where and how to allocate the money (Kovac, et al., 2018).

Laying the foundation of what scientific research really is, Koshkina and Sharamko (2015) defined it as the production of scientific knowledge (mainly of fundamental character), which is characterized by self-selection of the research direction based on internal criteria. Therefore, scientific research aims to expand mostly theoretical fundamentals, that later on will translate into applicable theories and concepts. One common concern for scientific research and people engaged in this area is lack of funding or sporadic funding (Kovac, et al., 2018), which might be also determined by shortage in information on available funding options or shortage in interest of taking the necessary effort to attract outside funding for own research interests. Additionally, it is inherently difficult to provide incentives for innovative activity using formal contracts and rules (Nishimura, Okamuro, 2018) and yet research grants calls are the most popular funding alternative in the area of scientific research.

Still, the current development of scientific research has brought within this area the concept of 'project management', centered on applying organization theory and organizational behavior approaches to the project phenomena (Jacobsson, et al., 2016). In the context of project management when it comes to externally funded scientific research projects, the need for monitoring within scientific research projects has become essential for restraining moral hazard and discouraging opportunistic behavior among project participants, especially in the absence of incentive contracts (Nishimura, Okamuro, 2018).

One leading source for scientific research projects consists of university and their staff who frequently face research related performance evaluation in order to get ahead in their academic career. For example, Corsi, et al. (2019) have discovered substantial variability in the chances of qualifying for an academic position, depending on candidates' main fields, topics and methods of research. Moreover, the same authors have discovered that a candidate's chances to qualify as an acceptable associate or full professor under the Italian ASN procedure depend also on his/her research interests (Corsi, et al., 2019). At the university level, heightened competition has placed universities under considerable pressure to gain and attract continuous external investment in order to fund research center, the leading strategy in sustaining research excellence (Morrisson, Szumilo, 2019).

All in all, scientific research creates the premise of growth for every level: individual (academics and research results users and recipients), community (universities, research consortia and industries) and nations. But in order to achieve these positive outcomes, responsibility also falls on academics to develop sound research projects for attracting external funding. Next, our research in an economic university in a Romania will evaluate academics perception on this topic.

3. Romanian economic academic researchers' interest and experience in attracting external funding for research project

3.1. Research methodology

3.1.1. Scope

The present study is focused on Romanian economic academic researchers' interest and experience in attracting external funding for research project, as this is one of the major concerns of ex-communist countries: lack of confidence and experience in accessing European funds.

3.1.2. Objectives

This research is split in three sections, as presented below, each section having a series of secondary objectives:

A. Degree of involvement in the university research activity
    a. The current researcher status
    b. The scope of the academic research activity
    c. The current level of involvement in university research activity
    d. Number of projects conducted as manager or research team member
    e. Type of involvement in the university research activity
B. Funding sources for academic research activity – level of awareness and application
    a. Known sources of funding for research projects
    b. Sources of non-reimbursable funding for which at least one project application has been submitted
    c. Funding sources accessed
    d. The research topics for which the funding was obtained
    e. Reasons why no grant applications have been submitted so far
C. Future approaches of the research activity
    a. Future scopes for academic research activity
    b. Funding sources for future research activities

3.1.3. Source of information

The researched community is represented by the employees and collaborators of one of the biggest Romanian economic universities: the Bucharest University of Economic Studies (ASE). The observation unit coincides with the survey unit and is represented by the person who carried out or intends to carry out research activities as an ASE employee or collaborator.

3.1.4. Data collection

Research method: online survey, designed through the Lime Survey platform. The link to the questionnaire was distributed on the institution's intranet, thus achieving a balance between the percentage of those who had research concerns so far and those who have not yet carried out such activities but intends to do so.

The questionnaire had 27 questions, most of them with standardized answers, so as not to overload the respondent. There are, however, a few open-ended questions, just to give the research participant the opportunity to provide as much relevant information as possible. The questionnaire includes both questions directly related to the purpose of this survey, as well as other questions derived from the need to know as much as possible about the researchers' behavior.

