Belgian Science Policy Office

Statistics in Brief

The partial exemption from payroll tax for researchers

SPITHOVEN André, PHALET Elena

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Highlights

- The legal text changes ten times, ambiguities remain
- The measure's cost multiplies between 2005 (67 million) and 2014 (760 million)
- An evaluation of its impact on R&D activities and strategic planning seems expedient

Avenue Louise 231 - 1050 BRUSSELS, BELGIUM

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Tax credits for R&D

Belgium offers a variety of tax exemptions and tax credits in support of R&D activities. Three of those fiscal incentives have a direct impact on the cost for an employer to hire and maintain R&D personnel: an advantageous fiscal regime for foreign researchers working in Belgium, a single tax exemption for the recruitment of an additional member of the R&D personnel (due to a significant administrative burden, this measure was not much in use and was finally repealed in 2008), and the partial exemption from payroll tax for researchers, which will be discussed in detail. At this moment, the exempted percentage of the payroll tax is fixed at 80% for all groups of researchers concerned by the measure. This means, in concrete terms, that a researcher is 20% less expensive than she or he would be for the employer, if the measure did not exist.

Table 1. Overview of fiscal measures supporting R&D in Belgium

Measure	Targeted group or activity	Advantage	Legal base
Partial exemption from payroll tax for researchers	Researchers in the public and private sector	Exemption of 80% of the payroll tax	Art. 275/3 CIR 1992
Tax exemption per newly hired member of R&D personnel	Newly recruited R&D employees in all sectors	Single tax exemption of 10,000 or 20,000 euros	Art. 67 CIR 1992 (rescinded in 2008)
Fiscal status of foreign researchers	Foreign researchers employed in Belgium in research centres or laboratories	Special advantageous tax regime	Ci. RH. 624/325.294 8 August 1983
Environmentally friendly investments	Ecologically responsible R&D investments by private companies	Investment deduction of 13,5%	Art. 68 to 77 CIR 1992
Tax credit	Ecologically responsible R&D investments by private companies	Tax credit of 13,5%	Art. 289quater-novies and art. 292bis CIR 1992
Accelerated depreciation incentive for R&D investments in intangible assets	Research, manufacture and development of prototypes and products, inventions and know-how	Depreciation period shortened to three years instead of five	Art. 63 CIR 1992
Deduction for patent revenues	Revenues for own patents, or improved acquired patents	Reduction of taxable profits at the rate of 80% of the patent's revenue	Art. 2051 to art. 2054 and art. 236bis CIR 1992
Tax exemption for regional subsidies	Premiums and subsidies in support of R&D	Tax exemption on a company's profits at the rate of the sum received from regional authorities concurrence	Art. 193ter CIR 1992

The origin of the partial exemption from the payroll tax

The idea of supporting R&D through a partial "defiscalisation" of researchers' salaries was brought forward in 2000 in a proposal on the subject of social and fiscal conditions of researchers employed by universities, by a Working Group of the Federal Council on Science Policy (FCSP). The FCSP considered these conditions in need of clarification and improvement, because their uncertainties interfered with the international mobility of researchers, both of Belgian researchers abroad and foreign researchers in Belgium.

The working group's reasoning was the following: a research assistant at a university spends 50% of his or her time on the preparation of a PhD or other research activities. These activities consist of a personal development, which does not directly benefit the employer and, as a consequence, does not qualify for remuneration in the sense of the Income Tax Code. A defiscalisation of half of a researcher's salary thus becomes justifiable.

The FCSP's recommended scenario to achieve this defiscalisation was a restitution mechanism of the federal state to universities, because this would not affect the researcher's social attainments, nor would it imply a derogation of the Income Tax Code.

The FCSP's proposal clearly states that the measure's aim would be to instantly make available extra funds for universities, to be used for hiring additional research personnel, or, as the case may be, to increase researchers' salaries.

In 2000, the Conclusions of the Lisbon European Council called for the creation of a competitive and dynamic knowledge-based economy in the EU. To accomplish this goal, all member states committed to reach an investment in R&D of 3% of their GDP by 2010. Not all the member states managed this, so the Barcelona European Council extended the strategy to 2020.

