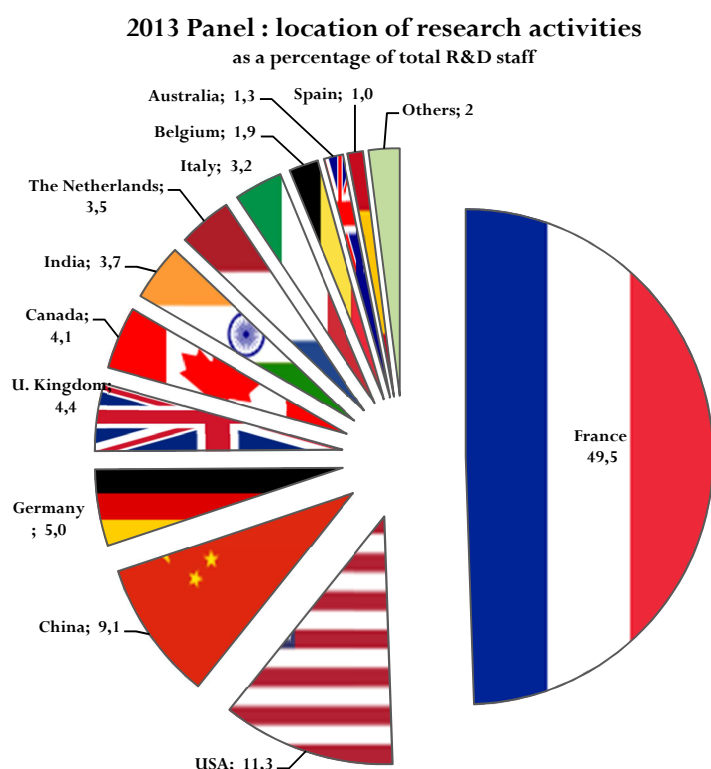


In the midst of a global restructuring of the research world, French performance bears out

This third issue looks back over the results of the last 3 years. Instability prevails and there have been numerous changes. The stability of French RTC is starting to leave a clear, attractive mark on the global research arena.



Twelve international groups, mostly ANRT members, that carry out part of their research in France, once again accepted this year to calculate and communicate to ANRT the comparative cost price of their researchers (including direct and tax aid) in the countries where they invest in research¹.

These groups invest 12 billion euro in research in the world; over 63,000 researchers are included in this comparison, with a wide variety of areas of application.

They have R&D teams in over 30 countries and yet now almost half of their employees are based in France! Their company headquarters are not always in France: although half of their research is carried out in there, the motivation is not always to do with habit or patriotism. The simple explanation comes down to one word: competitiveness (cost and non-cost).

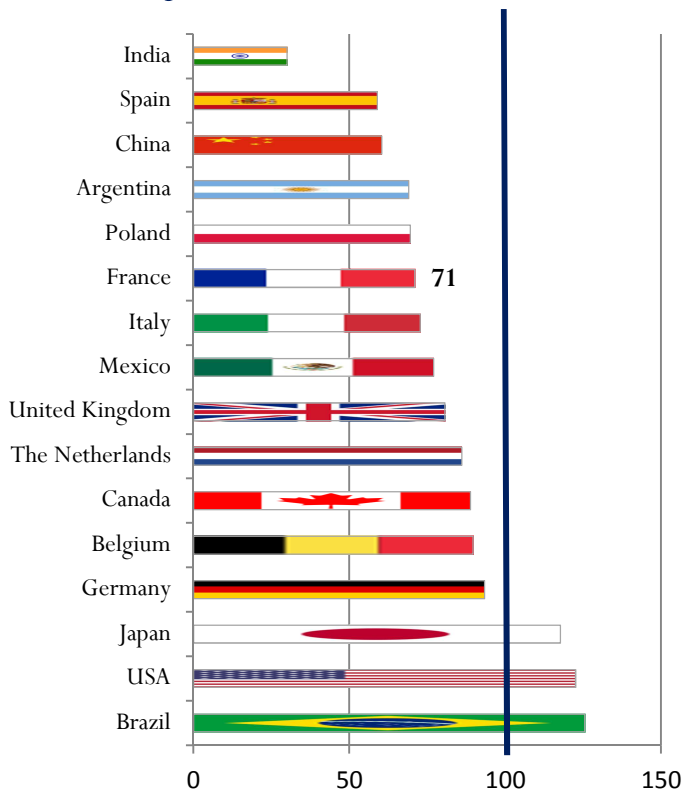
Competition between states to attract research is stiffer than ever. Countries without incentive schemes have become the exception.



¹ Air Liquide, Alcatel-Lucent, APERAM, ArcelorMittal, Danone, Mitsubishi Electric R&D Centre Europe, NXP, Orange, Oxyane, Saint-Gobain, Sanofi, Thales.

Image (1): cost of researchers in 2013

Average researcher's cost, incl. incentives 2013



The vertical bar indicates France's position if RTC did not exist.