The data collection process was carried out by the specialists of the project team, who carried out the following specific activities of a direct quantitative research: questionnaire

programming, data collection, interview verification, export of the database in Excel / SPSS format. The data was collected in the Fall of 2019.

Sample size: Being a representative research (both in terms of quantity and population structure), with a maxim margin of error +/- 5%, a confidence level of 95% and an 80% incidence level within the whole community (the share of permanent and auxiliary teachers involved in research activities in 2018), the total sample is 246 people. Correcting this value based on the total size of the research community (total of permanent and auxiliary teachers from ASE in 2018, N = 1175), we obtain a final sample size of 204 persons.

The sample structure was determined using the proportionate stratified sampling method, depending on what faculty the respondents belonged to and the purpose for which the research activity is carried out within the institution. For the faculty criterion, the weight of each faculty's teaching staff within the university total academic employees is taken into account. For the criterion regarding the purpose of the research activity, 60% of the research will be considered for grants and 40% of the research for scientific works (articles, conferences, doctoral works, etc.).

3.2. Research results

The analysis will be presented accordingly to the research objectives, going from the more general perspective on research involvement to the more specific funding access intentions and success rate.

3.2.1. The current researcher status

Before going into details about research objectives, funding sources and future research topics, the current status of the participants was examined. Although we had as a selection criterion that everyone had to have experience in academic research, it is important to know if participants are still involved in research activities.

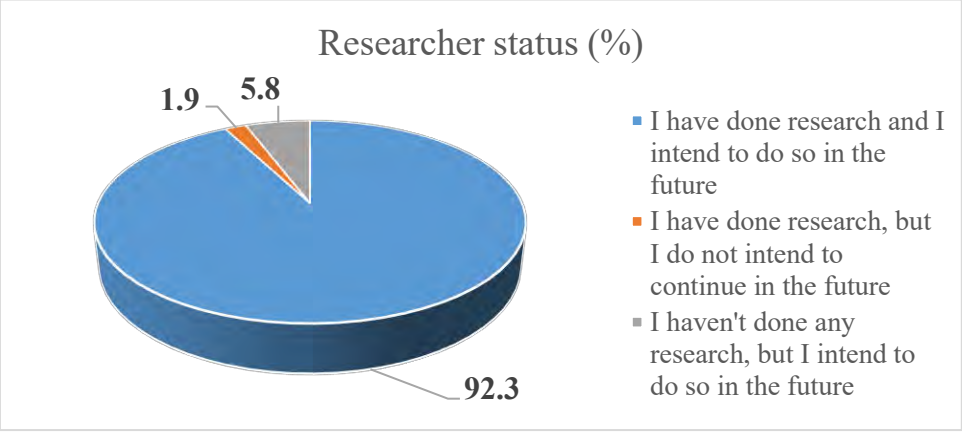

Figure 1. Research status for economic academic researchers (%)

As it can be seen in Figure 1, most participants (over 90%) have done research until now and intend to do so in the future. There is a small percentage that intends to quit this activity in the future, and the university management should find out what causes this decision, in order to diminish their spread in the researchers' community.

3.2.2. The scope of the academic research activity

The present paper's purpose is to evaluate the research activity focused on funding projects, thus it is important to see what is its place among all the academic research scopes (see Figure 2).

