

**SPECIAL CORPORATE INCOME
TAX RATE FOR MICRO
ENTERPRISES IN LITHUANIA:
PRODUCTIVE OR
UNPRODUCTIVE INCENTIVE?**

Enterprise
Lithuania





The study was commissioned by the Ministry of Economy and Innovation of the Republic of Lithuania in accordance with the OECD recommendation.

Author of the study:

Marius Kalanta, Enterprise Lithuania, m.kalanta@versli Lietuva.lt;

The initial study report was drafted on 21 October 2020.

The final version of the study report was drafted on 30 March 2021 after taking on board stakeholder comments.

Reproduction is authorized for educational and non-commercial purposes.

Citations must contain a reference to the study report.

Recommended citation:

Kalanta, Marius, 2021. *Special Corporate Income Tax Rate for Micro-Enterprises in Lithuania: Productive or Unproductive Incentive?* Enterprise Lithuania, Vilnius.

© Enterprise Lithuania, 2021.

Address: Balčikonio st. 3, LT-08247 Vilnius, Lithuania



TABLE OF CONTENTS

Summary	4
Introduction.....	5
1. Model, methods and data	6
1.1. Model	6
1.2. Data and methods	9
2. Characteristics of enterprises subject to the special CIT rate	10
1.1. Number of enterprises	10
1.2. Profits and profitability.....	12
2. Sources of profit of enterprises subject to the special CIT rate	15
2.1. Cost of capital, productivity and growth	15
2.2. Wage.....	18
2.3. Non-market revenue	21
Conclusions.....	27
References.....	31
Annex 1: Direct and indirect IDR indicators used in the study	32



SUMMARY

The main purpose of this study is to examine in more detail the impact of the special corporate income tax (CIT) rate on the behavior of micro-enterprises in Lithuania. In doing so the study looks at the special CIT rate from the perspective of incentives that shape enterprise's economic choices. It adopts an institutional entrepreneurship model in which the special CIT rate is an independent variable that creates incentives for enterprises to accumulate higher profits and therefore influences their profitability, a dependent variable. Theoretically, this influence can manifest itself through three channels. First, the special CIT rate can affect factor costs. It can directly reduce the cost of investment or working capital by reducing the cost of financing an enterprise's activities from internal sources, which in turn would increase returns through higher productivity or greater scale. Second, the special CIT rate may provide incentives to replace part of the wage bill with less taxable dividends for interest holders employed in the enterprise or pay employees undeclared wage supplements. And third, the special CIT rate, by introducing the differentiation in corporate income taxation, may encourage economic actors to opt for non-market transactions motivated by incentives of paying lower CIT. The study analyses each of these three potential sources of profit accumulation separately.

The study employed administrative firm-level data, which enabled to perform an analysis according to the CIT rate actually applied to enterprises. For the purposes of the analysis, three populations of Lithuanian enterprises have been singled out – enterprises to which a 0%, 5% and 15% CIT rate was actually applied in the period of 2014-2018. The total size of all three populations analysed was 488.234 cases. The study compares all three populations of enterprises according to profitability, investment, current asset and liability, wage, and other indicators.

The results of the study confirm the hypothesis that the special CIT rate, as an institutional incentive, influences the behaviour of enterprises by increasing their motivation to accumulate profits. Enterprises subject to the special CIT rate are systematically more profitable than enterprises subject to the standard CIT rate. The study found that the special CIT rate, while providing additional incentives for enterprises to accumulate profits, does not act as a productive incentive that, as initially expected by the government, would motivate greater profit accumulation through corporate development. On the contrary, more evidence has been found that the special CIT rate is more likely to act as an incentive for enterprises to obtain higher returns from unproductive, lower tax-motivated sources, such as non-market transactions between formally or informally related economic actors or reductions in labour costs through the channel of less taxed profits. Based on the results of the study, a policy recommendation is formulated to abandon the special CIT rate and move to more differentiated small business policy instruments, which would allow to focus support measures on enterprises motivated to invest and grow, and reduce the opportunities for enterprises without such motivation to use state tax support as a source of unproductive returns.



INTRODUCTION

According to the current provision of the Law on Corporate Income Tax of the Republic of Lithuania (LCIT) enterprises whose number of employees does not exceed 10 and annual income does not exceed EUR 300.000, instead of the standard 15% rate, can benefit from the special 5% or 0% CIT rate (LR Seimas, 2001).¹ Although the CIT rate was linked to the size of the enterprise back in 1996, special CIT rates took their current form in 2010, as a result of the attempts by the government to find ways to rebuild the economy affected by the Global financial crisis and to "enable entities to invest more in business development and job creation" (Finansų ministerija, 2009).²

Although the special CIT rate has been in place for 10 years, its impact on corporate performance has been given little attention, and there is no clear answer to the question of whether the special rate actually provides support for starting and developing a business when the business is small. On the one hand, the fact that the special rate is long-lasting and that its scope was extended even more in 2018, with a full CIT exemption in the first year of operation, shows that policy makers consider the special rate necessary. On the other hand, a previous study by Enterprise Lithuania found evidence raising doubts that the special CIT rate may not have a tangible positive effect and revealed its negative consequences (Versli Lietuva, 2018).

To summarize this previous study, in Lithuania, the group of micro-enterprises (ME) benefitting from the special rate contains a large share of ultra-small enterprises – up to 3 employees. Most enterprises in this group are not growing at all. Some of them inhibit their growth by seeking to remain below the upper bound of the eligible income level for the special CIT rate, thus they bunch at the kink point constituted by this bound, as suggested by the Saez (2010) model. In addition, the social and economic characteristics of the ME group differ considerably from those of other enterprise groups. Although the level of investments among MEs is the highest, it is in this group that investments are converted to productivity to the smallest extent. MEs pay the lowest wages to their employees, while the wage growth rate is the slowest. The low wages of MEs contrast in particular with their high profitability – the highest in the whole economy – and the profit per employee.

The main limitation of the previous analysis is that the data from the Lithuanian Department of Statistics (LDS) and administrative data used in it allowed the analysis to be performed only at the level of the entire population of MEs, in which enterprises taxed at the special CIT rate formed only a part. Meanwhile, it was not possible to carry out an analysis based on the CIT rate actually applied to enterprises. For this reason, the study offers a cautious conclusion not about what impact the special CIT rate has, but rather what impact it does not have: "the special CIT rate has not provided MEs with sufficient incentives to grow in the aftermath of the crisis and could not counterbalance the impact of other negative growth factors: MEs not only remain extremely small and non-growing, but they are also shrinking and slowing down." (Versli Lietuva, 2018, p. 35). The only specific conclusion regarding the impact of the special CIT rate was on its negative impact on the growth of some MEs, as shown by the bunching of enterprises at the eligible income threshold.

The main purpose of the analysis presented here is to examine in more detail the impact of the special CIT rate on the behaviour of MEs, focusing on the sources and use of the profit taxed at the special CIT rate. The analysis will complement the previous analysis with more precise conclusions about the impact of the special CIT rate on the economic and social characteristics of enterprises and will reveal more details about the seemingly paradoxical situation where ME productivity and wages are low, but profitability is high. Such a study is made possible by the new opportunity to analyse enterprises in terms of the CIT rate actually applied to them. Three populations of Lithuanian

¹ The author of the study is grateful to the experts of the Ministry of Finance of the Republic of Lithuania for many detailed and accurate comments on the initial version of the report.

² For the whole period of 2010-2019 the size of the special CIT rate remained the same – 5%. The special CIT rate of 0% was introduced additionally in 2018 and applies to companies during their first year of operation. However, the eligibility criteria for companies, in particular the income threshold, changed during the period considered. In 2010-2011 it was LTL 500,000, in 2012-2014 – LTL 1,000,000, from 2015 – EUR 300,000. A more detailed chronology of the special CIT rate can be found in Versli Lietuva (2018, p. 18).

enterprises were used for the analysis: enterprises to which a 0%, 5% and 15% CIT rate was actually applied in the period of 2014-2018.³ The total size of all three populations amounted to 488.234 cases. The study compares the populations of enterprises with each other according to profitability, investment assets and liabilities, wages, and other indicators.

The study consists of three parts and conclusions. In the first section, the model of institutional entrepreneurship is applied to the analysis of the impact of the special CIT rate, the data sources and methods are discussed. The second section presents descriptive findings on the characteristics of the populations of enterprises according to the actually paid CIT rate and analyses their profitability. The third section performs a comparative analysis of the sources of higher profitability of enterprises that have paid the special CIT rate. The conclusion summarizes the findings and provides policy recommendations.

1. MODEL, METHODS AND DATA

1.1. MODEL

The study looks at the special CIT rate from the perspective of incentives that shape enterprises' economic choices. The theoretical basis of the study rests on the perspective of institutional entrepreneurship (Baumol, 1990; Douhan & Henrekson, 2007; Henrekson, 2007; Henrekson & Sanandaji, 2010), according to which entrepreneurs – individuals and organizations active in the economy – are constantly looking for and seeking to reap economic returns that are higher than the risk-adjusted competitive market equilibrium. In the modern, Schumpeter-inspired entrepreneurial model, the source of such returns is the development of economic activity through the invention and use of new products, processes and markets (Ahmad & Seymour, 2008). However, the source of higher returns may also be the creation of a monopoly, the conclusion of a cartel, exclusive rights or business conditions guaranteed by the state, foreclosure of competitors with state aid, non-compliance with legislation (such as labour or financial accounting laws), tax evasion and, in extreme cases, robbery of others' property or other criminal activities (such as environmental pollution). According to the sources of economic return, entrepreneurship can be grouped into productive, i.e., socially useful, unproductive – which benefits only the entrepreneurs themselves, and destructive. The sources of economic return to which entrepreneurial resources (financial investments, organizational innovations, social network) are directed depend on the "rules of the game" set and enforced by the state, namely institutions. Research in institutional economics shows that if the state is able to create institutions that limit unproductive or destructive entrepreneurship or remove barriers to productive entrepreneurship, the supply of productive entrepreneurship increases (pvz., North, 1990; Rodrik et al., 2004). In essence, this means that productive entrepreneurship based on new products, processes and markets should increase as incentives to engage in unproductive or destructive entrepreneurship decrease or costs its increase.

