



Towards the next Framework Programme Italy and the European challenge

Rome, 12 Dec. 2017

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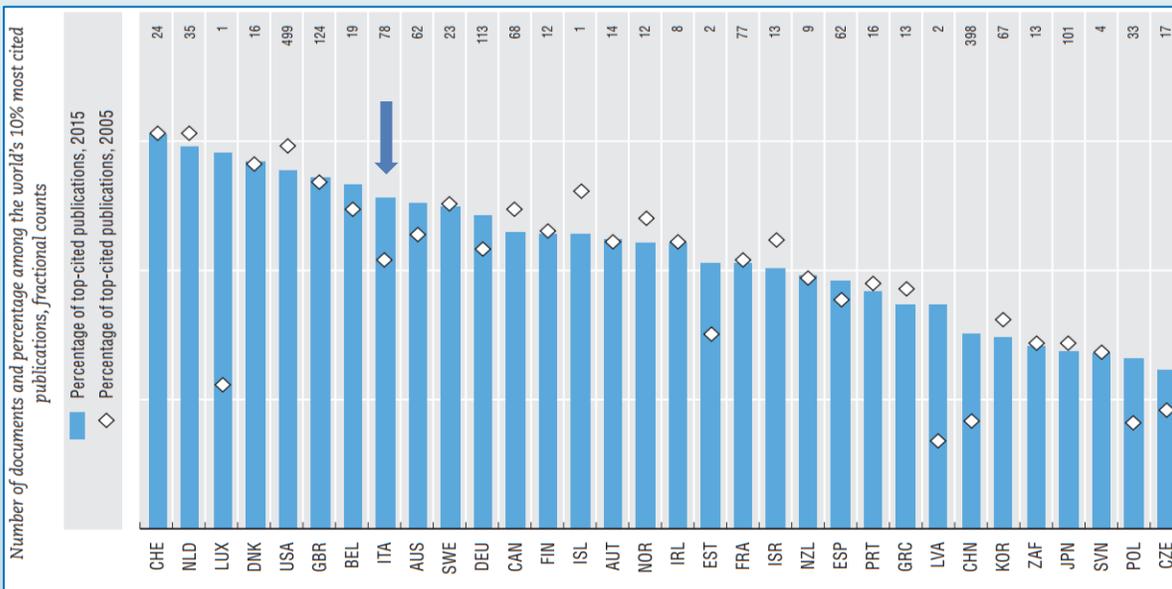
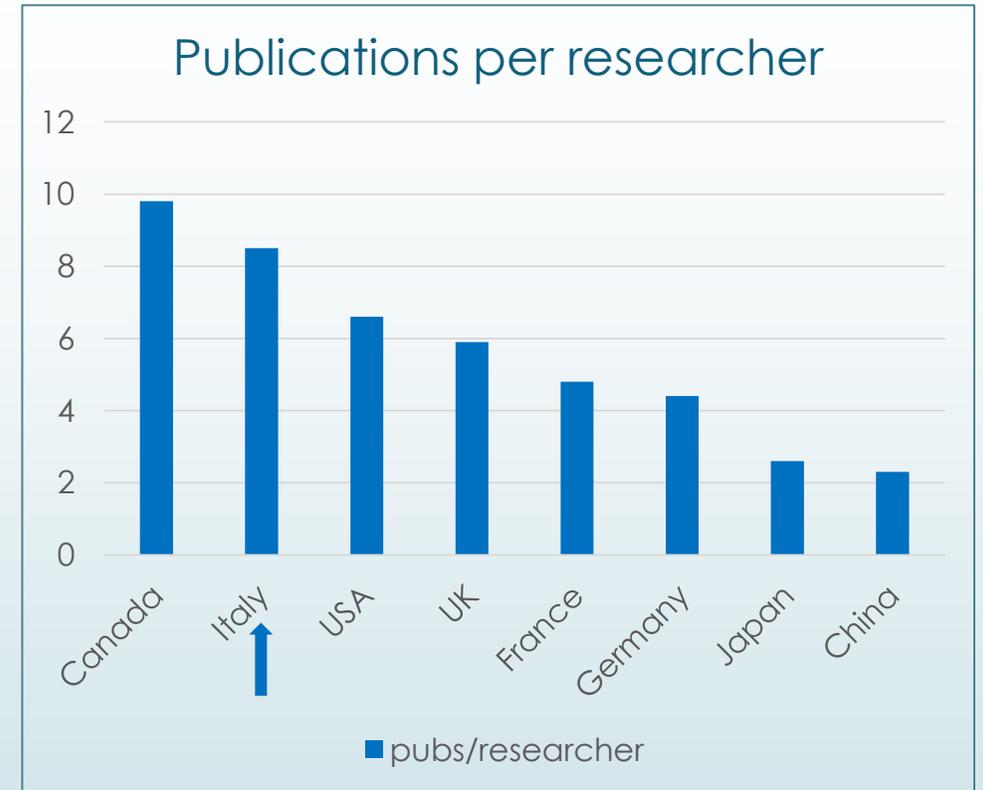
Technical Secretariat for Research Policies – Department for Higher Education & Research