Personnel costs constitute about 60% of all R&D expenditure in Belgium, so it makes sense to target those for an indirect support for R&D. The partial exemption from payroll tax for researchers does not in fact reduce those personnel costs, which would lead to a reduced investment in R&D, and be contrary to the disposition's goal of contributing to achieve 3% of Belgium's GDP invested in R&D. The gross salary costs stay unchanged, but the employer is exempt from actually transferring the indicated percentage of the payroll tax to the federal state. In the organisation's accounts, the amount exempted should therefore be registered as an operational subsidy.

Within this context of an increased investment of R&D aiming to reach the 3% goal, and an increasingly expansive budgetary policy, the partial exemption from payroll tax for researchers appeared on the political agenda in 2002, and was first introduced for researchers in the higher education sector by way of a Programme Law of 24 December 2002. The percentage of the exemption was fixed at the time at 50% and applicable to postdoctoral researchers and research assistants in the higher education sector.

The law

Between 2002 and 2016, the law has been changed ten times, steadily enlarging both the groups of researchers qualifying for the partial exemption from payroll tax, and the percentage exempted from transfer. However, three changes stand out as having a

particular impact on both the disposition's nature and its application.

Firstly, in 2005, the measure, originally targeting research personnel from the higher education and the public sector, is expanded to the business sector. This extension was recommended by the High Council 3%, aiming to reach the investment of 3% of the GDP in R&D. The tax credit first became applicable for private sector companies working with public sector research organisations, thus encouraging intersectoral cooperation. Subsequently, all private R&D qualified for the application of the tax measure.

Secondly, in 2006, the measure is included in the Income Tax Code under article 275.3, where regulations concerning the advance income tax payments are grouped together.

Finally, in 2013, a new, third paragraph to art. 275.3 added both a definition of R&D and a monitoring procedure of the business sectors' R&D projects by the PPS Science Policy. This at once clarified the measure's scope and created the possibility to follow up on its correct application.

The legal text however contains various ambiguities, which enable different interpretations of its correct application. Some of those were decided by Circular Letter of the FPS Finance in 2015, in the interest of clarity for a measure which became increasingly popular. These ambiguities were the following:

a. No definition of R&D

Until 2013, the concept of R&D remained undefined in the law. The definition was finally inserted after the European Commission opened an investigation into possible state aid to Young Innovative Companies due to, among other elements, the absence of a definition for the activities eligible for the application of the tax exemption. The definition includes the distinction between fundamental research, industrial research and experimental development, and broadly follows the internationally accepted definition of the OECD's Frascati Manual.

Box 1. Definition of R&D projects or programmes in art. 275.3 CIR

a) Fundamental research: experimental or theoretical activities aiming to create new knowledge about fundamental aspects of phenomena and observed facts, without a direct practical application or use in mind.

b) Industrial research: systematic or critical research aiming to acquire new knowledge and competences in order to develop new products, procedures or services, or to improve existing ones. It encompasses manufacturing parts of complex systems, necessary for industrial research – more specifically, for the validation of general technologies, with the exception of prototypes.

c) Experimental development: the acquisition, combination, formatting and use of existing scientific, technical and other knowledge and competences for plans or the design of new, changed or improved products, procedures or services, including the concept and design of alternative products, procedures or services.

The development of prototypes and pilot projects for commercial use are included in experimental development, if the prototype is the commercial end product and its production too expensive to use exclusively for demonstration and validation purposes. Routine or periodical changes of existing products, production lines, manufacturing processes, services and other continuous work are not considered to be experimental development, even if the changes improve the product.

b. Enlargement of the target groups and the definition of a researcher

Table 2. Enlargement of the target groups

Sector	Target group	Date of inclusion
Universities, university colleges, research funds (FWO-FNRS)	Assistant researchers and postdoctoral researchers	2003
Public scientific organisations, recognised as such by the Council of Ministers	Assistant researchers and postdoctoral researchers	2004
Enterprises	Researchers working on R&D projects or programmes in cooperation with universities, university colleges or recognised scientific organisations	2005
Young Innovative Companies	Researchers, R&D technicians and R&D project managers	2006
Enterprises	Researchers holding a PhD in certain fields of science and working on R&D projects or programmes	2006
Enterprises	Researchers working on R&D projects or programmes, holding a master degree in certain fields of science	2007

Note: the date of inclusion refers to date the law came into force.

Box 2. Definition of a researcher

Scientist or engineer working on the development or discovery of knowledge, products, processes, new methods or systems.