Conceptually dividing sources of economic return to productive and non-productive can also be useful in analysing the impact of ME's special CIT rate. The special CIT rate is an exclusive "rule of the game" set by the state for a certain group of enterprises, which makes it possible to obtain higher economic returns by paying lower taxes. If an enterprise benefits from the special CIT rate (5% or 0%), the CIT rate and the amount of CIT payable are reduced three times or to zero compared to the standard rate (15%). Thus, the special CIT rate should increase the incentives for enterprises to accumulate profits. Generally speaking, a lower CIT rate should increase an enterprise's incentive to make higher profits, as a smaller portion of it would need to be paid as taxes. This motivation is demonstrated on the left side of the model shown in Figure 1.

The special ME CIT rate imposes lower corporate taxation and may create additional incentives for enterprises to accumulate profits but is not a source of profit itself. So, the question arises as to what sources it can be gathered

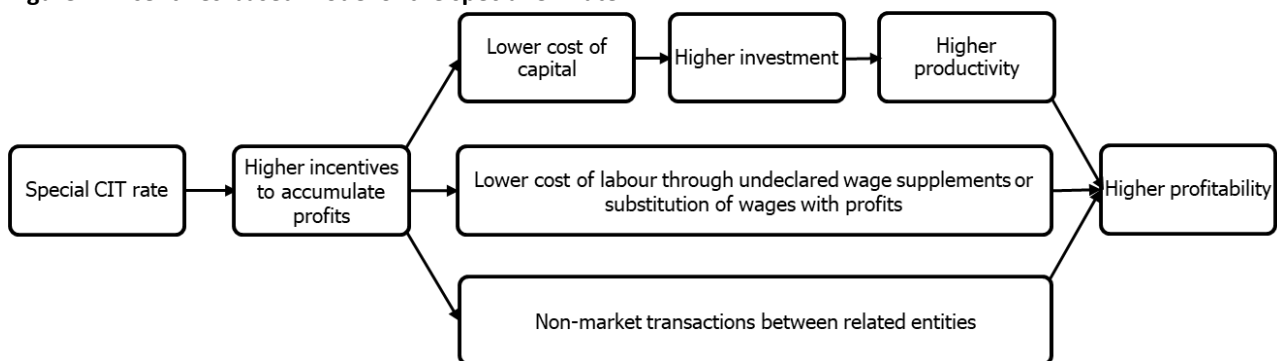
³ For more detailed arguments about placing enterprises that paid the 0% rate into a separate group, see the beginning of Section 2.

from. From an economic point of view, the price of goods and services sold by market enterprises is determined by the market. The market also determines the price of the factors of production used by the enterprise – capital and labour. Consequently, the profitability of an enterprise largely depends on productivity. The more productive it is, the more profitable it should be because it uses factors of production more efficiently. As a rule, larger enterprises are more productive (Haltiwanger et al., 1999; Versli Lietuva, 2018) hence, these enterprises can be expected to be more profitable than smaller ones.

In this context, the motivation of policy makers to reduce the taxation of the profits of microenterprises is also better reflected. The state is interested in the growth of enterprises and their higher productivity, so it introduces the special CIT regime and expects that these enterprises, in order to take advantage of the incentive to earn higher profits, will grow and become more productive. The mechanism of this effect goes through investment: lower taxation of profits can reduce the cost of capital, allowing it to be financed from cheaper inner sources; cheaper capital would facilitate productive investment and thus contribute to the growth of the enterprise. This causal sequence is depicted at the top right of the model in Figure 1.

However, the institutional entrepreneurship approach suggests considering other sources of profit that can be opened up with the special CIT rate by imposing exceptional operating conditions on a particular group of enterprises. Theoretically, two such sources are possible. These are the lower-than-market labour cost and income from the sale of goods or services not at the market price but through bilateral transactions of related entities. These two sources are also presented in the model diagram (Figure 1). The effect of the special CIT rate on the cost of labour can be twofold. First, it would depend on the characteristics of labour market institutions. If undeclared pay practices are possible or widespread in the labour market due to weak labour legislation and tax compliance, reduced-rate profits can become a source of funds available for undeclared wage supplements therefore reducing labour costs. Second, the special CIT rate changes the relative taxation of income by reducing the cost of income from profits in relation to other sources of income that are taxed more. This can provide incentives to take advantage of this less taxable source of income by substituting the profit part of the income for the wages of individuals working in the enterprise and entitled to a share of the enterprise's profits.

Figure 1. Incentives-based model of the special CIT rate.



Source: Compiled by the author.

The second source of non-productive profit – non-market transaction between related entities – may be generated by the unequal relative taxation of the profits of different economic actors. An enterprise (A) which, because of its size, is not entitled to the special CIT rate may, in order to reduce the taxation of its profits, divert through a supply of goods or services part of its income to an enterprise (B) that is entitled to the special rate and linked to the former enterprise by property rights or contractual relations. One of the possible mechanisms is that enterprise A buys certain goods or services from enterprise B on exceptional terms (above market price) and enables the latter to make relatively higher profits, which are then returned to enterprise A (its participants) in the profit-sharing process. In this way, the



special CIT rate can encourage the formation of supply chains of goods and services, in which the characteristics and prices of goods and services are determined not by the market but by incentives for lower corporate taxation.⁴

Further all three potential sources of higher profit are worth analysing in the context of the enterprise's profit accumulation and distribution process and the legal-institutional environment in Lithuania. The enterprise can use the accumulated profit taxed at a lower CIT rate in two ways: to reinvest it in the enterprise's activities and thus finance it from internal rather than external sources, or to distribute it to interest holders or shareholders in the form of dividends. Each of these options provides its own additional incentives. By reinvesting the accumulated profit in the enterprise's activities, the enterprise's equity is increased. Again, this can be done in two ways. Accumulated profits can be invested in fixed assets by purchasing equipment, buildings, and so on. Incentives for such investments should be further strengthened by the provision in Article 46¹ of the Law on Corporate Income Tax, which stipulates that enterprises that have acquired fixed assets⁵, may reduce taxable profit by the amount of expenses actually incurred and up to 100% (up to 50% before 2018) in profit volumes (LR Seimas, 2001). Another option is to use the accumulated profit as a current asset, thus increasing the enterprise's working capital and strengthening its ability to meet current liabilities.

By distributing the enterprise's accumulated profits as dividends, the profits become the income of private persons or enterprises who participate in the enterprise as holders of interests or shareholders.⁶ The special CIT rate may provide additional incentives to distribute profits as it reduces tax expense associated with the payment of that income. If the shareholder or holder of interests of the enterprise is another legal person (another enterprise) who is not entitled to the special CIT rate due to its size, or if a family member, relative or another close (friendship-related) person of the private participant of the enterprise is a participant of another enterprise not entitled to the special CIT rate, it may be in the interest of enterprises related through their participants to enter into reciprocal transactions in order to increase the profits of the enterprise benefiting from the special CIT rate. Although this possibility is limited by the Law on Corporate Income Tax by stipulating conditions for the connection of enterprises through their participants, under which the special CIT rate cannot be used,⁷ obviously these conditions do not exhaust the possibility of interconnection for all enterprises, such as interconnection between friends' enterprises or between enterprises where less than 50% of shares are controlled.

Incentives to distribute accumulated profits taxed at special rates as dividends may be enhanced by different taxation of capital income, which is lower, compared to the taxation of labour income, which is higher.⁸ Theoretically, two options linking dividends and labour income are possible. If the enterprise's shareholders are also employees of the

⁴ Although such transactions are formally prevented by Article 40 (1) and (2) of the Law on Corporate Income Tax and controlled by the tax administrator according to the arm's length principle (Finansų ministerija, 2004), the theoretical model is based on the assumption that due to the limited completeness and practical implementation of formal rules, the actual behavior of actors may differ from what is intended by formal rules. The high level of shadow economy (Awasthi & Engelschalk, 2018; Medina & Schneider, 2018) and a large VAT gap (Council of the EU, 2017) in Lithuania would entail that this assumption is reasonable.

⁵ For the purposes of this provision, the following types of assets are considered as fixed assets: machinery and equipment, plant (structures, wells, etc.), computer equipment and means of communication (computers, their networks and equipment), software, acquired rights and trucks not older than 5 years, trailers and semi-trailers.

⁶ Profits turn into income of private persons for owners of individual enterprises, shareholders of small, economic and limited partnerships and private shareholders of public and private limited companies. Profits turn into income of legal entities for corporate shareholders of public limited companies and private limited companies.

⁷ According to the provisions of Article 5 (3) of the Law on Corporate Income Tax which entered into force in 2018 (LR Seimas, 2001), the following are not eligible for the special CIT rate: (1) an individual enterprise whose owner or a member of his/her family is the owner of another individual enterprise; (2) an individual enterprise whose owner or a member of his/her family owns more than 50% shares of another enterprise; (3) an enterprise in which more than 50% of the shares are owned by the owner of an individual enterprise or a member of his/her family; (4) enterprises in which the same participant or participants control more than 50% of shares or contributions. In addition, the 0% special rate can only be applied to companies in which all participants are private persons.

⁸ While applying the special corporate tax rate and paying dividends, 15% of combined effective corporate and dividend tax rates (0% + 15%) or 19,25% (5% + 15%) are paid. Meanwhile, wage income is subject to employee personal income tax, employee and employer social security contributions, employer contributions to the guarantee and job benefit funds, resulting in effective workplace taxation ranging between 30% and 42%, depending on the amount of wages, non-taxable income size and historical period.



enterprise, they may be interested in exchanging part of their wages for dividends in order to achieve lower income taxation, i.e. to receive a relatively smaller share of income under an employment contract and a higher share in dividends. Under the second option, enterprises can use the profits taxed with the special rate and distributed to pay undeclared bonuses to the wages of the enterprise's employees, i.e. to pay wages in "envelopes"⁹. In this case, the profit taxed at the special CIT rate and distributed can be one of the sources of cash needed for the "envelopes", among others, such as the sale of goods / services for cash to the population and the possibility to exclude some transactions from accounting.

