

Pavel Hájek

Masaryk University, Czech Republic

ORCID 0000-0001-6834-9725

hajekpavel7@gmail.com

Research and development tax incentive in the Czech Republic and Croatia

Keywords: research, development, Czech Republic, Croatia, tax incentive, R&D

Summary. Each Member State of the European Union decides on its indirect support for research and development. For this reason, support differs very substantially among countries, not only in terms of the level of support but above all in terms of the process for granting support, the areas supported, the protection of know-how, and the legal certainty for taxpayers regarding R&D tax incentives. This article aims to identify positive legal support elements for indirect R&D support in Croatia and the Czech Republic based on the main criteria of their applicability in practice and decide which country provides more attractive indirect R&D support for beneficiaries. These findings may lead legislators to improve the legal regulation of indirect support for R&D in individual EU Member States and help beneficiaries to decide where to conduct their R&D. The Czech Republic and Croatia were chosen because they are comparably sized post-communist countries, but they have very different approaches to indirect R&D support. The article provides the most important information on the process of application of indirect support, their most important design elements, and a comparison of legislation in these two countries. Finally, *de lege ferenda* proposals are suggested to improve the current R&D tax incentives in the Czech Republic and Croatia.

Zachęta podatkowa na badania i rozwój w Republice Czeskiej i Chorwacji

Słowa kluczowe: badania, rozwój, Republika Czeska, Chorwacja, zachęta podatkowa, B+R

Streszczenie. Każde państwo członkowskie Unii Europejskiej decyduje o swoim pośrednim wsparciu dla badań i rozwoju. Z tego powodu wsparcie różni się bardzo istotnie pomiędzy krajami, nie tylko pod względem poziomu wsparcia, ale przede wszystkim pod względem procesu przyznawania wsparcia, wspieranych obszarów, ochrony know-how, a także pewności prawnej dla podatników w zakresie zachęt podatkowych na badania i rozwój. Niniejszy artykuł ma na celu zidentyfikowanie pozytywnych elementów wsparcia prawnego dla pośredniego wsparcia B+R w Chorwacji i Czechach w oparciu o główne kryteria ich zastosowania w praktyce oraz rozstrzygnięcie, który kraj zapewni bardziej atrakcyjne dla beneficjentów pośrednie wsparcie B+R. Ustalenia te mogą skłonić ustawodawców do poprawy regulacji prawnej pośredniego wsparcia B+R w poszczególnych państwach członkowskich UE oraz pomóc beneficjentom w podjęciu decyzji o miejscu prowadzenia działalności badawczo-rozwojowej. Czechy i Chorwacja zostały wybrane, ponieważ są porównywalnej wielkości krajami postkomunistycznymi, ale mają bardzo różne podejście do pośredniego wsparcia B+R. Artykuł dostarcza najważniejszych informacji na temat procesu stosowania wsparcia pośredniego, ich najważniejszych elementów konstrukcyjnych oraz porównania ustawodawstwa w tych dwóch krajach. Na koniec zasugerowano propozycje *de lege ferenda* w celu poprawy obecnych zachęt podatkowych w zakresie badań i rozwoju w Czechach i Chorwacji.

Introduction

Research and development have undisputable benefits for all, small and medium enterprises, as well as large companies. R&D is a very important driver of economic growth as it spurs progress, innovation, and invention. According to Baldwin investments in R&D in small firms are less common, but not less effective. R&D capability is one of the key factors associated with a company's success. In general, small enterprises are less likely to engage in R&D, conduct R&D on regular bases, and are less likely to have their R&D department. Despite all that, all enterprises can largely profit from R&D investments¹.

The European Union takes into consideration the positive effect that R&D has on businesses, but also the economies of Member States and therefore the EU as a whole. That is the reason why the European Union's goal was to increase research and development spending to 3% of GDP by 2020². As we can evaluate today, the European Union's goal was not met. The highest R&D expenditure to GDP in 2020 in the EU had Belgium and Sweden (both 3.5% of GDP), followed by Austria (3.2% of GDP). On the opposite end of the scale are Romania, Latvia, Malta, Cyprus, Bulgaria, and Slovakia, which invested less than 1% of GDP into R&D. Average expenditure in the EU was at 2.3% of GDP in 2020³.