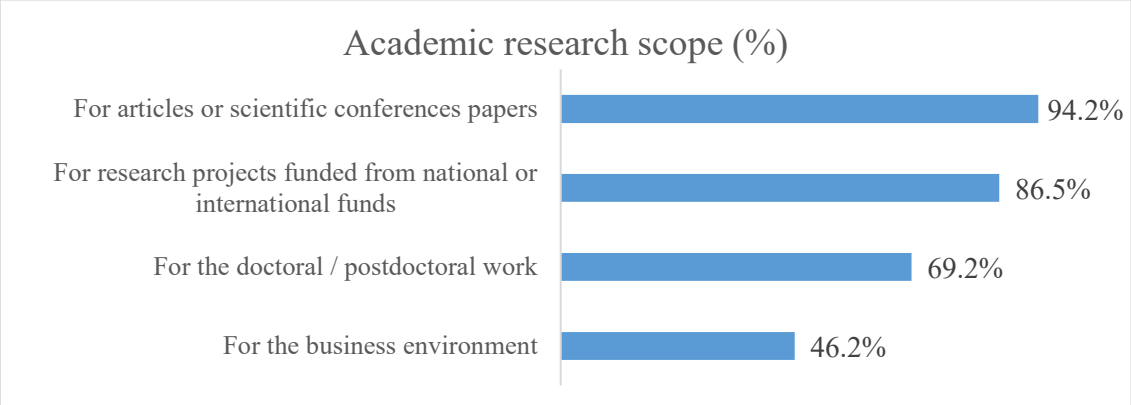

Figure 2. The scope of economic academic research (%)

We can observe that most of the times, when academic research is done, the scope is to write articles or scientific papers for conference attendance. Not far from this scope comes the research for funding projects, with a high percentage of 86.5%, thus we can draw the conclusion that there is a direct and strong association between doing research and getting the funds for it.

3.2.3. The current level of involvement in university research activity

This objective is directly correlated to the intensity of the research activity within the university, as it's not all sufficient to be part of the research world, it is also important the degree of involvement and effort put into writing and implementing a research project.

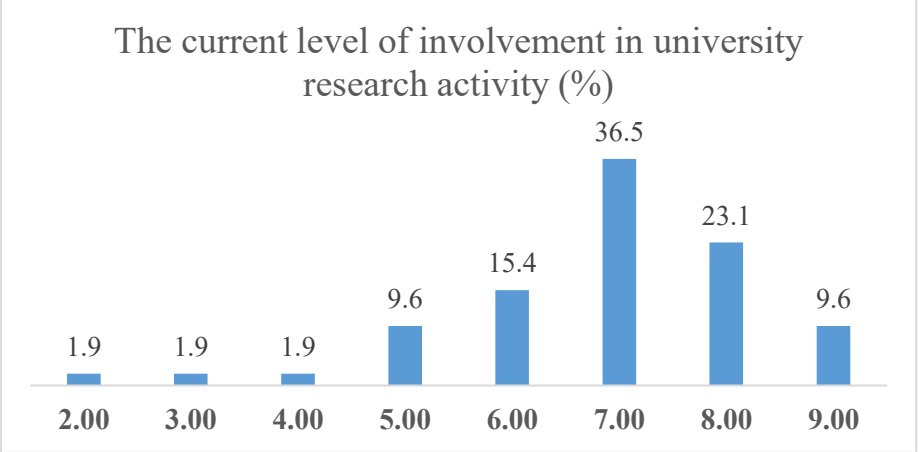

Figure 3. The current level of involvement in university research activity (%)

As it can be seen in Figure 3, most participants evaluated their own involvement as being a 7, on a scale from 1 to 10. None of the participants mentioned the extremes (1 or 10). The average value of 6.85 show a score slightly above average, thus it can be improved, with the help of a coherent academic research strategy and a management policy that encourages university's employees to get involved more in the research activities.

3.2.4. Number of projects conducted as manager or research team member

This quantitative objective shows us how experienced are the participants in managing and/or implementing a research project.

Table 1. Number of projects conducted as manager or research team member (%)

	Number of projects				
	0	**1-2**	**3-4**	**5-6**	**> 6**
I was / am project manager	65.4	25	5.8	3.8	0
I was / am a member of the project team	7.7	46.2	15.4	7.7	23.1

From Table 1 we can see the lack of experience in managing a project, as two thirds of participants have not held the position of manager and, out of those who have, most of them have the experience of 1 or 2 projects. When it comes to being a member in the implementation team, the situation changes, and we see that almost half of the respondents have had at least the experience of 1 or 2 research projects.

3.2.5. Type of involvement in the university research activity

The above-mentioned experience is also visible when we ask people to talk about the manner in which they have been involved in the research projects from their university. As it can be seen in Figure 4, there are at least three ways of involvement: we have one that is placed before the research's beginning, where we have a team effort of writing the project proposal, and two way of involvement during the research period: as part of the managerial or the implementation teams.