In summary, the model of institutional entrepreneurship demonstrates that the special CIT rate can not only provide an incentive for enterprises to devote more resources to business development than expected when it was introduced, but may also have a much more complex impact. Theoretically, this effect can manifest itself in three channels. The special CIT rate can affect the price of factors of production by reducing it directly, as in the case of capital, or by providing incentives to reduce it by the amount of part of the tax liability, as in the case of labour. Similarly, the special rate, by introducing different CIT regimes, may encourage economic actors to maintain non-market relationships motivated by lower corporate taxation incentives.

From the previously presented distinction between productive, unproductive, and destructive entrepreneurship, if an enterprise reinvests profits in its activities, it is obviously a case of productive entrepreneurship. It seems that with the introduction of the special CIT rate, it was expected that all entrepreneurship is just that. However, other opportunities to accumulate higher profits suggest that this is not necessarily the case. Of course, if an enterprise distributes accumulated profits, it does not necessarily mean that its entrepreneurship is unproductive – capital income is one of the most important motives for entrepreneurship. However, some cases of profit distribution are much easier to attribute to it. If distributed profits become a substitute for wage income or the income of related legal or natural persons, such entrepreneurship is unproductive because its economic decisions are determined by tax incentives. If an enterprise earned a profit taxed at 0% in the first year of its operation and distributed it, its entrepreneurship may also be considered as unproductive because the enterprise is not growth oriented. Moreover, if an enterprise uses the accumulated and distributed profits to pay employee wage supplements in "envelopes", such entrepreneurship is destructive, as the special CIT rate strengthens the incentives for it not to meet other tax obligations.

1.2. DATA AND METHODS

The study used anonymous enterprise data from the Interdepartmental Tax Data Repository (IDR)¹⁰. The data is submitted to the repository by state institutions: the State Tax Inspectorate, the Board of the State Social Insurance Fund, the State Enterprise Centre of Registers and the Lithuanian Department of Statistics (LDS). The IDR database is extremely useful for the study of the impact of the special CIT rate on MEs, as it provides an opportunity to analyse enterprises according to the CIT rate they actually paid. Enterprises were selected for the analysis according to the following criteria:

- The sample *includes* enterprises of the following legal forms: private limited enterprise, individual enterprise, individual enterprise established by a legal person, general partnership, limited partnership, European partnership and public limited enterprise. A fairly common legal form of a small partnership is *not included* in the sample due to technical problems in accessing IDR data for this type of enterprises.¹¹
- The sample *does not include* enterprises benefiting from the special CIT rate of free economic zones (special rates of 7.5% and 0%).
- The sample *does not include* enterprises engaged in agricultural activities (Section A of NACE Rev. 2 economic activities) as they are subject to separate CIT regulations.

⁹ Recent studies show that these practices are still widespread in Lithuania (Dirvanskienė et al., 2019; LRVK, 2016).

¹⁰ More information <http://tds.ivpk.lt/duomenys/>.

¹¹ According to LDS data, if small partnerships were included in the study sample, they would account for approximately 2% of the sample in 2014 and up to 7% in 2018. Thus, the non-representation of companies of this legal form in the sample can be assessed as reducing the representativeness of the study results, albeit insignificantly, but not reducing the validity of study findings.

- The sample *does not include* enterprises whose profits are actually taxed at 0% or 5% rates, but their size (number of employees or income) does not comply with the restrictions applicable to the special CIT rate for MEs. There were about 20 such cases, so they can be considered as a data artefact.

The sample of the study covers the period of 2014-2018 and the total number of 488.234 cases: 100.704 enterprises in 2014, 98.840 in 2015, 97.594 in 2016, 96.661 in 2017 and 94.435 in 2018.

The study uses the method of comparative descriptive statistics. Enterprises that have paid different CIT rates are compared with one another according to various economic indicators, such as profitability, productivity, investment, etc. Direct and derived indicators were used for the analysis. Their sources and definitions are included in Annex 1. As the compared samples of enterprises cover the absolute majority of the Lithuanian enterprise population, tests of the significance of differences in their statistical characteristics (e.g. averages) are not performed, and all differences between samples are considered statistically significant. Their importance from an economic policy point of view is justified in the wider context and in respect to research objectives.

2. CHARACTERISTICS OF ENTERPRISES SUBJECT TO THE SPECIAL CIT RATE

This section presents the characteristics of the populations of enterprises according to the actually paid CIT rate and analyses their profitability. Although the 0% and 5% CIT rates are levels of the same special tax regime, in some cases enterprises taxed at the 0% and 5% rates are analysed separately and compared with each other. There are two reasons for this. First, from the perspective of economic incentives, these rates are different because they set different levels of tax liability, so the tax incentives they provide may be different. Second, the 0% rate was introduced in 2018. This year is also the last year of the research period, so in the study there was no possibility to look at how enterprises taxed at 0% in the first year of operation move to the higher, 5% rate.

1.1. NUMBER OF ENTERPRISES

In the period of 2014-2018, a similar number of enterprises earned profit and were taxed at the special 5% CIT rate¹²: about 24.000 enterprises per year or 25% from all enterprises in the sample (Table 1). This is slightly more than the enterprises that have actually paid the standard 15% CIT rate. The latter amounted to some 23.000 per year or 24% from all enterprises. The special 0% CIT rate was applied to MEs as of 2018 and was actually applied to 770 enterprises that made a profit. On average, about half (51%) of all enterprises in the sample did not make a profit.

Table 1 Number of enterprises according to the CIT rate applied.

CIT rate applied	2014	2015	2016	2017	2018
0%					770
5%	24.822	24.427	24.213	24.345	23.405
15%	23.736	23.194	22.794	23.659	23.292
No profit	52.146	51.219	50.587	48.657	46.968
Total	100.704	98.840	97.594	96.661	94.435

Source: IDR (Interdepartmental Taxation Data Repository), compiled by the author.

Enterprises benefitting from the special rate of 0% or 5% are quite scattered across sectors.¹³ The largest number of such enterprises was in Wholesale and retail trade (G) – on average 5.200 enterprises per year, and in Professional, scientific and technical activities (M) – on average 3.170 enterprises per year. In Construction (F), Transportation and

¹² It is important to note that companies are further analysed according to the corporate income tax rate actually paid, i.e., the special (0% or 5%) or standard (15%) rate actually paid. In the data used and in the further analysis, the very fact that companies paid one or another CIT rate also means that the enterprise was profitable in the year in which it was taxed, i.e., it earned the profit that was taxed, and CIT was paid on it. This applies to all three corporate tax regimes. Small partnerships are excluded here and onwards.

¹³ Here and further on, sectors are defined according to the NACE rev. 2 classifier.



Storage (H) and Manufacturing (C) the number of such enterprises was 2 to 3 times lower, but still considerable. Here, their average number ranged between 1.400 and 1.700 enterprises per year. In other sectors, there were fewer enterprises subject to the special CIT rate: their number ranged from fewer than 200 on average in Education (P) to fewer than 900 on average in Real Estate Operations (L). A significant number of enterprises taxed at the special CIT rate did not declare their economic activities. Among enterprises subject to the 5% CIT rate there were 4.500 such enterprises in 2014 and as many as 9.000 in 2018.

Table 2. The number and profit of enterprises taxed at the 0% and 5% CIT depending on their size, 2018.

Enterprise size (number of employees)	Enterprise		Profit		Average profit, EUR
	Number	Share	Amount, EUR	Share	
0	2.663	11%	17.186.622	5%	6.454
1	6.158	25%	80.011.310	24%	12.993
2	5.120	21%	70.109.728	21%	13.693
3	3.356	14%	46.615.632	14%	13.890
4	2.322	10%	33.692.595	10%	14.510
5	1.565	6%	26.547.820	8%	16.963
6	1.044	4%	19.450.191	6%	18.630
7	694	3%	12.986.563	4%	18.713
8	570	2%	13.049.728	4%	22.894
9	462	2%	11.004.622	3%	23.820
10	221	1%	4.653.496	1%	21.057

Source: IDR, compiled by the author. Profit - estimated taxable profit.

The 0% or 5% CIT rate is mainly levied on ultra-small enterprises within the group of MEs and their share of profits is disproportionately high. In 2018, enterprises with 0 to 2 employees accounted for almost 60% of all enterprises benefiting from the special rate (Table 2). Together, these small businesses received 50% of the total estimated taxable profit subject to the special CIT rate. This, as might be expected, suggests that the profits of smaller enterprises are lower than those of larger ones, but also suggests that the difference could be larger. For example, in 2018, the average profit of enterprises with 1 to 2 employees was about EUR 13.000 and those with 9 to 10 employees – EUR 22.000. Consequently, enterprises larger by 5 to 10 times earn profits that are higher only less than 2 times. These differences are analysed in detail in the next Section.

While assessing the share of enterprises taxed at the special CIT rate by sectors (Table 3, Column 2), in some of them the share of such enterprises was extremely high, reaching up to half of all enterprises operating in the sector. These sectors are Health care, Social work (Q), in which in 2014-2018 48%-54% of enterprises were taxed at the special CIT rate, Professional, scientific and technical activities (M) with an average of 40% of enterprises and Education (P) with 34% of enterprises. The sectors with the lowest share of enterprises subject to the special CIT rate were Mining and quarrying (B) – on average about 10%, Water supply etc. (E) – on average about 14%, and Manufacturing (C) – about 22%. This suggests that enterprises in the service sector are more likely to qualify for the special CIT rate and those in the industrial sectors, which as a rule require more capital investment and human resources, are less likely to.

Are enterprises subject to the special rate different from those subject to the standard rate according to their economic activity? Data on the sectoral distribution of enterprises show that this is the case (Table 3, Columns 3-5). Special-rate enterprises are relatively more likely to engage in Professional, Scientific and Technical (M) activities and less frequently in Wholesale and retail trade (G), Transportation and Storage (H), Construction (F) and Manufacturing (C) activities. In general, enterprises subject to special rates are less likely to disclose their economic activities. As many as a quarter of special-rate enterprises did not do so – almost 3 times more than among standard-rate enterprises. It is reasonable

to assume that economic activities are more often not disclosed by enterprises with a lower level of institutionalisation and organisational maturity or whose economic activities are not clearly expressed.¹⁴

Table 3. Share of enterprises taxed at the special CIT rate of 0% or 5% by economic activity sectors (% of all enterprises in the sector) and sectoral structure of enterprises (%), average in 2014-2018.

