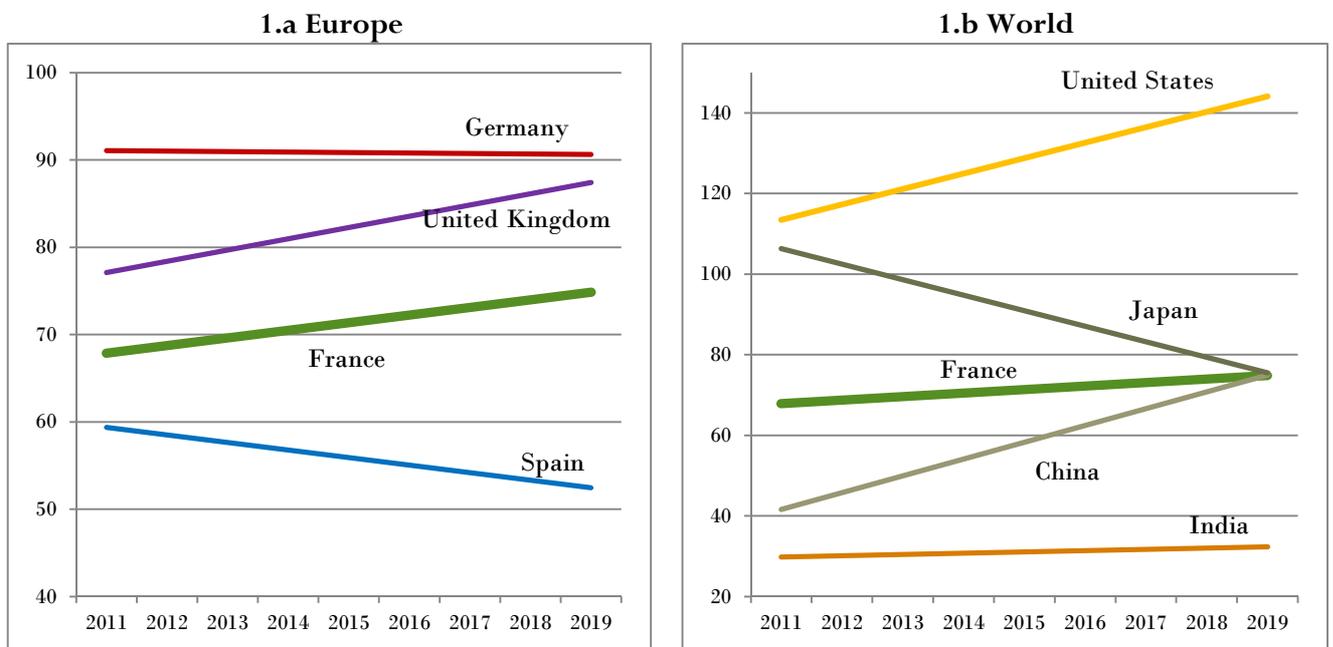


## Research tax credit: a structural asset for French competitiveness

Competitiveness driven by innovation and research has increased this year according to international rankings<sup>1</sup>: the Research Tax Credit reaffirms its role as the lynchpin of French ecosystems. Nevertheless, its conditions have been sorely tested and concerns are accumulating.

Graph 1 – In a fast-moving environment, French corporate researchers more or less maintained their relative competitiveness in Europe; internationally, their relative rate has been matched by those of the Chinese and Japanese.



These graphs present a comparison of the evolution of researcher rates, established using data collected by the ANRT Panel over the last 9 years. The country selection shown here indicates trends rather than annual values. NB: The position on the y-axis shows the cost of researchers in the form of an index: the cost of a French researcher with no tax credit or subsidies equals 100.

