

UNIVERSITIES' REGIONAL ENGAGEMENT IN ROMANIA. THE IMPACT OF THE EU FUNDING

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Abstract: *This study traces some important advancements in fostering universities' regional engagement at the European level, through strengthening research activities, promoting enterprise, contributing to the development of regional human capital and skills and supporting regional regeneration and smart specialisation. At the same time, the study highlights the contribution of European funding to supporting Romanian universities' missions in the eight development regions and gives some preliminary impacts of these funds on universities' outputs. As resulted from the analysis, structural funds are by far the most important external funding source for Romanian universities, as they represent, on average, more than 22% of universities' total income. Nonetheless, one can easily notice the uneven distribution of funds by regions and the real danger associated with increasing regional disparities instead of leveraging them. Policy implications are presented in the final part of the study.*

Keywords: *universities' regional engagement, smart specialisation, European funding, (Romanian) development regions*

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1. Introduction. The EU Framework for universities' regional engagement

As centres of knowledge, expertise and learning, higher education institutions can drive economic development in the territories where they are located; they can bring talented people into innovative environments and harness regional strengths on a global scale; they can foster an open exchange of knowledge, staff and expertise. They can also act as the centre of a knowledge network or cluster serving the local economy and society, if local and regional authorities implement smart specialisation strategies to concentrate resources on key priorities and maximise impact.

(EC Communication, 2011)

According to *The EU Agenda for the modernization of Europe's higher education institutions*, linking universities, research and business for excellence and regional development is a key issue for Member States and higher education institutions (EC Communication, 2011). In this respect, governments are placing increased emphasis on universities' regional mission: for example, in England, there are explicit funding streams promoting regional engagement, while in Finland universities have a formal responsibility to develop relationships with regional stakeholders (Benneworth, 2010). Although universities' regional engagement is not a novel requirement, there appears to be something new in the nature of the new public role, especially given the transition from elite to mass higher education. This situation led to a number of important reforms, such as using marketization and new public management to increase universities' responsiveness to external demands (Pinheiro et al., 2012). Similarly, starting 2013, the U-Multirank - the new ranking system for all European universities - will include universities' regional engagement as one of the main five dimensions in evaluation, together with education, research, knowledge transfer and internationalization. It should be noted here the fact that up to now - the regional engagement role of universities has not been included in rankings;

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from now on, all European universities will be asked to report on their progress regarding (1) graduates working in the region, (2) income from regional/ local sources, (3) regional joint research publications, (4) research contracts with regional business and (5) student internships in local/ regional enterprises (van Vught and Ziegele, 2011).

At the EU level, *Europe 2020 Strategy*, particularly through its *Innovation Union* flagship initiative, reinforces the role of universities in regional development (EC COM 2010/ 546). To this end, the European Commission's practical guide for *Connecting Universities to Regional Growth* identifies at least four mechanisms by which universities can highly contribute to regional development: to enhance regional innovation through their research activities, to promote enterprise, business development and growth, to contribute to the development of regional human capital and skills and to improve social equality through regeneration and cultural development (EC, 2011). Similarly, the European Centre for Strategic Management of Universities identified the main drivers for regional engagement. Consequently, in addition to their role in training and educating students, universities are able to make a major contribution to regional development through their actions relating to: (i) entrepreneurship, spin offs, collaborative R&D projects, (ii) leveraging knowledge from technology transfer, consulting, people placements, (iii) managing local infrastructure, including (pre)incubators, science parks, laboratories shared with regional players, (iv) active participation in clusters and networks, (v) promoting internationalisation by transferring the regional know-how to operators in other regions or countries and (vi) supporting areas that do not have a university, notably by conducting research activities on their behalf (ESMU, 2012).

More recently, at the EU level there is a strong emphasis on universities' involvement in the designing of national/regional innovation strategies for smart specialisation. In this respect, the European Commission's *Guide to Research and Innovation Strategies for Smart Specialisation* stresses the fact that *universities are a critical 'asset' of the region, mainly in the less developed regions where private sector may be weak or relatively small, with low levels of research and development activity*. Therefore, universities dealing with economics, public policy and administration, as well as those dealing with specific policy areas (such as industry, health, agriculture, environment and culture) are expected to provide public authorities and private sectors with strategic advice, as well as experts to work directly on regional development priorities (EC, 2012).

As regarding Romania, despite the fact that universities' third mission is in its very incipient stage, with only few universities consolidating their technology transfer and commercial infrastructure and personnel (Ranga, 2011), there are some clear steps towards regional engagement. As for example, Constantin Brâncoveanu University in Pitești has included the contribution to regional development in its mission statement and has made important efforts to put this objective into practice: The Centre for Regional and International Studies in Pitești has conducted more than 50 research contracts with regional partners and has drafted the Development strategies for three municipalities in Romania; similarly the University has highly integrated the enterprise dimension in the curricula of all study programs and has promoted the Counselling and Career Centre as a real interface for student placements and mobility within the region.

