

Central European Corporate R&D Report 2015



Partner's Foreword



Investments in research and development are an indisputable driving force behind long-term economic growth. Empirical analyses show that when comparing EU states, well-functioning economies invest a significantly higher percentage of GDP in research and development.

The advantage of comparatively cheap labour in Central Europe is to a certain extent negatively offset by their considerably lower expenditure on R&D. It is precisely these countries that should significantly increase their investments using one of the various possibilities of R&D support, in particular by stimulating the private sector, which tends to have a dominant position in terms of R&D funding in most advanced countries. The most basic forms of supporting corporate investments in R&D are direct support through subsidies and indirect support through tax incentives. There is no single globally-applied model for the allocation of support between these two forms. However, an analysis of the historical development of the forms of support demonstrates that successful economies tend to show an increasing preference for tax tools, dominant in countries such as South Korea and Japan, while Germany, Finland and Switzerland prefer direct support.

In this report, which analyses the responses to Deloitte's annual survey on corporate R&D in Central Europe, we present some of the obstacles that are impeding the private sector from investing higher amounts into R&D activities. Our findings show that these primarily include the uncertainty of tax and other authorities surrounding their assessments of subsidies and tax deductions, as well as their uncertain attitude in defining the activities that meet the requirements for being granted a subsidy or a tax deduction. We hope that identifying these drawbacks will serve as an impulse for state authorities and other institutions responsible for determining the conditions of efficient R&D support to implement the changes sought by the private sector and thereby stimulate R&D investment.

One positive development arising from the responses to our R&D survey is that we may expect a continuing growth trend in R&D support in the coming years. This trend should also be promoted by the new 2014-2020 programming period, which forms the legislative base for gaining subsidies from EU structural and investment funds.

I would also like to take this opportunity to thank all the companies that gave their time in completing the questionnaire so that we could share the results of this survey. I believe the results of this survey will be an interesting source of information for you and will serve as an impetus for implementing changes that lead to economic growth and a more efficient system of supporting research and development activities across Central Europe.

Luděk Hanáček
Partner

Macroeconomic view

Investments in research and development are a necessary ingredient in every recipe for long-term economic growth. These recipes are supported both by theory and practice. Economic growth models, from the basic model by Robert Solow to modern theories, state that increasing the productivity of production factors is the key driving force behind long-term economic growth. The way to increase productivity is through innovation driven by research and development. The relationship between economic growth and investments in research and development is not trivial, but it is certainly a positive one.

Empirical evidence supports this conclusion, whether we look at the numerous scientific studies or just compare the statistics. Scandinavian countries and Germany are generally considered examples of well-functioning economies and it is no coincidence that these countries invest significantly larger amounts in R&D than other European states do. In the European Union, 2% of GDP has been the average investment in R&D over the past few years. By way of comparison, in Germany this expenditure is close to 3% of GDP, while Finland, Sweden and Denmark are all above the 3% level. On a global scale, the leaders in the field of R&D include – in addition to the Scandinavian countries – Japan, South Korea and Switzerland, where investments in R&D exceed 3% of GDP.

Central European countries, meanwhile, spend significantly less on R&D investments on a national scale. In most of the countries belonging to this region, investments in R&D do not exceed 1% of GDP (with the exception of Slovenia, where this expenditure amounts to 2.6% of GDP). The advantage of comparatively cheaper labour in Central Europe is exhausted with the gradual economic convergence towards the level of advanced countries. If these countries want to maintain their solid dynamics in economic growth, they will have to invest more in research and development.

The basic means of supporting corporate investments in R&D are either direct support through subsidies or indirect support through tax incentives. There is no universal model for the allocation of support between these two forms around the world. For example, Germany, Finland and Sweden rely exclusively on direct support through subsidies, while Korea and Japan use tax incentives as the main tool for supporting corporate investments in R&D. However, a glance back at history shows that the number of countries using tax incentives as a means of stimulating investments in R&D has been continually increasing. In the Czech Republic, 74% of the public support of corporate investments in R&D is represented by tax incentives and 26% by direct subsidies.

The volume of corporate investments benefiting from either direct or indirect support could be higher, but there are certain factors impeding this potential increase. Our survey shows that companies mostly fear the uncertainty of tax or other authorities in assessing subsidies and tax deductions. Some companies also complain that the process of gaining subsidies is too bureaucratic and overly complicated.

Investments in R&D will become increasingly more important for the countries of Central Europe in the years to come. It would therefore be advisable to minimise, if not remove, the obstacles mentioned above – ideally to intensify the support of corporate investments in R&D and promote its use.

David Marek

Chief Economist Deloitte Czech Republic

Key findings:

- The most important factors impacting companies' decision-making on increasing R&D expenditure are unchanged from last year: the availability of more types of benefits (75%) and the availability of skilled and experienced researchers (71%).
- Central European companies are generally planning to increase their investments into R&D, both in the short-term and the long-term, as compared to 2014. However, the situation in each country is different.
- Companies in CE region most often protect their know-how by using a company secrets policy (67%), trademarks (38%) or patents and utility designs (37%). The least popular form of protection is industrial design. These findings are comparable with previous year.
- Nearly a third (32%) of companies consider the identification of activities that meet the conditions of R&D for the purposes of subsidies or tax deductions to be the biggest problem in the R&D support system, and a quarter (27%) of companies noted that the tax uncertainty of tax and other authorities in assessing subsidies and tax deductions was the greatest obstacle. These findings may mean that the R&D support system is becoming unclear.
- 66% of companies are collaborating with research units and strengthening the cooperation between business and science. However, the possibility of cooperating with universities/research institutes is still highly appreciated and desirable in R&D activities.

Analysis

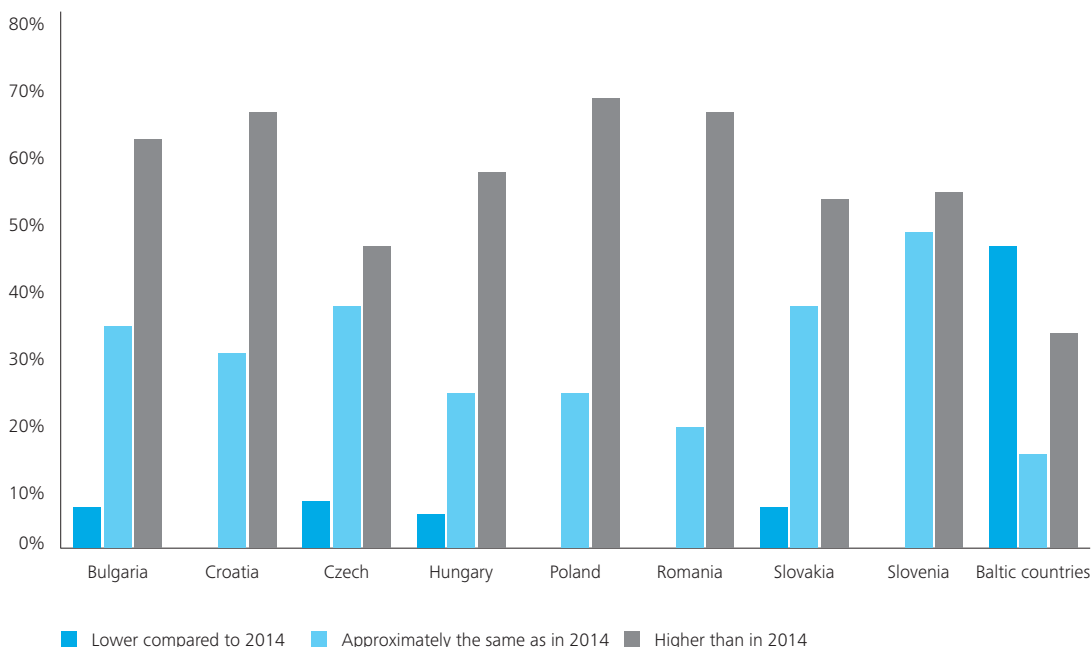
The fourth edition of Deloitte's annual survey focusing on corporate sentiment and plans about research and development was conducted in eleven Central European countries (Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia) with a total of 411 participants.

This year's survey confirms the willingness of companies across Central Europe to invest more into R&D, which may be connected to the new program period of EU funds (2014 - 2020). Some countries also recently adopted new tools for the support of R&D investment, such as a new tax deduction offered in Slovakia, which may have impacted companies' views. Finally, a willingness to invest more into R&D can be also related to the general economic recovery across the region.

The comparison of planned R&D investments in the short-term (1 to 2 years) and in the long-term (3 to 5 years) generated similar responses from most companies. It is interesting to note that only companies in the Baltics are planning to decrease R&D investments in the long-term horizon (45% of respondents). Most companies in the remaining countries reported that they were planning to increase their investments both in the short-term and in the long-term as compared to 2014.

The outlook of respondents generally indicates a positive forecast for the economic situation of companies in the region.

Company Investments in R&D in following 3-5 years

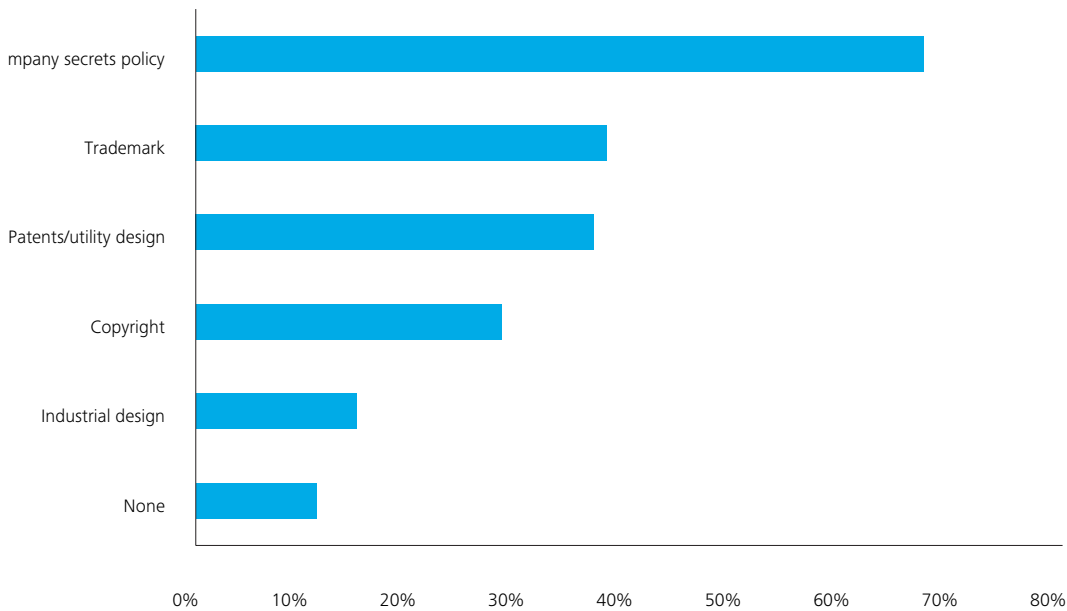


Companies' R&D Policies and Intellectual Property / Know-How Protection

This year, only 11% of companies from all the countries surveyed stated that they do not use any form of protection of their Intellectual Property / know-how. Significantly above average in having no policy are companies from Hungary (25%) and the Baltic countries (14%). These responses demonstrate that the protection of internal know-how is becoming increasingly important for companies.

