# The Financial Situation of Entrepreneurs in the Slovak Republic and their Application of Tax Relief for R&D

**Lea Jančičková**

University of Economics in Bratislava, Faculty of Economic Informatics
Dolnozemská cesta 1, Bratislava 5, 852 35
Slovak Republic
lea.jancickova@euba.sk

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**Abstract.** Since 2015, companies in Slovakia have had a very effective tool for financing innovation: deduction of research and development expenses. It is an indirect support for research and development, which is provided to the company through a tax credit for expenses incurred for research and development activities. The amount of supercomputing gradually increased during the first years. The year 2018 was a breakthrough in the application of supercomputing, as the rate increased to 100% compared to previous years, when entrepreneurs could claim only 25% of expenditure (costs) on research and development. Thanks to R&D, taxpayers can therefore apply a reduction in the tax base (tax relief) and a precisely defined amount in addition to their normal business activities, regardless of whether R&D activities are the core of their business or are only ancillary to their main business. activities. These options apply to all tax entities investing in development activities, regardless of whether they are natural persons (entrepreneurs), small legal entities or large multinational corporations. The aim of this paper is to analyze the application of supercomputing to research and development by entrepreneurs in the context of the financial situation of companies in the Slovak Republic in 2018 using financial and statistical indicators.

**Keywords:** development, financial situation of entrepreneurs, research, tax relief, R&D

**JEL classification:** *O30, F63, H25*

## 1 Introduction

R&D support exists in different forms in the countries of the European Union. Innovation is clearly part of R&D. Innovation is a process that has gone through the whole technological cycle from the birth of the idea, its technological development and documentation to the necessary business practices to enter the market in the form of a product, service or technology (Slobodnyak, etc., 2020). The decisive objective and

objective of using different forms of indirect R&D support is to motivate the business sphere to carry out R&D more, including their financial support (Turečková, 2016). Companies' investments in R&D are one of the factors that stimulate economic growth and innovation performance of both companies and the state (MacGregor Pelikánová, 2019), both nationally and regionally (Majerová, 2018). Governments around the world use different types of R&D support tools (Turečková, Nevima, 2020). Support may take a direct or indirect form. Direct types of support include the provision of public financial assistance in the form of grants and subsidies. Indirect types of support for R&D, especially in the business environment, can be described as tax incentives in the form of an additional deduction of expenses incurred in the form of a tax credit, tax saving or preferential treatment for R&D companies. The benefits of R&D include royalties or revenues from the sale of research - related assets or patents and development, and resulting innovations can also affect the efficiency, efficiency and economy of the costs incurred with efficiency gains.

The purpose of financial analysis is to provide information to financial managers and analysts so that they can make thorough decisions about their business (Hasanaj, Kuqi, 2019). The analysis of financial reporting plays an important role in deciding on the resources needed to increase the efficiency of the enterprise and maximize profitability by increasing production with minimal labour and capital costs. To ensure the accuracy and transparency of reporting, it is important to carry out an analysis, including the main financial indicators. Based on the decision of the management of companies in financial and economic aspects, companies can prevent various risk situations (Sroka et. al., 2020). The financial analysis is of particular importance to external stakeholders as it is based on available financial statements, which are the main source of information for all who need to take decisions (Laitinen, 2018).

The contribution focuses on R&D in the Slovak Republic in 2018. Theoretical interpretations of R&D in legislative standards at transnational and national level are defined in the first part of the contribution. Theoretical background is important from the point of view of understanding R&D in the conditions of the Slovak Republic. In research, the processed data are collected and published by the Financial Administration of the Slovak Republic, which, under the leadership of the Ministry of Finance, oversees, among other things, compliance with generally binding legal regulations, EU regulations and international treaties that ensure the implementation of trade policy, customs policy, tax policy. It manages the collection of taxes, and its main mission is to effectively collect and manage customs duties and taxes to meet the revenue part of the state budget of the Slovak Republic and the budget of the European Union (EU), the protection of the economic interests of the state and the protection of the expenditure part of the state budget of the Slovak Republic (Financial Administration, 2022a).