In order to meet all European and regional expectations, Romanian universities should be provided with consistent human and financial resources, and the European funding programmes – covered by this study - are providential in this respect.

2. Research method

The aim of the study is to highlight the contribution of European funding to supporting Romanian universities' missions. To this end, three types of funds are considered for the analysis: (1) structural funds, (2) funds attracted from the EU's Framework Programme for Research and Technological Development (FP7, the main funding programme created by the EU to encourage research in the European Research Area) and (3) funds from other EU programmes (such as the EU's Programmes for Lifelong Learning, Competitiveness and Innovation etc.).

The data were made publicly available by the Romanian Ministry for Education in 2011, following the first national exercise for the classification and ranking of Romanian universities and their study programmes. Therefore, the analysis was based on universities' self-reported data for 2008, 2009 and 2010. In total, there were 90 accredited public and private universities that were subjected to evaluation; of these, only 66 (73%) have succeeded in attracting funds from at least one of the sources mentioned above (structural funds, FP7 and other EU programmes), so we only selected these universities for the analysis. Furthermore, we have tried to identify some preliminary impacts of these funds on various types of universities' outputs in research, knowledge transfer, human capital and community development, using a simple correlation analysis. Although it is still early to assess the total impacts of the EU funds, as many of the EU funding programmes are still in progress or are expected to have a long-term effect, we highlight a number of preliminary conclusions and tendencies in the final part of the study.

3. Research results

At least two important evolutions can be observed in the *Figure no. 1* that draw the distribution of the total European funds attracted by Romanian universities between 2008 and 2010. In 2010, Romanian universities have succeeded in attracting about 268 million € from structural funds, seven times more than in 2008 and four times more than in 2009. Second, the funds attracted from the Framework Programme and other EU programmes are much lower than those from structural funds and the difference goes higher with the years. One can easily observe that both the funds from Framework Programme and the EU Programmes dropped in 2009, but they increased by 30% in 2010.

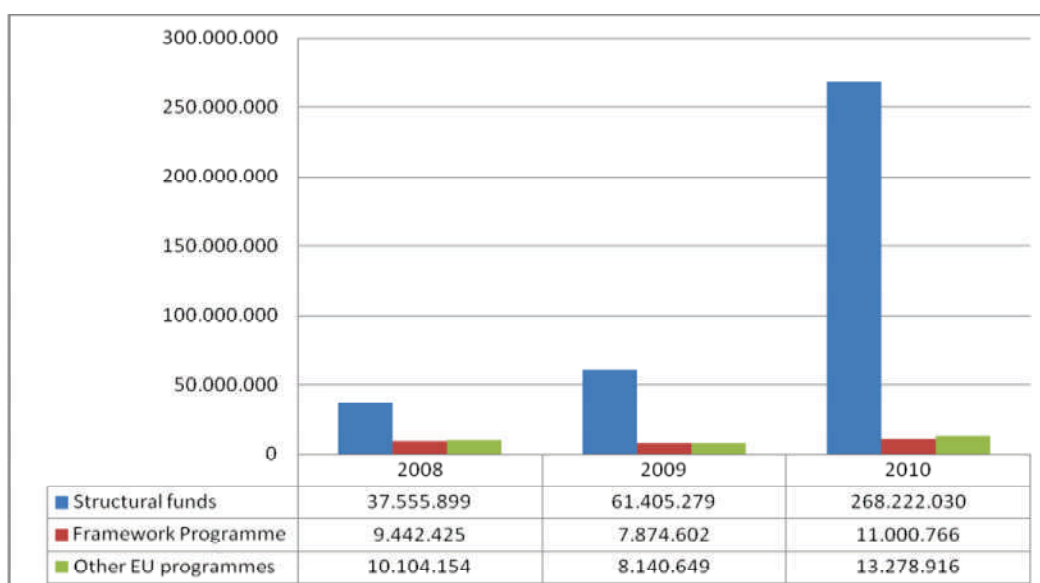
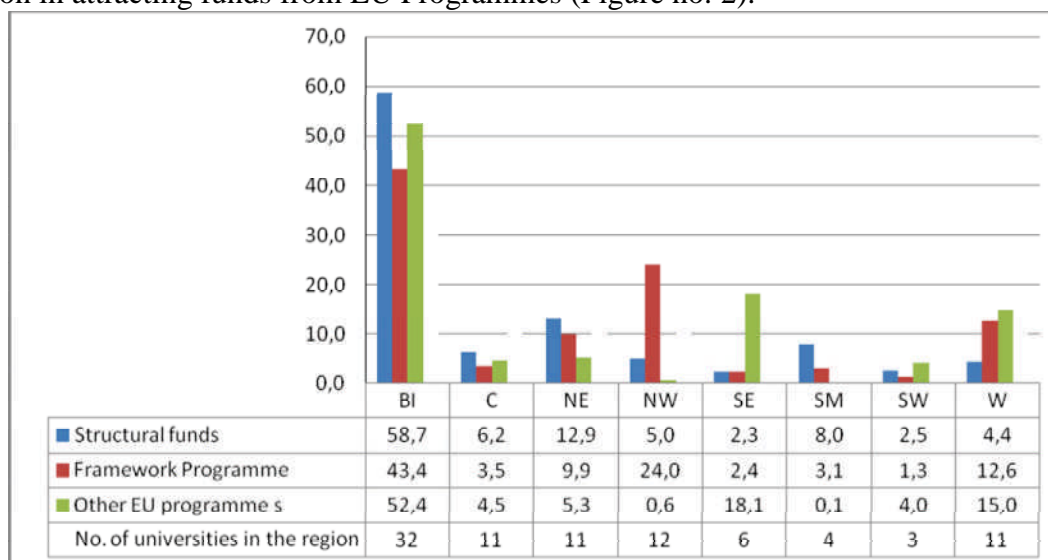