Investments in research and development are very much linked with the country's development⁴ and have a direct effect on GDP growth⁵. In general, there are two main ways of supporting research and development. The first is direct support, which could be characterized as financial aid or support for specific goals to selected subjects and under specific conditions (such as subsidies, grants, loans, etc.). The second one is indirect support which supports all subjects that meet general conditions. The most frequent indirect support of R&D is tax incentives⁶.

¹ R.J. Baldwin, *The Importance of Research and Development for Innovation in Small and Large Canadian Manufacturing Firms*, p. 28-30, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=123588 [access 1.08.2022].

² European Parliament, *EU research and development goals*, https://www.europarl.europa.eu/doceo/document/E-8-2015-005756_EN.html [access: 5.08.2022].

³ Eurostat, *R&D expenditure in the EU at 2.3% of GDP in 2020*, <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20211129-2> [access: 3.08.2022].

⁴ J. Hu, Y. Lan, *Empirical Study on the Relationship between R&D Expenditure and GDP in Guangdong Province*, <https://www.atlantis-press.com/proceedings/icesem-18/25901125> [access: 5.08.2022].

⁵ S. Meo et. al., *Impact of GDP Spending on R&D, number of universities and scientific journals on research publications in pharmacological sciences in Middle East*, https://www.researchgate.net/figure/Correlation-coefficient-between-spending-on-R-D-as-percentage-of-GDP-and-total-number-of_fig2_258204614 [access 05.08.2022].

⁶ M. Janeček, K. Mráček, *KA 7.2: Organizace podpory výzkumu, experimentálního vývoje a inovací-Rada pro výzkum, vývoj a inovace, poskytovatelé, způsob poskytování podpory*, <https://www.tacr.>

Direct R&D support has a long tradition in most countries, indirect support raises its popularity gradually. Countries, such as Sweden or Finland rely mostly on direct funding. Others, like Japan, the Netherlands or Canada use indirect support widely. Many countries, however, offer both ways to provide a wide range of R&D support as possible⁷. According to Carvalho, tax incentives, as a dominant indirect instrument, offer several advantages in comparison with direct support. To provide a short list, tax incentives are offered to a wide variety of companies that can decide where and how to use the support most effectively and efficiently. Even though Carvalho refers to tax incentives as non-discriminatory, the author of this paper believes that some amount of discrimination may be found, although less than in direct support. Large companies that have tax advisers and lawyers usually easier comply with strict formal rules set by respective states to gain tax incentives, therefore have a clear advantage in applying for incentives. Among common disadvantages can be lined with the possibility of companies labeling other activities as R&D and investing only in projects with the highest rates of return⁸. In general, public incentives on R&D lead to increased private R&D investments, however only to a certain extent⁹. The positive outcome of R&D spending also highly depends on factor allocation, such as monetary capital (e.g. financial constraints), human capital (e.g. highly skilled employees), and management institution (e.g. efficient operations)¹⁰.

This article aims to decide which of the two selected countries, Croatia and the Czech Republic, provides superior R&D indirect support. Therefore, the following hypothesis was chosen: The Czech Republic provides more attractive indirect R&D support for beneficiaries, than Croatia. This research question shall be answered based on selected criteria, such as project eligibility, know-how protection, the volume of support, and the legal certainty of beneficiaries. These selected criteria reflect, on the one hand, the attractiveness of support for private companies and, on the other hand, the possibility for the state to consistently control com-

cz/interni_projekty/zefektivneni/KA7.2/KA%207_O2%20Organizace%20podpory%20VaVaI%20-%20final.pdf [access: 9.08.2022].