Economic activity	Share of enterprises taxed at the 0% and 5% rate by sectors	Sectoral structure of enterprises taxed at the 0% and 5% rate	Sectoral structure of enterprises taxed at the 15% rate	Sectoral structure of unprofitable enterprises
G. Wholesale and retail trade	24,3	21,3	30,6	18,2
M. Professional, scientific and technical activities	39,8	13,0	6,8	6,5
H. Transportation and storage	24,9	7,0	10,4	5,5
F. Construction	23,4	6,1	9,4	5,4
C. Manufacturing	21,6	6,1	11,2	5,5
Q. Health care, social work	50,9	3,8	2,0	0,9
L. Real estate operations	20,2	3,5	5,6	4,1
J. Information and communications	29,5	2,9	2,8	2,1
N. Administrative and support service activities	26,0	2,7	3,4	2,1
I. Accommodation and catering	21,0	2,5	3,4	3,0
S. Other service activities	32,0	1,5	0,9	1,2
D. Electricity, gas, steam supply and air conditioning	22,8	0,8	1,2	0,8
P. Education	34,4	0,7	0,4	0,5
K. Finance and insurance	27,5	0,7	0,8	0,6
R. Arts, entertainment and recreation activities	25,5	0,6	0,5	0,6
E. Water supply etc.	13,7	0,2	0,7	0,3
B. Mining and quarrying	9,8	0,0	0,2	0,1
Economic activity not declared	21,5	26,5	9,5	42,8

Sector Public Administration and Defence; Compulsory social security (O) is not included as only 1-3 enterprises were active therein. Source: IDR, compiled by the author.

1.2. PROFITS AND PROFITABILITY

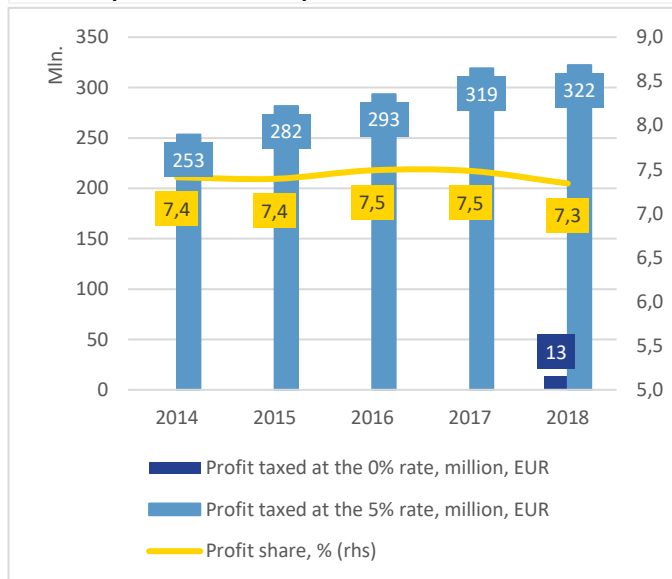
In 2018, enterprises taxed at the special CIT rate received EUR 335,3m of estimated taxable profit¹⁵ (Figure 2). Of this amount, enterprises taxed at the 5% rate received EUR 322,3m and those at the 0% rate – EUR 13m. Since 2014, the profit of enterprises taxed at the special rate has been growing rapidly, by 27%. This growth rate was in line with the growth rate of profits in the economy as a whole. This is shown by the constant share of profits of enterprises taxed at the special rate in the total profits of the whole economy. Throughout the period of 2014-2018, this share remained stable at about 7,4%.

¹⁴ In Lithuania, it is not mandatory to indicate the type of future economic activity during the registration of an enterprise, but data on the economic activities of enterprises are collected by the Lithuanian Department of Statistics (LDS) for statistical purposes. According to the information provided by the LDS by telephone, when a newly registered enterprise starts its operations, the LDS contacts it and by means of a survey determines its economic activity at the four-digit level of the NACE Rev. 2 classification. If the statistical data, including the IDR, do not indicate the economic activity of the enterprise, this means that the enterprise could not be contacted, or the enterprise refused to indicate its economic activity. Companies must also indicate their economic activity in the corporate income tax returns submitted to the State Tax Inspectorate and in the financial statements submitted to the State Enterprise Center of Registers. However, the practice of the Lithuanian Department of Statistics shows that the information they provide is of little use for statistical purposes, as enterprises usually list not one main but several activities, and not at the level of 4 characters of the NACE Rev. 2, but at a lower level of detail.

¹⁵ The estimated taxable profit is derived from taxable profit (= income - non-taxable income - allowable deductions - limited allowable deductions + non-allowable deductions (Art. 11 of the Law on Corporate Income Tax)).

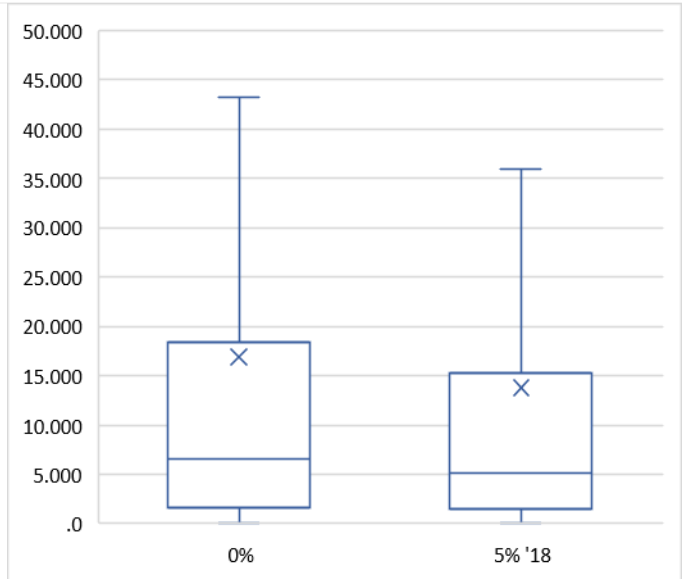
Further, the aim is to determine whether there are differences in profits between enterprises subject to the special and standard CIT rate. For this purpose, the profitability of enterprises is analysed – the profit margin of enterprises, obtained as the ratio of estimated taxable profit to income. The profitability data of enterprises presented in Table 4 show that differences in profitability do exist: the profitability of enterprises taxed at the special rate was significantly higher than that of enterprises taxed at the standard rate over the observed period. This trend is observed at both – the whole economy¹⁶ and sectoral – levels. At the level of the whole economy, the profitability of enterprises taxed at the 0% CIT rate was about 30%, i.e., this part of the income became the estimated taxable profit, to which the 0% income tax rate was actually applied. Enterprises that paid the 5% special CIT rate, enjoyed the average profitability of 16,7%. Meanwhile, enterprises that paid the standard 15% income tax rate, earned the average profit of 5,6%.¹⁷

Figure 1 The estimated taxable profit of enterprises taxed at the special CIT rate and its share of the estimated taxable profit of all enterprises.



Source: IDR, compiled by the author.

Figure 3. The 2018 average, median and quartiles of estimated taxable profit of enterprises taxed at the special CIT rate.



X represents the arithmetic mean. Outliers have been removed. Source: IDR, compiled by the author.

Significant differences in corporate profitability in terms of the CIT rate actually paid also remain at the sectoral level. Although, as Table 4 reveals, corporate profitability varies widely between sectors (lowest in Wholesale and retail trade (G) and among the highest in Finance and Insurance (K) and Real Estate (L)), however, in all sectors without exception enterprises taxed at the 5% CIT rate were more profitable than enterprises taxed at the standard corporate income tax rate. In most sectors, the difference between the profitability of enterprises taxed at different rates was 2-3 times.

Since enterprises taxed at the 0% and 5% special CIT rate are subject to the same legal size limits, it is worth comparing these two groups of enterprises in terms of profit distribution characteristics. Such a comparison is presented in Figure 3. It compares the average, median and quartiles of estimated taxable profit of enterprises that actually paid the 0% and 5% income tax rate. Since the data of enterprises taxed at the 0% rate covers only the period of 2018, and, as can be seen from Figure 2, corporate profits grew throughout the entire period of 2014-2018, the chart shows the profit of enterprises taxed at the 5% rate also only for 2018.

¹⁶ Excluding the Agriculture (A) sector.

¹⁷ It could be assumed that larger companies (taxed at the standard corporate tax rate) have more opportunities to take advantage of the various profit reduction opportunities provided by the Law on Corporate Income Tax, such as the reduction of taxable profits due to investments. However, in the context of the population as a whole, the significance of such a reduction is not big and its impact on aggregate profitability is small. The higher profitability of companies with the special CIT rate is also indirectly confirmed by the LDS data on profitability by enterprise size groups, according to which enterprises with 0-9 employees are the most profitable compared to other enterprise size groups (7,41% vs. 4,76-5,31% in 2018).

According to all compared characteristics the profit of enterprises taxed at the 0% corporate income tax rate was higher than the profit of enterprises taxed at the 5% rate. In 2018, each enterprise taxed at the 0% corporate income tax rate earned on average almost EUR 17.000 of estimated taxable profit. This is one-fifth more than the profit of enterprises taxed at the 5% corporate income tax rate in the same year, which amounted to about EUR 14.000. Similarly large differences are observed in the median profit. The median profit of enterprises taxed at the 0% rate is around EUR 6.600 – almost 30% greater than that of enterprises taxed at the 5% rate (EUR 5.100). The profit of half of the enterprises taxed at the 0% rate ranged between EUR 6.600 and 43.200. Meanwhile, the profit of enterprises taxed at the 5% rate fluctuated in the range of smaller values: between EUR 5.100 and EUR 35.900.

Table 4 Profitability (profit margin) of enterprises according to the actually paid CIT rate, in %, average of 2014-2018.