The rising trend in the cost of a researcher in France – from 64 to 74 over 9 years according to our indicator – can mainly be put down to changes introduced early on in the period<sup>2</sup>. The progressive decrease in public subsidies for collaborative research has left its mark, in some sectors in particular. Over time, the impact of national governments’ choices in terms of research and innovation are clearly visible. Spain, for example, has adopted and supported a very strong policy to make R&D attractive. The fact that the gaps seem smaller in Europe than elsewhere in the world is largely due to India and the United States. The Japanese and Chinese cases illustrate the benefits of long-term monitoring of the impacts of R&D support policies considering macroeconomic contexts. The cost of a corporate

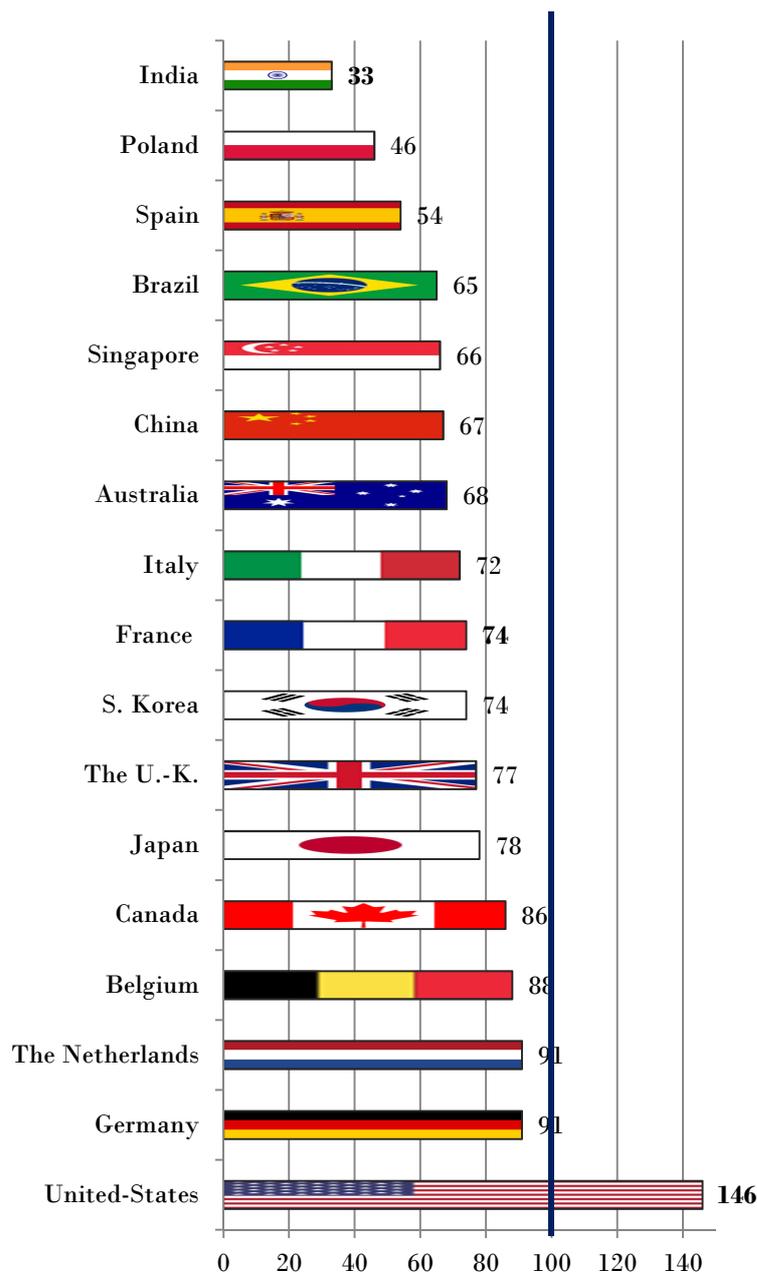
<sup>1</sup> Cf. for example, the “Global Competitiveness Report 2019” by the World Economic Forum, published on 24 September. In this ranking, France has moved up to 15<sup>th</sup> place out of 141 countries.

<sup>2</sup> In 2011, the operating costs rate dropped from 75% to 50%; conditions for contracting out to the private sector became more restrictive.

researcher that has moved closer to the French standard from 20 points higher (Japan) does not mean the same thing as a move from 20 points lower (China). National research competitiveness is relative by definition. An apparent improvement may illustrate a deflationary trend; or on the contrary, an apparent deterioration may indicate a certain overheating that conveys optimism.