⁷ I. Busom, B. Corchuelo, E. Martínez-Ros, *Tax incentives and direct support for R&D: What do firms use and why?* https://www.researchgate.net/publication/254401518_Tax_incentives_and_direct_support_for_RD_what_do_firms_use_and_why [access: 9.08.2022].

⁸ A. Carvalho, *Why are tax incentives increasingly used to promote private R&D?*, p. 15, https://www.researchgate.net/publication/241753926_Why_are_tax_incentives_increasingly_used_to_promote_private_RD [access: 12.08.2022].

⁹ J. Choi, *Do Government Incentives to Promote R&D Increase Private R&D Investment?*, <https://academic.oup.com/wbro/article/37/2/204/6588035> [access: 18.08.2022].

¹⁰ D. Tang *et. al.*, *Government R&D spending, fiscal instruments and corporate technological innovation*, <https://www.sciencedirect.com/science/article/pii/S1755309122000302?via%3Dihub> [access: 15.08.2022].

pliance with the legal requirements for the allocation of support and therefore is more sustainable in the long-term.

The Czech Republic and Croatia were chosen because they are comparably sized post-communist countries, but they have very different approaches to indirect R&D support. Thus, this paper will first critically analyze the unidirectional aspects of indirect support to reveal the different aspects of investment attractiveness in both countries. By synthesizing the gained knowledge, it will be possible to evaluate the rationality behind different measures in legislation. The findings from each country will then be compared to answer the research question and possibly open space for proposing possible changes *de lege ferenda*. Therefore, the main scientific methods in this paper will be analysis, synthesis and comparison.

Currently, the literature and research on this topic focus only on individual national legislation. There are articles on tax support for R&D in both the Czech Republic and Croatia, which the author will build on in this article. However, any comparison of legislation on indirect R&D support in several countries is not very common. Research on the focus of comparisons of indirect support in the Czech Republic and Croatia has not yet been carried out.

1. R&D activities according to Frascati manual

To distinguish R&D and activities that may label as R&D it is necessary to first define activities falling under R&D. Many EU Member States adopted R&D types definitions from Frascati Manual. Frascati Manual is a document created by the Organization for Economic Co-operation and Development (OECD) and is an internationally recognized methodology for collecting and using R&D statistics¹¹.

Frascati Manual primarily distinguishes 3 types of research and development and those are:

- **Basic research**, which is experimental or highly theoretical work. The main goal is to obtain new knowledge of the underlying foundations of phenomena and observable facts. The outcome of basic research is usually published in a scientific journal.
- **Applied research** is primarily focused on specific and practical objectives or aims.
- **Experimental development** is connected with the production of new (or improving existing) processes or products. Experimental development draws on knowledge gained from practical experience and research¹².

¹¹ OECD, *Frascati Manual*, <https://www.oecd.org/sti/inno/Frascati-Manual.htm> [access: 18.08.2022].

¹² *Ibidem*, p. 45-55.

These definitions of R&D types derived from the Frascati Manual are implemented in Czech and Croatian law. Although the process of applying for tax incentives differs in both countries, taxpayers in both countries need to prove that the activities can be considered as R&D or that it fulfills a definition of another supported activity. Frascati Manual also contains a negative definition of research and development types, among which belongs for example feasibility studies. Feasibility studies use existing techniques to provide additional information before deciding on implementation¹³. Interestingly, some countries like Croatia¹⁴, also support feasibility studies, even though it does not fall under the R&D definition by the Frascati manual. From the above, it can be concluded that countries mainly adopt the definitions of individual types of research and development from Frascati Manual. However, this does not mean that they cannot extend their support to other activities.

