



Horizon 2020: Geographical balance of beneficiaries

Performance gap between EU13 and EU15 Member States¹

KEY FINDINGS

The purpose of Horizon 2020 is to support research and innovation of the highest quality, produced in international collaboration, and selected on a competitive basis. Under such conditions, uneven budget distribution is inevitable. However, participation in Horizon 2020 seems biased against the entire EU13 region.

The reasons for lower participation of the EU13 Member States in Horizon 2020 are related mainly to the size and performance of the national research and innovation systems, quality of research, and weaker connections to European research collaboration networks.

The EU13 region is not homogenous and the reasons are differently relevant for individual Member States. Therefore, there is no “one-size fits all” solution for increasing participation of EU13 Member States in the EU Framework programmes. The solutions require shared responsibility at various levels – organisational, regional, national, and European.

Policy interventions towards better integration of the EU13 Member States into the European Research Area should in particular focus on strengthening strategic governance of national R&I systems, reinforcing Spreading Excellence and Widening Participation scheme, and increasing attractiveness of Framework Programmes for newcomers from the EU13 region.

Investing in research is considered essential for achieving smart, sustainable, and inclusive growth in Europe. The Framework Programme Horizon 2020 is the EU’s primary instrument for creating the European Research Area. The purpose of Horizon 2020 is to attract excellent (European) research teams to solve major societal challenges and to contribute to the global competitiveness of the EU. To achieve this objective research needs to be of the highest quality, produced in international collaboration, and selected on a competitive basis. So the “juste retour” principle cannot be applied here and uneven participation and geographical budget distribution are inevitable. However, participation in Horizon 2020 seems to be biased against an entire region of the EU, namely the EU13 region.

¹ This briefing summarises the presentation of the STOA in-depth-analysis [“Exploring the performance gap in EU Framework Programmes between EU 13 and EU 15 Member States”](#) geared towards answering the specific research questions the CONT committee posed on the geographical and institutional distribution of the funding.



Geographical distribution of Horizon 2020 budget

There are two perspectives of looking at the geographical distribution of the Horizon 2020 budget. According to the overall funding from Horizon 2020, more than 95% of the total Horizon 2020 budget has been allocated to research teams from the EU15 Member States so far (dominated by Germany, the UK and France). Research teams from the EU13 Member States participate much less on the Horizon 2020 budget, getting only less than 5% of the total budget allocations. From this perspective, the geographical distribution of the total Horizon2020 budget is indeed biased against the EU13 region.

The second perspective takes into account the size of the national R&D systems expressed by total general expenditures on R&D (GERD). From this perspective, many EU13 Member States (e.g. Malta, Estonia, Latvia, Cyprus but also Slovenia or Bulgaria) are placed ahead of the most EU15 Member States and the geographical bias of the Horizon2020 distribution against the EU13 region completely disappears.

These two perspectives clearly show that lower participation of the EU13 Member States on the Horizon 2020 budget is to a large extent determined by the smaller size of national R&D systems. In addition, it is evident that neither the EU13 nor EU15 regions are homogenous groups of countries concerning their participation, success rate, and financial support received from Horizon2020 budget, both in absolute terms and in relation to the size of their R&D systems.

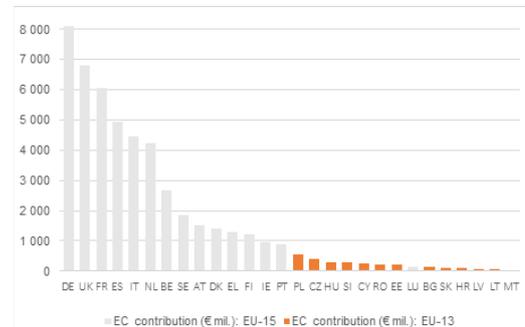
Regarding the Horizon2020 distribution, the evidence also shows that more than 55% of the total Horizon 2020 budget has been allocated to 25 large European research institutions so far. All these so called TOP25 research institutions are based in the EU15 Member States or Switzerland and Israel. Project proposals submitted with TOP25 institutions are more successful than project proposals without them. These research institutions create network hubs for European research collaboration.

Reasons for geographical disproportion

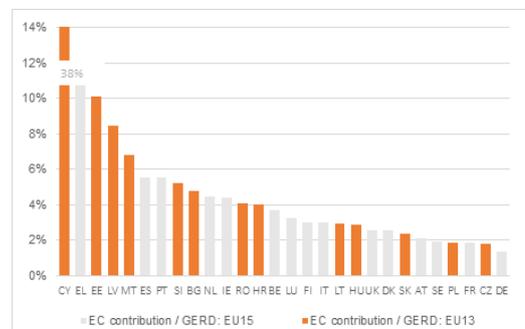
Despite the heterogeneity among the EU13 Member States, there are groups of common reasons for lower participation of the EU13 Member States in Horizon 2020.