All of our Panel members agree that a shift is imminent: the situations and research policies pursued in Germany, Spain, the United Kingdom and the United States alone are judged critical and likely to influence the rankings established over the last decade.

**Graph 2 – 2018 researcher rates: France as a “global standard”**



|100 = Cost in France with no RTC or subsidies |

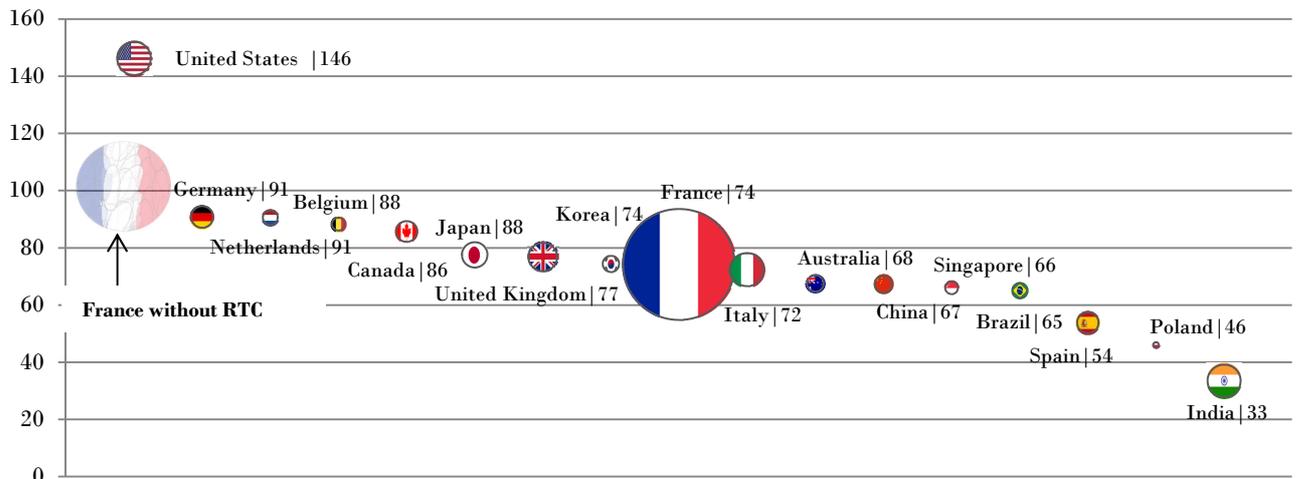
This year, the Panel compared the average cost of researchers in 17 countries. With a rate of 74, France occupies a central position, at the same level as Korea.

Leaving India and the United States to one side, the rate doubles from the lowest (Poland) to the highest (Germany). The perception of the gap between these two countries is even more striking given their geographic proximity. This tension also explains the German decision to establish a tax research credit from 1 January 2020 (see below).

The British come in at 77, a historically low level. This position results from a reform of the country’s R&D tax relief in April 2016 (creation of *Research and Development Expenditure Credit, RDEC*) and an increase in rates for SMEs dating from 2014. These improvements automatically translate into an increment in RDEC, which amounted to more than 5 billion euros in 2017.

Rates in the United States, which have risen to 146, are about double that of French rates, impacted by a scarcity of researchers and insufficient renewal of their numbers.

**Graph 3 – In 2018, out of 17 countries, French industrial research maintained its position**



**Key:** The size of each flag is proportional to R&D staff in the panel companies. The position on the y-axis shows the cost of researchers in the form of an index: the 100 mark is the cost of a French researcher with no tax credit or subsidies.

Corporate researchers on the ANRT 2019 panel mainly contribute to R&D activities on French sites. In general, Europe is their primary location region, followed by Asia and the Americas. The countries in which the Panel companies' R&D teams are located have all established tax incentive measures – with the exception of Germany, the most expensive country in the world for locating research after the USA. However, a German law on research aid, the *Forschungszulagengesetz*, voted on 7 November 2019, will attempt to correct this situation with the establishment of an RTC accessible to German companies from 2020. To obtain this *steuerliche Forschungsförderung*, or research tax subsidy, at a rate of 25% for a maximum benefit of 500,000 euros, companies must comply with the eligibility conditions of the Frascati Manual (OECD, 2015).