The aim of the contribution is to analyze the application of the super deduction of R&D costs by entrepreneurs in the context of their financial situation in Slovakia for 2018 using a statistical evaluation of selected financial indicators of companies applying the super-deduction in 2018, namely revenues, profit before tax, after tax, super-deduction of R&D costs, income tax payable, ROA and ROE.)

## 1.1 Theory background

R&D plays an important role in economic growth (Blanco et al., 2020). Although government R&D subsidies prevail in several countries, which could presume market failures as they distort the market incentive mechanism and reduce the efficiency of the market mechanism (Chen & Yang, 2016), in some situations R&D subsidies may even reduce R&D investments due to the so-called extrusion effect (Acemoglu, etc., 2018). Government R&D subsidy should not only encourage businesses to increase investment in R&D, but also improve the efficiency of R&D of enterprises (Xiong, 2011). So far, however, there is still no consensus on the impact of government subsidies on R&D on business R&D efficiency (Wan-Shu Wu & Kai Zhao, 2021). Based on the documented results of private enterprises, it is confirmed that government subsidies for R&D can effectively increase investment in R&D, but do not have a significant impact on the efficiency of R&D of enterprises (Zheng, 2016). The government tends to support high productivity businesses. The efficiency of enterprises will improve significantly after receiving a R&D grant (Guo et. al., 2018). On the other hand, the authors Yan and Huang found through their research that government subsidies for R&D do not have a significant impact on the effectiveness of R&D of enterprises. However, they may aggravate the overcapacity of businesses. The inconsistency of existing research affects the possible complex relationship between the government's R&D grant and R&D efficiency, which is often influenced by multidimensional factors such as industry, entrepreneurship, the region and other key factors from different perspectives (Yan Huang, 2020).

Frascati's manual defines R&D as "*creative work done systematically to increase the pool of knowledge, including knowledge of man, culture and society, and to use this pool of knowledge to design new applications."* (OECD Frascati Manual, 2015)

R&D is the generation of new knowledge. In a business context, it is an activity that companies undertake to develop new products, processes, or services or to improve those that already exist. Businesses often face risks in carrying out R&D. This is because there are uncertainties as to whether what they are trying to do is technologically feasible or, more often, they do not know how they will achieve their objectives in practical terms (ForrestBrown, 2019). There are two main types of research in R&D – basic research and applied research.

*1. Basic research is about acquiring knowledge and using it to build understanding and intelligence that a business can use to its advantage. This knowledge can be the basis for other R&D projects and can feed on strategic business decisions. It is often part of the scientific research activities of universities and research organizations. Less often it is carried out by business entities.*

*2. Applied research is much more defined and often seeks to achieve a specific goal. This could be the use of new technology, the achievement of a new market, improved safety, or cost reductions. Applied research is often what leads to the development phase. This type of research is carried out by business entities with the most.*

To motivate companies to invest more in R&D, create more jobs for professionals, as well as increase competitiveness, the Slovak Republic introduced a super-deduction as a tool to support R&D - a special tax regime allowing additional deduction of R&D

costs from the income tax base (Sario, 2021). Until 2015, companies in the Slovak Republic could benefit from support only in the form of subsidies or tax breaks. Since 2015, the conditions of the Slovak Republic apply a tax super-deduction of costs/expenses. The base rate for 2015-2017 was 25% of R&D expenditure(s). Since 01 January 2018, the deduction of R&D expenditure (costs) has increased from 25 % to 100 % of R&D expenditure(s) and the method of calculating the deduction of R&D expenditure has also changed (Financial Administration, 2018).

Super deduction for R&D in the Slovak Republic: (Sario, 2021)

- provides for the possibility of additional deduction of R&D - related costs.
- is automatically claimed in the tax return for the tax period.
- does not require any application and is not subject to approval by any authority.
- there are no sector restrictions.
- applies throughout the territory of the Slovak Republic, without any differences.

In the following Figure 1 we present the phases of the project/project cycle in the company that decides to implement research and development.