2. R&D tax incentive in Croatia

In Croatia, all legal provisions related to R&D tax incentives are codified in Act on state aid for research and development projects and the Ordinance for State Aid for Research and Development Projects. A taxpayer established by the regulations of the Republic of Croatia on profit or income taxation is entitled to the additional tax base deduction. First of all, the taxpayer must submit an Application for Granting State Aid for Research-Development Project. The implementing authority that evaluates these applications on behalf of the Ministry of Economy, Entrepreneurship, and Crafts is The Croatian Agency for SMEs, Innovations and Investments HAMAG-BICRO (hereinafter "HAMAG-BICRO"). This agency evaluates formal requirements and verifies the eligibility of the project, activities, costs, and beneficiaries. When the agency completes the evaluation, the granting authority issues the Confirmation on the Status of State Aid Beneficiary or Notice on Non-Acceptance of the Application¹⁵.

Only after the Status has been granted can the costs incurred within the framework be counted towards research and development support. All projects may last

¹³ *Ibidem*, p. 77.

¹⁴ Act on state aid for research and development projects (*Zakon o državnoj potpori za istraživačko-razvojne projekte*, NN 64/2018). https://narodnenovine.nn.hr/clanci/sluzbeni/2018_07_64_1306.html?fbclid=IwAR3HhOhBozx39aPg1LxEcF4_S0kkAfoYh1hbZmIxf3z3cMxwGq-GRQ8jy-N8 [access: 18.08.2022].

¹⁵ Council of the European Union, *Croatia's Act on State Aid for Research and Development Projects (HR013)*, <https://data.consilium.europa.eu/doc/document/ST-9652-2019-ADD-6-REV-1/en/pdf&ccd=1&chl=cs&ct=clnk&gl=cz&client=firefox-b-d> [access: 20.08.2022].

a maximum of up to 3 years in total¹⁶. The beneficiary is also obliged to submit an Annual Report on the execution of project activities, incurred costs, and the use of support to the grantor or the implementing body and the Ministry of Finance with the application of profit tax or income tax, following the deadlines prescribed by the special regulation regulating profit tax or income tax¹⁷.

Table 1. Tax base intensity and maximum amount of aid in Croatia

	Tax base reduction (eligible project costs)	Maximum amount of aid (per beneficiary, per project)	Maximum aid under special conditions*	Maximum aid intensity (eligible project costs)
Basic research	200%	€ 300,000	€ 40 million	100%
Industrial research	150%	€ 200,000	€ 20 million	50%**
Experimental development	125%	€ 100,000	€ 15 million	25%**
Feasibility study	150%	€ 50,000	€ 7.5 million	50%***

*Applies if more than 50% of the cost of research conducted is contracted with organizations for research and dissemination of knowledge

**May be increased to 80% of eligible costs under specific conditions

***May be increased by 10% for medium-sized entrepreneurs and 20 percentage points for small entrepreneurs

Source: own creation based on Croatia's Act on State Aid for Research and Development Projects

As can be seen from the table above, the Croatian legislator has decided that R&D support will be limited to a maximum of aid per beneficiary per year. However, special rules apply when it comes to a project, where at least 50% of the cost of research conducted is contracted with organizations for research and dissemination of knowledge. From this point, it is undoubtedly, that to reach support for larger projects, it is necessary to involve institutions oriented on R&D. The tax base reduction is more than favorable for the taxpayers with a range starting at 125% and up to 200% of eligible costs counted towards tax base reduction. Eligible costs include for example:

- costs of contractual research,
- costs of consultancy related to R&D projects,
- personnel costs (according to actual working hours spent on R&D),
- depreciation costs of equipment and instruments and
- additional overheads and other operating expenses¹⁸.

¹⁶ Croatian Agency for SMEs, Innovation and Investments, *State Aid for Research and Development (R&D) Projects*, <https://en.hamagbicro.hr/grants/innovation-process-support-programs/state-aid-for-research-and-development-rd-projects/> [access 20.08.2022].

¹⁷ Article 18 paragraph 5 Act on state aid for research and development projects, *op. cit.*

¹⁸ KPMG, *Global R&D Incentives Guide*, p. 43, <https://home.kpmg/us/en/home/insights/2021/05/tnf-kpmg-report-overview-of-r-and-d-tax-incentives-by-country-2021.html> [access: 3.08.2022].