This definition is included in the legal text under the heading of Young Innovative Companies only. YIC are small companies, at most 10 years in existence, where R&D activities account for at least 15% of turnover, and which do not result from a restructuring or reorganisation of activities, the enlargement of a previous activity or an activity take-over. The European Commission however considered this definition too generous.

The concept remains undefined for the other target groups.

In its 2015 Circular Letter, the FPS Finance states that the application of the YIC definition of "researcher" to the other categories, where the concept remains undefined, would be legally correct, on the condition that the person in question holds a higher education degree.

Except for researchers employed by companies whose nature and R&D activities put them squarely in the last two target groups, where master and doctoral degrees in natural sciences, engineering and technology, medical and health sciences or agricultural sciences are required, any higher education degree in any subject suffices to be considered as a researcher under the terms of the law.

The YICs stand out for another reason: not only its researchers are eligible for the application of the fiscal measure, but also two other categories of employees: research technicians (persons who work closely with researchers to offer the necessary technical support for experimental research and development) and R&D project managers (persons who are in charge of the organisation, coordination, and planning of the project, be it administratively, legally, financially and technologically). Moreover, the concept of a researcher, for YICs, opened up to employees who do not necessarily hold an engineering degree, but have obtained the necessary qualifications in the workplace. Both these provisions remain only applicable to YICs.

c. The recognition of scientific organisations

The law does not specify any criteria for the recognition of an organisation as a scientific organisation. Based on the reasoning of the FCSP, and in accordance with practices in the higher education sector, the PPS Science Policy (BELSPO) transmits to the Council of Ministers requests for recognition where the personnel concerned spends at least 50% of their time on R&D activities. Moreover, BELSPO requires the amount to be reinvested in additional R&D. The 2015 Circular Letter however points out that these practices have no real legal basis, but offers no alternative.

d. The application of the pro rata

Another ambiguity in the law concerns the application of the pro rata. The percentage of the non-transferred income tax started at 50% for higher education and public scientific organisations in 2004 and at 25% for the private sector in 2006, was brought into line for the different target groups at 65% from 2008 onwards, and has been 80% since 2013.

Table 3. Evolution of target groups

Target group	2003	2004	2005	2006	2007	2008	2009-2012	2013
Universities, university colleges, research funds	50%	50%	65%	65%	65%	65%	75%	80%
Public scientific organisations	-	50%	50%	50%	50%	65%	75%	80%
Enterprises cooperating with public sector organisations	-	-	50%	50%	50%	65%	75%	80%
Young Innovative Companies	-	-	-	50%	50%	65%	75%	80%
Enterprises (1) Doctoral degrees (2) Masters' degrees	-	-	-	25% (1)	25% (2)	65%	75%	80%

In line with the original idea of a researcher spending half of his or her time on R&D activities, the percentage of the income tax the employer is exempted from paying is calculated on the gross salary in its entirety for researchers in the higher education and the public sector.

For private sector researchers however, the law states that only the time actually spent on the R&D project or programme can be taken into account, and the percentage should be applied to the income tax due on this part of the gross salary. This interpretation has been confirmed by the 2015 Circulary Letter.

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e. What happens to the exempted amount?

The measure's aim is to stimulate a knowledge economy by increasing R&D investment through a defiscalisation, which should be booked as a subsidy from the federal government in the organisation's accounts. The non-transferred funds made available by this system are immediately available to R&D active organisations.

While it seems to have been considered obvious during the preparation of the law that these funds should be directed towards additional R&D, no such obligation has been introduced in the legal text.

The first paragraph however states that, for the higher education sector and the recognised public research centres at least, those funds cannot be used to lower the cost of the R&D activities which gave rise to them in the first place. If this were the case, R&D investment would decrease instead of increase. This clarification also means that the gross salaries of researchers participating in a research project, financed by for example the EU, can be entered for reimbursement.

For the business sector however, neither this expectation to reinvest in R&D, nor the restriction to use the non-transferred sums to effectively lower research costs apply.

The partial exemption from payroll tax in million €

The cost of the fiscal measure multiplies by 11 over 10 years' time, going from 67 million euros in 2005 to 761 million in 2014. This evolution is unevenly spread over the different sectors of application, as is shown in figure 1. The private sector's share starts at the lowest level of 2% of the total sum, and grows to surpass the public sector with 63% of the total amount in 2014. There are several reasons for this. The gradual enlargement of the target groups, with in 2005 only collaborative R&D projects with the public sector qualifying, through only PhD holders in certain fields of science and YIC R&D personnel in 2006, to the inclusion of masters' degrees in certain fields of science. Secondly, the percentage of non-transferrable funds goes form 25% to 80% in between 2005 and 2013; and finally, the fiscal measure has become increasingly known and used by a sector four times the size of the public R&D active sector.