Companies most often protect their know-how by using a company secrets policy (67%), trademarks (38%) or patents and utility designs (37%). The least popular form of protection is industrial design.

How do you protect Intellectual property / know-how in your company?



Key factors influencing R&D spending

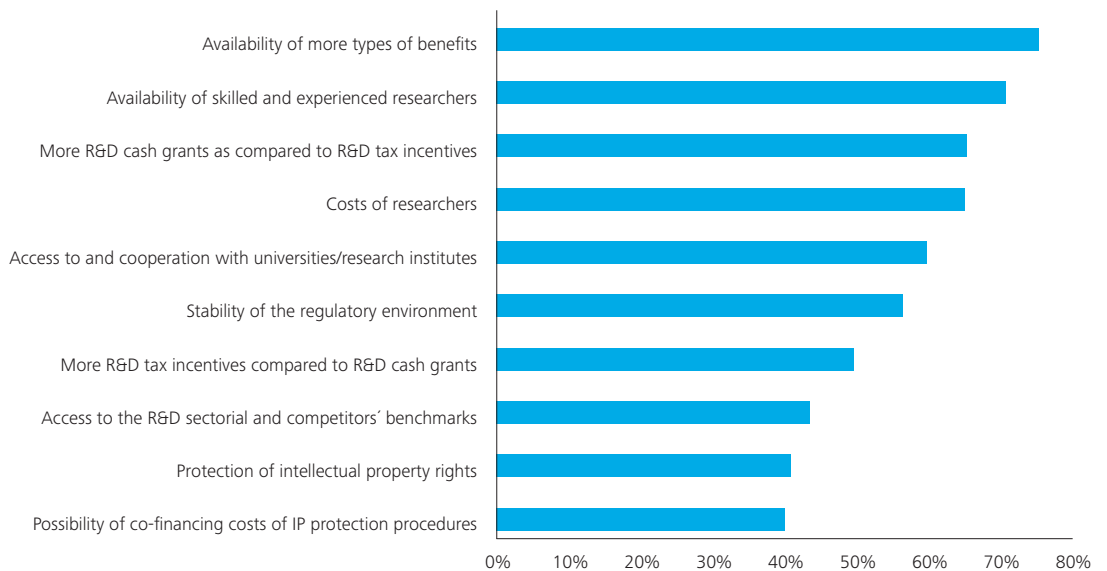
When asked to what extent and which select external factors would influence an increase in R&D spending in the coming 1-2 years, companies reported that the availability of more types of benefits (75%) and the availability of skilled and experienced researchers (71%) were most important. The shortage of qualified and experienced workers, especially in technical fields, is visible in all the countries in which the survey was conducted. It is also worth noting that companies consider the costs of these employees to be of less importance in making decisions to increase investments in R&D (65%).

This year's results thus fully correspond with the findings of surveys from the previous two years, when companies also considered the availability of more types of incentives to be the most important factor.

The factors that companies considered the least important, on the other hand, were the possibility of co-financing the costs of IP protection procedures and the protection of intellectual property rights.

It is important to mention that tools available to support R&D could vary in each country across Central Europe – grants are implemented in all countries, but R&D tax deductions are common only in some countries and are not available at all in Poland, for example. In addition, the level of R&D tax deduction can be different: Slovakia allows companies to deduct 25% of R&D spending, the Czech Republic allows 100%, and Latvia allows 300%.

To what extent would the external factors mentioned below influence the increase of your R&D spending in the coming 1-2 years?



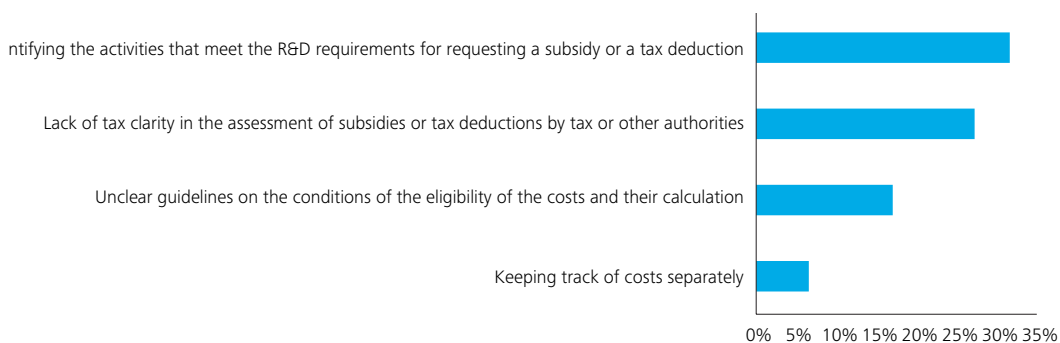
Most Serious Problem in the Current System of R&D Support and usage of R&D Grants and Tax Incentives

When asked to identify the most serious problem in the current system of R&D support (both among subsidies and tax deductions), the largest share of companies (32%) singled out identifying those activities that meet the R&D requirements for requesting a subsidy or a tax deduction. Just over a quarter (27%) of companies chose the lack of tax clarity in the assessment of subsidies or tax deductions by tax or other authorities as the main obstacle. These findings may mean that the systems of R&D support are becoming increasingly unclear. On the other hand, the administrative burden arising from keeping track of costs separately is only seen as a problem by 7% of respondents.

The part of the survey that was aimed at mapping companies' attitudes to R&D support tools (such as tax deductions and investment incentives) showed that 27% of companies are familiar with the topic. The survey also confirmed that although companies are familiar with the issue, they are often not sure which activities belong to the R&D field and how they should define it (29%).

When mapping companies' attitudes to subsidies, it turned out that, as in the case of tax deductions and investment incentives, 17% of companies are not familiar with the issue. Most companies claimed they were familiar with the topic but did not have enough resources to monitor these opportunities and apply for the relevant subsidies (25%). However, 29% of companies are familiar with subsidies and also make use of them (this proportion is particularly high in the Czech Republic – where 56% of companies reported this – and far below average in Poland and Slovenia).

What is the most serious problem in the current system of R&D support?



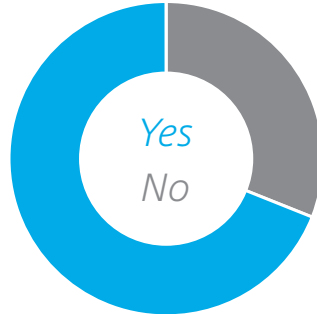
Cooperation with third parties while carrying out R&D projects

This year's survey again confirmed that the majority of companies (66%) cooperate with a third party when implementing R&D projects.

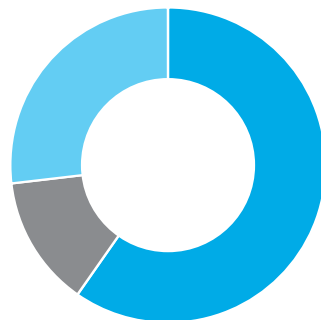
The main reason cited by companies for cooperating with a third party is that cooperation is necessary for completing a specific R&D project (77%). A less commonly stated reason was that cooperation with a third party was one of the requirements for being granted a subsidy or that cooperation presented a possibility of gaining access to more subsidy funds for the given project.

The main reason identified by companies for not cooperating with a third party when delivering R&D projects was the existence of the company's own R&D centre (41%). The proportion of companies with their own R&D centre has slightly dropped in comparison with last year and highlights the fact that the availability of skilled and experienced researchers is one of the most important factors influencing R&D expenditure.

Are you cooperating with third party?

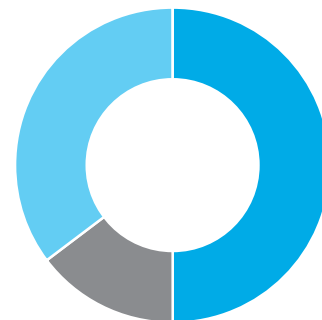


Yes, because



- It is needed for conducting out research projects
- It is required in order to receive higher cash grant for conducting an R&D project
- It is needed for conducting out research projects

No, because



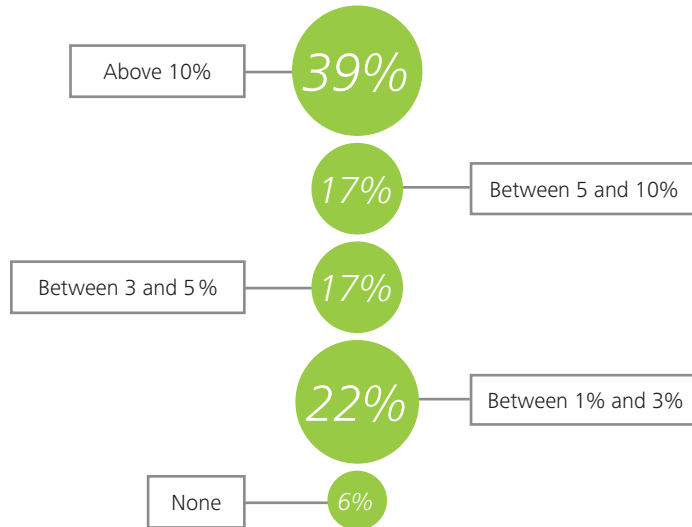
- Our Company has got an R&D Centre
- Our Company has got an R&D Centre in other firm of capital group
- Other reason

Key findings:

- The majority of respondents continue to be optimistic and expect to increase spending on R&D in the short term (next 1 to 2 years) and medium term (the next 3 to 5 years) compared to spending levels in 2014.
- Most respondents rate the increased availability of skilled researchers and decrease in labour costs as the most important factors that would stimulate an increase of their R&D investment in the short term.
- A quarter of respondents' knowledge of R&D cash grants is still limited, and a fifth of respondents have no sufficient administrative resources to monitor the availability of cash grants and prepare successful applications.
- Half of the respondents find existing government policies for encouraging R&D unsatisfactory, and nearly the same amount think that policy changes are necessary.