Regarding the projects, it is also important to mention that Croatian legal provisions contain a negative definition of eligible projects. Projects with a future revenue in gambling and betting, financial services, insurance, real estate, social welfare, or retail and wholesale are not eligible for the R&D tax incentive. Other restrictions limit a potential beneficiary. Beneficiaries cannot be experiencing financial difficulties, have unsettled tax, social security liabilities, unsettled liabilities toward employees, or have a record of previous infringements related to European Commission aid.¹⁹ To sum it up, Croatian legal provisions provide interesting opportunities for companies that buy fruits of R&D from research institutions with relatively low risks of losing state support. However, companies conducting research without major external help and those conducting larger projects may get more suitable tax incentives in other EU countries.

3. R&D tax incentive in the Czech Republic

In Czechia, legal provisions related to R&D tax incentives are codified in Czech Income Taxes Act. The definition of R&D is, however, incorporated in the Act on Support of R&D. The definition itself was implemented into national law from the Frascati manual. More detailed information about R&D tax incentives can be found also in decrees D-288 and MF-17 published by the Ministry of Finance. Although these decrees are not legally binding for the taxpayers²⁰, legal praxis shows the only way of avoiding any complication with the application for an R&D tax incentive is to follow precisely both decrees mentioned above.

The process of obtaining tax incentives very much differs from Croatia. First of all, a taxpayer needs to submit an official Notification to the tax authorities before the project starts. Since the Notification is delivered to the tax authorities, the project costs may be counted towards the incentive²¹. The taxpayer also needs to create a special document called “Project documentation” that shall contain identification of the taxpayer, project duration, goals, estimated cost, names of personnel participating in a project, ways of control, date of approval, name, and signature of approving person²². Tax authorities and administrative courts are very strict when it comes to evaluating formal requirements. The Supreme Administrative Court

¹⁹ *Ibidem*.

²⁰ Decisions of the Supreme Administrative Court of the Czech Republic from 23.06.2022, nr. 10 Afs 242/2020-40, and from 25. 10. 2006, nr. 8 Afs 3/2005-59.

²¹ F. Šimeček, *Výzkum a vývoj: Vybrané aspekty odčitatelné položky od základu daně v kontextu aktuální Judikatury*, <https://www.dauc.cz/clanky/7586/vyzkum-a-vyvoj-vybrane-aspekty-odcitatelne-polozky-od-zakladu-dane-v-kontextu-aktualni-judikatury> [access: 1.09.2022].

²² Article 34c, the Act of 18 December 1992, Income Taxes Act [official gazette Sběrka zákonů, No. 586/1992, as amended].

of the Czech Republic ruled that tax incentive represents a certain benefit, and if the taxpayer is interested in benefiting from it, he must meet the strict conditions set by the legislator²³.

The taxpayer then claims an R&D incentive in the corporate income tax return as an item deductible from the tax base²⁴. When the taxpayer claims the incentive, tax authorities usually conduct a tax audit. Firstly, they evaluate whether all formal requirements were fulfilled. If not, they do not even need to deal with the material requirements of the project, such as whether all project activities fall under the R&D definition²⁵. Secondly, tax authorities verify if all costs related to the project were recorded separately from other taxpayers' costs, which is one of many requirements. And lastly, they evaluate whether the activities performed fall under the definition of R&D.