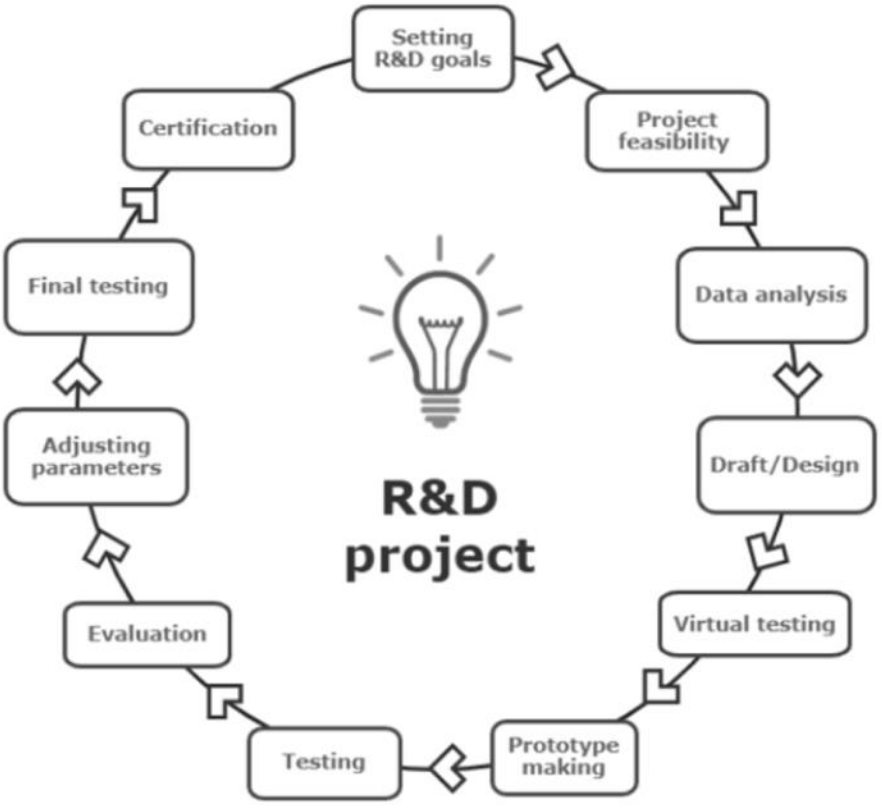


**Fig. 1.** R&D Project phases/Project cycle

All the above steps in Figure 1 are necessary to develop the R&D project that the company needs to develop to apply the super-deduction to R&D. The length of each stage depends on the type and form of research and development.

## 2 Data and Methodology

We draw all information about companies that apply super-deduction of R&D costs in the Slovak Republic in 2018 from the current lists published on the Financial Administration of the Slovak Republic (2022b). The Financial Administration of the Slovak Republic collects data on enterprises from completed and filed tax returns, in which companies indicate the number of projects, the objectives of individual projects and the amount of the super deduction they applied in the tax period. Table 1 presents statistics on the number of enterprises by legal form that have applied a super deduction in 2018, the financial indicators of which will be subject to further analysis.

**Table 1.** Overview of enterprises by legal form of business in 2018.

| Enterprises according to legal form | Total number of entities | Number of subjects analyzed |
|---|---|---|
| Limited Liability Company | 197 | 181 |
| Joint Stock Company | 49 | 43 |
| Limited Partnership | 3 | 3 |
| Self-employed | 14 | 0 |
| Contributory organization | 1 | 0 |
| **Total** | **264** | **227** |

Source: own processing

Our research contains data for the Slovak Republic for 2018, when complete data are available to us. Of the 264 companies, we have financial data for 246 companies from the official source of the Register of Financial Statements in Slovakia, which are obtained from the finstat.sk (2021) in the processed form of the dataset. The analysis shall be carried out on entities accounting in the double-entry accounting system which have a uniform form of financial statements and are corporate taxpayers. Financial data were not available for 18 entities – 14 self-employed persons, as they are not obliged to publish their financial statements in the register of financial statements, the data of 1 contributory organization, 1 limited liability company and 2 public limited companies were not disclosed. Of the 246 financial data disclosed, 10 entities must prepare IFRS financial statements that do not have a uniform structure; therefore, these entities will also be excluded from the following analysis. Since the super-deduction can only be used for a positive tax base, we have exempted from a more detailed analysis 5 entities with negative management results before tax and 4 entities with negative equity, which