Economic activity	0%	5%	15%
Total economy (excluding Agriculture (A))	30.3	16.7	5.6
B. Mining and quarrying		19.7	9.8
C. Manufacturing		14.4	5.6
D. Electricity, gas, steam supply and air conditioning		23.6	6.8
E. Water supply etc.		16.3	6.4
F. Construction		15.8	6.2
G. Wholesale and retail trade		9.1	3.6
H. Transportation and storage		12.5	4.6
I. Accommodation and catering		9.2	7.1
J. Information and communications		25.0	10.3
K. Finance and insurance		24.9	18.3
L. Real estate operations		25.9	17.5
M. Professional, scientific and technical activities		25.2	15.2
N. Administrative and support service activities		19.2	7.5
P. Education		21.1	11.8
Q. Health care, social work		18.8	7.6
R. Arts, entertainment, and recreation activities		17.2	4.2
S. Other service activities		14.5	5.9
Economic activity not specified	31.6	24.4	6.4

Profitability was calculated based on the aggregated data on estimated taxable profit and income. Only enterprises with estimated taxable profit > 0. Small partnerships are not included in the sample. The 0% rate period of 2018. Sector Public Administration and Defence; Compulsory social security (O) is not included as only 1-3 enterprises were active therein. Source: IDR, compiled by the author.

In statistical analysis, outliers – unusually high or low values of variables – are usually discarded because they tend to skew the results. Above, while calculating the profit characteristics of enterprises taxed at the special CIT rate, they were also excluded. However, in the data used in this analysis, outliers are not the result of inaccurate measurement or error but are real cases of enterprises with extremely high profits. Therefore, some of these cases deserve to be analysed separately.

In 2014-2018, 163 cases were recorded when enterprises taxed at the special CIT rate earned EUR 200.000 and more in estimated taxable profit.¹⁸ Interestingly, most of these enterprises – as many as 66% – are ultra-small, with 1-2 employees. The number of such exceptionally high profit cases tends to increase year by year. In 2014, there were 18 of them, in 2015 – 21, in 2016 – 36, in 2017 – 34, and in 2018 – 54. Among the latter there were 5 enterprises subject to the 0% income tax rate, which indicates that they earned their over EUR 200.000 profit in the first year of operation (12 other similar enterprises earned between EUR 100.000 and 200.000 n profit). The highest number of

¹⁸ Note, that EUR 300.000 is the upper annual income bound for the eligibility for the special CIT rate.



exceptionally high profit cases was in the service sectors: 33 cases in Professional, Scientific, and Technical activities (M), 17 in Real Estate Operations (L), 15 in Information and Communication (J) and 14 in Wholesale and retail trade (G). In 61 cases of exceptionally high profit the economic activity was not indicated. A more detailed analysis of profit outliers is provided in Section 2.3.

In summary, enterprises taxed at the special CIT rate are more profitable than enterprises taxed at the standard rate. This confirms the prediction of the theoretical model that the special CIT rate provides incentives to enterprises to earn higher profits. At the same time, this conclusion is in line with the objectives pursued by the introduction of the special CIT rate. The special CIT rate can only influence profits, which means that the higher the profits of enterprises taxed at the special CIT rate, the greater the potential effect of the special rate. However, the special rate is not a source of profit itself, so the question arises as to the sources from which enterprises subject to the special rate accumulate relatively higher profits. This question is answered in the next Section.

2. SOURCES OF PROFIT OF ENTERPRISES SUBJECT TO THE SPECIAL CIT RATE

In the research model, the special CIT rate is an independent variable that creates incentives for the enterprises to which it applies to make higher profits and affects their profitability, a dependent variable. The previous section has shown that such a connection does exist. However, the special CIT rate is not a source of profit in itself, so its impact is indirect, but may occur through other channels. As mentioned above, the special CIT rate can affect the price of production factors by directly reducing it and encouraging investment from internal financial sources, as in the case of capital, or by providing incentives to reduce it by the amount of part of tax liabilities, as in the case of labour. Similarly, the special rate, by introducing different CIT regimes, may encourage economic actors to maintain non-market relationships motivated by lower corporate taxation incentives. Each of these three sources of profit is analysed separately below.

2.1. COST OF CAPITAL, PRODUCTIVITY AND GROWTH

This section seeks to answer the question of whether enterprises subject to the special CIT rate allocate profits to business development, as expected with the introduction of the special CIT rate (Finansų ministerija, 2009). At the outset, it is important to emphasize that higher productivity cannot in itself be a source of higher profitability for enterprises subject to the special CIT rate, as these enterprises are less productive than enterprises subject to the standard rate. This is illustrated in Figure 4. In 2018, the average (median) productivity of enterprises taxed at the 0% rate was EUR 11.000, those taxed at 5% - EUR 11.500 and for enterprises taxed at the standard rate – EUR 20.000, which is almost twice as high. There is a similar difference between the most productive enterprises in each group. The most productive enterprises in the 0% and 5% groups reached the productivity of EUR 50.000 and EUR 43.000, respectively, whereas those in the standard rate group reached EUR 86.000.

However, while being less productive, enterprises taxed at the special rate can earn higher profits as they grow. There are two ways in which enterprises can use profits for their own development. The first option is to profitably finance productive investments by acquiring fixed assets, improving the enterprise's organizational processes, or raising the qualifications of employees. The second option is to increase the quality (sustainability) of the enterprise's financial flows by ensuring enough working capital and improving the enterprise's ability to meet short-term liabilities. In both cases, it could be expected that the frequency and volume of investments by enterprises subject to the special CIT rate would be equal to, or at least close to, that of a standard rate enterprise.

There are no data to determine the investments of enterprises with special CIT rates in organisational processes or employee training. Meanwhile, corporate investments in fixed assets can be identified from income tax returns. Article 46 (1) of the Law on Corporate Income Tax stipulates that undertakings which have acquired fixed assets may reduce their taxable profits by the amount of the costs actually incurred and up to 100% in the amount of profit (up to 50%



until 2018).¹⁹ However, the representativeness of these data should be treated with caution. Only less than 10% of enterprises' gross investments in tangible assets are made using this provision of the Law on Corporate Income Tax. There may be several reasons for this. Not all types of fixed assets qualify for reduction, and there are requirements for the novelty of assets. In addition, unprofitable investing enterprises are by definition not eligible for this provision.

On the other hand, even if the data on profit reduction by investment do not represent the total tangible investment of the business, these data may reveal useful information on the differences in the frequency and volume of investment between special and standard CIT rate enterprises. Again, however, it should be borne in mind that the incentive for enterprises with the special rate to take advantage of the opportunity to reduce taxable profits may be lower, as for them the benefits of reducing taxable profits are lower (5% vs. 15%) or non-existent (0%) as compared to standard rate enterprises. In addition, the relative administrative costs of declaring investment by small businesses are higher. Anyway, in the hope that the special CIT rate – in this case, it is reasonable to talk only about the 5% rate – encourages investment, it is noteworthy that a significant part of it should be declared in order to further reduce their cost. As the financial benefit to enterprises subject to the special rate is three times lower (15/5) and the administrative costs further reduce it (say by 2 percentage points), sufficient evidence of the positive effect of the special CIT rate on investment would amount to the fact that the difference in investment frequency and volume between special and standard CIT rate enterprises would not be more than 5 times.

Table 5. Reduction of taxable profits of enterprises due to investments.

Corporate income tax rate	Year	Number of enterprises that reduced their profit due to investment	Amount of profit reduced due to investment, EUR	Share of reduction in the total profit of reducing enterprises, % ¹	Share of reduction in the profit of enterprises of the whole population, % ¹	Average amount of profit reduction due to investments, EUR
5%	2015	78	761.488	37,1	0,27	9.763
	2016	71	506.708	38,0	0,17	7.137
	2017	86	691.833	28,9	0,22	8.045
	2018	133	1.561.237	55,0	0,47	11.739
	Average	92	880.317	39,8	0,28	9.171
15%	2015	971	326.492.276	24,2	8,39	336.243
	2016	1.068	343.476.294	24,2	8,46	321.607
	2017	1.261	413.291.531	25,9	9,31	327.749
	2018	1.423	541.980.024	30,1	11,13	380.871
	Average	1.181	406.310.031	26,1	9,32	341.618

¹ From taxable profit (before deducting investment-related reduction). Source: IDR, compiled by the author.

Table 5 presents data on the reduction by investment of taxable profits of enterprises with special and standard CIT rates. They reveal that only a small number of enterprises taxed at the special CIT rate, both in nominal terms and in comparison with enterprises taxed at the standard rate, declare investments in fixed assets for the purpose of reducing profits, and the overall level of declared investments is low. In the period of 2015-2018, there were 368 cases of declaring investments of enterprises taxed at the special CIT rate. During the period, the number of such enterprises did not reach 100, and increased to 133 only in 2018. For comparison, among the enterprises taxed at the standard corporate income tax rate, there were 12 times more of them – 4.700 or an average of 1.200 per year. The relative difference in the frequency of investments between the two groups of enterprises is particularly pronounced, given that the total number of enterprises with the special CIT rate and the standard CIT rate in the population is similar (see Table 1). Significant differences between groups of enterprises are also observed in assessing how intensively enterprises taxed at the special CIT rate invest compared to the profits earned by the group as a whole. Special rate

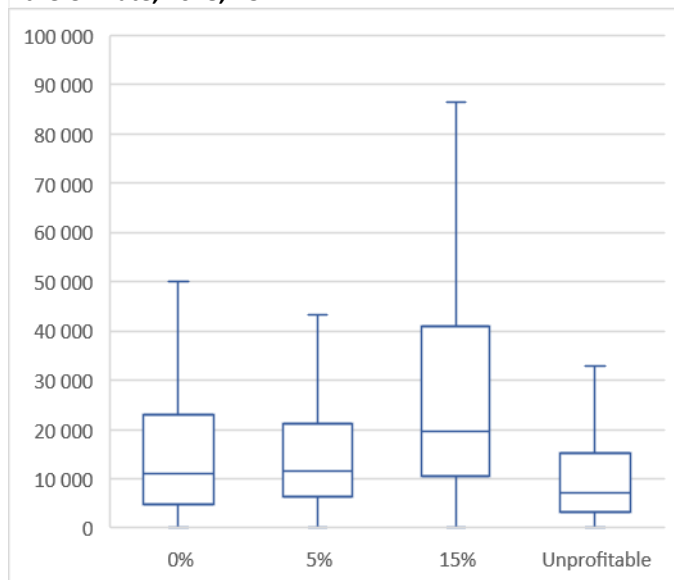
¹⁹ For the purposes of this provision, the following types of assets are considered as fixed assets: machinery and equipment, plant (structures, wells, etc.), computer equipment and means of communication (computers, their networks and equipment), software, acquired rights and trucks not older than 5 years, trailers and semi-trailers.

enterprises declared to have invested an average of 0,3% in fixed assets from the taxable profit received by the whole group (in 2018 this share was the highest and amounted to 0,5%). Meanwhile, the intensity of declared investments of enterprises taxed at the standard CIT rate was more than 30 times higher and averaged at 9,3% from the taxable profit of the group as a whole. Thus, it can be concluded that the frequency and volume of investments of enterprises taxed at the special CIT rate is significantly lower than that of enterprises with the standard rate.