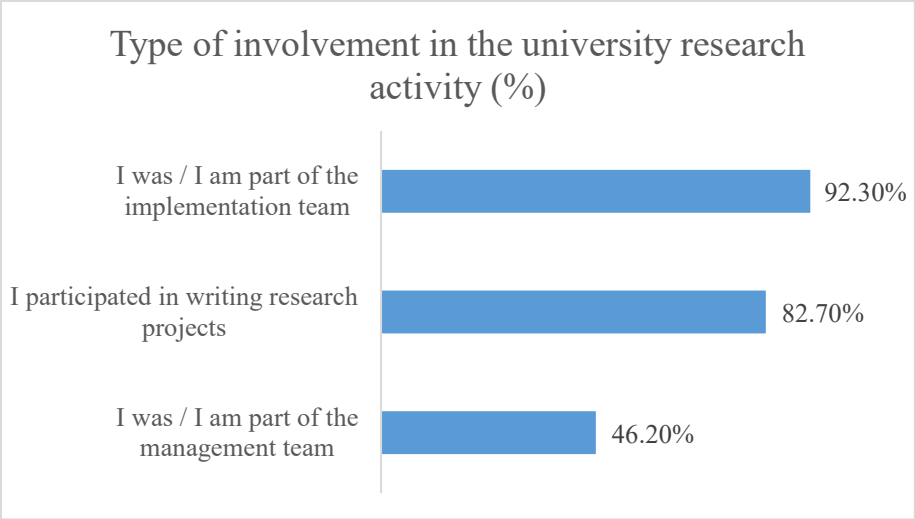

Figure 4. Type of involvement in the university research activity (%)

The percentage of people declaring to be part of the managerial team here is higher (46.2%) than what we have seen in the previous objective's results (34.6%), but this is because in the managerial team we have more than just the project manager (there is the financial responsible, the communication manager, the manager's assistant, etc.).

3.2.6. Known sources of funding for research projects; Sources of non-reimbursable funding for which at least one project application has been submitted; Funding sources accessed

This section presents the results of 3 research objectives, making a parallel between awareness, application and success rates for research funds. We will go from known funds, to those in which participants applied at least once and finish with the funding option from which they had a positive evaluation, obtaining the money for their research.

Table 2. Sources of funding known, applied to and accessed (%)

Funding sources	Known	Applied to	Accessed
Operational Program Competitiveness (POC)	**69.2%**	9.6%	5.8%
Horizon 2020 (H2020)	57.7%	3.8%	1.9%
UEFISCDI P2 - Increasing the competitiveness of the Romanian economy through RDI	53.8%	13.5%	**9.6%**
Projects with the economic-social environment	46.2%	7.7%	**9.6%**
UEFISCDI P1 - Development of the national R&D system	38.5%	**15.4%**	7.7%
UEFISCDI EEA & Norway Grants	38.5%	5.8%	0%
UEFISCDI P4 - Fundamental and borderline research	32.7%	5.8%	3.8%
Institutional Development Fund (FDI)	30.8%	3.8%	5.8%
International projects	26.9%	5.8%	3.8%
UEFISCDI P3 - European and international cooperation	25.0%	1.9%	0%
Institutional development project - Excellence financing projects RDI	23.1%	1.9%	0%
Sector plan	13.5%	1.9%	3.8%
I don't know any of the funding sources listed	3.85%		
I have not so far submitted any application for funding as a manager		57.7%	
I have submitted, but I have not received any funding so far			9.6%

As it can be seen in Table 2, the highest level of awareness (69.2%) belongs to the Operational Competitiveness Program (POC), which is a program financed by European funds, through the Romanian Ministry of European Funds. POC supports investments that respond to the needs and challenges related to the low level of economic competitiveness, in research, development and innovation (RDI) and in Information and Communication Technology (ICT).