implies an unfavorable financial situation and do not give meaningful results for the ratios used. After the filtering is indicated, 227 business units belong to the analyzed enterprise group (Table 1).
Before starting a more detailed examination of financial indicators, we subjected the dataset to a formal check, i.e., whether the balance sheet equation Assets = Equity + Liabilities applies in the analyzed financial statements and thus the financial data do not show signs of inaccuracies. All data from the analyzed dataset without signs of formal errors passed through this check.
In the following Table 2 we provide descriptive statistics of basic indicators for R&D enterprises in 2018. We will list sales, assets, and equity as the basic financial indicators of the group of enterprises examined. The arithmetic means and median in all three indicators show that half of the entities achieve above-average values of financial indicators, as the arithmetic mean is always significantly (several times) above the median.

**Table 2.** Descriptive statistics of the surveyed enterprises for the year 2018 (in EUR).

| | **Sales** | **Property** | **Equity** |
|---|---|---|---|
| **Min** | 0.00 | 11,424.00 | 7,425.00 |
| **Max** | 485,483,065.00 | 158,677,861.00 | 139,698,627.00 |
| **Arithmetic mean** | 15,648,851.36 | 9,966,003.89 | 4,876,224.86 |
| **Median** | 3,538,224.00 | 2,753,224.00 | 1,150,912.00 |

Source: own processing

The aim of the contribution is to analyze the application of the super-deduction by entrepreneurs in the context of the financial situation of companies applying the super-deduction for R&D in Slovakia for 2018 using statistical indicators. We use several financial and statistical indicators to assess the financial situation of companies, namely: Profit or loss before tax (EBT); Super-deduction of R&D costs, Income tax payable, Profit after tax; EBIT (Profit before tax and interest); Arithmetic mean of Assets; ROA – Return on Assets, ROE – Return on Equity.
From the ratio indicators we will use ROA and ROE. ROA is an indicator of how profitable a company is relative to its total assets. ROA gives a manager, investor, or analyst an idea as to how efficient a company's management is at using its assets to generate earnings. ROA is displayed as a percentage; the higher the ROA the better (Investopedia, 2021a). According to expert recommendations, the profitability of total assets should exceed the interest rate on long-term loans. The higher the value of the asset profitability indicator, the better.

$$\text{ROA} = \frac{clear\ profit}{assets} x100\%$$

The result can be interpreted: How many monetary units of net profit were generated by one monetary unit of total assets. From the point of view of the balance sheet

equation, this also applies in derived to the unit of total capital, total equity and liabilities.

The ROE is used to determine the yield of one equity unit. Return on Equity (ROE) is a measure of financial performance calculated by dividing net income by shareholders' equity. Because shareholders' equity is equal to a company's assets minus its debt, ROE is considered the return on net assets. ROE is considered a measure of the profitability of a corporation in relation to stockholders' equity (Investopedia, 2021b). The return on equity should be at least the interest rate of banks on deposits, since only in this case is it more advantageous to do business than to value free capital through interest-bearing deposits with a bank. ROE growth dynamics should be higher than roa growth dynamics.

$$\text{ROE} = \frac{clear\ profit}{equity} x100\%$$

The following hypotheses have been established for research purposes:

1) Hypothesis – If an entity has achieved a positive profit or loss, its tax due will be greater than zero for most enterprises. It can then be assumed that most businesses have managed to benefit from all the tax breaks and do not pass on part of the super-deduction for years to come.
2) Hypothesis – Most businesses value equity (ROE) at more than 10%, which is higher than the appreciation of deposits with banks in 2018.
3) Hypothesis - Most enterprises value total capital (ROA) at more than 10%.

In the next part of our contribution, we will use a statistical analysis of financial indicators of entities that apply tax super deduction of R&D costs in the Slovak Republic in 2018 through descriptive statistical indicators of the surveyed group of enterprises. We will then analyze the obtained values and present the results obtained by us in tables and graphs.