While analysing whether enterprises taxed at the special CIT rate use the second option for the use of profits for development, i.e. to increase the quality of financial flows, the *current ratio* is calculated. This ratio is the ratio between the enterprise's current assets, i.e., stocks of goods, cash, etc., and current liabilities, i.e., amounts due within a period of one year. A ratio between 1,2 and 2 is generally considered to indicate the enterprise's sustainable ability to cover its short-term borrowings. A ratio of less than 1 indicates that the enterprise's financial flows are not sustainable because it does not have sufficient current assets to cover short-term borrowings. A value exceeding 2 indicates that the enterprise has a large surplus of current assets and gives rise to the question of whether these assets are being used effectively. Further, the current ratio of enterprises is calculated from the data of annual financial statements (balance sheets) provided by legal entities to the State Enterprise Centre of Registers.

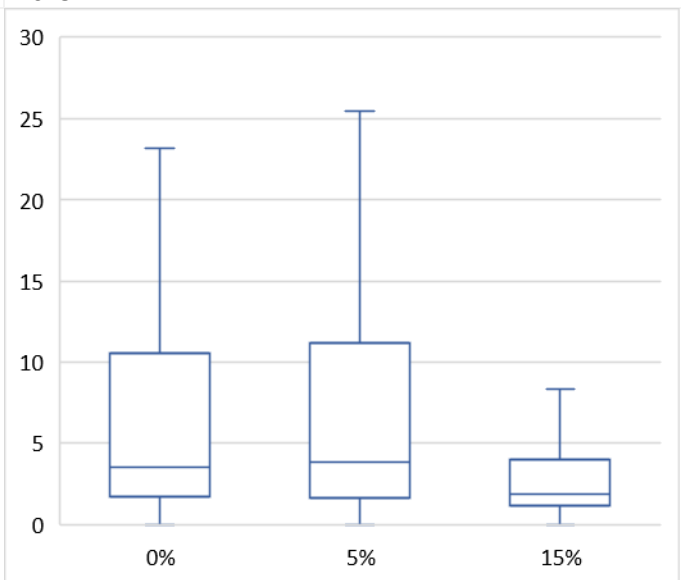
The data of the current ratio of enterprises presented in Figure 5 show that the value of the ratio of enterprises subject to the special CIT rate is high and has a rather wide variation in the higher direction. Both groups of special rate enterprises – 0% and 5% – are similar in terms of this indicator. In the period of 2014-2018, the median current ratio of these enterprises was 3,6 and 3,9, respectively. The current ratio of a quarter of the enterprises with the highest ratio value fell in the range between 10,6 and 25,5. Meanwhile, the value of the current ratio of enterprises taxed at the standard CIT rate was lower and fluctuated within a narrower range. During the observed period, the median value of the ratio of these enterprises was 1,9, and that of the enterprises with the highest value was 8,3.

Figure 4. Productivity (value added per employee) by to the CIT rate, 2018, EUR.



Outliers have been removed. Source: IDR, compiled by the author.

Figure 5. Current ratio of enterprises by the CIT rate, 2014-2018.



Number of observations: 302.504. Outliers have been removed. Source: IDR, compiled by the author.

From the data on the current ratio, it can be concluded that enterprises subject to the special CIT rate tend to have a large surplus of current assets compared to their current liabilities, which is much higher than that of standard rate enterprises and much higher than necessary for their sustainable operation. A more detailed analysis shows that the differences in the ratio are not due to differences in the sectoral structure of enterprise groups, as might be expected given the higher share of special-rate enterprises in the services sector: the latter have systematically higher median ratio values across all economic sectors. A more plausible explanation would be that the surplus of current assets of

enterprises taxed at the special CIT rate shows a large share of retained earnings on their balance sheets. Thus, the conclusion is that most special CIT rate enterprises tend to keep the profits earned as current assets.

If special-rate enterprises used the profits they earn for development, this should be reflected in their growth. Figure 6 shows the annual revenue growth characteristics of enterprises that were taxed at the special CIT rate in 2014 and, in order to eliminate the effect of enterprise size, of enterprises of a similar size that were taxed at the standard rate in the same year. There are only minimal differences in the growth rates of the two groups of enterprises. In the period of 2014-2018, the typical (median) enterprise taxed at the special CIT rate at the beginning of the period grew on average by 1% per year. A similar enterprise subject to the standard CIT rate grew by 0%, i.e., did not grow at all. Revenues of a quarter of the fastest growing special-rate enterprises grew between 23% and 85%. A similar range of a quarter of the fastest growing standard-rate enterprises was 21-88%. However, these differences should not be considered significant, and in general it can be stated that both groups of enterprises have a similar share of growing and shrinking enterprises, which means that the average annual growth rates of both are close to zero. It also suggests that the special CIT rate is not a factor that encourages enterprises that use it to grow faster.

The low growth rate of income of special-rate enterprises is also reflected in the fact that only a small part of this group of enterprises changes their tax status by moving from the revenue levels of application of the special CIT rate (below EUR 300.000) to the revenue levels eligible for taxation with the standard rate (above EUR 300.000). Among the enterprises that were taxed at the special CIT rate in 2014, after 4 years, in 2018, 8% of enterprises had moved to the standard rate zone (4% in 2015, 6% in 2016). Among the remaining enterprises in 2018, about half (47%) remained in the special CIT rate zone, another fifth (19%) ceased operations, the rest became unprofitable.

2.2. WAGE

The wage gap between enterprises with the special and standard CIT rate is large. Enterprises taxed at the special rate pay their employees significantly, even up to 3 times, lower wages than enterprises taxed at the standard CIT rate. This is shown in Figure 7, based on the data of the insured amount declared by the State Social Insurance Fund Board in 2018. Enterprises whose profits are taxed at the 0% rate, paid their employees on median EUR 2.000 gross salary per year, enterprises taxed at the 5% rate – EUR 4.300, and enterprises taxed at the standard rate – EUR 6.100. There were also significant differences in the wages of the enterprises with the highest wages in each group. While among the 0% rate enterprises, a quarter of the enterprises with the highest wages paid from EUR 3.700 to EUR 8.000 per year, in the group of 5% rate enterprises this amount was within the range of EUR 5.800-10.500, and among standard-rate enterprises – within the range of EUR 9.500-17.300.

Two related questions arise. The first is how to explain the fact that enterprises with the special CIT rate pay such a low median wage that is below the statutory minimum monthly wage, which in 2018 was EUR 400? In answering this question, the reliability of the data was first checked, i. e. whether they are free of error and this possibility was ruled out.²⁰ Another explanation remains that special-rate enterprises employ some of their employees on a part-time basis. It is likely that in 0% rate enterprises this share is higher than in 5% rate enterprises.²¹

The second question is how to explain such large differences in wages between groups of enterprises with different rates. Theoretically, the wages paid to an enterprise's employees depend on two factors: the enterprise's ability to pay a certain amount of wages and the labour price set in the labour market. The ability of an enterprise to pay a certain amount of wages depends on the productivity of the enterprise, so it can be expected that wages will be higher in

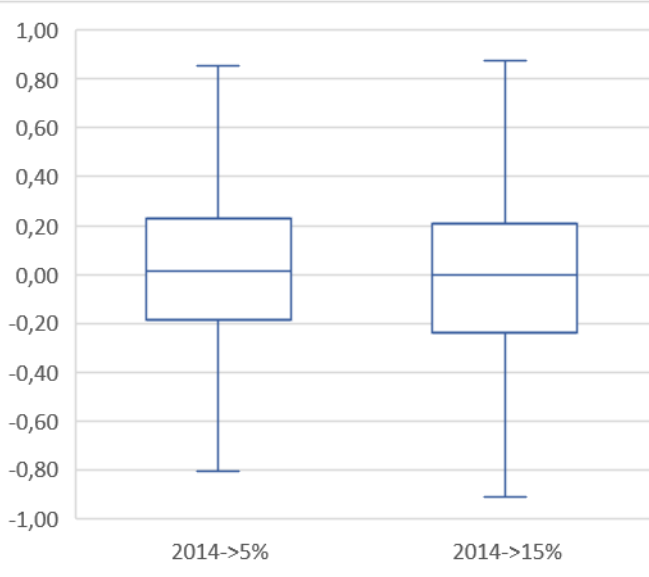
²⁰ To check the reliability of the data, wages (insured amount) declared by all enterprises and the number of insured persons in the data set were aggregated and compared with the data on structural business statistics on employee wage and salary costs and the number of employees provided by Lithuanian Department of Statistics (LDS). In both cases, the average annual wage per employee in 2018 was similar: according to the LDS, it amounted to about EUR 10.000, and in the data set - about EUR 9.200. The difference between the values is not considered to be large, given that some enterprises are not included in the data set of this study (see Section 1.2), and the LDS's method of collecting and aggregating data may differ.

²¹ In 2018, 0% rate companies had in total about 1.600 employees, 15% - almost 67.000 employees.

more productive enterprises and lower in less productive ones. However, wage differences should not be greater than differences in productivity, as an employee would simply not work for a lower-wage enterprise if he/she got a higher one for the same job in another, so the enterprise would not be able to find employees. Of course, wage differences between enterprises can also be caused by the fact that employees are guided by incomplete information when making employment or job change decisions, and the supply of jobs may be unevenly distributed geographically and depending on the phase of the economic activity cycle, but again the impact should not be significant for the economy as a whole.