Figure no. 1. Total European funds attracted by Romanian universities (€)

At the regional level, Bucharest Ilfov was the most successful region in attracting all types of European funds, but the figures should be interpreted carefully, as the capital region hosts more than one third of Romanian universities. The North East region comes second for structural funds, while South Muntenia comes third, even though it only hosts four universities. As regarding the Framework Programme funds, one can observe the high concentration in those regions with advanced-research oriented universities, namely North West, West and North East. Finally, the South East region is the most successful non-core region in attracting funds from EU Programmes (Figure no. 2).



*BI – Bucharest Ilfov, C – Centre, NE – North East, NW – North West, SE – South East, SM – South Muntenia, SW – South West, W – West

Figure no. 2. The distribution of European funds by regions, 2010 (% in total funding per type of source)

Table no. 1 presents a comparative analysis between European funds and other types of funds attracted from public Romanian and foreign programmes or private sources (private Romanian funds, private foreign funds, contract agreements that were not obtained through competitions and funds gained from the commercialization of university products). To make the data comparable, we standardized their values and represented them as percent in total universities' income. This time, the high distance between structural funds and other types of funds is clearly represented: structural funds brought in more than 22% of universities' total income and they are by far the most important funding source. The income generated from commercial activities comes second, and the public Romanian funds for research and development come third, while the other types of funds – except for the funds attracted from European programmes - count each for less than 1% in total universities' income.

Table no.1. Comparison with other types of external funding (% in total universities' income)

Structural funds	EU Framework Programme	EU Programmes	Public RO funds	Private RO funds	Public foreign funds_	Private foreign funds_	Contract research	Commercial income_
22,4341	0,5281	3,1986	4,2560	0,3929	0,3050	0,0907	1,915	6,3738

By region, structural funds weighted more in the budget of universities from South East and South Muntenia, but represented less than 10% in the total income of universities from North West, South East or Centre (Figure no. 3).

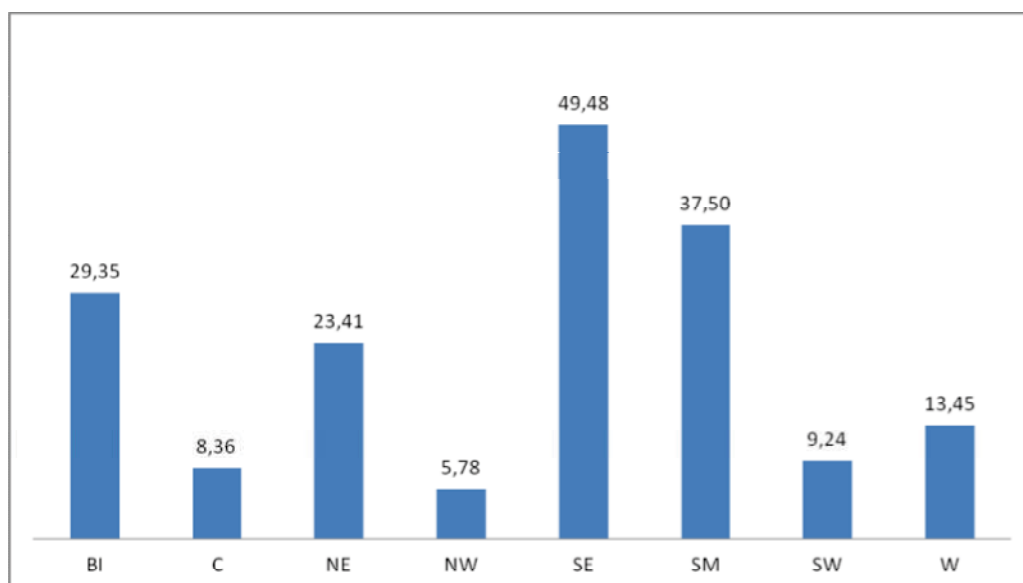


Figure no. 3. Structural funds by regions as % in total universities' income, 2010

Finally, in order to highlight some preliminary impacts of the EU funds on universities' outputs, we correlated their values with different quantitative variables describing universities' potential for research, enterprise, human capital and community involvement (Table no. 2 and Table no. 3).