## 3 Analysis of the financial situation in companies applying the super-deduction for 2018

Based on the available financial statements, we can calculate other financial indicators examined and subject them to statistical examination. For selected financial indicators, statistical indicators such as min, max, arithmetic mean, variation range, standard deviation, median, upper quartile, lower quartile, and interquartile deviation were selected. The statistical indicators of the financial indicators examined by us are shown in Table 3 and 4.

**Table 3.** Analysis of selected financial indicators in 2018.

| | Profit or loss before tax (in €) | Profit or loss after tax (in €) | Income tax payable (in €) | EBIT (in €) |
|---|---|---|---|---|
| **MIN** | 296.00 | 296.00 | 0.00 | 938.00 |
| **MAX** | 85,480,108.00 | 68,137,938.00 | 17,599,404.00 | 85,480,108.00 |
| **Arithmetic mean** | 1,363,342.04 | 1,128,253.38 | 279,081.38 | 1,390,584.31 |
| **Coefficient range** | 85,479,812.00 | 68,137,642.00 | 17,599,404.00 | 85,479,170.00 |
| **Deviation** | 6,047,927.34 | 4,834,538.13 | 1,326,091.49 | 6,055,396.35 |
| **Median** | 260,244.00 | 243,914.00 | 36,962.00 | 294,533.00 |
| **Upper quartile** | 869,630.00 | 782,579.50 | 147,085.50 | 965,939.00 |
| **Lower quartile** | 58,439.50 | 59,353.50 | 5,728.00 | 77,193.25 |
| **Interquartile deviation** | 811,190.50 | 723,226.00 | 141,357.50 | 888,745.75 |

Source: own processing

**Table 4.** Analysis of selected financial indicators in 2018.

| | Arithmetic means of assets (in €) | ROA (in %) | ROE (in %) |
|---|---|---|---|
| **MIN** | 6265.00 | 0.05 | 0.26 |
| **MAX** | 140,672,150.00 | 113.97 | 658.72 |
| **Arithmetic mean** | 9,831,367.94 | 18.58 | 42.15 |
| **Coefficient range** | 140,665,885.00 | 113.92 | 658.46 |
| **Deviation** | 20,004,713.18 | 20.50 | 55.26 |
| **Median** | 2,192,606.50 | 11.11 | 28.43 |
| **Upper quartile** | 8,756,677.25 | 24.50 | 54.62 |
| **Lower quartile** | 585,189.75 | 4.61 | 11.43 |
| **Interquartile deviation** | 8,171,487.50 | 19.89 | 43.19 |

Source: own processing

The statistical analysis shows that in all the indicators examined, the arithmetic mean is greater than the median, which means that half of the entities achieve significantly above average values of the indicators examined expressing their economic stability. The positive financial situation of the group of undertakings examined is also confirmed by the upper quartile, which indicates above average values for the ROA and ROE ratios, which means that a quarter of the enterprises make a return on the capital invested for total capital of 24.5 % (ROA) and for equity capital. 54.62% (ROE), which is more than the average of the entire enterprise group at 18.58% (ROA) and 42.15% (ROE), and up to half of enterprises reach 11.11% (ROA) and 28.43% (ROE). At the lower quartile of 4.61 (ROA) and 11.43% (ROE), a much higher rate of appreciation of the capital employed across the group of enterprises examined can be observed compared to interest on deposits with banks in 2018. Based on these indicators, it can be concluded that more than 75 % of the undertakings examined achieve an excellent appreciation of capital.

For the other absolute financial indicators analyzed, on the other analyzed, the arithmetic average is greater than the upper quartile, indicating the distribution of the group of enterprises, where a quarter of enterprises achieve the highest financial indicators, which are above and below their arithmetic average. This means that the highest values of financial indicators are for a smaller group of enterprises than the upper quartile. This situation is also described by financial indicators, which we have also assessed based on basic descriptive statistics. The same conclusion applies to the applied amount of the R&D cost super deduction, where the top quartile is 211,796.23 € close to the arithmetic average of 230,224.36 €. This means that only a small number of enterprises apply large amounts of super deduction and most claim the super deduction in low amounts, as confirmed by the Figure 2.