To point out the most important aspects of R&D tax incentives in the Czech Republic, it is necessary to mention that taxpayers may deduct 100% of the project cost from the tax base or 110% of exceeding the cost of the previous year. The same cost basically enters a tax base twice. Firstly, as a regular tax expense and secondly as a tax incentive. There is no maximum limit of tax deduction, no excluded areas of R&D, and no need for preapproval of public authorities for the project (taxpayers only need to notify tax authorities)²⁶. Regarding costs, not eligible for tax deduction are costs that are connected with license fees or already supported by direct public support. Costs of services, except for those bought from public universities or organizations specialized in R&D and listed in the special legal act, costs spent on proving that performed activities fall under the R&D definition, and costs connected to financial leasing are also not eligible²⁷. If the taxpayer is unsure whether certain costs can be included in the tax deduction, they can request a Binding Assessment from the tax administrator. However, a Binding assessment is subject to a fee of CZK 10,000 (approx. EUR 400) and taxpayers may be rejected projects that would in the end turn out to be eligible by administrative courts. Therefore, this institute is not frequently used. To sum it up, the Czech tax incentive provides the same amount of support to all different types of R&D and therefore is more suitable for larger and more practical R&D. However, taxpayers may lose the incentive if they do not comply with all very strict formal requirements or prove that activities in question fall under the definition of R&D.

²³ Decisions of the Supreme Administrative Court of the Czech Republic from 4.11.2020, nr. 1 Afs 270/2020-26.

²⁴ KPMG, *op. cit.*, p. 45.

²⁵ Decisions of the Supreme Administrative Court of the Czech Republic from 28.6.2018, nr. 5 Afs 209/2017-44.

²⁶ § 34a-§ 34c Income Taxes, *op. cit.*

²⁷ T. Rydval, *Náklady na výzkum a vývoj jako položka odčitatelná od základu daně*. Prague 2021, p. 65-67.

4. Conclusion

The Czech Republic and Croatia provide indirect R&D support differently. International businesses and multinational enterprises may choose a country where to conduct their R&D in order to tax-optimize. All taxpayers applying for this indirect support will be primarily concerned with whether their R&D project is eligible for the incentive, how high support may receive, how their know-how will be protected in the process, and what legal certainty will they have that the support will not be withdrawn.

As already mentioned in the previous chapters, the Croatian legislator has established a clear list of projects that cannot be supported (e. g. gambling and betting, financial services, insurance, etc.) and conditions related to the taxpayer that exclude him from support (experiencing financial difficulties, have unsettled tax, etc.). On the one hand, these conditions show signs of project priority, i.e., state intentions not to support areas where R&D would not be of benefit to society, while on the other hand motivating taxpayers to fulfill their legal obligations properly. These elements are completely absent in Czech law, although they have positive elements. Although these restrictions have their justification, for taxpayers doing business in these excluded areas, this may be one of the reasons to carry out their R&D in other countries, e.g. in the Czech Republic, where such strict R&D criteria are not set.

The level of support is generally higher in Croatia. Croatian legislators also distinguished among different types of R&D. Generally speaking, the more theoretical and therefore most useful to society, the higher the support granted. In contrast, for experimental development or feasibility studies, where a larger impact on the profit of the company carrying out the development can be expected, the aid is generally lower. Although the Czech law distinguishes among different types of R&D, the meaning of these definitions is rather formal. The incentive contribution to a gradual increase in R&D spending compared to the previous year can be highlighted as a positive element in the Czech legislation. However, the amount of this incentive support is only symbolic, at 10% of eligible costs exceeding spending on R&D in the previous term, which makes this increase in support slightly lacking in its incentive function.

The implementation of a maximum amount of aid is somewhat debatable. Croatian law introduced a maximum amount of aid which, in the author's opinion, is too low. As a result, only minor projects that do not lead to a major development of society will be supported. Since 2018, i.e. since the entry into force of the law in question, the maximum amount of aid has not changed in Croatia, which, with the current inflation in the EU further reduces the real effectiveness

of the aid. For investments in R&D in which at least 50% of the costs are related to work purchased from scientific institutions, the maximum aid limit increases significantly. It is certainly right that scientific institutions, whose services will be in greater demand, are also indirectly supported in this way. In contrast, these restrictions prevent taxpayers, who can carry out large R&D projects on their own, from being supported. In the Czech Republic, there are no such limits, which seems to have a positive effect. Therefore, limiting the maximum amount of support thus appears to be an inefficient element of R&D support.