Table 4: The partial exemption from payroll tax for researchers 2003 - 2014 (millions €).

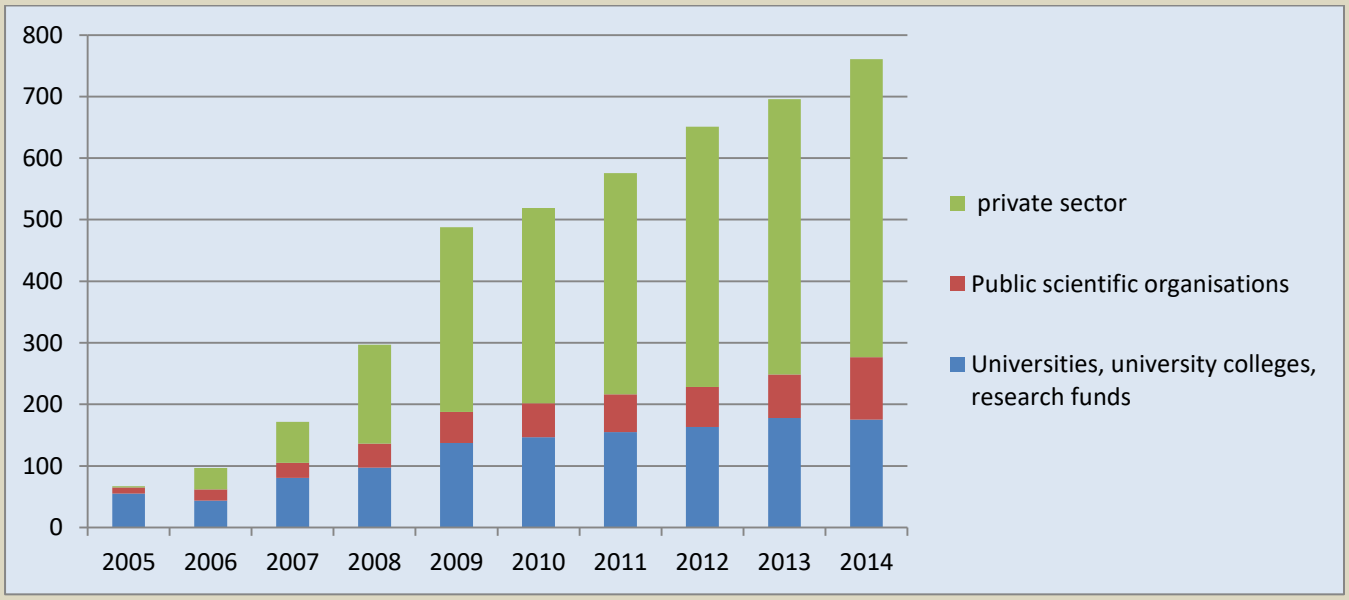
Target group	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Universities, university colleges, research funds	x	x	55,24	43,76	80,62	97,03	137,03	146,36	154,97	163,06	177,71	175,24
Public scientific organisations	-	x	9,83	18,11	24,5	39,05	50,62	55,08	61,16	65,21	70,9	101,27
Total public sector			65,07	61,87	105,12	136,08	187,65	201,44	216,13	228,27	248,61	276,51
Companies cooperating with public sector organisations	-	-	1,88	13,44	15,84	20,24	24,57	26,71	27,18	29,83	28,6	24,36
Young Innovative Companies	-	-	-	1,48	5,18	8,34	12,84	13,9	14,45	15,87	16,35	13,79
Companies (1) Doctoral degrees				19,75	34,27	79,44	143,49	152,49	161,64	190,04	196,58	210,86
Companies (2) Masters' degrees	-	-	-	-	10,92	52,92	119,15	124,64	156,44	187,08	205,7	235,09
Total private sector	-	-	1,88	34,67	66,21	160,94	300,05	317,74	359,71	422,82	447,23	484,1
TOTAL	x	x	66,95	96,54	171,33	297,02	487,7	519,18	575,84	651,09	695,84	760,61