The second most known program is Horizon 2020 (or H2020, as it's called in the branch). Horizon 2020 is the financial instrument implementing the Innovation Union, a Europe 2020 flagship initiative aimed at securing Europe's global competitiveness. This is the biggest EU Research and Innovation program ever, with nearly €80 billion of funding available over 7 years, from 2014 to 2020 (European Commission, 2019)

The podium is completed with a funding source from UEFISCDI, concerning the increase of competitiveness for Romanian economy, through research, development and innovation. The UEFISCDI abbreviation comes from the Executive Unit for Financing Higher Education, Research, Development and Innovation, which is a public institution with legal personality, subordinated to the Ministry of National Education (MEN).

When it comes to applying to this funding sources, despite the fact that it is only in the 5th place in the awareness hierarchy, the 'Development of the national R&D system' program from UEFISCDI has the highest level of application: 15.4% of all respondents have tried at least once to get funding from this source.

An important result to highlight here is the huge portion of academic researchers that haven't tried up until now to apply as a project manager (57.7%), and we will see in section 3.2.8 what were the reasons behind this decision. Out of the remaining 42.3% participants that have applied to the above-mentioned funding sources, one quarter of them didn't get any funding until now. The most successful applications were for projects with the economic-social environment and UEFISCDI's 'Increasing the competitiveness of the Romanian economy through RDI' program.

3.2.7. The research topics for which the funding was obtained

It is important to know what were the research topics that led to a successful application, and from Table 3 we can see that they are very heterogeneous. Participants gave answers that go from very general topics, such as marketing or agriculture, to very specific ones, such as waste management of electrical and electronic equipment.

Table 3. Funded research topics

Funded research topics
Agriculture
Entrepreneurship, the student entrepreneurial society
Insurance, corporate finance
SME marketing communication
Increasing performance and reducing university dropout
Development of entrepreneurial capacity
Risk and productivity assessment
Fiscal policy
Innovation, neuromarketing, eco-marketing
IT
University management
Waste management of electrical and electronic equipment, risk management in the context of the digital economy, Green economy
Marketing
Social responsibility - waste management
Strategy for tourism development and promotion of Dâmbovița county
Emerging technologies in marketing - knowledge transfer
Violence in the social field - knowledge transfer in public affairs

3.2.8. Reasons why no grant applications have been submitted so far

As mentioned in section 3.2.6, it is important to understand the barriers behind the low percentages of academic researchers applying for projects funding (see Figure 5).