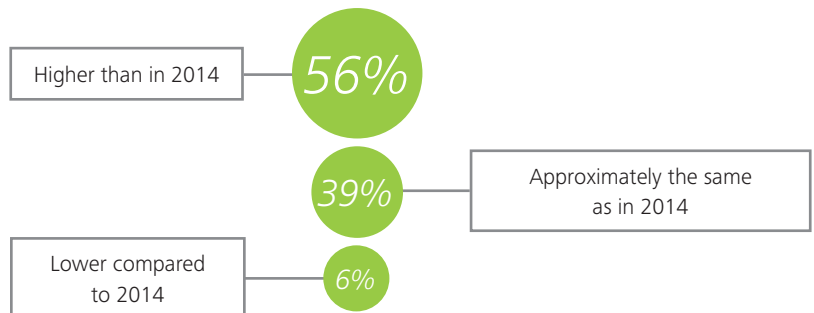
1. What percentage of your turnover was spent on R&D in 2014?

The majority of respondents (39%) spent over 10% of their annual turnover during 2014 on R&D, while the second largest share of respondents (22%) spent between 1% and 3%. 17% of respondents allocated between 3% and 5% of their turnover and the same number of companies reported that they spent between 5% and 10%. Only 6% of respondents did not spend anything on R&D in 2014.

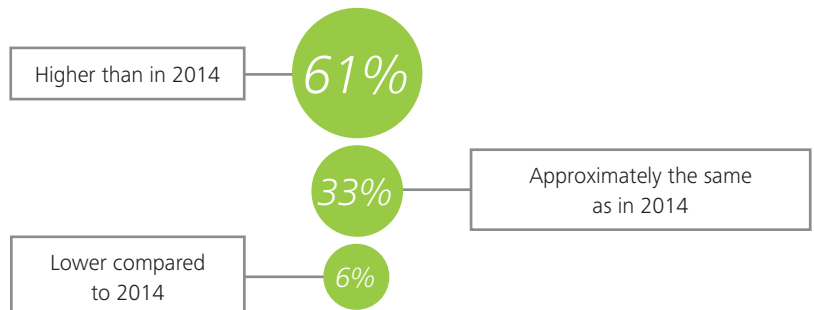


2. How would you foresee the R&D spending of your company in the coming 1-2 years and 3-5 years?

Compared to the previous year's survey, in 2014 respondents seem to be more optimistic in terms of their expected R&D spending in the near future. Just over half (56%) of the participating companies plan to increase their R&D spending in the short term (1 to 2 years), compared to a third in the previous survey. Over a third (39%) of respondents expect to maintain the same level of investment, while just 6% plan to spend less on R&D in the next 1 to 2 years compared to 2014.



In the medium term (3 to 5 years) respondents do not differ significantly from their short-term plans. Two thirds (61%) of companies expect to increase their spending on R&D compared to 2014. One third (33%) foresee similar R&D investment as in 2014 and only 6% expect their R&D spending to decrease during the next 3 to 5 years.



Key findings:

- Croatian companies plan to increase their R&D spending over the coming years – however, they are working from a low base compared to other countries in the region as spending on R&D remains at 0.75% of GDP.
- Only 54% of respondents are familiar with investment priorities and financial allocations related to the strengthening of the economy through research, technological development and innovation activities under the Operational Program Competitiveness and Cohesion for the period 2014-2020. This means that almost 50% of respondents are not informed about the possibilities available from EU funds, hampering their potential investments into R&D.
- Recent changes to the administrative process and eligibility criteria of the R&D tax incentive have brought more clarity to those companies which are already aware of the incentive system. However, these changes have made companies more reluctant to apply for the incentive in general. Also large share of companies are still unaware of the availability of R&D tax incentives altogether.
- Together with increasing the volume of benefits, providing more information to final beneficiaries about the available R&D grants and incentives opportunities could have a significant impact on the overall increase in R&D expenditure, according to survey respondents.

R&D system in Croatia

It should be noted that Croatia is still in the process of building up its R&D policy framework. In terms of the government strategy and R&D policy framework, Croatia is lagging behind its neighbors in the region and in the EU. Some of the crucial prerequisites for the use of European structural and investment funds (ESIF) were adopted recently, at the end of 2014, with the most important one still outstanding. Once the policy framework is completely set up, use of ESIF funds will be made possible and this should help spur on growth and competitiveness in the Croatian economy.

Familiarity with ESIF funds

46% of Croatian companies are still not familiar with investment priorities and financial allocations related to the strengthening of the economy through research, technological development and innovation activities under the Operational Program Competitiveness and Cohesion for 2014-2020 and European Structural and Investment Funds (ESIF).

Companies should be better informed about opportunities from EU funds in order to enhance the absorption of all the available EU funds earmarked for investments to boost competitiveness and to develop environmentally friendly and resource-efficient economy, thereby contributing to the sustainable growth and economic development of Croatia.

Use of R&D grants

A third (33%) of this year's respondents are not familiar with R&D grants, a notable improvement on last year's survey (43.6%). In spite of this positive trend, there is still significant space to improve the dissemination of information on R&D grants in Croatia. Among other Central European countries, only Bulgaria (39%) and Romania (38%) reported a greater share of companies unfamiliar with R&D grants.

According to this year's results, companies that are familiar with R&D grants but do not use them either have no sufficient resources to monitor the opportunities and eventually prepare a successful application (25%) or find that the available grant opportunities are not relevant for their company because of a partnership/consortia requirement (13%).

Conversely, there is a downward year-on-year trend of companies who are familiar with R&D grants actually making use of them, with just 21% of respondents this year using grants compared to 25.6% last year. From among the companies making use of these grants, EU grants on a national level (through European Structural and Investment Funds) are the most commonly used (71%), followed by grants from the Croatian Agency for SMEs (43%), and Innovation and Investments and EU grants on the central level such as Horizon 2020 and EUROSTARS (43%). The least used type of grants were those identified as "Other state or private R&D and innovation grant programmes" (25%). The popularity of the various grants, as chosen by respondents in this year's survey, is broadly aligned with the general volume of money available in respective funds, grant schemes and programmes.

This trend will likely change as Croatia gains access to the possibility to fully participate in open calls from EU funds in the period 2014-2020. A potential for increased use of R&D grants available through European Structural and Investment Funds allocated to Croatia is expected by mid-2015 when one of the major calls for proposals related to R&D, worth EUR 100 million, is announced. This call is a fraction of the total budget of EUR 665 million allocated for R&D spending in the public and private sectors through national Operational Programme for Competitiveness and Cohesion for 2014-2020.

With respect to the use of R&D grants, which statement(s) is/are relevant for your company?



21% ⬇ Familiar with R&D grants and use them



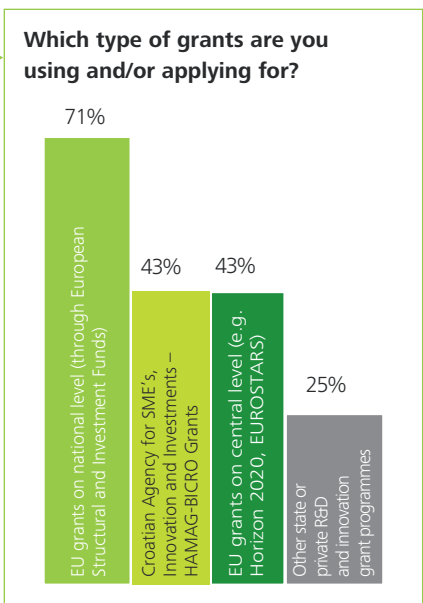
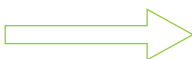
25% ⬆ Familiar with R&D grant opportunities but:
Has no sufficient resources to monitor such opportunities and eventually prepare successful application(s)

13% ⬆ Grant opportunities relevant for our company would require involvement of partners (consortium), but the nature of our R&D project/our business interests do not allow such co-operation with third parties

25% ⬆ Do not use them



33% ⬇ Not very familiar with R&D grants



Key findings:

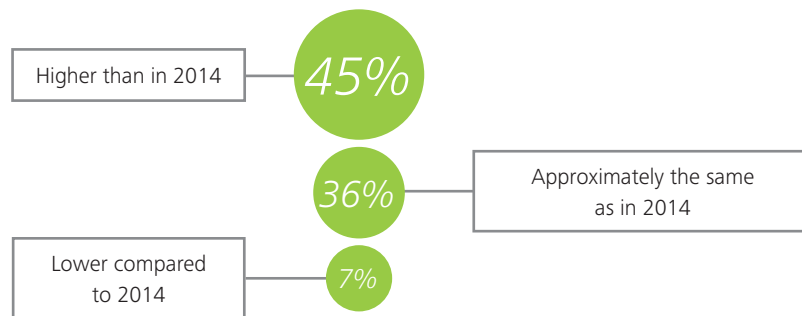
- A clear majority of Czech companies (81%) plan to invest in R&D at the same (36%) or a greater level than they did in 2014 (45%) in the long term (3-5 years).
- The most important factors companies consider to be key in deciding whether to increase R&D spending in the long term are the availability of qualified workers who are skilled and experienced in R&D (71%) and the opportunity to benefit from various types of support, such as a combination of subsidies, investment incentives, tax deductions and other financial tools (amounting to 70%).
- More than a third of respondents (34%) cite the lack of clarity of tax and other authorities in assessing subsidies or tax deductions as the biggest problem in the current system of R&D support and surprisingly companies do not view having to keep separate records of R&D costs to be a significant administrative burden (8%).
- Companies are looking for other forms of R&D support (loan/credit, capital input etc.) in addition to what is currently available.

What amount of funding is your company planning to invest in R&D over the next three to five years?

A clear majority of nearly four fifths (81%) of Czech companies reported that in the long term (3-5 years) they plan to invest in R&D at the same (36%) or a greater level than they did in 2014 (45%). These findings are similar to last year's survey and are influenced by the significant share of foreign investments into R&D in the Czech Republic.

In comparison with answers of other countries in the Central European region, companies in the Czech Republic plan to invest less in this area, especially in comparison with companies which plan to invest in R&D the same or greater level than they did in 2014 in Poland (90%), Slovakia (88%) or Croatia (94%).

What amount of funding is your company planning to invest in R&D over the next three to five years?



What do you see as the biggest problem in the current system of R&D support?

One of the aims of the survey is also to monitor the biggest problems for the companies in the current system of R&D support over a long term period, and to look beyond the field of subsidies to include tax deductions as well.

More than a third of respondents (34%) cite the lack of clarity of tax and other authorities in assessing subsidies or tax deductions as the biggest problem in the current system of R&D support, which is in contrast with last year, when companies singled out unclear guidelines on eligibility criteria, including the way that costs should be calculated (36% in 2014). This may be a result of the greater number of financial controls and legal disputes in the area of R&D support, despite the fact that there were not any significant changes in the guidelines on eligibility criteria. On the other hand, in the future we can expect an increase in companies reporting a lack of clarity in the guidelines for direct support in connection with the beginning of the new program period for 2014-2020.