Source: FPS Finance, Inventory of federal fiscal expenditure

X = no data available

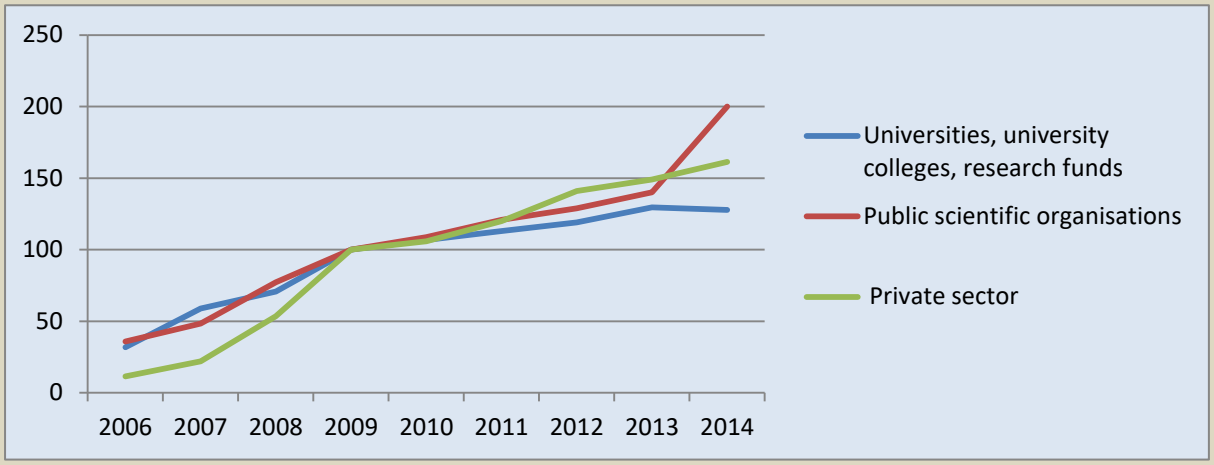
- = measure not applicable yet for this target group

Figure 1. The partial exemption from payroll tax for researchers 2005 - 2014 by sector



There is an increase in non-transferred sums for all sectors - except for the higher education sector in 2006 - which is steep for the first 5 years, and then keeps climbing steadily but at a slower rate between 2009 and 2014. There does not seem to be an impact in 2014 of the inclusion of an R&D definition or the obligation for the private sector to register R&D projects with BELSPO beforehand. The effect of the inclusion of other higher education degrees than masters and PhDs for four of the six target groups, in force from 2015, remains to be studied in the 2016 data.

Figure 2. Relative growth rates per sector



Note: 2009 = 100

If we take the 2009 break in trend as a reference point and compare relative growth rates with 2009 as value 100, we can conclude that the higher education sector seems to grow more gradually, and reach its full use of the measure around 2013. Although its personnel increases annually, this increase remains slight and the total cost of the measure for the higher education sector is not liable to increase much more over the coming years.

The private sector's growth tends to even out too, although the effect is less pronounced than in the higher education sector. The scientific organisations' part however increases significantly, but it remains to be seen if this is a coincidental effect, more due to the organisation of political work in the council of Ministers which has not approved the recognition of any additional organisations since 2014, than to actual fluctuations in the known R&D actors.

Conclusion

Fiscal measures in support of R&D activities carry a significantly slighter administrative burden for all parties than direct financing systems such as subsidies. Moreover, they are neutral and transparent, in the sense that there are only formal conditions attached to eligibility. Direct financing systems tend to focus on certain sectors or research themes, thereby running a risk of winner picking, and entail a heavy administrative burden for the scientific organisation as well as the administrations involved.

In addition, fiscal measures impacting personnel costs, such as the partial exemption from payroll tax for researchers, are accessible to all research organisations: public or private, profitable or showing a deficit.

However, a system of direct subsidies, both structural or project related, has the definite advantage that costs are relatively easy to anticipate, monitor and control. For fiscal measures, the full cost and its subsequent development is very difficult to estimate.

For the R&D active organisations, the measure seems clear, predictable and easy to apply, all three factors contributing to its success and to a possibly important impact on R&D activities and the organisations' strategic planning.

Because of the ambiguities in the legal text and its implementation, combined with the

steadily rising cost of the measure and the uncertainty of possible reinvestment in further R&D activities or personnel, an in-depth evaluation seems advisable in order to more accurately estimate the different aspects of its impact.

Statistics in Brief aims at presenting relevant data to inform a broad audience, including policy makers.
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