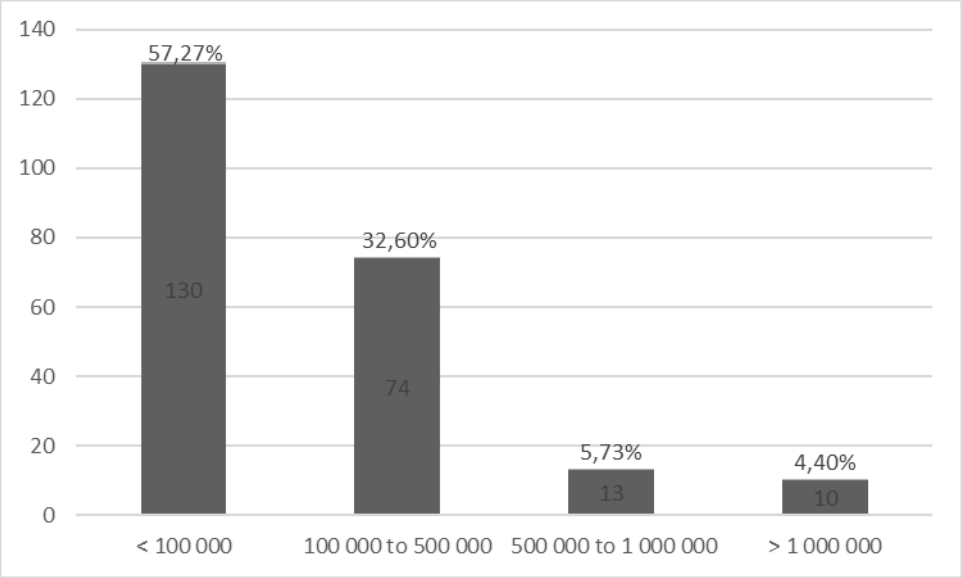


**Fig. 2.** Overview of the categories of enterprises applying for super-deduction in 2018

The threshold for the lower quartile for the after-tax profit figure was set at 59,353.50 € and the threshold for the upper quartile is 782,579.50 €. Enterprises are profitable, their financial situation is good, which is also helped by the possibility of deducting expenditure on R&D carried out, i.e., super deduction of costs and thus lower loss of equity in the payment of income tax. The undertakings examined by us do not lead to critical situations, are not at risk of bankruptcy and their financial situation is positive, as evidenced by the EBIT indicators, where the minimum of the group of undertakings examined is 938,00 €.

The ROA and ROE indicators were positive across all enterprises. We calculated the lowest ROA value at 0.05% for AXYZ - CNC s.r.o. If we focus more closely on its other financial indicators in this case, the profit before and after tax was €296 and the tax due was 0 €. Conversely, we calculated the highest ROA value at 113.97% in Čavojský & Partners, a. s. In this case, the company reported a pre-tax profit of 849,371 € and payable tax of 97,060 €. For the ROE indicator, we calculated 0.26% in INSEKO a.s. as the lowest, with a pre-tax profit of 2.625 € and a tax due of 1,120 €. On the other hand, we are the highest ROE in the company HD elektronika SK, s.r.o.. calculated at 658,72 %, with a pre-tax profit of 142,078 € and a tax due of 960 €. We can conclude that, for the most part, the higher the ROA and ROE, the higher the value of the profit or loss after tax and the lower the ROA or ROE, the lower the profit after tax or the tax due was low or zero.

According to the financial statements data found, the tax due was zero for 31 entities, with two enterprises reporting a profit before tax higher than the profit or loss after tax and, after a closer inspection of the financial statements, we found that the balance sheet line 'income tax due' had been incorrectly filled in and the incorrect line 'deferred income tax' was filled in. We have therefore included only 29 enterprises listed in Table 5 in the further analysis. All the entities examined reported a positive profit-to-profit result and managed to eliminate the full amount of their income tax liability up to 0.