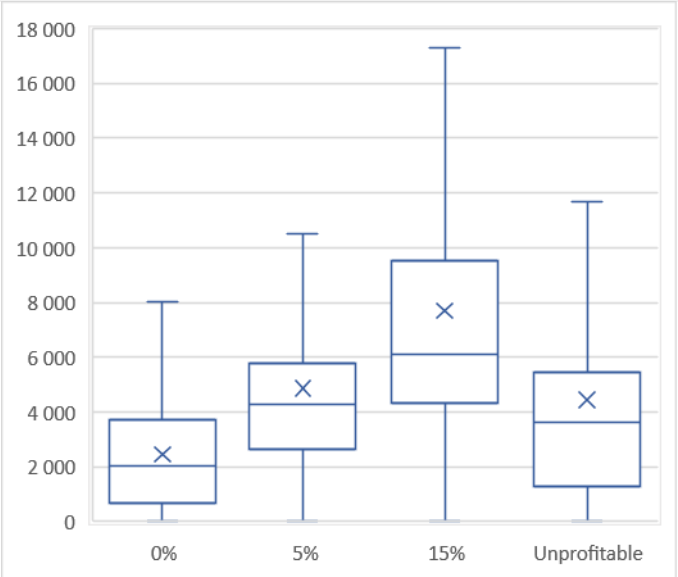
The data show that, in reality, wage differences between enterprise groups only partially reflect productivity differences. Enterprises taxed at the standard CIT rate are the most productive and pay the highest wages (Figures 4 and 7). Both the productivity and wages of enterprises taxed at the special CIT rate are lower, but the size of the gap with the standard rate enterprises differs. The difference in productivity between 5%-rate and standard-rate enterprises is 1,7 times and the wage – 1,4 times. This suggests that 5% rate enterprises face only partial labour market pressures: they pay lower wages than other market participants, but those wages are relatively higher than productivity would allow. The productivity of 0% rate enterprises is 1,8 times lower than that of standard-rate enterprises, and wages are 3 times lower. This shows that 0% rate enterprises are not subject to labour market pressure on wages or are subject to only minor pressure. This also suggests that a part of the value added created by 0% rate enterprises is not covered by wage income – this is especially eloquently evidenced by the fact that 0% and 5% rate enterprises do not differ in productivity, but differ in wages – and suggest the possible existence of additional forms of compensation for work.

Figure 6 Annual growth rate of revenue of special and standard CIT rate enterprises in 2014-2018, per cent



Only enterprises that had 0-10 employees and an income of at least EUR 50.000 in 2014. Number of cases: 73.622. Outliers have been removed. Source: IDR, compiled by the author.

Figure 7. Wages (insured amount per insured person per year) by the CIT rate, 2018, EUR.



To eliminate bottom outliers, only enterprises with an Insured Amount > 0 were selected, and to eliminate cash withdrawals by holders of interests, only enterprises with a number of insured persons > 0 were selected. Number of cases: 77.927. X represents the arithmetic mean. Outliers have been removed. Source: IDR, compiled by the author.

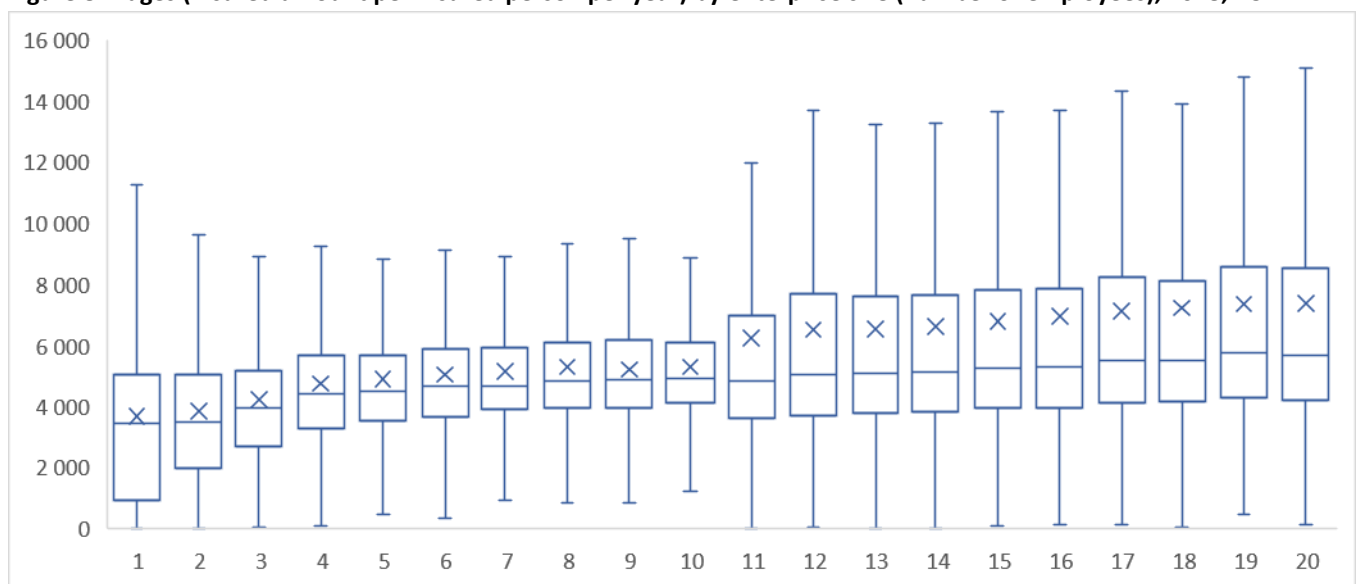
The lower influence of the labour market on the wages of special-rate enterprises is also confirmed by the comparison of these enterprises with standard-rate enterprises similar in size. Figure 8 shows the characteristics of the wage distribution of enterprises with 1 to 20 employees, where enterprises with 1–10 employees paid 0% or 5% corporate income tax rate, and enterprises with 11-20 employees – 15%. The figure suggests, as if two labour markets existed: groups of enterprises with 4-10 and 11-20 employees are quite homogeneous internally in terms of wage characteristics but differ from one another. In the group of enterprises with 11-20 employees taxed at the standard rate, the median wage falls in a rather narrow range between EUR 4.800 and EUR 5.700, where it grows steadily along with the size of the enterprise. This uniformity continues, in even larger enterprises. Similarly, the lower and upper

wage thresholds (third quartile and maximum value) of a quarter of the highest earners vary and increase steadily over a small range. In the group of enterprises with 4-10 employees taxed at the special CIT rate, the median wage also falls within a rather narrow range between EUR 4.400 and 4.900. The same is true for the third quartile and the maximum values, which vary and grow steadily over a similarly narrow range. Such similarity of wages and coherent change within both groups suggests that in them the wages of employees are determined by the market.

However, there is a significant difference in the wage characteristics between the groups of enterprises with 4-10 and 11-20 employees, which shows that the size of the wages of the enterprises of the first group is determined by factors other than the market. This difference consists of the tipping point of the arithmetic mean, the third quartile, and the maximum values at the group boundary, interrupting the uniformity of the dynamics in each of the groups. Whereas the average wage in an enterprise with 10 employees, which until then grew, albeit slightly, but steadily, is EUR 5.300, then in an enterprise that is larger by one employee, it suddenly jumps to EUR 6.200 and continues to grow steadily again. In the same way, while in enterprises with 10 employees the lower limit of the wage of a quarter of the highest earning employees, having grown steadily throughout the range, reaches EUR 6.100, it suddenly jumps to 7.000 in enterprises with 11 employees and continues to grow much more evenly. A similar tipping point at the limit of 10-11 employees occurs with the maximum value of wages. The tipping point coincides exactly with the threshold for applying the special CIT rate. This suggests that the lower third quartile and maximum values among the first and second group enterprises are related to the special CIT rate.

The smallest enterprises with 1-3 employees, which, however, are the most numerous and make up 60% of all enterprises taxed at the special rate (see Table 2) are excluded from the above analysis, because they represent another exceptional case in terms of their wage characteristics. They are worth analysing separately. Comparing the wage characteristics of enterprises with 1-3 employees with those of adjacent enterprises with 3-10 employees, the former stand out with extremely low wage values of the first quartile and relatively low values of the second (median) and third quartiles, as well as widely distributed values of the 25% of the highest earners among the enterprises of 1 employee. This shows that there are two opposite trends among the smallest enterprises. On the one hand, the wages of most employees are the lowest among enterprises subject to the special CIT rate and the furthest from the market wages represented by enterprises with 11 or more employees. Meanwhile, the highest-earning employees earn most among all special-rate enterprises.

Figure 8 Wages (insured amount per insured person per year) by enterprise size (number of employees), 2018, EUR.



Only enterprises with an insured amount > 0 were selected to eliminate bottom outliers, and with a number of insured persons of 1 or more. The estimated taxable profit of all enterprises > 0. Enterprises with 1-10 employees only those that paid the 0% or 5% corporate income tax. Number of observations: 51.591. X represents the arithmetic mean. Outliers have been removed. Source: IDR, compiled by the author.

To sum up the results of the wage analysis, there is evidence that the special CIT rate affects the wage level of the enterprises using it. How can this influence manifest itself? In the case of enterprises with 1-3 employees, the most likely explanation relates to the conversion of the wage income of the holders of interest into profits. Although these enterprises have the lowest wages, this is not due to low productivity or limited financial resources. In contrast, these enterprises earn 60% of the total profits taxed at the special rate. Their profit per employee is the highest among all special-rate enterprises. In 2018, among enterprises with 1-3 employees, it varied on average from EUR 4.600 to EUR 13.000, while among enterprises with 4-10 employees - from EUR 2.100 to EUR 3.600.