There are no specific provisions on the protection of know-how in the legislation on indirect R&D support in both countries in question. Therefore, it is only necessary to rely on the general provisions on non-publicity. However, the fear of misuse of all new know-how is often the reason why many taxpayers prefer not to use R&D tax support. In Croatia, all project documentation is assessed by the state organization before the project even starts. In the assessment phase of projects, know-how can be misused not only by the officials themselves but also by the invited expert who may be biased in some way (e.g., working for a competitor). In the Czech Republic, the taxpayer notifies the tax authorities of its intention to carry out R&D before the project is started. The Notification itself must also contain a basic definition of the project. The more specifically the taxpayer describes the project, the higher the likelihood of possible misuse of the information provided by officials. Conversely, if the definition is not specific enough, the taxpayer runs the risk of possible withdrawal of public support. The improvement of the system in both countries could be by implementing strict regulations when it comes to officials and experts involved in project evaluations.

When it comes to the question of legal certainty for taxpayers regarding the recognition of R&D costs, Croatian legislation can be highlighted. The taxpayer can be sure of the support already at the beginning of a project. This is primarily due to the tax support process because the state authority declares the beneficiary status before the project activities start. In the Czech Republic, in contrast, the verdict on whether the costs incurred will be deductible will only be discovered in the last step of the assessment during the tax audit (if a tax audit is conducted). Cases of subsequent denial of tax deductions disincentivize taxpayers from further investment in R&D, which is a very undesirable element and is one of the biggest challenges for Czech legislators to face in upcoming years when it comes to R&D support.

Finally, on the basis of the above, the hypothesis can be confirmed or refuted. As can be seen, the Czech Republic, compared to Croatia, offers an unlimited amount of indirect aid to beneficiaries. However, this is compensated by the long legal uncertainty of the beneficiaries and the lower aid percentage. The protection

of know-how is low in both countries and is therefore indecisive for the stated hypothesis. The hypothesis is therefore generally to be regarded as disproved. In detail, however, it can be admitted that in the case of large projects, or projects targeting areas excluded from support in Croatia, the hypothesis could be confirmed. In general, however, it can be assumed that taxpayers will prefer a higher percentage of support and the legal certainty that they will not lose the support once it has been granted. It can therefore be concluded that the hypothesis has been disproved and that Croatia generally offers more attractive R&D support.

Summary

All Member States of the European Union determine their indirect R&D support independently. Good examples of different approaches are the Czech Republic and Croatia. The Czech Republic and Croatia were chosen because they are comparably sized post-communist countries, but they have very different approaches to indirect R&D support. The goal of this paper was to decide, which country offers more attractive indirect R&D support for its beneficiaries. As it turned out, Croatia generally offers more attractive R&D support. However, when it comes to large projects, or projects targeting areas excluded from support in Croatia, the Czech Republic has more to offer. However, both countries should introduce rules for greater protection of know-how, which should make them more attractive for R&D investment.

Among the most important factors that can be highlighted in terms of R&D tax incentive in Croatia is a motivation for taxpayers to properly fulfill their obligations to reach the incentive. Very positive is also a sufficient level of support and a high level of legal certainty for both, taxpayers and granting authorities. Research and development tax incentive in the Czech Republic offers an unlimited amount of tax support and provides extra motivation to annually increase R&D investments. Although neither country has a flawless legal framework for indirect R&D support, both have several positive elements that can be an inspiration for legislators all over the world.

References

- Baldwin R.J., *The Importance of Research and Development for Innovation in Small and Large Canadian Manufacturing Firms*, "Statistics Canada Analytical Studies Paper" 1998, No. 107, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=123588.
- Busom I., Corchuelo B. and Martínez-Ros E., *Tax incentives and direct support for R&D: What do firms use and why?*, "Business Economic Series" 2011, https://www.researchgate.net/publication/254401518_Tax_incentives_and_direct_support_for_RD_what_do_firms_use_and_why.

