

## **EARTO Background Note: The Repayable Advances Scheme**

20 February 2018

For the last couple of years and in the frame of the preparation of the next Framework Programme (FP9), the European Commission is looking at new financial tools to finance high TRL RD&I activities. Financing RD&I activities through Competitive Grants is still the most used scheme. But there is more and more a shift towards the use of other financial instruments like Repayable Advances. The Repayable Advances scheme has however an impact on RTOs and IPs.

The 1 December 2017 EU Competitiveness Council conclusions already noted that "grants should continue to be the main form of funding in the FP", which was welcomed by EARTO<sup>1</sup>, as RTOs experiences with Repayable Advances scheme show that those are not an appropriate scheme for RD&I support.

This note will serve as a mean to compare the efficiency of those two types of funding and their consequences for RTOs.

In the OECD Science, Technology and Innovation Outlook 2016 report<sup>2</sup>, the OECD gives for each country a qualitative rating on the use by that country of two schemes of public RD&I funding:

- RD&I financing by Repayable Advances. 0 stands for "not used" and 9 stands for "high and increasing use".
- RD&I funding on Competitive Grants. 0 stands for "not used" and 9 stands for "high and increasing use".

In the following table, we gather for seven large OECD countries these two ratings and the ranking of each country in the Global Innovation Index<sup>3</sup>.

<b>Countries</b>	<b>Competitive Grants Index</b>	<b>Repayable Advances Index</b>	<b>GII 2016 Ranking</b>
USA	9	0	4
UK	7	0	3
South Korea	8	2	11
Germany	8	2	10
Spain	4	2	28
Italy	1	3	29
France	6	4	18

Sources:

- [http://www.oecd-ilibrary.org/science-and-technology/oecd-science-technology-and-innovation-outlook-2016\\_sti\\_in\\_outlook-2016-en](http://www.oecd-ilibrary.org/science-and-technology/oecd-science-technology-and-innovation-outlook-2016_sti_in_outlook-2016-en)
- WIPO/ INSEAD/ CORNELL University Global Innovation Index (GII) Country Ranking

### **GII Ranking vs OECD Repayable Advances Index**

We create here a graph to check if there is a correlation between the Repayable Advances index and the global innovation index.

It can be observed that there is a negative correlation between the GII and the repayable advances index: the countries (USA, UK) that have the best GII rankings are the ones that use the least Repayable Advances for the financing of the RD&I (USA and UK do not use Repayable Advances financing at all). Conversely, those who use the most refundable advances are those who are the

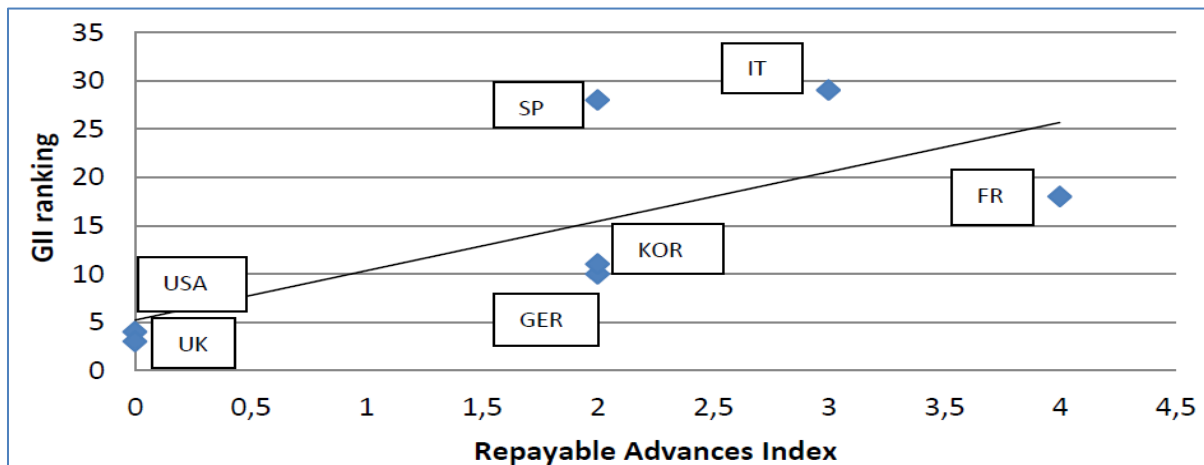
<sup>1</sup> EARTO Views on EU Competitiveness Council's Conclusions of 1 December 2017: Towards FP9, 1 December 2017