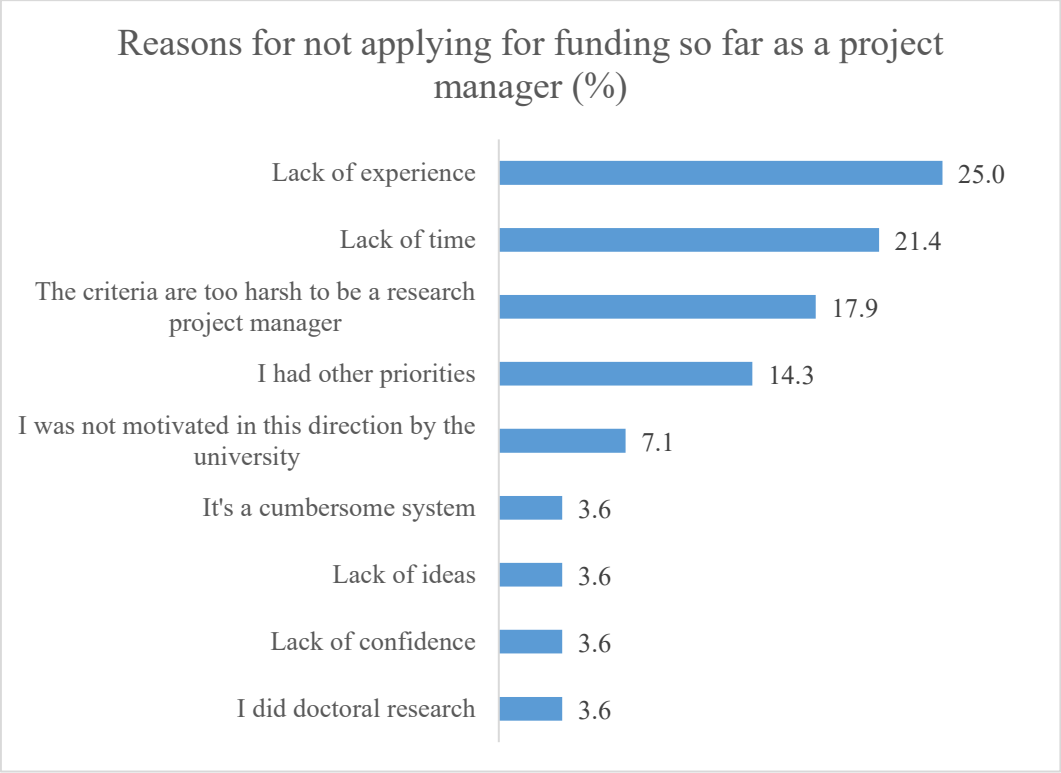

Figure 5. Reasons for not applying for funding so far as a project manager (%)

Most of the times we see that the barriers are actually perceptions that it cannot be done, due to lack of experience (25%) or time (21.4%). There is also the self-evaluation that every researcher does in order to see if they qualify for project manager and the criteria aren't fitting some of them (17.9%). Other external barriers refer to the university's lack of support for its employees in applying for funding programs or the difficult systems that have to be used for such activities.

3.2.9. Future scopes for academic research activity

This objective shows us that the situation will not differ much in the future, as most academic researchers will still focus on articles and conference papers (Figure 6), with a higher percentage than before (95.9% compared to 94.2%). The worrying situation is related to doing research in order to apply to different funding programs, where we see an important drop from what we had until now (86.5%, Figure 2) to the self-estimations made for future research plans (69.4%, Figure 6).

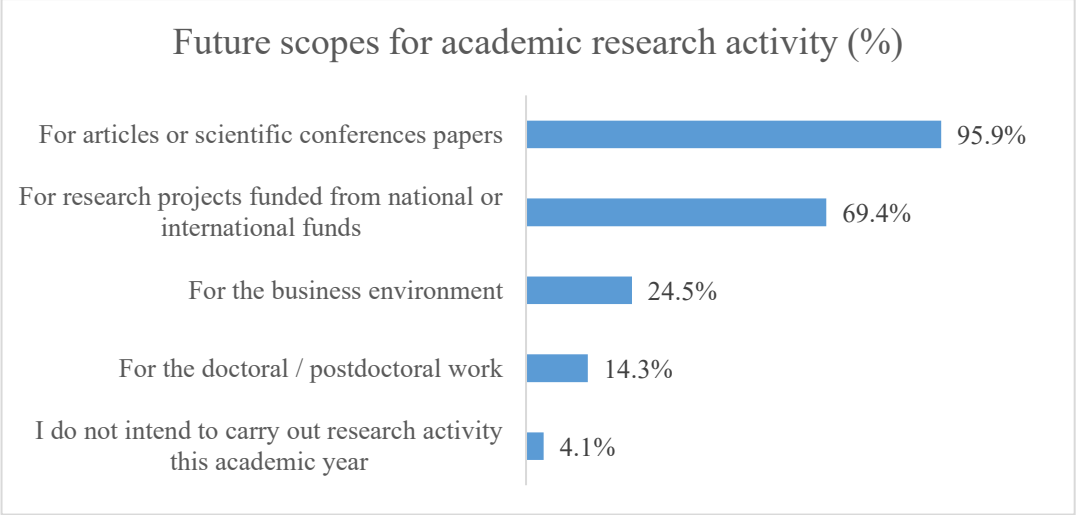

Figure 6. Future scopes for academic research activity (%)

3.2.10. Funding sources for future research activities

When it comes to funding future research projects, as seen in Figure 7, participants tend to focus more on projects for the economic-social environment (48.8%), as the criteria here are easier to fulfill. In second and third places we see three funding programs that actually have the highest awareness level: H2020 (41.9%), UEFISCDI's 'Increasing the competitiveness of the Romanian economy through RDI' (41.9%) and POC (39.5%).