- Carvalho A., *Why are tax incentives increasingly used to promote private R&D?*, “Working Paper Portugal” 2011, https://www.researchgate.net/publication/241753926_Why_are_tax_incentives_increasingly_used_to_promote_private_RD.
- Choi J., *Do Government Incentives to Promote R&D Increase Private R&D Investment?*, “The World Bank Research Observer”, <https://academic.oup.com/wbro/article/37/2/204/6588035>.
- Council of the European Union, *Croatia's Act on State Aid for Research and Development Projects [HR013]*, <https://data.consilium.europa.eu/doc/document/ST-9652-2019-ADD-6-REV-1/en/pdf&cd=1&hl=cs&ct=clnk&gl=cz&client=firefox-b-d>.
- Croatian Agency for SMEs, Innovation and Investments, *State Aid for Research and Development [R&D] Projects*, <https://en.hamagbicro.hr/grants/innovation-process-support-programs/state-aid-for-research-and-development-rd-projects/>.
- European Parliament, *EU research and development goals*, https://www.europarl.europa.eu/doceo/document/E-8-2015-005756_EN.html.
- Eurostat, *R&D expenditure in the EU at 2.3% of GDP in 2020*, <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20211129-2>.
- Hu J., Lan Y., *Empirical Study on the Relationship between R&D Expenditure and GDP in Guangdong Province*, ICESSEM 2018, <https://www.atlantispress.com/proceedings/icesem-18/25901125>.
- Janeček M., Mráček K., *KA 7.2: Organizace podpory výzkumu, experimentálního vývoje a inovací – Rada pro výzkum, vývoj a inovace, poskytovatelé, způsob poskytování podpory, Technologická agentura ČR, 2016*, https://www.tacr.cz/interni_projekty/zefektivneni/KA7.2/KA%207_O2%20Organizace%20podpory%20VaVa%20-%20final.pdf.
- KPMG, *Global R&D Incentives Guide*, <https://home.kpmg/us/en/home/insights/2021/05/tnf-kpmg-report-overview-of-r-and-d-tax-incentives-by-country-2021.html>.
- Meo S. et al. *Impact of GDP, Spending on R&D, number of universities and scientific journals on research publications in pharmacological sciences in Middle East*, European review for medical and pharmacological sciences, https://www.researchgate.net/figure/Correlation-coefficient-between-spending-on-R-D-as-percentage-of-GDP-and-total-number-of_fig2_258204614.
- OECD, *Frascati Manual*, <https://www.oecd.org/sti/inno/Frascati-Manual.htm>.
- Rydval T., *Náklady na výzkum a vývoj jako položka odčitatelná od základu daně*, Prague 2021.
- Šimeček F., *Výzkum a vývoj: Vybrané aspekty odčitatelné položky od základu daně v kontextu aktuální judikatury*, <https://www.dauc.cz/clanky/7586/vyzkum-a-vyvoj-vybrane-aspekty-odcitatelne-polozky-od-zakladu-dane-v-kontextu-aktualni-judikatury>.
- Tang D. et al., *Government R&D spending, fiscal instruments and corporate technological innovation*, “China Journal of Accounting Research” 2022, <https://www.sciencedirect.com/science/article/pii/S1755309122000302?via%3Dihub>.
- The Act of 18 December 1992, Income Taxes Act [official gazette Sbirka zákonů, No. 586/1992, as amended].
- The Act of 26 July 2018 – Act on state aid for research and development projects [official gazette Narodne novine, No. 64/2018, as amended].
- The Judgement of the Supreme Administrative Court of the Czech Republic of 23 June 2022, 10 Afs 242/2020-40.
- The Judgement of the Supreme Administrative Court of the Czech Republic of 25 October 2006, 8 Afs 3/2005-59.
- The Judgement of the Supreme Administrative Court of the Czech Republic of 4 November 2020, 1 Afs 270/2020-26.
- The Judgement of the Supreme Administrative Court of the Czech Republic of 28 June 2018, 5 Afs 209/2017-44.