The first group is related to the size and performance of the national research and innovation systems. The EU13 Member States invest much less in research and innovation than the EU15 Member States, and the

H2020 total contributions (mil. EUR)



H2020 contributions as percentage of Gross Expenditures on R&D (%)



Source: EC, eCORDA 05/2020, Eurostat.

research and innovation performance in the majority of the EU13 countries is lower compared to the EU15 average.

Another group of reasons concerns the quality of research, where the majority of the EU13 Member States lag behind the EU15 average. This is an important aspect since excellence is the key guiding principle for selecting projects for funding from the Horizon 2020. The lack of scientific quality is reflected also in the lower quality of project proposals. It results in a lower success rate of project proposals submitted by research teams from the EU13 Member States.

The next group of reasons lies in weaker connections to European research collaboration networks. While research teams from the EU15 Member States have established strong cooperative linkages over time, EU13 research teams remain mostly on the periphery of the European research networks. This position outside the existing networks hinders their participation in collaborative Horizon 2020 research projects.

Policy options

The issue of lower participation of EU13 in Horizon 2020 has no “one-size-fits all” solution. However, on the basis of an understanding of the combination of reasons for suboptimal participation in Horizon 2020, it is evident that any strategy to increase participation in Framework Programmes requires actions at three levels: the level of research and innovation organisations, the national level of R&I systems, and the European level. Policy options will be most successful if they address the situation at multiple levels.

At the national level, it is vital to strengthen the strategic governance of national R&I systems, mainly in terms of focusing on areas of competitive advantage and shared long-term visions. In this respect, emphasis should be put on the following specific improvements:

- Reinforce smart specialization processes and activities, evaluate their implementation and use various funding resources (national, European Structural and Investment Funds, Horizon 2020 and others) in a synergetic way to strengthen the position of regions in areas of their competitive advantage.
- Increase national R&I funding and use it explicitly, together with European Structural and Investment Funds, as leverage to attract funding from Framework Programmes.
- Establish a system for periodical evaluation of research organisations, which would also look at international collaboration and research management. Such schemes will reward excellence and improve the readiness of research organisations to participate in Framework Programmes.
- Increase visibility and attractiveness of research centres and research infrastructures in the EU13 Member States in order to facilitate connections to European collaboration networks. Many of these research facilities have been created or substantially modernized recently with the help of EU Structural and Investment Funds.

At EU level, the Spreading Excellence and Widening Participation scheme has introduced new impulses for strengthening the R&I potential of EU13 countries and their better integration into the European Research Area. The following additional options might be considered for further implementation of this programme:

- Enlarge the budget for the programme scheme to ensure that sufficient research and innovation actors are reached through the programme so that a critical mass of participants in Framework Programmes can develop.

- Take into account the quality of organisational strategic management as a criterion for evaluating research capacities of consortia members. The aim is to encourage research organisations in the EU13 to improve their strategic management, including the management of human resources.
- Emphasise also the excellence of EU13 partners as a criterion for evaluating project proposals. The aim is to avoid projects being dominated by EU15 partners and the cognitive and technological distance of EU13 partners becoming too large to fully profit from the collaboration. Though this may create further pressure on EU13 organisations, in the long-term it ensures that the participation of the EU13 Member States in Framework Programmes is effective and has desirable spin-off effects.
- Encourage specifically collaboration between national research organisations and TOP European research organisations. Collaboration with TOP 25 institutions has the potential to considerably increase the participation success rate of the EU13 and it may increase future participation opportunities in Framework Programmes for the EU13 partners.

With relation to the steadily decreasing success rate in Framework programmes, it is important to maintain or even increase the attractiveness of Framework Programmes. This is crucial to ensure that sufficient research and innovation actors, including participants from the EU13 countries, are reached through the programme. The European Commission, in cooperation with the Member States, can undertake the following actions:

- Strengthen the opportunities for effective use of R&D outputs resulting from the Framework Programme, for example by introducing a proof of concept scheme (similar to ERC PoC) that would enable follow-up activities, leading to a successful implementation of R&D results achieved in Framework Programmes.
- Build good case material about successful use of Framework Programme instruments by EU13 research and innovation actors that can serve as exemplars for new entrants. Case material should be sufficiently diverse in order to attract the attention of a wide range of research and innovation actors, including new entrants and incremental innovators.
- Encourage researchers, experts and other national actors to participate actively in the management of Framework Programme instruments (expert groups, advisory bodies, project evaluators).

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This document is available on the internet at: www.europarl.europa.eu/supporting-analyses

Print ISBN 978-92-846-7555-5 | doi:10.2861/9369 | QA-03-20-610-EN-C

PDF ISBN 978-92-846-7556-2 | doi:10.2861/748043 | QA-03-20-610-EN-N