As regarding universities' research, the scientific production measured by scientific articles that were indexed by Thomson Reuters database and the release of new products and services were encouraged by all European programmes, with the Framework Programme being on top. On the other hand, patent applications at Romanian Patent Office and the income generated from their licensing activities or from the commercialization of other products and services are correlated only with structural and Framework Programme's funds, as both of them have some specific research and knowledge transfer axes. Unfortunately, none of the EU Programmes have succeeded in fostering universities' potential to apply for patents at the European Patent Office or to create spin-offs and there is possibly still a long way for Romanian universities to be able to generate such high-level outputs.

Table no. 2. Correlation analysis: EU funds and Research & Enterprise outputs

RESEARCH & ENTERPRISE OUTPUTS	Structural Funds	Framework Programme 7	EU programmes
Number of ISI articles	0.608**	0.695**	0.439**
Patents at Romania Patent Office	0.570**	0.516**	0.312*
Patents at the European Patent Office	0.220	0.256*	0.207
New products and services	0.383**	0.542**	0.379**
Number of spinoffs	0.010	0.056	0.026
Commercial income	0.524**	0.528**	0.278*

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level

As regarding Human Capital function, the correlations between the European funds and the number of PhD students, as well as the number of Continuous Development Programmes' graduates are significant for all the programmes, with the Framework Programme being again on top. For the Community dimension, universities' self-reported data only included the number of partnerships with business, public institutions and Nongovernmental Organizations (NGOs). In this respect, as it results from the Correlation matrix, fostering the links between universities and business was a priority for all the programmes. Nonetheless, for the links between universities, public institutions and NGOs we can conclude that the impact was feeble, except for the EU programmes.

Table no. 3. Correlation analysis: EU funds and Human Capital & Community outputs

HUMAN CAPITAL & COMMUNITY OUTPUTS	Structural Funds	Framework Programme 7	EU programmes
Number of PhD students	0.585 ^{**}	0.706 ^{**}	.372 ^{**}
Number of Continuous Development Programmes' graduates	0.549 ^{**}	0.563 ^{**}	0.440 ^{**}
Number of partnerships with business	0.542 ^{**}	0.534 ^{**}	0.508 ^{**}
Number of partnerships with public institutions	0.330 ^{**}	0.390 ^{**}	0.520 ^{**}
Number of partnerships with NGOs	0.336 ^{**}	0.309 [*]	0.358 ^{**}

^{**}. Correlation is significant at the 0.01 level (2-tailed).

^{*} Correlation is significant at the 0.05 level

Conclusions and policy implications

In order to meet all the expectations, universities rely on external funding sources, of which the European programmes are the most preeminent. To assess the impact of the EU programmes on Romanian universities, our study proposed a descriptive analysis of the current situation in attracting funds from structural funds, Framework Programme and other European programmes, but also made some inferences on the impacts on universities' outputs. Study's main conclusions are synthesised below:

- 27 % of Romanian accredited universities have not attracted European funds; the rest attracted 268.222.030 € from structural funds, 11000766 € from Framework programme and 13278916 € from other European programmes in 2010;

- Structural funds are by far the most important funding source for Romanian universities, as they represent, on average, more than 22% in universities' total income. Therefore, we can conclude that a cut in this type of funds could seriously affect universities' current budgets and implicitly their ongoing activities.

- Structural funds are positively correlated with almost all type of universities' outputs, except for spin-offs and patent applications at the European Patent Office. In this respect, policy makers should seriously run a cause and effect analysis and look for the appropriate measures to stimulate them.

- Finally, one can easily observe the uneven distribution of funds by regions and the real danger of increasing regional disparities instead of leveraging them. Nevertheless, the case is clearly explained by the uneven distribution of universities across the regions. To this topic, policy makers should look carefully to solutions that fairly balance Romanian regions' knowledge creation potential.

As previously mentioned, the results of our study can only be seen as preliminary, as many programmes are still in progress or are expected to generate long-term impacts.

Moreover, despite the accuracy given by quantitative and measurable data, qualitative impacts should also be assessed, as they are at least as valuable.

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