<sup>2</sup> OECD Science, Technology and Innovation Outlook 2016, 8 December 2016

<sup>3</sup> The Global Innovation Index WIPO/INSEAD/CORNELL UNIVERSITY ranks 141 countries according to their ability to innovate by taking into account more than 90 criteria (1 is the highest rank, 141 is the last rank).

GII's [website](http://www.gii.gov): "The Global Innovation Index (GII) aims to capture the multi-dimensional facets of innovation and provide the tools that can assist in tailoring policies to promote long-term output growth, improved productivity, and job growth. The GII helps to create an environment in which innovation factors are continually evaluated. It provides a key tool and a rich database of detailed metrics for 141 economies this year, which represent 95.1% of the world's population and 98.6% of global GDP".

lowest ranked in the GII (Italy, France). Germany and South Korea are in an intermediate situation.

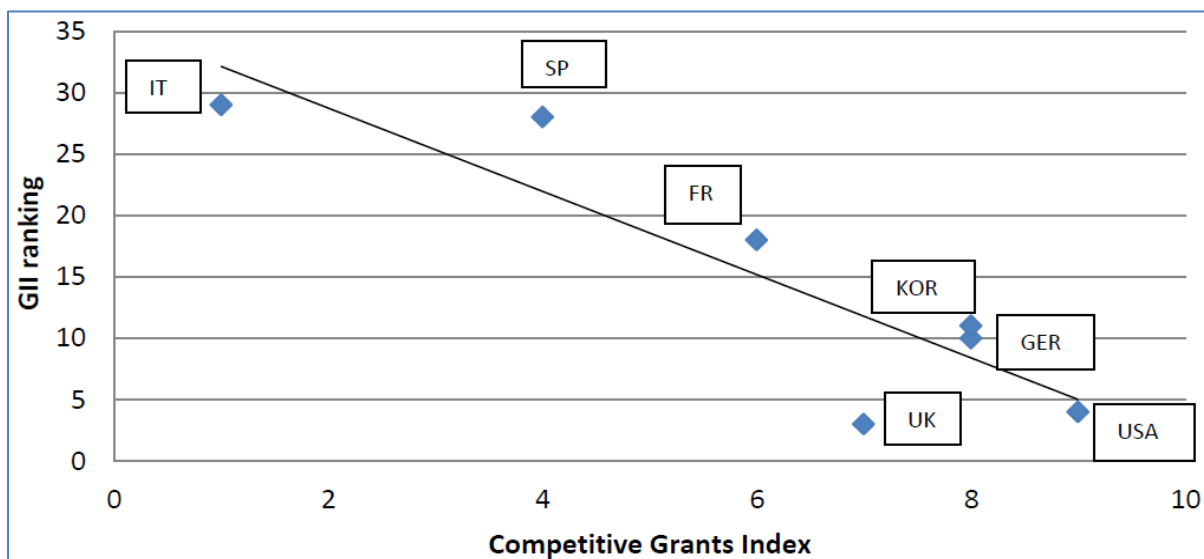


The linear trendline has an R-squared value of  $R^2=0.4943$

### GI I Ranking vs OECD Competitive Grants Index

We create here a graph to check if there is a correlation between the Competitive Grants index and the global innovation index.

One can see a remarkable positive correlation between the GII and the Competitive Grants index: the countries (USA, UK) with the best GII rankings are those that use the RD&I financing by Competitive Grants the most. Italy, which barely uses the Competitive Grants scheme has the worst GII ranking of the panel. Other countries are in intermediate situations.