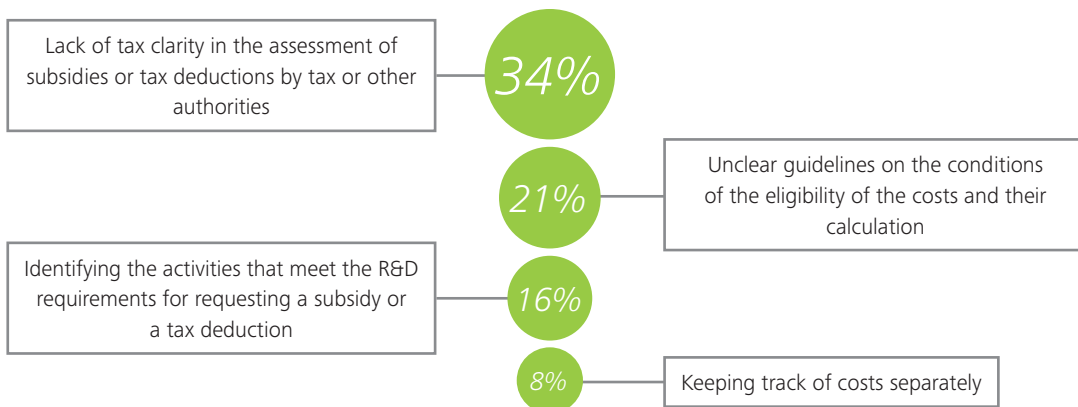
All the factors mentioned above emphasise the necessity for changes to legislation and the need for a stable interpretative praxis among all inspecting authorities.

The survey also showed that companies do not view having to keep separate records of R&D costs to be a significant administrative burden (8%).

When questioned about their companies' approach to tax deductions, 60% of companies stated that they had good knowledge of R&D subsidies and have made use of them.

Regarding the R&D tax deduction, 29% of respondents reported that they are familiar with them but they were unsure about the tax authorities' attitude to R&D costs; they therefore feel that using an R&D tax deduction is risky from a tax-certainty point of view, while another 29% of respondents see the methods on how risks related to classification of its activities as R&D could be managed.

What do you see as the biggest problem in the current system of R&D support?



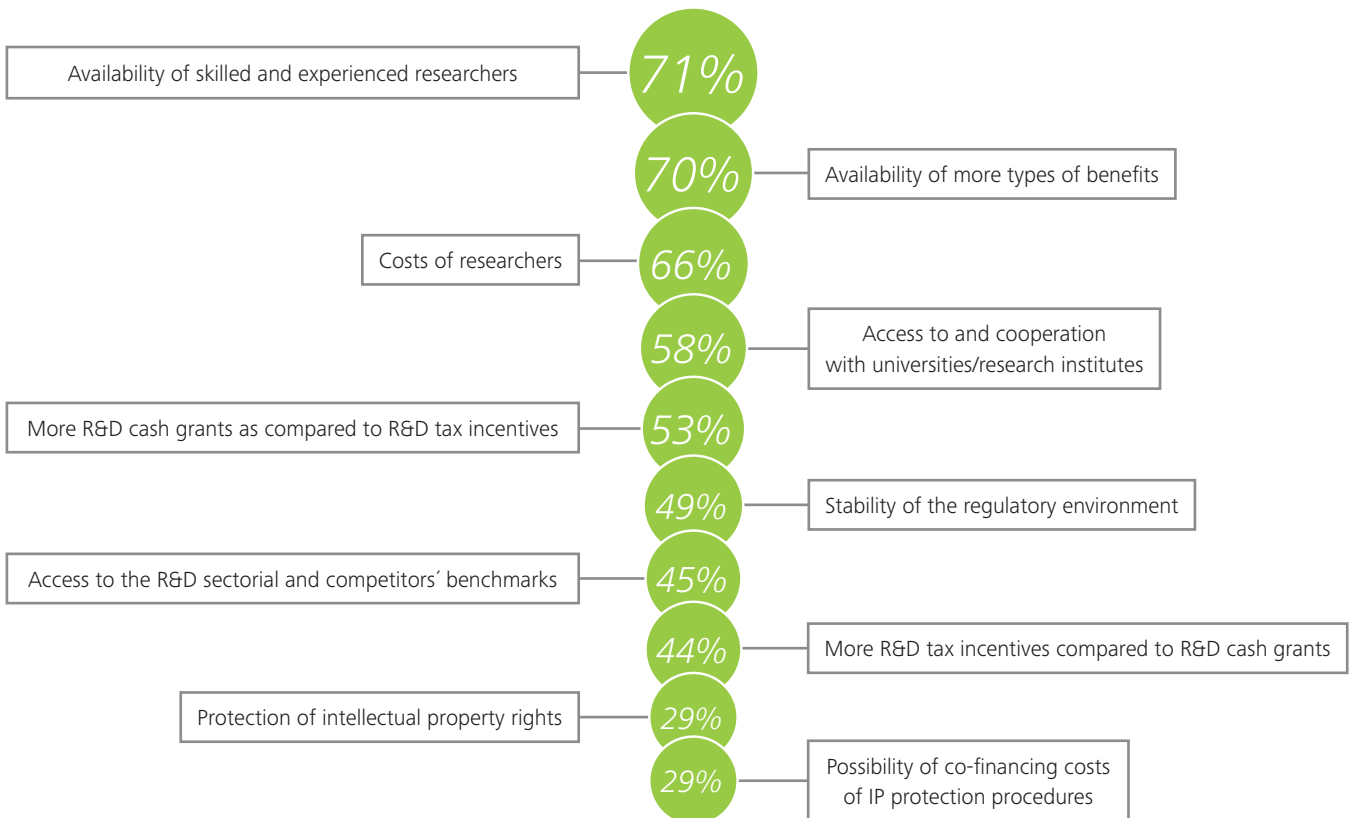
External factors that would positively influence R&D spending in the next two years

This year's survey shows that the factors companies consider to be key in deciding whether to increase R&D spending in the long term are primarily the availability of qualified workers who are skilled and experienced in R&D (71%) and the opportunity to benefit from various types of support, such as a combination of subsidies, investment incentives, tax deductions and other financial tools (amounting to 70%). Just as last year, the third key factor for companies is the labour cost of researchers.

One of the solutions could be support for employing young, unskilled workers in the R&D area, who may be expensive for companies during the first year but compensate for the risk of companies losing them after the one-year induction period. The Slovak model could be considered as an example, in which companies are encouraged to hire young people on the labour market by receiving a tax benefit.

Companies in the Czech Republic are able to use various forms of R&D support (i.e. subsidies, tax incentives, tax deduction) and they appreciate it. Meanwhile the availability of qualified workers who are skilled and experienced in R&D is a crucial factor in all Central European countries, and tackling it will require a long-term solution in the education and labour systems.

What amount of funding is your company planning to invest in R&D over the next three to five years?



Key findings:

- Nearly half (47%) of respondents report that they spend 5-10% of their turnover on R&D.
- Estonian companies predict that spending on R&D will increase even more in the near future.
- 43% of respondents are aware of measures to support R&D and are using them, but still feel that this process is too bureaucratic.

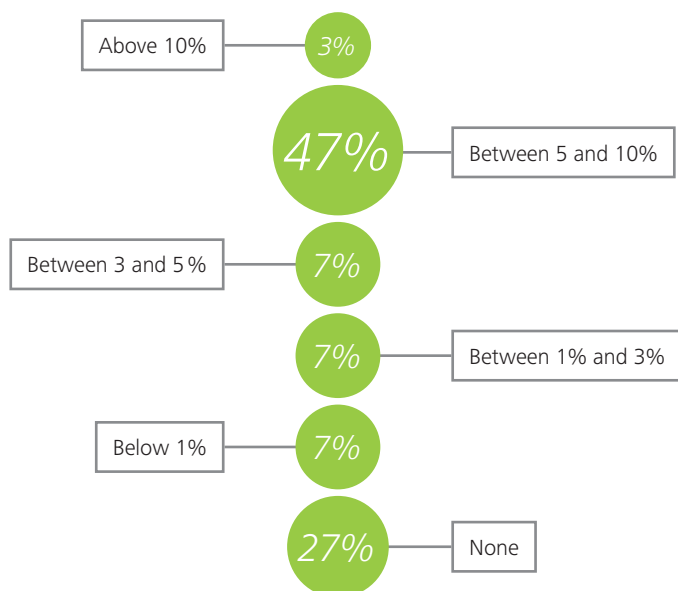
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One of the solutions could be support for employing young, unskilled workers in the R&D area, who may be expensive for companies during the first year but compensate for the risk of companies losing them after the one-year induction period. The Slovak model could be considered as an example, in which companies are encouraged to hire young people on the labour market by receiving a tax benefit.

What percentage of your turnover was spent on R&D in 2014?



Forecast on R&D spending in the coming years

Respondents report that their forecast for the coming 1 to 2 years is more optimistic than the average in Central Europe. In Estonia, 55% of respondents foresee increasing R&D expenditure in the next 1-2 years, and 67% in the next 3 to 5 years. The forecast of Latvian firms is similar, while Lithuanian companies are more modest in their forecasts and foresee decreased expenditure compared to 2014 – including a significant 82% of respondents expecting a decrease in R&D spending over the next 3 to 5 years.

One of the reasons for such pessimism in R&D expenditure forecasts is that expenses in R&D have been higher before and that level is hard to keep (in 2014, 39% of respondents said that they spend more than 10% of their turnover on R&D). Compared to last year's survey, Estonian companies are more optimistic because 75% last year foresaw that the level of spending will remain the same in the next 3 to 5 years and 25% expected an increase in expenditure.

How would you foresee the R&D spending of your company in the coming 1-2 years?

How would you foresee the R&D spending of your company in the coming 3-5 years?