According to attractiveness surveys published in 2019, France has moved up and is now the leading destination for R&D investments (reinforcement or creation of R&D centres) in Europe. As announced in this study in 2018, the virtuous dynamics that RTC stimulated are now becoming more concrete. To change the credit now, just as it is starting to make French R&D sites more attractive, would have damaging consequences. While France has presented a clear, stable model over recent years, other countries constantly adjust their measures to boost their competitiveness. Therefore, at comparable levels of scientific and technical skills, and even within a few percentage points, positive differences are extremely valuable for a country.

### Caution, attractiveness is fragile: proof by example

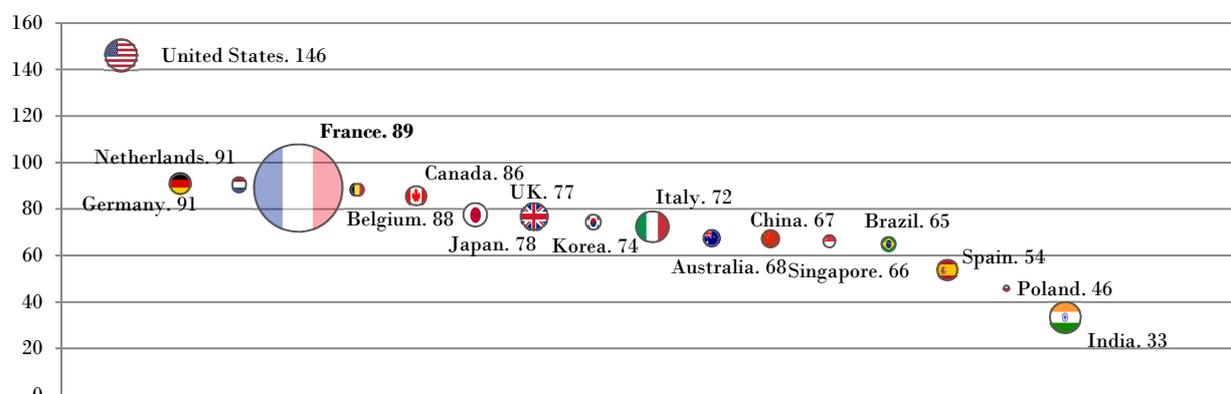
The attractiveness of a country is a fragile affair. When asked, major research employers on the ANRT panel suggest that differences in researcher costs in geographically close countries have a significant impact. This variable attractiveness is not only the result of corporate R&D expenditure being subject to RTC. However, a slow erosion resulting from successive political decisions in the form of ostensibly minor cutbacks does not just undermine confidence – it ends up having economic impacts.

This is the effect of the 2020 French finance bill, and changes in the way that lump-sum operating expenditure is calculated. The reduction of the rate of eligible staff expenditure from 50% to 43% should, all things being equal elsewhere, lead to financial savings of about 200 million euros. This 'minor

technical measure’, which is supposed to have a marginal impact on RTC for individual beneficiaries, is in fact worth putting into figures. **For the members of the Panel, the outcome is estimated to be an average loss of 3.5% of their research tax credit.** Automatically, in the absence of additional changes in the United Kingdom, from 2020 the average cost difference is likely to work to the advantage of corporate researchers on British sites.

The government’s firm position of maintaining RTC in its current format has worked to avoid the advent of a potentially much more harmful change. The calculation of RTC, which is back on the parliamentary agenda this year with the ambition of “better management of public debt”, could be implemented at the scale of corporate tax integration, and not, as currently, at the level of each industry that carries out R&D. The legislator has established a cap of 100 million euros of research expenditure, beyond which the RTC rate is divided by six (5% instead of 30%). This arrangement thus naturally curtails the support offered to research and innovation-intense companies that choose to invest in R&D in France. If this measure, which is being increasingly pushed by its supporters, were to be implemented, the savings would be very low compared to the negative impacts. On the basis of the calculations made, **the Panel companies concerned estimate that they would on average lose more than half of their RTC.** Graph 4 (below) sets out the consequences for the competitiveness of national research. The corporate researcher rate in France would become comparable to that in Germany and the Netherlands, i.e. one of the highest in the world. In the mid term, numbers of R&D personnel in companies located in France would also tend to decrease.