The linear trendline has an R-squared value of  $R^2=0.7912$

### Discussion

Using the Repayable Advances scheme (compared to the current Competitive Grants scheme) would negatively impact RTOs and their IP and Technology Transfer best practices and results. This could for example force them to transfer a part of the royalties of the licenses they grant at the end of the projects to the funding agency (for example EC in the FP). Then the funding agency might be tempted to fund only projects in themes where royalty levels are high, to the detriment of all others<sup>4</sup>, going against the public interest: EC could preferentially fund projects that appear to offer the greatest prospects of financial return by royalties to the neglect of others that yield equal or even greater social benefits. For example, licences for biomedical knowledge account to almost 87% of all the licence incomes in Europe for all the EU research organisations, and 67% in the

<sup>4</sup> Respondent Report of the Knowledge Transfer study, 2012"; study made by Empirica on behalf of EC DG Research; April 2013 (based on 498 respondents); Anthony Arundel and all.

USA. In order to increase royalties, the funding agency could be tempted to oblige RTOs to grant sectorial exclusive licences both for the Foreground created in the projects it funds, but also to the Background needed to exploit the Foreground, which would go against:

- The public interest: Research Organisations could no longer engage this BG as the BG for another RD&I collaboration project with another industrial company in another field, hindering therefore globally the technology transfer results of research organisations,
- International best practices in technology transfer and
- The EC's [recommendation](#) for the management of intellectual property and technology transfer.

More generally, the EC could reinforce its march-in rights by taking control of the IP to sell it to the best bidder, even foreigners, demotivating even more research organisations and industrial companies to participate in such projects.

Such situation already exists. In France, some public research organizations are involved in some projects at high Technology Readiness Level (TRL) financed by public program agencies with the repayable advances scheme. The results are generally weak and the incentives for the respondents to apply are often low. For example, Universities and Research Organisations have in place or are encouraged to have internal reward policies for their researchers, enabling them to gain a part of the royalties earned by their employer (see for example again EC's [recommendation](#)). Repaying the funding agency with a part of the royalties earned would therefore not only demotivate Universities and Research Organisations to participate in projects funded with the Repayable Advances scheme, but it would also undermine their reward policies and deter researchers. In some Member States, rewarding individual researchers by enabling them to gain a part of the royalties earned by their employer is even mandatory by law. Therefore, repaying the funding agency with a part of the royalties earned would also go against these laws

## Conclusion

Taken into account that:

- There is a negative correlation between the Global Innovation Index and the Repayable Advances index and that the countries (USA, UK) that have the best GII rankings are the ones that use the least Repayable Advances for the financing of the RD&I (USA and UK do not use Repayable Advances financing at all),
- The Repayable Advances scheme demotivates researchers and research organisations,
- The Repayable Advances scheme has negative impacts on the global technology transfer efficiency of Research Organisations,
- The Repayable Advances scheme has negative impacts on the Public Interest,

EARTO recommends not to implement this Repayable Advances funding scheme in FP9.

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## **EARTO - European Association of Research and Technology Organisations**

*Founded in 1999, EARTO promotes Research and Technology Organisations and represents their interest in Europe. EARTO network counts over 350 RTOs in more than 20 countries. EARTO members represent 150.000 highly-skilled researchers and engineers managing a wide range of innovation infrastructures.*

## **RTOs - Research and Technology Organisations**

*From the lab to your everyday life. RTOs innovate to improve your health and well-being, your safety and security, your mobility and connectivity. RTOs' technologies cover all scientific fields. Their work ranges from basic research to new products and services development. RTOs are non-profit organisations with public missions to support society. To do so, they closely cooperate with industries, large and small, as well as a wide array of public actors.*

**EARTO Working Group Legal Experts:** *is composed of 25 corporate legal advisers working within our membership. Established in autumn 2013, this Working Group has also worked on the revision of the state aid rules & the GBER. Our experts also contributed to the setting-up of the DESCA Consortium Agreement model for Horizon 2020. More recently they were at the origin of the EARTO Paper on Open X, the EARTO Background Note on the US Federal Agencies Data Sharing Policies, and the EARTO voting recommendation for Globally Competitive Standardisation in the Digital Single Market.*