Italian Ministry for Education, University & Research

Country rankings 1996-2016

(Scimago Journal & Country Rank 1996-2016, OECD STI Scoreboard 2017)

Country	↓ Documents	Citable documents	Citations	Self-Citations	Citations per Document	H index
1 United States	10193964	9165271	240363880	110517058	23.58	1965
2 China	4595249	4525851	32913858	18210007	7.16	655
3 United Kingdom	2898927	2499445	60988844	13948928	21.04	1213
4 Germany	2570206	2394158	49023207	12158563	19.07	1059
5 Japan	2367977	2277777	35480575	9503478	14.98	871
6 France	1826708	1712312	33910955	7292478	18.56	966
7 Canada	1468796	1338700	31052115	5578703	21.14	963
8 Italy ←	1449301	1335074	25366435	5850838	17.50	839
9 India	1302605	1223521	10839171	3694872	8.32	478



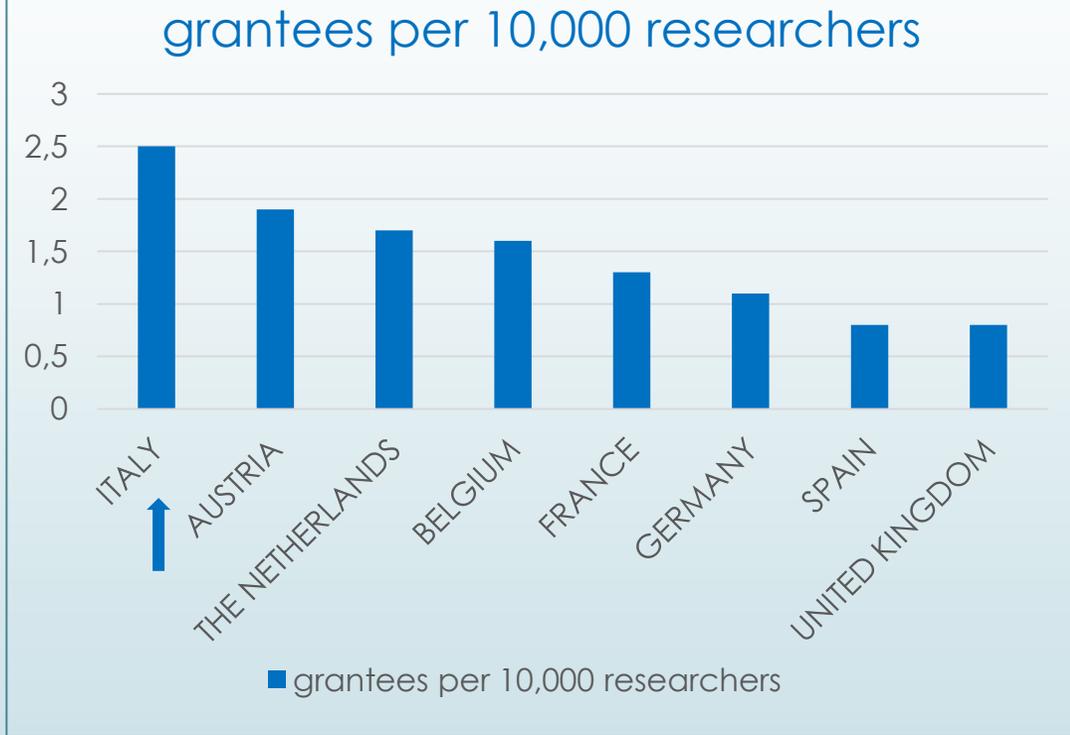
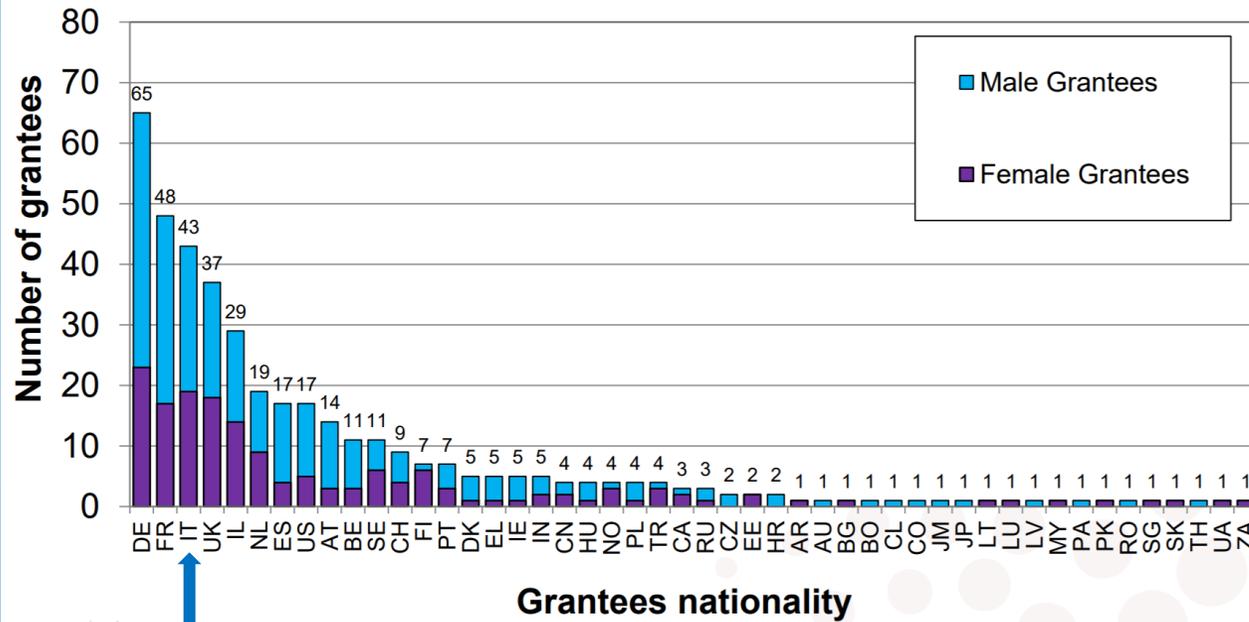
Italian researchers are performing very well!

