

EU OPPORTUNITIES FOR RESEARCH IN THE HEALTH FIELD. WHAT SHOULD BE DONE TO IMPROVE THE ROMANIAN PARTICIPATION?

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Abstract: Background: Research and technological development (RTD) is a high priority topic in the European Union (EU), being an obligation stipulated by the European treaty, but also a key factor for the humanity progress. Aim: describing the main EU RTD opportunities in the field of health and analysing the degree of Romanian researchers' involvement in the EU initiatives. Methods: A review of main EU relevant documents related to research was done, considering the key priorities, the investment (in EUR) and the countries involvement (measured in the number of projects, total budget and budget per inhabitant). Results: the Framework Programmes (FP) have been the main tools for financing RTD activities in the EU. Launched in 1984, this mechanism has been continuously developed in terms of financing, number of projects and number of entities and member states involved. However, the capacity to access research funds varies among the member states in terms of total budget or budget by inhabitant. Germany, UK, France, Italy and Netherlands absorbed the highest amount of funds from FP 6 and FP 7 (partial data), but Sweden, Finland, Denmark, Netherlands and Belgium succeeded in reaching the highest budget per inhabitant. Lowest budgets and budgets per inhabitant were found in the new comers. Romania absorbed the lowest amount of money per inhabitant, both from FP 6 and FP 7 (in FP 7, the situation seemed to improve - from 1.3 to 1.9 EUR/inhabitant). In the health field, Romania is member in 39 projects. Conclusion: The Romanian participation in the Framework Research EU programmes, in general, but also in the health issues is still weak and needs to be developed in the future. Identifying interested parties, exploring and disseminating the opportunities at national level, understanding the challenges for the national stakeholders and taking appropriate actions could help in increasing the visibility of Romania in these programmes.

Cuvinte cheie: cercetare și dezvoltare tehnologică, Programul-cadru 7, Orizont 2020

Rezumat: Introducere: Cercetarea și dezvoltarea tehnologică reprezintă un subiect de mare interes în Uniunea Europeană (UE), fiind o obligație prevăzută în Tratatul UE, dar și un factor-cheie pentru dezvoltarea societății. Scop: Descrierea principalelor oportunități de cercetare în domeniul sănătății de la nivelul UE și analiza implicării organizațiilor din România în inițiativele europene. Metodă: Analiza principalelor documente relevante pentru cercetare în UE, a priorităților cheie, a investițiilor (EUR) și a implicării statelor (prin număr de proiecte, buget total și buget pe cap de locuitor). Rezultate: Programele – cadru au devenit principalul mecanism de finanțare a activităților de cercetare în UE. Lansat în anul 1984, acest mecanism a fost continuu dezvoltat atât în ceea ce privește bugetul alocat, cât și numărul de proiecte, numărul de organizații și de state membre implicate. Capacitatea de accesare de fonduri pentru cercetare variază foarte mult în rândul statelor membre în ceea ce privește bugetul global și bugetul pe locuitor. Germania, Marea Britanie, Franța, Italia și Olanda au absorbit cel mai mare volum de fonduri (mil euro) din FP 6 și FP 7 (date parțiale), iar Suedia, Finlanda, Danemarca, Olanda și Belgia au reușit să atragă cei mai mulți bani pe locuitor. Bugetele cele mai reduse (atât global, cât și pe locuitor) s-au regăsit la noile state membre. România a absorbit cel mai mic buget pe locuitor atât din FP 6, cât și din FP 7 (în FP 7, pentru date parțiale de până la 1 ianuarie 2011, situația s-a îmbunătățit – de la 1,3 la 1,9 euro/locuitor). România este în prezent membru în 39 de proiecte FP 7 în domeniul sănătății. Concluzie: Participarea României la Programele-cadru de cercetare ale UE, în general, și la temele de sănătate în special, rămâne modestă și trebuie îmbunătățită în viitor. Identificarea părților interesate, explorarea și diseminarea în plan național a oportunităților existente, înțelegerea barierelor pentru entitățile naționale și adoptarea de intervenții eficiente pentru depășirea acestor bariere pot conduce la creșterea vizibilității României în cercetarea europeană.