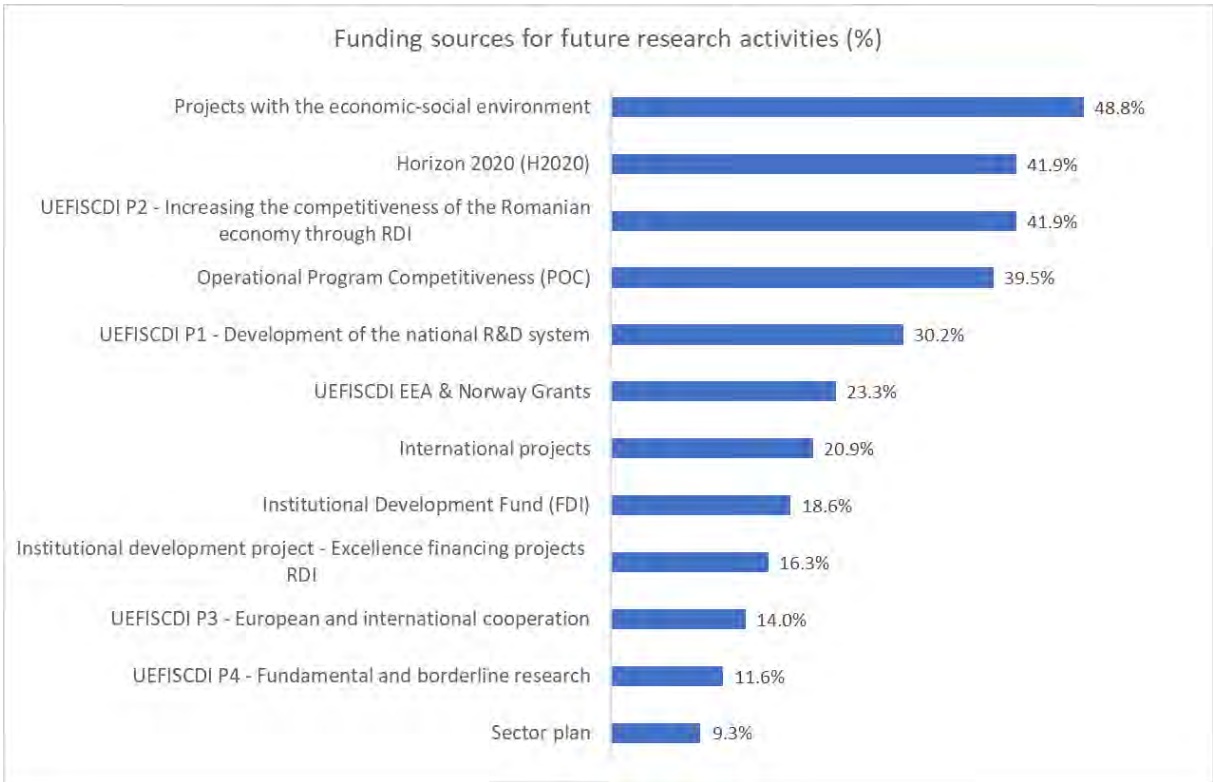

Figure 7. Funding sources for future activities (%)

4. Conclusions, managerial implications and future researches

This study uncovers a gap between funding opportunities and applications number, based on lack of awareness for several funding programs, but also lack of experience in accessing European money for research.

Although the Romanian economic academic employees have experience in doing research, this is not sufficient for high success rates in accessing national and European funds. We see some barriers that prevent them from increasing this rate, such as lack of confidence and lack of support from the university. These issues can be tackled with in an institutional research strategy that offers clear and transparent information about opened funding programs, promotes collaborative work and motivates academic employees to get more involved in research activities.

Having conducted the study only in one university may have limited the representativeness of our research, and for this reason we recommend that future researches extend the sample to more universities. Moreover, in order to better capture the usefulness of funding programs, the participants have to be from different scientific areas, not just Economics.

Acknowledgments

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