Knowledge-oriented research: ERC success of Italian young researchers

ERC Starting Grant 2017
Grantees by nationality and gender
 Total 406 grants



48 nationalities





Technology & product-oriented research: success of Italian SMEs (Innovation in SMEs) in H2020

Applications IT SMEs	288
Retained IT SMEs	141
% retained IT SMEs	49%
Allocated TOT (M€)	102,4
Allocated to IT SMEs (M€)	10,8
% allocated IT	10.5%

Overall performance of IT in H2020

% H2020 budget allocated to IT	8.5%
IT researchers as % of EU28	6.7%
H2020 €/researchers' capita - IT	14.8
H2020 €/researchers' capita - UK	11.5
H2020 €/researchers' capita - DE	11.0
H2020 €/researchers' capita - FR	8.7
H2020 €/researchers' capita - NL	22.9

http://www.apre.it/media/459686/apre_panoramica_partecipazione_h2020.pdf

Towards the next FP - an Italian vision

Most wanted features of the next FP (as compared to H2020)

The Basics: The European Research Area & the Framework Programme

- The main research policy objective of the European Union is the full implementation of a European Research Area (ERA) and the multiannual framework programme (FP) represents the main support instrument for implementing research at EU level.
- Surprisingly, these two pillars on which the European research is founded have evolved independently from each other.
- Italy believes that transnational research, supported by the FP financial resources, involving multiple Member States (and Associated Countries) across the whole of Europe and beyond, is instrumental for the achievement of a fully functional ERA.
- Therefore, Italy expects that the ERA priorities are echoed in the formulation of the next FP.

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A focus on researchers

- Research cannot be done without researchers: the dialogue between research and innovation for the good of the whole society cannot take place without researchers.
- Researchers (particularly 1st stage researchers and women researchers), should be at the core of the FP much more than they have been in H2020, as they are the main effectors of socio-economic growth.
- An Open Science and Open Innovation approach implies new efforts and additional work for the involved individuals (researchers and innovators) and their organisations (universities, research centres, enterprises etc.).
- These efforts should be appropriately and adequately incentivised and rewarded in the next FP, at the level of individuals (e.g. in applications to the MSCA programmes) and institutions (e.g. in research and innovation actions' proposals).