**Graph 4 – Estimation of the impact of RTC in the case where capping would apply at the level of tax integration (and considering the anticipated evolution of operating costs)**



**Key:** The size of each flag is proportional to R&D staff in the panel companies. The position on the y-axis shows the cost of researchers in the form of an index: the 100 mark is the cost of a French researcher with no tax credit or subsidies.

One of the justifications put forward in this proposal to modify the RTC is that user companies “would artificially create subsidiaries once they had reached the ceiling to be able to benefit from the full rate again”. The Panel members concerned made a list of all changes concerning their subsidiaries. From 2008 to 2018:

- 1 company had a positive creation/destruction outcome;
- 4 did not change at all;
- 3 saw the number of their R&D subsidiaries go down (and even halved!). They thus chose to organize their research in the way that suited them best, independently from loss of earnings.

It is therefore incorrect to say that the biggest users of RTC systematically tend to adjust their organization choices to obtain potential financial gains. As fittingly stated in the annex, “Only the

absence of a ceiling would avoid a windfall effect. An upper limit defines the optimum expected by public authorities. A cap indicates the maximum research investment that the country expects. As a result, it is more favourable to those that make a small share of their research investment in France; it is less favourable to those that make French sites their main global research hubs.”

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\* \*

*Fifteen international groups, members of ANRT (National Association for Research and Technology) that carry out part of their research in France, this year accepted once again to calculate and communicate to ANRT the comparative cost price of their researchers (including direct aid and tax credit) in the countries where they invest in research.*

*These groups invest over 14 billion euros in research in the world; this year close to 70,000 researchers were included in this comparison, with a wide variety of areas of application.*

*They have R&D teams in over 30 countries and yet on average over half of their employees are based in France! And the reason is not just habit or patriotism. The simple explanation comes down to one word: competitiveness (cost and non-cost).*



## Reliable, comprehensive barometer

International groups have every reason to view France as a favourable host country for their research investments. The quality of research and the proximity of large markets, along with favourable researcher prices and research costs for domestic propositions of comparable quality, carry the decision in favour of one or other of the research sites and in particular the company's development.

### **Researchers**

This study only concerns company researchers. These are employees whose task is research & development and who have contributed to at least one research project during the considered period.

### **Methodological approach with an emphasis on domestic consistency**

Taking as a reference the average price of a researcher in France before any subsidy and research tax credit (base 100), ANRT aggregated the compatible data specific to each group to produce the researcher rate by country.

For a given country, the average cost of a researcher is only included if two conditions are fulfilled:

- The ANRT panel has at least two averages of charge-inclusive costs from two different companies
- The research centres considered employ more than 20 people

The different accounting entries were pooled in order to standardize the information, while considering differences between the groups' accounting systems. The information is thus homogeneous at group level, making international gaps highly representative.

### **Virtuous tax measures**

An adequate tax incentive policy involves creating conditions in a country whereby the public resources mobilized produce the desired effect, no more and no less. In the absence of sound information from the field, the legislator cannot know the impact of policies in place elsewhere in the world and attempts to strike the right balance. Studies carried out on research tax credit, in particular by the OECD, quantify theoretical impacts at a macro-economic level. Despite their intrinsic qualities, these studies do not have the capacity to describe the actual cumulated effect on company accounts of all public policies, direct aid and tax incentives.

Accounting is the only real barometer of major companies, taking all advantages and charges into account. Multinational groups' accounting and tax systems are obliged to be robust and consistent; financial control and business intelligence can be used to extrapolate decision-making data. Information is therefore highly sensitive: it reflects the strategy of both companies and governments through subsidy regimes specific to sectors, locations, or intellectual property registration in a country.

### **No upper limit means no windfall effect**

An upper limit defines the optimum expected by public authorities. A cap indicates the maximum research investment that the country expects. As a result, it is more favourable to those that make a small share of their research investment in France; it is less favourable to those that make French sites their main global research hubs.