Key findings:

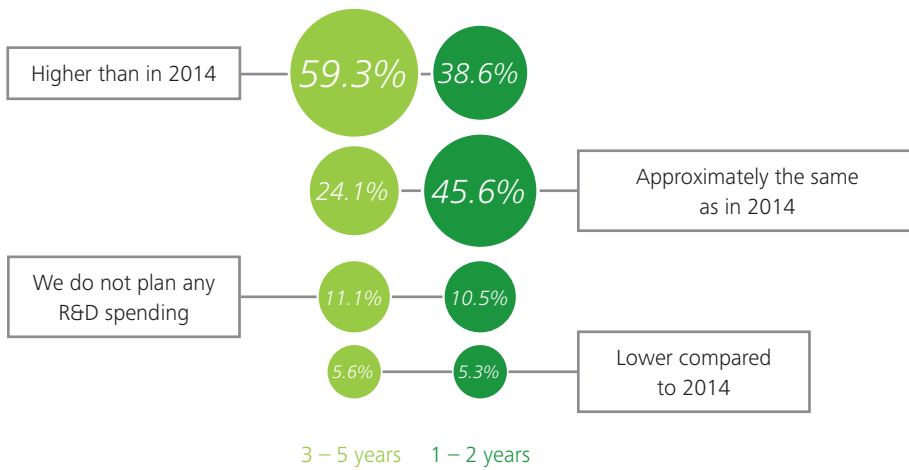
- 25% of Hungarian respondents reported that they had no R&D expenditure in the past year, most likely because they either do not spend any money on research and development or they did not identify their R&D expenses as such.
- As opposed to the current situation and short-term expectations, Hungarian companies' willingness to invest in R&D is still promising as nearly 60% of respondents plan to increase R&D expenditure in the medium term (3-5 years).
- The greatest challenge in the current system of R&D grants and incentives is to identify those activities which are eligible for R&D grants or incentives. This is closely followed by the lack of clarity in the assessment of grants and tax incentives by the competent authorities.
- Nearly one-third of HUF 750 billion EU funds for R&D will be made available as (repayable) financial instruments. Financial instruments seem to discourage almost 25% of respondents to apply at all, thus financial instruments must be very carefully planned for R&D projects.
- Only 5.4% of respondents requested an HIPO expert opinion for their ongoing or completed R&D projects or parts of projects. Looking ahead, in order to increase the number of requests regarding ex post R&D qualification, this opportunity should be explained and communicated better to companies in the future, and a solution should be offered for the treatment of a large number of minor projects.

R&D expenditure

The proportion of respondents who expect to decrease their annual R&D expenditure in 2015, although not large, has doubled compared to last year. As opposed to the above, about 85% of companies plan to keep R&D expenditure at the same level as 2014 or even to increase spending in 2015.

However, it is interesting to see that almost 60% of respondents plan to increase R&D expenditure in the medium-term (3-5 years), whereas less than 50% of respondents reported such plans last year. At the same time, the proportion of companies expecting their R&D expenditure to decrease or those that do not plan any R&D expenditure at all has dropped compared to the previous two years. Based on these results it appears that companies' willingness to invest in R&D is still promising in the medium-term as opposed to the current situation and in the short-term.

R&D expenditure of companies in the next 1-2 or 3-5 years



Financial instruments (repayable aid)

Approximately HUF 200 billion of EU R&D funds between 2014 and 2020 will be made available in the form of so-called financial instruments (i.e. loans at preferential interest rates, guarantees, etc.). Financial instruments for R&D projects may become less attractive for a large number of companies than R&D cash grants and could strongly influence the willingness of many companies to apply for EU funds.

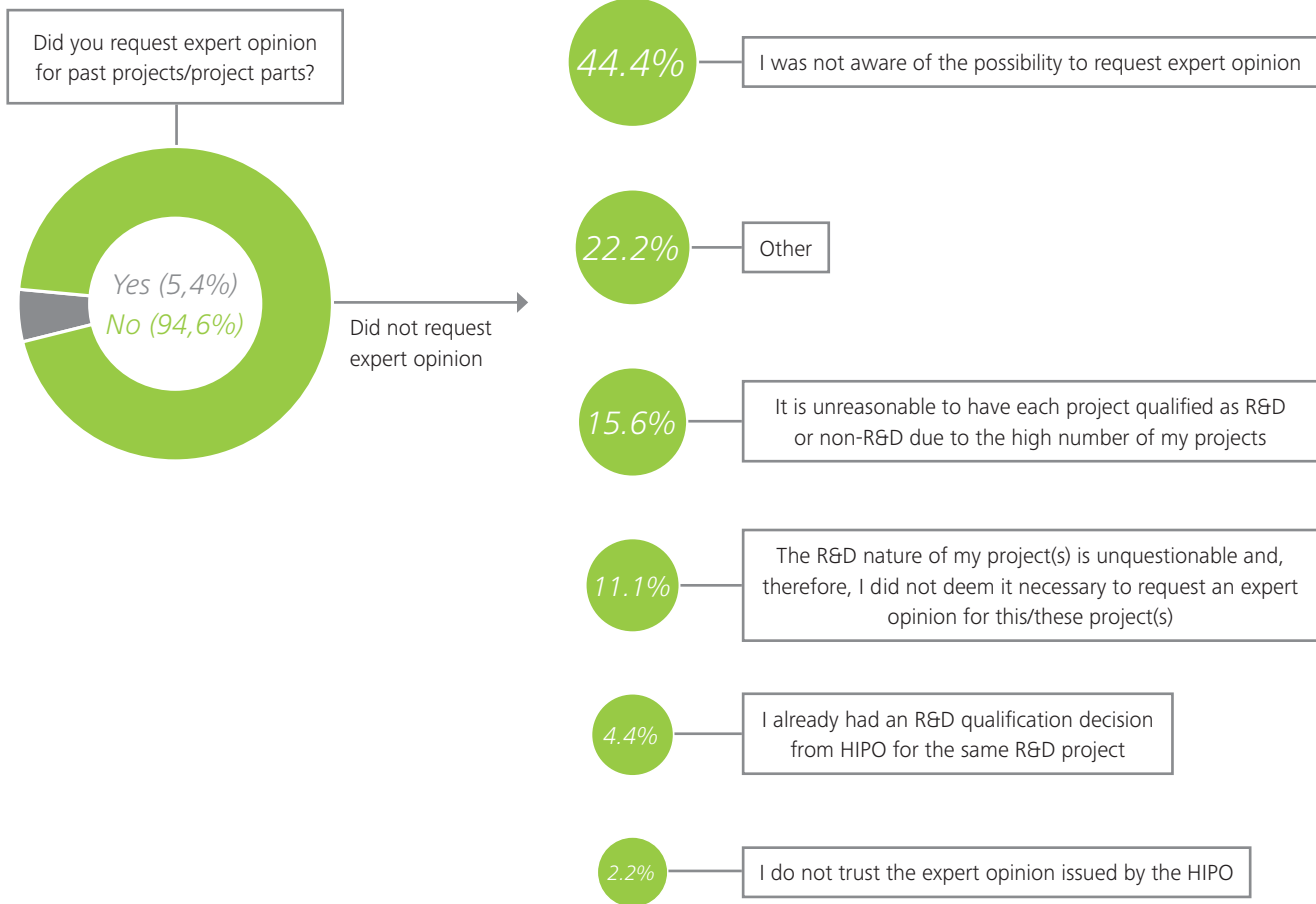
About 25% of respondents would not apply at all if the R&D subsidy would have to be partly or fully repaid. It would be especially discouraging for potential applicants if repayment depended on the volume of income deriving from the project or the date of such income. Similarly, repayment should not depend upon the successful completion of the project, as in the case of an R&D project the targeted goal may not always be achieved. Financial instruments must therefore be very well planned for R&D projects as the repayable nature of such subsidies would significantly affect companies' willingness to apply. This is especially true knowing that the amount of funds for research and development is expected to grow considerably compared to 2007-2013, and that a great part of these funds will target small- and medium-sized enterprises who may be even less willing to apply if part or the full amount will need to be repaid in the future. For these reasons it appears that the absorption of R&D funds could be imperilled even further.

Experience of ex post R&D qualification

At the beginning of 2014, the Hungarian Intellectual Property Office (HIPO) confirmed that, in addition to the qualification of future R&D projects that is binding on all Hungarian authorities, at the request of companies it would also assess completed or ongoing R&D projects or parts of projects in return for a fee in the context of an expert opinion (so-called "ex post R&D qualification"). Although ex post R&D qualification is not binding on other authorities, in practice the tax authority accepts the expert opinion of HIPO. In 2014, HIPO have probably issued more expert opinions as part of ex post R&D qualification than qualification decisions for future R&D projects. Against this background, only 5.4% of respondents reported that they used this opportunity, yet all of them found the quality of HIPO's opinion to be appropriate. This result is nevertheless not significant considering the fact that 95% of respondents did not use ex post R&D qualification at all.

Slightly more than 10% of companies did not opt for ex post R&D qualification because they were convinced that their respective projects are R&D projects. Nonetheless the survey primarily revealed that half of respondents did not use ex post R&D qualification as they did not know about it, or because they found the project-based R&D qualification unreasonable given their high number of R&D projects. It is clear that the ex post R&D qualification should be explained and communicated better to companies in the future, and that a solution should be offered for the treatment of a large number of minor projects (even if a practical solution for the latter problem does exist).

Popularity and use of ex post R&D qualification



Key findings:

- Most Latvian companies foresee their spending on R&D to increase or at least stay at the same level as 2014 in the short term (next 1-2 years). Nevertheless, some companies expect to decrease their R&D spending in the long term (3-5 years) despite the fact that R&D is widely perceived as the core driver of competitiveness.
- The main external factors influencing the level of R&D spending are the availability of experienced researchers and state aid opportunities, which allow companies to reduce real R&D costs. State support in the form of grants is more welcome than tax incentives.
- As in many Central European countries, the main obstacles to state support of R&D in Latvia are a lack of transparency and clarity, administrative complexity, and unreliability.
- Most respondents co-operate with third parties while carrying out R&D projects, though rarely with universities and research institutes.
- The availability of skilled researchers is considered more important than access to universities and research institutes. Together with the fact that most Latvian companies rely primarily on a company secrets policy to protect their Intellectual Property, this is an indication that internal R&D is valued more highly than cooperation with third parties due to the risk of others getting access to proprietary information.
- Latvian companies are the least active among Central European countries in filing patents and protecting utility designs.

The new tax credit scheme in Latvia

Latvia introduced a **new tax credit scheme** in 2014, according to which companies are able to save 30% of eligible R&D costs. This is one of the most generous schemes of its kind worldwide.