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Changes within a stable architecture

- The 3-pillars architecture has contributed to deciphering the H2020 main areas of activity and it should be maintained in the next FP.
- As to the 1st Pillar, the European Research Council (ERC) and the Marie Skłodowska Curie Actions (MSCA) contributed to foster a reservoir of talented, gender-balanced human resources for R&I in Europe and should maintain adequate support.
- The recent evolution of the MSCA is effectively promoting the relationship between innovators and researchers, between society and academia, thus the investment on the MSCA should be re-equilibrated with that of the ERC.
- In agreement with the *Science Europe Statement on a More Meaningful Research Impact Assessment*, an 'impact window' should be open also among the ERC criteria, without for that compromising the fully bottom up approach of the Programme.
- The 3rd Pillar should maintain focus on EU industrial research, which is lagging behind global competitors. In particular, "Innovation in SMEs", radical AND incremental, is expected to keep all its importance for economic growth, social cohesion and wellbeing, even more now, within the framework of the Fourth Industrial Revolution.

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Excellent Research, Innovation AND Impact: the keys for adequate financial resources

- In line with the position expressed by the European Parliament and with a number of studies making the economic case for investing in R&I, Italy argues in favour of a substantial increase of the FP budget within the next Multiannual Financial Framework.
- It is easy to ask for more money, much more difficult is to convince the resources' owners, i.e. the taxpayers, to give more money. Impact is the key which can open the 'money safe'. To obtain a strong support from the European citizens is indispensable to demonstrate the ability to progress towards the solution of the Global Challenges.
- A vision which considers excellence and impact as mutually exclusive is severely obsolete. We are convinced that maintaining a challenge-based approach in the next FP, especially, but not exclusively, in the 2nd Pillar, can ensure coherence and, most important, can improve effectiveness and impact of the EU R&I funding landscape.
- The rapidly changing contexts need an abundant reserve of flexibility, to account for changes in the rank of priorities, but also for the emergence of new priorities. Thus, the approach of a flexible allocation of resources to biennial 'work-programmes' should be maintained, without for that losing a long-term vision.
- Although not being in favour of an excessive drift toward a finance-driven approach, we would welcome a balanced experimentation of alternative R&I funding modalities, especially for large high TRLs close-to-market activities involving PPP

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The 'new' 2nd Pillar: a challenge-based, mission-oriented approach

- We believe that the UN Sustainable Development Goals (SDGs) represent an appropriate framework in which to inscribe the challenge-based approach of the new FP, avoiding both overlaps and uncovered areas.
- In co-designing the new FP, in line with the UNs' SDGs and with their Sendai Framework 2015-2030, Italy would like to see emerging global challenges, as e.g. Migrations & Integration, and Disaster Risk Reduction, to be taken in consideration.
- According to a RRI attitude, it cannot be promised that, within the lifespan of the new FP, the SDGs will be achieved. Therefore, a wise and serious option is to embed into the challenge-based approach a mission-oriented approach.
- We consider appropriate a definition of 'missions' as "*ambitious but feasible, high-impact objectives, embedded within a challenge-based approach, with a defined timeframe*".
- In this connection, mirroring a similar initiative by the EC, we are planning for the coming weeks to launch a National consultation for the identification and prioritisation of particularly significant 'missions'.

Towards the next FP - an Italian vision

Most wanted features of the next FP (as compared to H2020)

The Joint Programming Process (JPP) and the role of Partnerships within the new FP and its challenge-based, mission-oriented approach (a)

- The JPP is crucial for providing an operational meaning to the concept of European Added Value (EAV) and for streamlining National and European research, with the aim of reducing fragmentation and eliminating unnecessary duplications.
- The JPP has produced excellent results in shaping the European R&I landscape, with a distinct EAV, in its 'hard' component, i.e. the research infrastructures (RI), which have been identified through the European Strategy Forum for RI (ESFRI) roadmaps.
- Comparable results have not yet been achieved by the 'soft' component of the JPP, i.e. the research programmes, which frequently are the bare sum of National projects, without any added streamlining/aligning effect on National programmes and, most important, without a perceivable EAV.
- To improve the effectiveness of the JPP, Italy proposes a progressive convergence of its soft- and hard- components, by promoting around the identified Grand Challenges the creation of 'societal partnerships', similar to the model of our National Technology Clusters.