**Table 5.** Businesses with zero tax due in 2018.

| Company | P/L before tax (in €) | P/L after tax (in €) | Super-deduction in 2018 (in €) | ROA | ROE |
|---|---|---|---|---|---|
| *AMIDIA s.r.o.* | 4,683 | 4,683 | 5,073.25 | 1,83% | 3,30% |
| *Ardaco, a.s.* | 253,035 | 253,035 | 187,253.86 | 9,37% | 12,46% |
| *AXYZ - CNC s.r.o.* | 296 | 296 | 243.70 | 0,05% | 0,42% |
| *Bel Power Solutions, s.r.o.* | 43,859 | 56,813 | 320,601.35 | 0,24% | 0,77% |
| *Bizzcom s.r.o.* | 362,620 | 362,628 | 398,499.69 | 8,54% | 66,30% |
| *Blumenbecker Slovakia s.r.o.* | 167,061 | 167,061 | 195,264.63 | 6,10% | 11,28% |
| *CASPRO s.r.o.* | 216,035 | 216,035 | 209,598.42 | 18,78% | 77,39% |
| *CELIM SLOVAKIA* | 37,443 | 37,443 | 1,859.75 | 49,96% | 78,72% |
| *CLEVERSOFT, s.r.o.* | 37,443 | 37,443 | 40,561.40 | 49,96% | 78,72% |
| *develogics k. s.* | 49,300 | 49,300 | 56,607.38 | 24,09% | 51,56% |

| | | | | | |
|---|---|---|---|---|---|
| *Ecoland s. r. o.* | 51,646 | 51,646 | 11,265.25 | 3,60% | 15,37% |
| *EkoWatt s.r.o.* | 17,366 | 17,366 | 10,888.79 | 9,47% | 26,91% |
| *ELRON s.r.o.* | 63,051 | 63,051 | 66,191.98 | 17,29% | 45,88% |
| *EXENT s.r.o.* | 938 | 938 | 3,735.38 | 0,83% | 6,64% |
| *GEORGANICS s.r.o.* | 28,108 | 28,108 | 28,169,23 | 11,75% | 30,80% |
| *G-Performance EU, s.r.o.* | 1,481 | 1,481 | 13,388.94 | 5,73% | 16,52% |
| *GRADIENT ECM s. r. o.* | 99,296 | 99,296 | 100,972.26 | 5,84% | 9,41% |
| *KFB Control s.r.o.* | 57,599 | 57,599 | 25,094.49 | 5,54% | 11,44% |
| *Krone Consulting s. r. o.* | 27,544 | 27,544 | 43,012.08 | 10,65% | 24,23% |
| *LKT, s. r. o.* | 33,423 | 40,567 | 3,264.23 | 2,71% | 88,66% |
| *Manufacturing s.r.o.* | 40,614 | 40,614 | 46,071.88 | 24,28% | 103,81% |
| *METRUM servis, s.r.o.* | 160,721 | 160,721 | 161,727.33 | 30,42% | 48,31% |
| *MYMEDIA, s.r.o.* | 2,604 | 2,604 | 5,887.22 | 3,31% | 9,92% |
| *R-DAS, s. r. o.* | 213,624 | 213,624 | 213,994.04 | 4,45% | 6,10% |
| *Relco Technology s.r.o.* | 8,604 | 8,604 | 7,219.12 | 52,03% | 67,00% |
| *robotec, s.r.o.* | 79,698 | 79,698 | 107,224.31 | 2,24% | 9,43% |
| *Rossum Integration s. r. o.* | 39,816 | 39,816 | 42,242.64 | 24,06% | 155,38% |
| *SEWEX, s. r. o.* | 58,121 | 58,121 | 58,459.69 | 16,80% | 31,69% |
| *VAS Systém, spol. s r.o.* | 168,265 | 168,265 | 178,170.40 | 9,33% | 23,69% |

Source: own processing

In 2018, 29 companies correctly report income tax due, or no tax, in the financial statements, which accounts for just under 13% of all businesses surveyed. We anticipate that in the following accounting periods, as the super-deduction rate increases, the number of entities that will be able to eliminate the tax burden on the State altogether and to keep the capital generated by the profit in the company for further business activities will also increase.