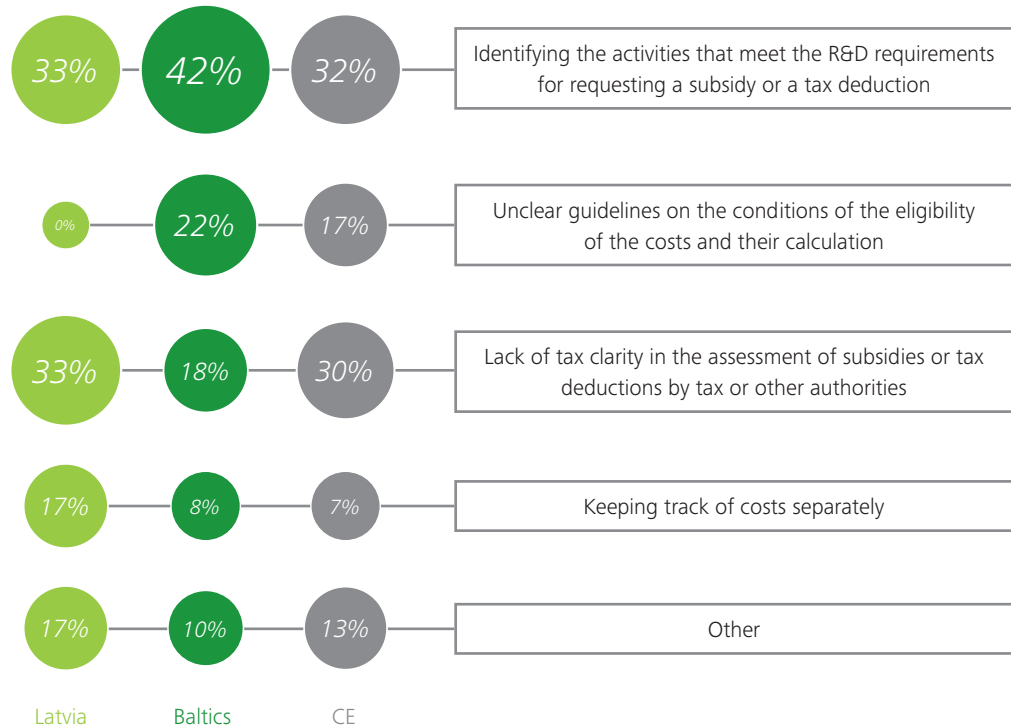
Companies are already taking a risk when they make investments into R&D projects, as the outcome is often uncertain and there is no guaranteed ROI. Any further uncertainty – with respect to the eligibility, aid intensity, and outcomes of the R&D incentives approval process – is only adding to the burden of risk associated with R&D and doing little to encourage companies to actively pursue R&D investments.

For those who are already using or strongly considering to use the new tax incentive, the following additional changes to the legislation would be important in influencing their decision to continue or start using the incentive:

- Expanding eligible costs by including costs of materials
- Cancellation of three-year Intellectual Property holding requirement
- Cancellation of prohibition to apply tax incentive if any part of the project is supported by State Aid

In terms of R&D spending as a proportion of turnover, Latvian companies are much more conservative than Baltic or other Central European companies. However, it does not necessarily mean that Latvian companies do not invest as much as others – it could also be the case that companies in other countries include broader, unrelated activities within the scope of R&D (such as acquisition of technologies, market research, etc). Indeed, as can be seen in the graph, about a third of respondents (33%) reported a problem in distinguishing between R&D and non-R&D activities as the most serious barrier to R&D support.

In your view, what is the most serious problem in the current system of R&D support?



Key findings:

- Lithuanian companies do not directly equate their future R&D expenditure to the availability of R&D cash grants and tax incentives
- A sharp increase in R&D expenditure could be expected when institutions with an adequate number of research personnel become more open to co-operating with businesses
- An overall positive sentiment is emerging for growth in R&D expenditure as a majority of companies expect to increase their short- and medium-term spending
- The most widely-known and used incentives among Lithuanian companies are those related to R&D tax incentives, employee training programmes, and projects in co-operation with research institutions
- A shortage of available information and risk management issues are the two main reasons for a low rate of application for R&D incentives
- Respondents report increased awareness of R&D-related grants and incentives, especially tax incentives – however, additional action from private and public institutions is needed to boost awareness further

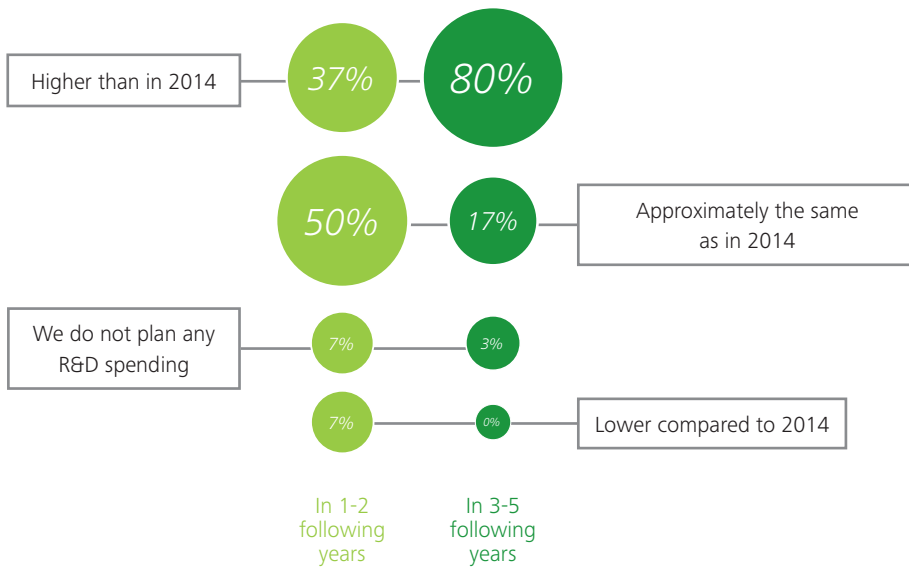
R&D expenditure

The largest proportion of respondents (38%) reported that they have re-invested more than 10% of their annual revenue towards R&D activities. Together with those companies which invested more than 5% of their revenue into R&D (21%), these companies constitute roughly 59% of total respondents – just a shade below last year’s mark of 63%.

On the other hand, 24% of respondents claimed to re-invest less than 1% of their revenue towards innovative activities, including around 7% which did not invest into R&D at all.

With respect to the outlook for the future, the general trend appears very favorable. Similar to last year, only 14% of respondents expect to decrease their investment into R&D over the next 1-2 years compared to the level in 2014, whereas this number gets reduced to a mere 3% over the next 3-5 years. Significantly more companies are bullish towards R&D expenditure and plan to increase their invest over the medium-term (80%) compared to the short-term (37%). It is likely that the results correlate with the general outlook for the economy.

Figure 1. Plans of the companies towards R&D spending in the mid-term and long term



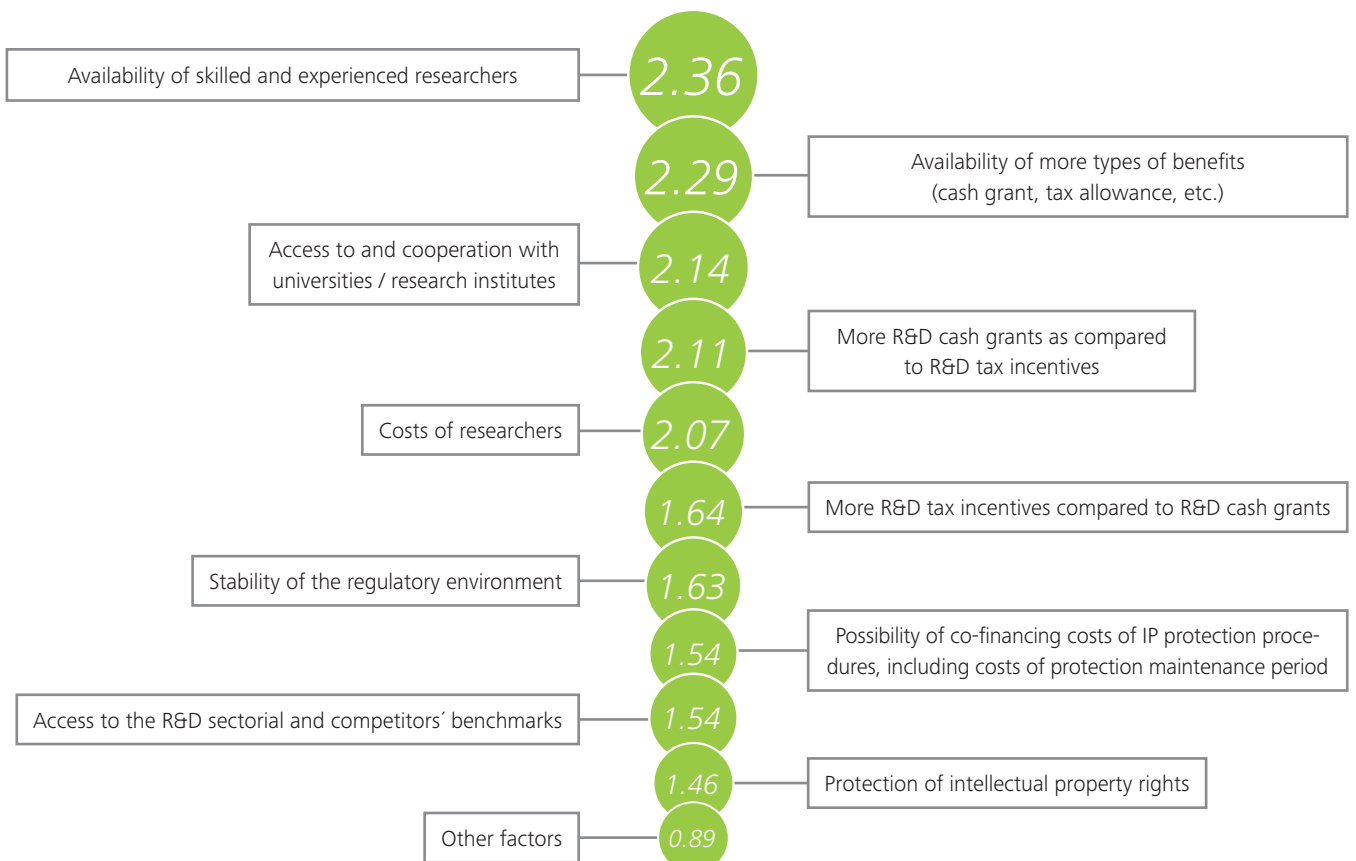
Lithuanian companies reported that the most important external factors influencing future R&D spending are access to and communication with universities and research institutes, the availability of skilled and experienced researchers, as well as availability of more types of benefits, such as tax grants and incentives. Very similar results were noted in the previous year's survey, where, contrary to the consensus view of companies in other Central European countries, Lithuanian respondents indicated that access to education institutions and the availability of researchers were the main factors stimulating further R&D activities.

Meanwhile, Lithuanian companies do not consider the stability of the regulatory environment, access to R&D sectorial benchmarks or protection of Intellectual Property rights, and co-financing of related costs to be factors of high significance, according to the survey.

It appears that human capital, along with an influx of knowledge and ideas, are seen as the decisive elements in fuelling R&D investments. This is why Lithuanian companies collaborate actively on R&D projects with a range of public and private sector organisations that have access to appropriate personnel and technology.

This trend is confirmed by the results of the survey: a large majority of the companies that carried out R&D activities (roughly 86%) did so in co-operation with third parties. Those organisations, such as universities or research centres, do not solely provide the required researchers, premises and equipment – they may also be able to offer much-needed insights during the project development process. Such assistance from universities and research centres is likely to remain one of the key supporting pillars for companies engaged in R&D activities in the future.