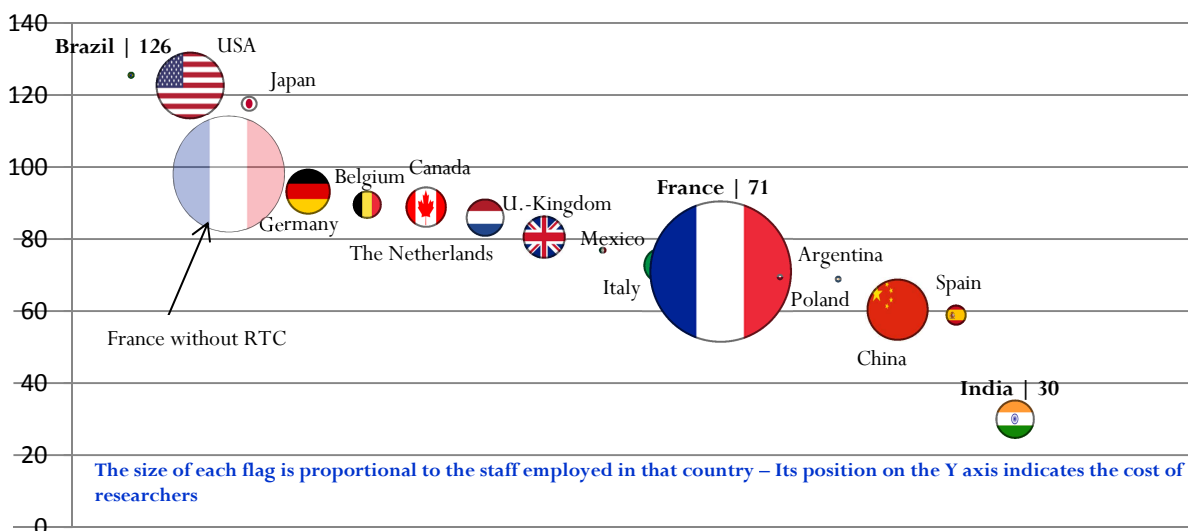
Base = 100 France without RTC

The price of a French researcher is stable in relative terms, although it has gone up slightly compared to last year.

In the United States and Japan, the leading global economies, researchers are expensive. Their technological specialities seem to be sufficiently robust to deal with the challenge.

Costs in Brazil, impacted by a two-fold hike in social contributions, have shot up to reach the same level as the two richest countries. If this is not a statistical error, then Brazil is no longer controlling its costs and risks a formidable backlash.

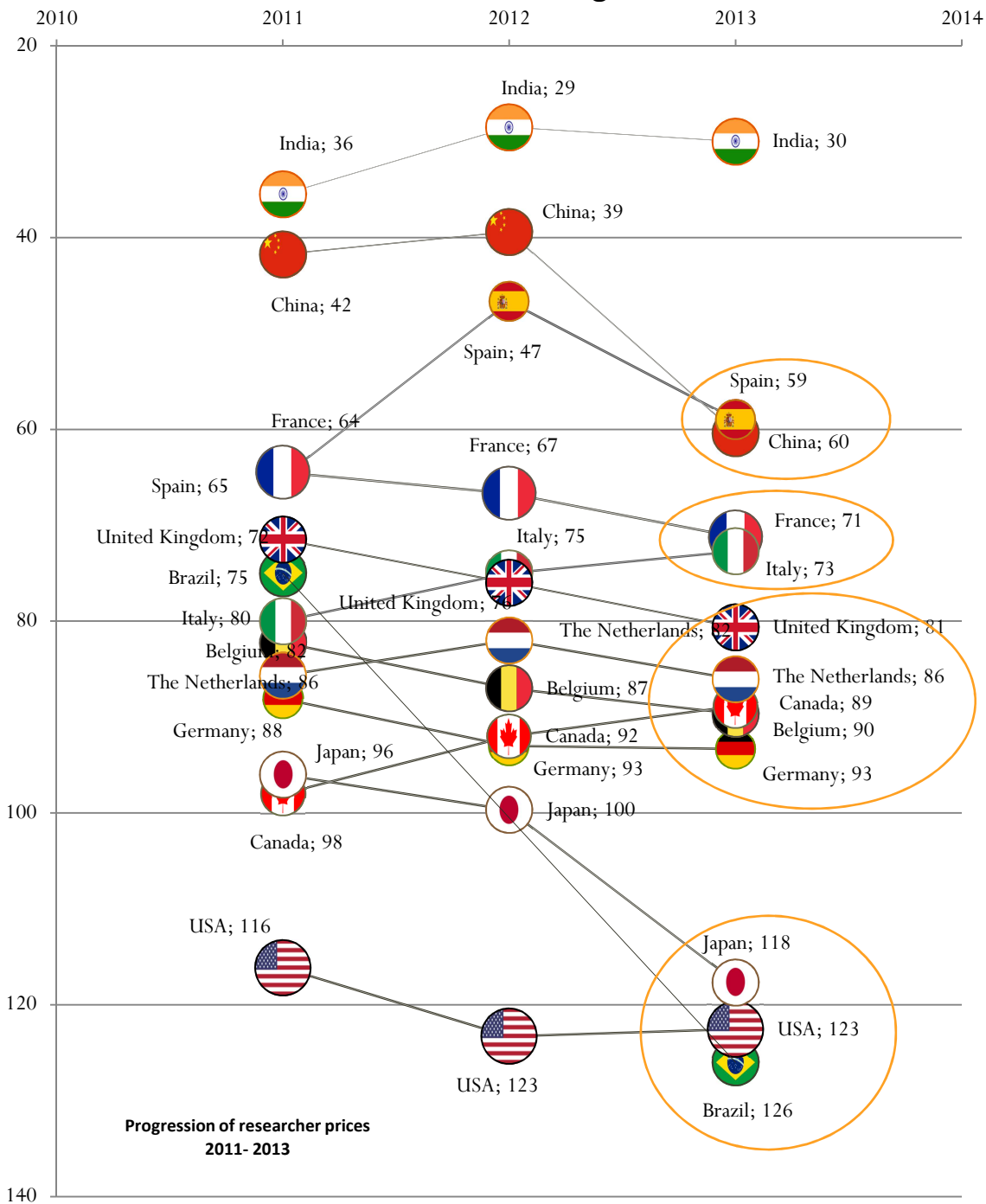
Image (2): researcher costs and location of staff in 2013