Of these 29 entities, the highest ROA has 52.03% company Relco Technology s.r.o., whose applied super deduction was 7,219.12 € and the lowest ROA .0.05 % company AXYZ - CNC s.r.o. with a super deduction of 243.70 €, the highest ROE was 155.38% for Rossum Integration s.r.o., whose super deduction was 42,242.64 € and lowest ROE 0.42 %.enterprise AXYZ - CNC s.r.o. with applied super deduction 243.70 € and it can be eded that they have managed to take advantage of all available tax breaks involving a super-deduction for R&D. Some businesses may have benefited from other tax breaks, including tax breaks or various subsidies and incentives that we did not analyse in this research. All these enterprises have a positive economic result and carry out R&D, so we assume that thanks, they have managed to eliminate the payment of the tax due to zero. The lowest profit before tax is reported by AXYZ – CNC s.r.o. only in

the amount of 296.00 € with a super-deduction of 243.70 € and on the other hand the highest company Bizzcom s.r.o. in the amount of 362,620 € with a super deduction of 398,499.69 €. The average value of profit before tax was 80,148.07 €. Several enterprises report a profit after tax higher than before tax, which may be due to the application of deduction of the tax license paid from previous years or higher paid advances on income tax.
Of the other 197 entities, the lowest income tax was paid by V O N S C H spol. s r. o. in the amount of 4.00 €, for super-deduction of R&D costs in the amount of 25,249.24 € and the highest tax liability was reported by ESET, spol. s r. o. in the amount of 17.599.404 € for super-deduction of R&D costs in the amount of 3,595,889.56 €.

## 4 Conclusion

Based on our analysis, the financial situation of R&D superanloyment companies is good, most of them value the capital contributed above average and therefore the use of research results in enterprises can be assumed in the future, applying the continuity of the continuation of the activities of the 227 enterprises examined. It can also be assumed that such support in the form of income tax reductions promotes the maintenance of a good financial situation and stability of. The group of investigated entities showed 29 that reported zero tax due and showed a positive economic result, which may mean that this is due to the application of a super-deduction of R&D costs. However, most enterprises reported a positive value of the tax due, which means that even after applying the super-deduction in full, the income tax was positive, which means that the financial performance of the enterprises is good. This is confirmed by the statistical evaluation of the financial indicators examined.
We have confirmed all 3 hypotheses with research. We confirmed hypothesis 1 because 196 enterprises reported income tax due of more than 0 €, which is 86 % (out of 227 enterprises). It can therefore be assumed that most businesses have managed to benefit from all tax breaks and do not pass on part of the super deduction to subsequent years. The hypothesis 2 that most businesses value equity (ROE) at more than 10%, which is higher than the appreciation of deposits with banks in 2018, has been confirmed as the median is 28.43%, i.e., more than half of businesses have a ROE greater than this value. Also confirmed is the hypothesis 3 that most businesses value total capital (ROA) at more than 10%, which is higher than the appreciation of deposits with banks in 2018, when the median ROA is 11.11%.
All selected enterprises have potential for the future, their situation is stable, although we can see high differences in them, e.g., in the amount of assets, sales or equity. The undertakings examined are in a positive financial situation and their activities do not lead to critical situations or bankruptcy. It is true that we have analyzed the available data for 2018 and we can assume that in 2020 there may be some financial problems due to the ongoing Covid19 pandemic. The financial incentive to apply the super deduction is gradually increasing, which can help even in the period after the covid-19 pandemic. That's why future research will look at the impact of super-deduction

percentage growth, financial analysis of businesses during and after the Covid-19 pandemic.

At the beginning of the research, we eliminated different groups of enterprises from the original group, either enterprises for which we did not have financial data or were published under IFRS. We have excluded some entities based on negative indicators, since only an entity whose tax base has been positive and the ROA and ROE ratios for negative indicators (equity and profit or loss) can claim a super calculation of R&D expenditure does not give meaningful results for evaluation.

There were also those entities that showed negative equity (4) and negative profit or loss (5) that were excluded from this research. For these entities, we see the potential for writing additional contributions to track their financial situation from the start of the super deduction.

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