Figure 2. Factors influencing the R&D spending of the companies in the next 1-2 years



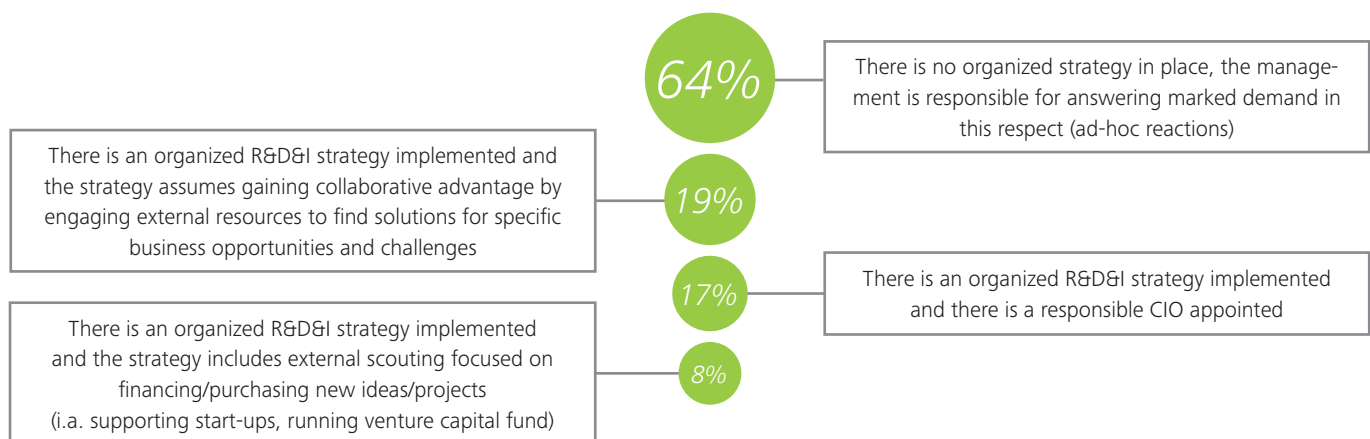
Key findings:

- Nearly twice as many Polish companies allocated over 3% of turnover to R&D last year compared to the prior year (increase from 26.3% to 48% of the companies).
- Almost half of respondents believe that a “mixed incentives system” consisting of both cash grants and R&D tax incentives would have the biggest influence on the increase of R&D spending.
- The share of companies with no R&D expenditures increased by 30% (from 9.7% in 2014 to 13% in 2015). It is also worth noting that in the survey carried out in 2013, none of the respondents claimed to have had no R&D expenditure.
- More than 75% of companies expect their level of R&D expenditures to increase in the next 3 to 5 years, and 50% expect spending to increase in the next 1 to 2 years. The share of companies that will continue to increase their R&D spending in the coming 3 to 5 years has been consistently growing each year (by an average of 8 percentage points per year).
- The availability of more types of benefits remained the external factor which has the greatest impact on R&D spending among Polish companies.
- 64% of respondents in Poland declared that they do not have any defined R&D and innovation policy.
- There is a decrease in the proportion of companies cooperating in R&D projects with third parties by 29 percentage points compared to the previous year. This year 50% of companies reported they cooperate with third parties because it is required by support schemes and 41% do so to receive higher cash grants.
- 45% of companies are familiar with R&D grants yet do not apply for them because the administration of the grant process is too bureaucratic and complicated. Companies reporting this view

The availability of more types of benefits remained the external factor which has the greatest impact on R&D spending among Polish companies in 2015, receiving an average 2.3 points out of 3. It is especially important for micro- and small enterprises, which gave this factor the maximum number of points in more than 80% of cases. This confirms the importance of introducing R&D tax relief. However, the consistently high impact of the availability of incentives on the level of R&D spending means that companies' activities in this regard are mostly related to the possibility of obtaining support for implementing R&D activities and not to their development. The continuing dependence of R&D on available incentives is a challenge for the government in terms of the need for constant stimulation of this area of business activity. It should be a factor in accelerating work on possible introduction of a new R&D tax relief that could be an alternative to grants, the availability of which will diminish in the future. It should also provide impetus to creating greater awareness among companies and entrepreneurs of the need for continuous improvement of their business and to developing the appropriate conditions for it in Poland.

A general lack of long-term planning among Polish companies in terms of their R&D and innovation activities is confirmed by responses to the question about R&D&I management policy, in which 64% of respondents reported they do not have such policy. Among companies that have an R&D&I strategy, the most common practice is to appoint a CIO to be responsible for it and gain collaborative advantage by engaging external resources to find solutions for specific business opportunities and challenges.

How do you manage R&D&I policy in your company?

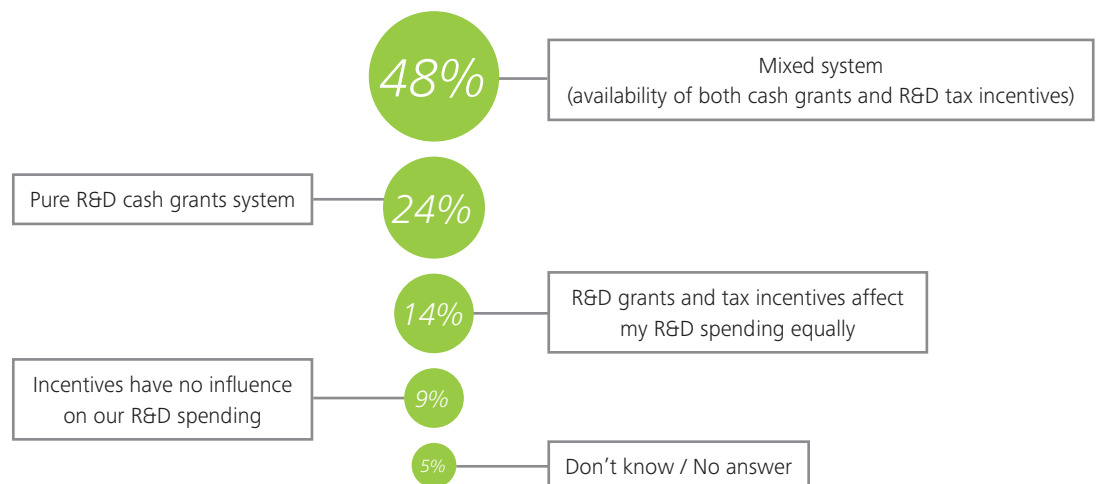


In Poland almost 50% of respondents believe that a system with availability of both cash grants and R&D tax incentives would have the biggest influence on the increase in R&D spending in the future. This corresponds with the fact that in most OECD countries, including most of the countries in Central Europe, the entrepreneur/taxpaying entity can use a mixed system which adapts to the changing economic conditions. Additionally, tax credits are more stable and attractive for companies who are already engaged in risky R&D activities, even though they are not a direct support in the form of a transfer of funds. Work on a new R&D tax relief is under way in Poland and it is expected to address these expectations of entrepreneurs. The introduction of an effective, attractive and transparent system should complement grants and provide support for R&D activities at a time when entrepreneurs in Poland will no longer be able to benefit from EU funds. Given the responses of entrepreneurs indicating reluctance to use incentives because of the bureaucracy and legal interpretation issues, it is important to simplify a new solution as much as possible. An easy to understand catalog of measures and eligible costs associated with R&D support schemes, accounting, tax and reporting would be most desirable, according to responses to this R&D survey. Competencies related to the assessment of tax authorities' doubts concerning the purpose of R&D works should be held by public entities that have experience in assessing this type of activity both in terms of science and business so that there would be no risk of misunderstanding the principles of R&D organization in the enterprise, its method for determining objectives and types of costs.

Only 9% of respondents claimed that grants and tax incentives had no influence on their R&D activity, which confirms that a key factor affecting R&D activities is the availability of co-financing sources.

The survey demonstrated the importance of introducing an additional premium for conducting R&D activities in form of a tax credit, as 44% of respondents believe that such an incentive would increase their R&D spending in 1 to 2 years – especially true for the Energy and Resources sector (60%) but not for Manufacturing and Engineering, where only 10% of companies reported they would be able to introduce any significant change in their R&D systems in a two-year period. Additionally, 59% of respondents declare that these circumstances would help spur an increase in R&D spending in the next 3-5 years (increase by 22.9 percentage points in comparison with 2014). Moreover, the proportion of companies that would start reporting current R&D expenditures in financial statements/for statistical purposes is 38%, increased by 4.7 percentage points since 2014, which may suggest that the real total of a company's expenditures on R&D are higher than currently being reported. Interestingly, 2% of companies claimed that the introduction of a tax credit for R&D activities would reduce their R&D spending in both the coming 1-2 and 3-5 years.

Which system of incentives would have the biggest influence on the increase of your R&D spending:



Key findings:

Key findings:

- Companies in Slovakia foresee their spending on R&D to increase or at least stay at the same level in the coming years.
- The main obstacles in state support of corporate R&D are a lack of transparency and clarity, administrative complexity, and unreliability.
- Financing and access to qualified people continue to be the main factors influencing R&D spending.
- Legislation introduced recently to enable an additional R&D cost tax deduction was welcomed by the business community, but the amount of aid offered (25% off corporate tax base) is often perceived as insufficient.
- A majority of respondents think that offering aid at an insufficient level might disadvantage Slovakia compared to other countries, thereby influencing companies as they make decisions about where and when to make future R&D investments.

Outlook on R&D spending and factors influencing it

Both in the short- and medium-term, respondents plan to continue spending on R&D activities at the same level as in 2014 or higher. When looking at 3-5 year plans, however, 45% of respondents still do not plan to increase their spending above the present level. Considering the variety of factors influencing R&D spending (discussed further below), this might be seen as a gap in potential R&D spending.

There are a number of external factors that influence a company's decision about whether to spend on R&D and to what extent. The two types that have resonated throughout the years and editions of this survey are people and financing.

This year financing factors were mentioned most often – the breadth of various types of benefits; R&D grants; and tax incentives. Respondents again showed a slight preference for R&D cash grants compared to tax incentives.

The availability of skilled and experienced researchers and their cost continues to be a significant factor.

The new tax credit scheme in Slovakia

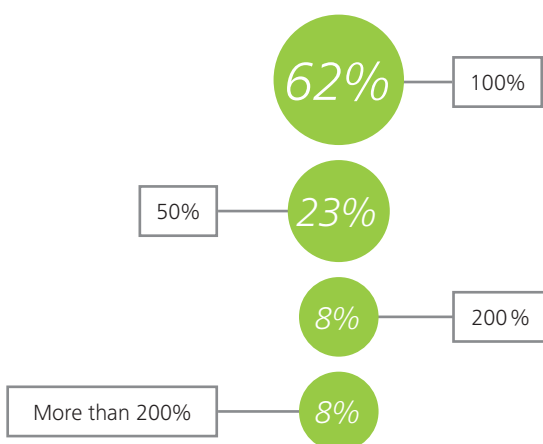
Companies already have a lot on their plate with respect to the uncertainty of the outcomes of their investments in individual R&D projects. Any further uncertainty with regards to the eligibility, aid intensity and outcomes of the R&D incentives approval process is only adding to the risks associated with R&D and not encouraging companies to pursue R&D investments.