The size of each flag is proportional to the staff employed in that country – Its position on the Y axis indicates the cost of researchers

Despite the size of the French flag, in the absence of RTC France would be so much less attractive that it would become the most expensive country in Europe, in fruitless competition with Japan and the United States.

Video: “Global restructuring of research activities”



All change

For the first time, the cumulated effect of the progression of companies on the ANRT panel, the creation of global value chains, and changes in states' financial capacities show that **RTC helps to strengthen France's visibility and international attractiveness** for research investments.

To develop innovative applications and services, it is often better to invest in France than elsewhere. Good recent examples are Google, Microsoft and even more recently Samsung's decisions to locate their research centres in France.

Europe is stable overall, but has suffered from a drop in European research aid, which explains the overall slide in competitiveness between 2011 and 2012. Northern countries are more expensive than southern ones. Germany, Belgium, the Netherlands, and the United Kingdom make up a coherent bloc. Canada is a member of this group of developed countries and has constantly improved its research cost competitiveness thanks to targeted active policies. France and Italy are in a similar position. Thanks to RTC, France has become the most competitive developed country, capable of attracting and maintaining research sites with distinct specialities.

This year, Spain and China converge towards very attractive wage costs way below those of the group of developed countries described above. Although Spain has greatly reduced its wage costs to achieve this, on average China seems to have raised them. In China, the difference in rates between companies is significant. The reason for this is different strategies for locating intellectual property, and sectorial and local agreements that result in tax relief and exemptions; the upsurge is also due to employing expatriates at higher rates. On the other hand, the Spanish RTC showed its limitations between 2011 and 2012; Spain is thus preparing to make some changes: reimbursement of expenditure of up to 3 million euro per company per year, provided it is reinvested in research and R&D staff levels are maintained for three years. Its ministry for industry will decide on the eligibility of expenditure.

Lastly, India offers low-cost research, aimed more at customized development than innovative solutions.

R&D employment levels do not follow general trends; they react to incentive systems and create local relationships in French ecosystems

The attractiveness of the national territory is fragile. A questioning of several of the main researcher employers on the ANRT panel showed that it is by maintaining the cost competitiveness of research that favourable progression of research employees on national territory is guaranteed. At the same time, numbers of non-research staff are dropping, and those countries whose gap with France has negatively widened are seeing their clout in global research diminish.

Maintaining efficient R&D in specialized technical areas involves keeping up a significant volume of research. Research teams located in France are naturally in intra-group competition with all the other teams located elsewhere. For central decision-makers, the cost of a researcher is a decisive factor in maintaining a research activity in a given geographic zone.

French R&D teams that come under a head office and a central laboratory located outside France use all of their RTC financial return locally, either directly or indirectly. Anecdotal evidence show that, in a company that focus most of their resources and investments on Asia, RTC is always used on French territory, and never for funding R&D in Asia or even other outfits in Europe outside France. Thus, RTC is often invested in collaborative research projects with state laboratories (i.e. universities, national scientific research centre, etc.), for investment profitability reasons !

ANNEX

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.

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 observed researcher rate by country.

The only countries taken into account in the rate calculation are those for which the panel has at least two weighted averages of charge-inclusive researcher costs, taken from two different companies with over 20 employees.

Considering differences between the groups' accounting systems, the information was standardized by pooling each of their accounting entries. Although information is not perfectly homogeneous, it is by group. Thus, international gaps are highly representative.

Virtuous tax system

An adequate tax incentive policy involves creating conditions in a country whereby the public resources mobilized produce the desired effect, no less and no more. 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 get it right. 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; it is by definition more favourable to those who supplement their research investment in France and less favourable to those who have made France one of the pillars of their research.