Towards the next FP - an Italian vision

Most wanted features of the next FP (as compared to H2020)

The Joint Programming Process (JPP) and the role of Partnerships within the new FP and its challenge-based, mission-oriented approach (b)

- The process of identifying the 'missions' within each Grand Challenge could evolve as an 'ESFRI-roadmap-like' co-design procedure, based on available evidence and on foresight exercises: the challenge-specific Societal Partnerships, conceived as strategic hubs for R&I on the relevant challenge, could design a 'missions' roadmap, maintaining an appropriate reserve of flexibility to face 'the unexpected'.
- We are convinced that a Challenge-based, Mission-oriented Approach, managed by open and inclusive Societal Partnerships, including all relevant stakeholders, could considerably simplify the European R&I landscape and maximise the impact of its funding.
- EU-level platforms could favour the operations of the Societal Partnerships, thus we look forward to the European Open Science Cloud, and we imagine that also a European Innovation Council could fit well within this landscape, provided that it has the instruments for stimulating a more risk-prone attitude by investors, which is where Europe severely lags behind its competitors, particularly the US.
- Private, risk-taking investors and a pervasive and intensified public procurement are mostly needed to support EU SMEs, whose transition to become 'smart factories' cannot take place without adequate financial and regulation support.

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Most wanted features of the next FP (as compared to H2020)

Synergies and simplification

- Establishing synergies between the FP and the ESIF, good in principle, has been extremely difficult in practice due to the scarce compatibility or overt contradiction between the respective regulations. Therefore, Italy recommends that extreme care is taken in verifying that the principle can be easily applied by all MS in the next FP.
- The 'Seal of Excellence' concept, applicable to all the mono-beneficiary programmes, has been welcomed by the Italian research system (in its private and public dimension) and should be maintained in the next FP.
- Italy would favour further simplification steps in terms of procedures, particularly with regard to co-financed programmes, and strong efforts should be deployed not to discourage potential applicants (particularly newcomers) due to an excess of bureaucracy and of a mistrust-based *ex ante* financial scrutiny.
- The establishment of a single entry point for grants (including for co-funded financial instruments) would considerably simplify and widen the participation, especially of the most promising subjects in the innovation sectors, as SMEs and Start-Ups.
- About the 'time to grant', the need to speed up the process has to be balanced with that of guaranteeing the quality of the evaluation and an adequate feedback to the applicants.

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Making the European R&I landscape wider

- Europe and its 28 National research systems individually are too small to cope with the global competitors. Thus, the EU cannot afford to further circumscribe its R&I potential to a limited number of MS, or, worse, to a limited number of regions in a limited number of MS.
- Italy favours a boost of the 'widening participation' concept in the next FP, including a revision of the criteria for selecting the potential beneficiaries, which should be based on an evaluation of the baseline conditions sounder than that adopted in H2020.
- To seriously widening participation, the dimension of the projects eligible for funding should encourage applications by newcomers, especially those from countries/ regions historically less participating and less 'winning'. This does not preclude of course the possibility to support big projects, when justified by the scope, but the doors should remain open to small-to-medium projects.
- A deeper cohesion within the EU will be promoted also by further efforts to improve the interoperability of the higher education (HE) systems. Thus, a tighter relationship between the ERA and the European HE Area should be fostered, with a view to making a new generation of European researchers and innovators grow.

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An international dimension

- Remaining truly Open to the World is a need for each and every Nation on the face of Earth to meet the Global Challenges we have in front of us, climate change being the most striking example. This of course applies to the EU as well.
- Therefore, the next FP should maintain the international dimension which characterized its predecessors. However, a renewed attention should be attributed to the need not to 'dilute' this dimension across scattered initiatives, but rather to concentrate it where extra-EU R&I co-operation represents a true added value to tackle a specific Global Challenge and the 'missions' embedded into it.
- In particular, Italy expects to see, in the next FP, a special attention to the Mediterranean Area and to the African Continent in general, for jointly tackling R&I issues related to Global Challenges such as Migrations and, overall, to the achievement of the universally shared SDGs.

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A co-designed and co-implemented Framework Programme

- According to the Conclusions of the last Competitiveness Council (Dec. 1st 2017), Italy expects the European Commission to cooperate closely with the Member States in the early conception of the next FP and to involve Member States, stakeholders and citizens in its co-design and implementation.
- We are convinced that the role of Member States in the priority-setting process should be reinforced, so that National policies and the Union policy are mutually consistent.
- Once the FP operational phase starts, Member States and Associated Countries should be fully and timely involved in all stages of work programmes' co-design, preparation and implementation.