The **new tax credit scheme** introduced in 2014, under which companies are able to deduct an additional 25% of eligible R&D costs from their corporate income tax base, was designed to provide a clear and transparent method of evaluation and a uniform treatment with respect to the amount of aid offered.

Respondents welcomed the scheme, with 67% reporting they would at least consider using it. The initial configuration of a 25% deduction raises some concerns, however. **Almost half of respondents do not find it motivating enough** to invest into setting up the scheme. Of those not currently motivated, two thirds asked for **at least a 100% additional reduction**.

Another issue raised by respondents was international competitiveness – 84% of respondents think that offering aid that is too low might disadvantage Slovakia compared to other countries. Companies are more than willing to choose a country to host their R&D facility and/or future R&D investments with an incentive regime that offers them the most advantageous terms.

What amount of additional deduction would you consider motivating enough to use the scheme?



Key findings:

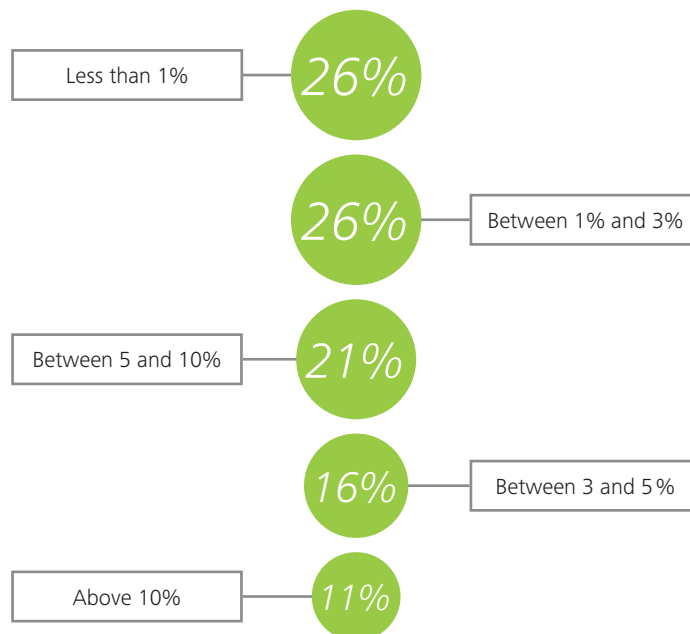
- Most companies have an optimistic outlook on the level of R&D spending in the future: all of the participants are of the opinion that in the future the level of R&D spending will be the same or higher than now.
- Factors with most relevance on R&D spending are on average the availability of skilled and experienced researches and cost of researches.
- Slovenian companies are more familiar with and use more R&D tax incentives than R&D grants.
- The most common way to protect IP / know-how in Slovenia is trademark (68%), followed by patents/utility design and company secret policy (both 58%).
- Most pressing problems pointed out by companies include identifying the activities that meet the R&D requirements, and lack of tax clarity in the assessment of subsidies or tax deductions by tax or other authorities.
- The increase of the tax allowance to 100% qualifying R&D costs on average did not affect the behavior of Slovenian companies in terms of R&D spending: most of Slovenian companies (76%) have not changed the level of R&D spending despite the higher tax allowance available.
- In Slovenia, the R&D tax project documentation preparation is the responsibility of the tax department (67%).
- For the tax allowance as deduction of tax base for corporate income tax the following costs are claimed: costs of labor represent most of tax allowance claimed (63%), followed by costs of equipment (19%) and costs of external advisors (19%).

Investment in R&D in Slovenia (as % of turnover)

All of the Slovenian companies taking part in the survey invest in R&D to some extent. More than half of respondents (53%) reported that investment in R&D represents up to 3% of turnover. 21% of participants spend between 5-10% of turnover and 11% of participants spend above 10% of turnover. The number of companies who spend above 10% of their turnover

is quite low compared with responses from other Central European countries: based on answers obtained from participating companies in EU countries, 25% of companies on average invest more than 10% of their turnover. This means that the level of investment in R&D in Slovenia could potentially be a lot higher based on average R&D investment from other EU countries in Central Europe.

Graph 1: The percentage of companies' turnover spent on R&D in 2014

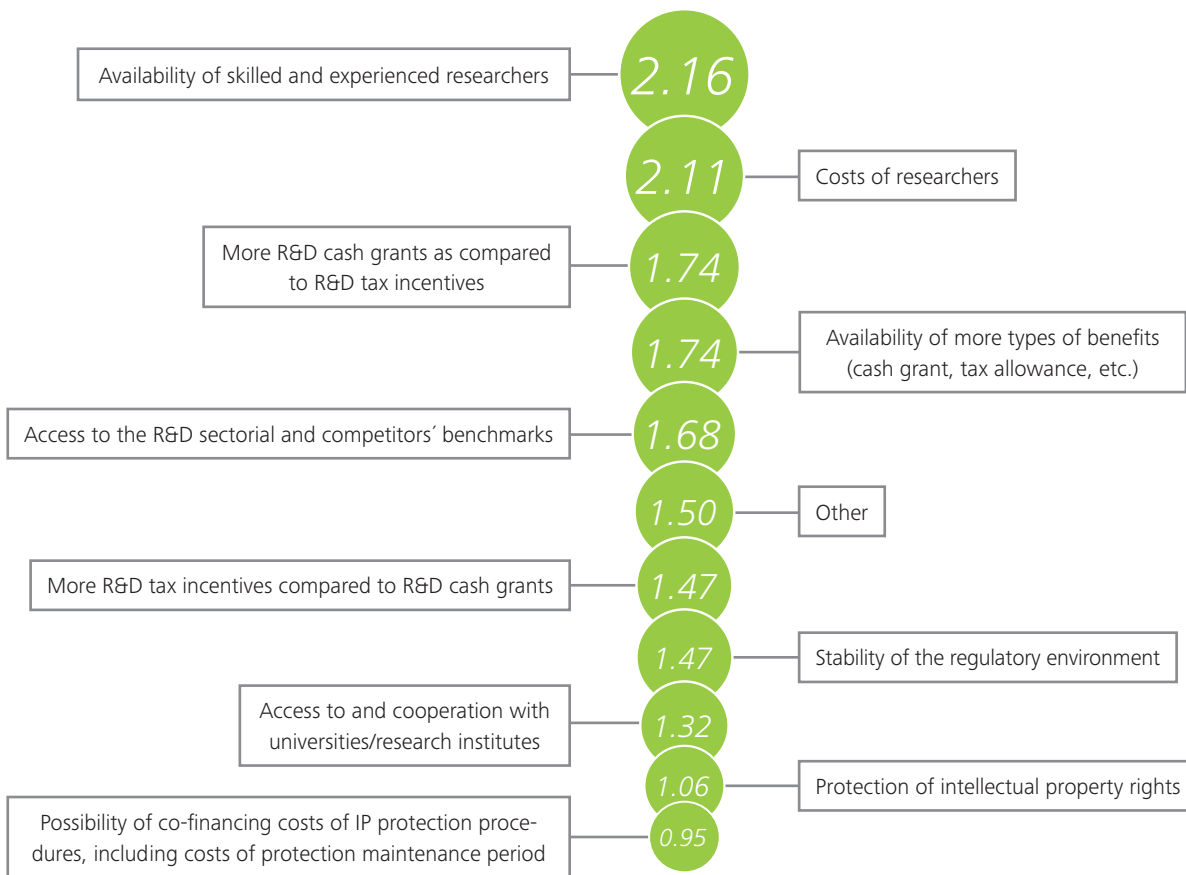


Which factors have the greatest impact on R&D spending?

When asked to identify the most important factors which would impact an increase on R&D spending, respondents selected the availability of skills and experience researchers and the cost of research. This indicates

that one of the biggest challenges appears to be finding appropriately skilled staff and compensating them accordingly. The latter point may be linked to the costs of labor in Slovenia being relatively high compared to other countries in the Central European region.

Graph 2: External factors impact on increase of R&D spending

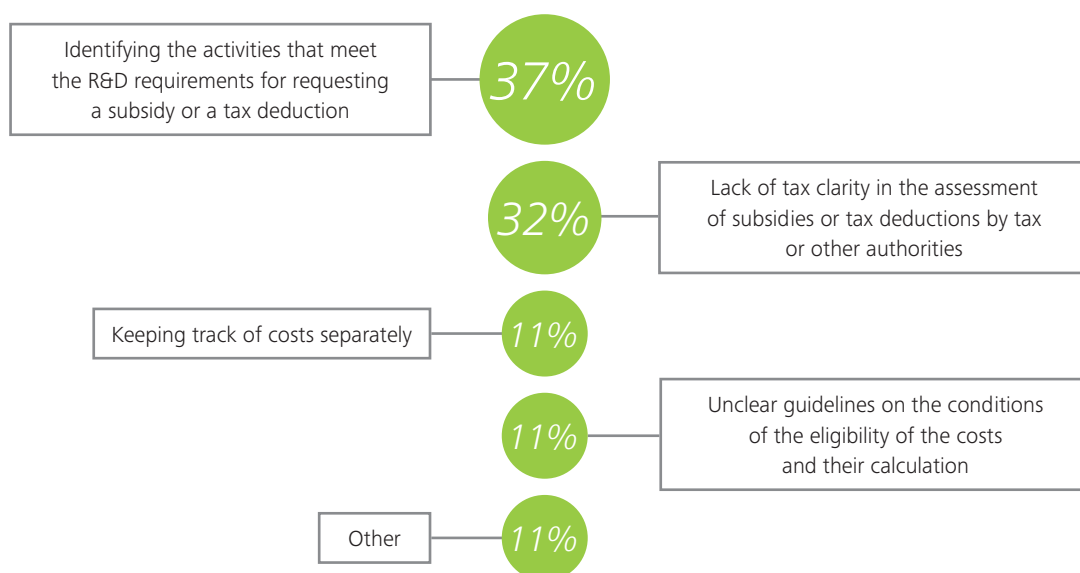


Assessment of current system of R&D support

The most serious problems in the current system of R&D support, according to respondents, are identifying those activities which meet the requirements for R&D (37%), closely followed by lack of tax clarity in the assessment of subsidies or tax deductions by tax or other authorities (32%). These choices are not surprising considering that the Slovenian regulation for claiming R&D benefits is not

very detailed and does not provide examples of the kind of activities which meet the requirements to be classified as R&D. There is also little publicly available guidance on how Slovenian authorities view specific R&D activities in practice. As a result, the level of uncertainty for a taxpaying entity when deciding whether or not to claim an R&D tax allowance is quite high.

Graph 3: The most serious problem in the current system of R&D support (both in terms of subsidies and of R&D tax deductions)?



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