INTRODUCTION

Research and technological development (RTD) is a high priority topic in the EU, being an obligation stipulated by the European treaty. “The Union shall have the objective of

strengthening its scientific and technological bases by achieving a European research area in which researchers, scientific knowledge and technology circulate freely, and encouraging it to become more competitive... “(1) According to the treaty, the

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Union shall implement research programmes and promote cooperation between research centres, member states, international organizations and third countries. Also, the Union shall disseminate the research results and stimulate researchers' training and mobility. Behind the legal obligations to develop research, it is a key factor for the humanity progress and for the collective and individual wellbeing of the people.

PURPOSE

The aim of this paper was to describe the main EU RTD opportunities in the field of health and to analyze the degree of involvement of Romanian researchers in the EU initiatives or programmes.

METHODS

A review of the main EU relevant documents related to research was done, considering the key priorities, the investment (in EUR) and the Romanian involvement (measured in the number of projects and/or in the received budget). Further directions for research or strategic developments were also described, aiming at raising awareness and encouraging the Romanian participation in the EU RTD activities.

RESULTS

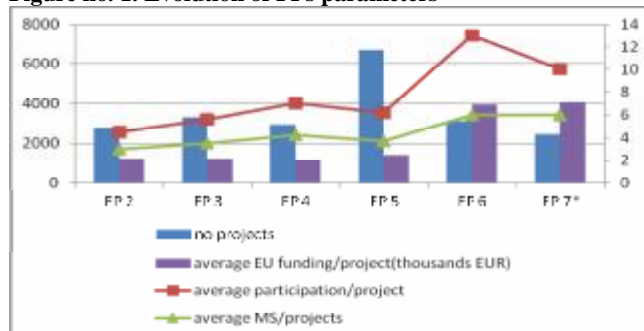
The Framework Programmes have been the main tools for financing the RTD activities in the EU. Launched in 1984, based on the Treaty provisions (current Art. 182, ex. Art 166 TEC), the Framework Programmes reached their 7 cycle (FP7), that runs between 2007 and 2013, having the highest funding allocation, in amount of 53.2 billion EUR. The FP total financing continuously increased (Table no. 1). In the mean time, the number of projects, the mobilization for projects and the budget per project also increased. (Figure no. 1)

Table no. 1. Framework Programmes – covered period and budget increase

Programme	Covered Period	Budget (mil. EUR)	Percentage increasing in budget
FP 2	1987-1991		NA
FP 3	1990-1994		NA
FP 4	1994-1998	13215*	-
FP 5	1998-2002	14960	4.61
FP 6	2002-2006	17500	16.97
FP 7	2007-2013	53221	204.12
FP 8**	2014-20	87740	64.86

* ECU; **upcoming, provisional budget. Source: FP 4 – FP 6 (2-4), FP 7 (5), FP 8 (6)

Figure no. 1. Evolution of FPs parameters



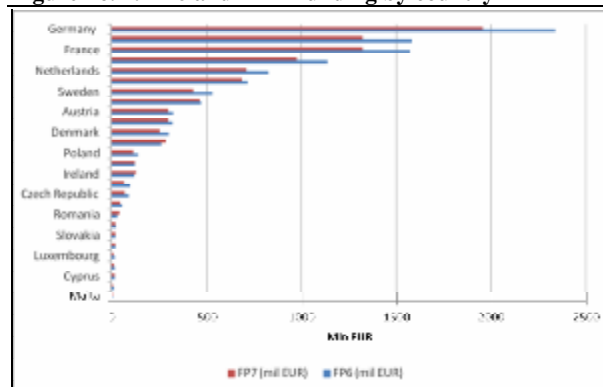
* Partial data for FP 7, Data source:(7)

However, the capacity to access research funds through the Framework Programmes has a wide range of

variation among the states. If we consider the absolute funding (mln. Eur), this variation ranges from 5 in Malta, to 2338 in Germany. Germany, UK, France, Italy and Netherlands are the best funding absorbers and the lowest levels of absorptions occur especially in the new-comers in EU 27. (Figure no. 2) However, Germany, UK, France and Italy have also the highest number of population in EU 27. Analyzing the FP funding per inhabitant (Figure no. 3,) few facts are revealed:

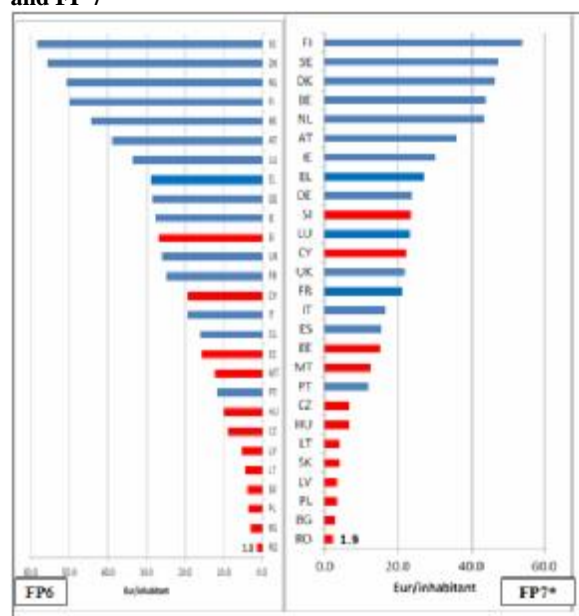
- The five most performing countries - able to absorb the highest amount of Eur per inhabitant – are Sweden, Finland, Denmark, Netherlands and Belgium, both for FP 6 and FP 7. Compared to them, Germany, France, UK and Italy register lower positions.
- The disparities between the western and eastern countries become even more obvious. Slovenia and Cyprus are the only new comers that succeeded in interfering with the old member states.
- Romania has received the lowest amount of money per inhabitant, both from FP 6 and FP 7, even if regarding FP 7, the situation seemed to improve (from 1.3 to 1.9 EUR/inhabitant, partial data).

Figure no. 2. FP6 and FP7* funding by country



* Partial data for FP 7 (1st of Jan 2011), Source:(7)

Figure no. 3. Financing per inhabitant and per country, FP 6 and FP 7*



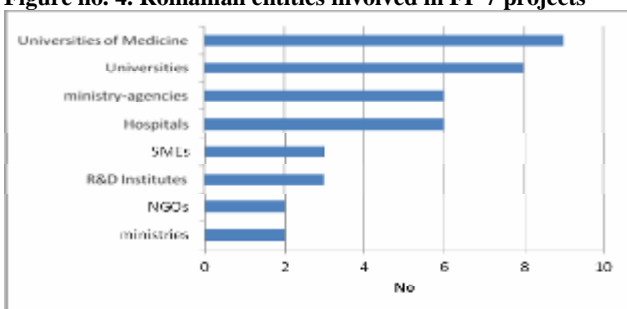
*Partial data for FP 7 (1st of Jan 2011), Source:(7)

The main themes of FP 7 comprise: Cooperation, Ideas, People,

Capacities, Euratom and Joint Research Centre. The most important – cooperation – accounting more than 60% of the total budget, is sub-divided in ten areas from which one is dedicated exclusively to health; also, the other areas can include health issues. The health area has a budget of 6.1 billion EUR for the life-cycle of the programme. The priorities of this area consist in biotechnology, generic tools and technologies for human health, translating research for human health and optimising the delivery of health care to the European citizens.

According to data from the National Authority for Scientific Research, at the beginning of 2012, Romanian entities were involved in 39 European projects under FP 7th – Health theme, only as a partner. Most of them were universities (medical or general), but also ministry-agencies and hospitals were involved. Only 3 R&D institutes, 3 SMEs and 2 NGOs were involved in FP 7 projects (Figure no. 4). The budget was not considered.

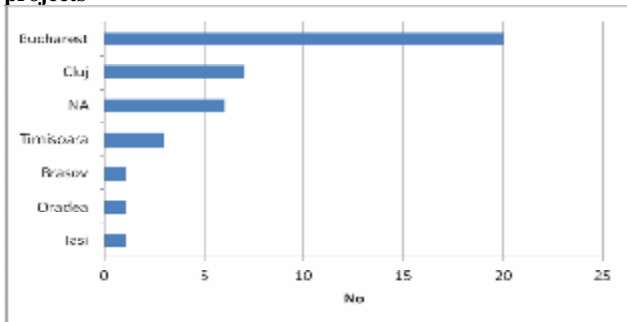
Figure no. 4. Romanian entities involved in FP 7 projects*



Source: NASR. List of Romanian entities involved in FP 7 projects;(9) *updated 16 of March, 2012

Most of these entities are located in Bucharest (Figure no. 5)

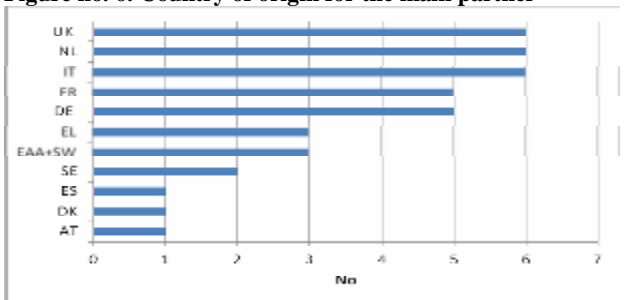
Figure no. 5. Location of Romanian entities involved in FP 7 projects*



Source: NASR. List of Romanian entities involved in FP 7 projects;(9) *updated 16 of March, 2012

The main partner is usually from UK, Netherlands, Italy, France and Germany. (Figure no. 6)

Figure no. 6. Country of origin for the main partner*



Source: NASR. List of Romanian entities involved in FP 7 projects;(9) *updated 16 of March, 2012

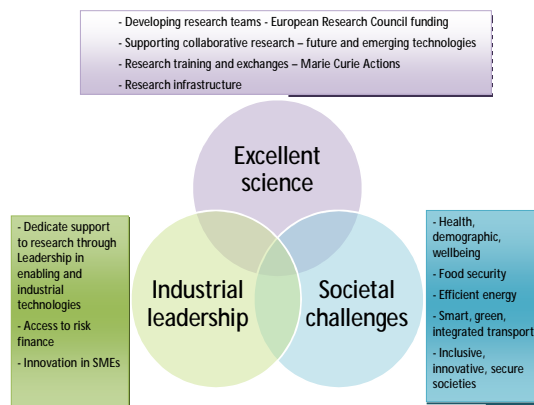
DISCUSSIONS

According to what we know at the moment, Romania has the lowest funding per inhabitant coming from EU Framework Programmes 6 and 7 (till the 1st of January 2011). As a new member state, this situation could be explained by the necessary know-how to be developed in the country. There is also an obvious gap between the new comers and the old member states. However, there are some new member states that succeeded in absorbing even ten times more money per inhabitant compared to us (Slovenia and Cyprus). National mobilization to improve Romania’s participation in the EU Framework Programmes should be considered by the Government, by the research communities, SMEs and civil society organizations. Also, further research is needed to understand the determinants of the Romanian entities involvement in the EU Framework Programmes in general, but also in health issues and to identify their specific needs. Two upcoming opportunities to develop the Romanian participation in EU research programmes could be considered.

This year, the last call under FP 7 is expected to be published in the mid July, but the priorities are already publicly available in the Orientation Paper.(10) According to this document, the new call will focus especially on brain research, antimicrobial drug resistance and comparative effectiveness research in 2013, but other priorities will be also considered.(10) A horizontal approach for translating research results into innovative applications for health will be particularly followed this year.

The perspective is however the new Framework Programme for Research and Innovation (8) – Horizon 2020 - aiming at “building an economy based on knowledge and innovation across the whole Union, while contributing to sustainable development”.(6) “Horizon 2020” supports the Europe 2020 strategy and other Union policies and has three distinct and “mutually reinforcing” priorities (Figure no. 7).(6)

Figure no. 7. Horizon 2020 priorities



Source: Horizon; 2020.(6)

CONCLUSIONS

The Romanian participation in the Framework Research EU programmes, in general, but also under the health theme is still weak and needs to be developed in the future. Identifying interested parties, exploring and disseminating opportunities at national level, understanding the challenges for the national stakeholders and taking appropriate actions could help in increasing the visibility of Romania in the EU Research Programmes.

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