While looking for an answer to how the special CIT rate can affect the wages of enterprises with 4-10 employees, two related explanations are possible. The first explanation relates to the share of part-time employees. Compared to all enterprise size groups, this share is exactly the largest in the ME group, i.e., MEs employ the largest share of part-time employees.²² And part-time employees in turn earn lower wages. However, such an explanation does not answer the question of why the wages of enterprises with the special CIT rate are lower than those of similar size enterprises with the standard rate. Even if employees of special-rate enterprises or MEs in general work shorter hours, why are employers and employees of these enterprises more likely to agree on shorter working hours? This indirectly leads to the only other theoretically possible explanation – undeclared wage supplements or wages "in envelopes". Indirect evidence – lower wages, higher share of part-time workers, higher profitability and a clear link between wages and the CIT rate – suggests that enterprises with the special CIT rate may be more likely than other groups of enterprises to pay part of their wages as undeclared supplements, in order to avoid part of the tax liability related to workplace taxation. Still, this is an indirect guess. Meanwhile, the study cannot provide direct evidence of the extent of this phenomenon.

2.3. NON-MARKET REVENUE

The third way for enterprises subject to the special CIT rate to achieve high profitability is to generate revenue not from the market but from related legal entities or other sources. This would allow enterprises to earn higher than standard market returns, as their income would not consist of selling goods and services at market prices but selling them at higher than market prices set by bilateral price agreements or financial transactions masked by sales of goods and services.

To assess this empirically, it is necessary to identify enterprises with abnormally high – higher than standard market returns – profits or profitability. For this purpose, enterprises subject to the special CIT rate were analysed from two aspects. First, a profit outlier analysis was performed to identify enterprises with profits significantly higher than those in the majority population. Second, a more detailed analysis of the profitability of enterprises was performed in order to reveal more information about the differences between the profitability of enterprises taxed at the special rate and those subject to the standard rate. The results of both analyses are presented below.

The results of the profit outlier analysis are presented in Table 6. Since an enterprise's profit depends directly on the scope of its activities, the analysis groups the enterprises according to their size in terms of the number of employees. The method of three standard deviations from the mean was used to identify outliers. This rather "cautious" approach has been chosen in order to single out only enterprises that are very far from the average. As expected, profit outlier margins vary by enterprise size. It is smaller for smaller enterprises and larger for larger ones. For example, for enterprises employing 0 employees, it amounts to almost EUR 40.000, and for enterprises with 8-10 employees – to

²² This is shown by the data on the number of workers (employees) and the relative number of employees (converted into full-time equivalents) of the LDS business statistics, according to which MEs have the largest difference between these two indicators. The difference between the actual and equivalent number of employees reflects the extent to which the number of hours indicated in the employee's employment contract differs from the number of hours if the employee worked full time. In 2018, this difference amounted to 31% among MEs. This means that ME employees are employed on average for the number of hours that is lower by one-third as compared to full-time employment. In other groups of companies, this difference is several times smaller and amounts to 4% in large companies and up to 12% in companies similar to ME in size with 10-19 employees.



over EUR 100.000. During the period of 2014-2018, a total of more than 2.500 cases were attributed to profit outliers. The highest number of outliers was found among the smallest enterprises employing 1 and 2 employees, 645 and 539, respectively. Together, they account for almost half of all outliers. Such a large number can be explained by the large abundance of enterprises of this size in the population. The number of profit outlier cases is unevenly distributed over the years and tends to increase. If in 2014 370 enterprises received exceptionally high profits, in 2016 this number grew to 505, and in 2018 – to 650 enterprises.

The profits of outlier enterprises account for a significant share of the profits of all enterprises subject to the special CIT rate and also tend to grow annually. During the same period of 2014-2018, the enterprises attributed to the outlier group received a total of EUR 307m in profit. This accounted for one-fifth (21%) of the profits of all enterprises subject to the special CIT rate. Among the smallest enterprises with 1-2 employees, this share was even higher and reached 23%-25% from the total profit of the group of enterprises with 1-2 employees. As in the case of the number of outliers, the profit of the enterprises attributed to the profit outlier group increased in the analysed period: in 2014, it amounted to EUR 43,3m, in 2016 – almost EUR 61m, and in 2018 – to almost EUR 79m. Over the whole period, the profits of exceptionally high-profit enterprises grew by 82% – 3 times faster than the total profit of all enterprises taxed at the special CIT rate, growing by 27% (see Figure 2). This shows that an increasing share of profits taxed at the special CIT rate belongs to enterprises with exceptionally high profits.

Table 6. Profit outliers among enterprises taxed at the special CIT rate, by enterprise size (number of employees), 2014-2018.

	0 empl.	1 empl.	2 empl.	3 empl.	4 empl.	5 empl.	6 empl.	7 empl.	8 empl.	9 empl.	10 empl.	Total
Mean	5.464	10.764	12.068	12.403	12.929	15.158	16.914	17.880	19.875	22.531	22.157	
Standard deviation	11.397	22.116	22.451	21.699	21.165	23.005	25.324	24.182	27.511	28.603	28.615	
Margin (3SD)	39.656	77.112	79.420	77.499	76.423	84.172	92.887	90.426	102.408	108.340	108.002	
Number of outliers	225	645	539	363	249	179	126	73	76	57	33	2.565
Total cases in population	15.168	30.632	24.267	16.043	11.457	8.107	5.313	3.750	2.998	2.590	1.320	121.645
Amount of outlier profit, mln. EUR	16,30	81,93	67,37	42,92	28,81	21,65	16,38	9,15	10,32	8,06	4,52	307,40
Outlier profit as a share of total profits	19,7%	24,8%	23,0%	21,6%	19,4%	17,6%	18,2%	13,6%	17,3%	13,8%	15,5%	20,8%

The outlier value consists of 3 standard deviations from the mean. Only enterprises with income and estimated taxable profit > 0. Source: IDR, compiled by the author.

The sectoral distribution of exceptionally high-profit enterprises is uneven. Most – almost a quarter – of such enterprises operate in the Professional, Scientific and Technical Activities (M) sector. In the period of 2014-2018, there were 584 cases of exceptionally high profit (Table 7). One sub-sector stands out in this sector, where almost half of all the above cases are concentrated. These are Headquarters and Management Consultancy (M70) activities, which at a more detailed level are dominated by business and other management consultancy activities. A further 144 cases were detected in the subsector Architecture and Engineering (M71). In the remaining 5 subsectors, the number of such cases is much lower. A group of enterprises that do not indicate their economic activity stands out among all cases of exceptionally high profits. During the period 2014-2018, this group accounted for 582 cases of exceptionally high profits, or also almost a quarter of all cases.

In some other sectors, the number of exceptionally high profit cases is also significant. 280 such cases were detected in the Wholesale and retail trade (G) sector. In it, more than two-thirds of cases are concentrated in the Wholesale (G46) subsector. 235 cases were detected in the Real Estate Operations (L) sector and 200 cases in the Information

and Communication (J) sector. In the latter, the majority consists of the subsector Programming and consulting activities (J62) with 160 cases. In other sectors, the number of exceptionally high profit cases is lower.

Another analysis of corporate profitability follows, the results of which are shown in Figures 9 and 10. They present the profitability of enterprises taxed at the special and standard CIT rate in terms of the number of employees at aggregated and non-aggregated levels, respectively. Both figures show that most enterprises receive a standard market return that is independent of enterprise size, but some enterprises' return is above standard. The profitability of enterprises with 4 and more employees taxed at the standard CIT rate is similar and amounts to 5%-7% (average) at the aggregate level and 3%-4% (median) at the non-aggregated level. This suggests that these enterprises receive returns in a competitive market. However, the profitability of enterprises with 0 and 1 employees far exceeds the standard market return: at the aggregate level it is 10%-15%, at the non-aggregate level – 8%-18%.

A similar situation is observed in the case of enterprises taxed at the special CIT rate, but their situation differs in two respects. First, the standard market return of these enterprises is about twice that of enterprises taxed at the standard rate: at the aggregate level, it is 13% (average), non-aggregated – 8%-9% (median). The second unique feature is that the returns of the smallest enterprises with 0-2 employees are extremely high and amount to 19%-30% (average) at the aggregate level and 13%-31% (median) at the non-aggregated level.

Table 7. Sectoral distribution of profit outliers, 2014-2018.

Sector (economic activity)	2014	2015	2016	2017	2018	Total
M. Professional, scientific and technical activities	78	109	113	141	143	584
<i>Among them: M70. Headquarters and Management Consultancy activities</i>	42	52	52	57	64	267
Economic activity not attributed	94	100	125	130	133	582
G. Wholesale and retail trade	44	47	53	59	77	280
<i>Among them: G46. Wholesale trade</i>	28	33	41	42	55	199
L. Real estate operations	33	37	57	43	65	235
J. Information and communications	32	37	32	51	48	200
<i>J62. Programming and consulting activities</i>	24	30	28	42	36	160
F. Construction	15	25	34	36	46	156
C. Manufacturing	20	33	20	23	22	118
N. Administrative and support service activities	11	17	16	25	31	100
H. Transportation and storage	16	12	19	23	30	100
Q. Health care, social work	4	7	10	16	15	52
D. Electricity, gas, steam supply and air conditioning	4	5	6	15	12	42
P. Education	6	8	4	8	5	31
K. Finance and insurance	4	4	3	9	8	28
S. Other service activities	4	4	4	3	5	20
R. Arts, entertainment and recreation activities	3	4	3	2	3	15
I. Accommodation and catering	1		3	1	6	11
E, B, O	1	4	3	2	1	11

Only enterprises with income and estimated taxable profit > 0. Source: IDR, compiled by the author.

The fact that in both standard and special rate groups the returns of most enterprises are similar and independent of their size shows that these enterprises receive their income in the market. Thus, differences in profitability between these groups of enterprises are more related to internal sources of additional returns, such as the lower wages analysed above, than to income received through related parties or from other external sources. However, how can it be explained that 1) the smallest enterprises with 0 to 2 employees are more profitable than larger ones and 2) enterprises

with 0 to 2 employees taxed at the special CIT rate are more profitable than enterprises with a similar size but taxed at the standard rate?

These questions can be answered in part by the specifics of the activity of enterprises with a minimal number of employees. Because these businesses are extremely small, they can operate with minimal operational administrative costs, such as accounting or office maintenance. Part of the answer may also lie in differences in the sectoral distribution of enterprises. The smallest enterprises may be more inclined to operate in sectors with low labour intensity but higher standard market returns, such as real estate operations.

Figure 9 Profitability of enterprises by CIT rate, aggregated average, by enterprise size (number of employees), 2014-2018.

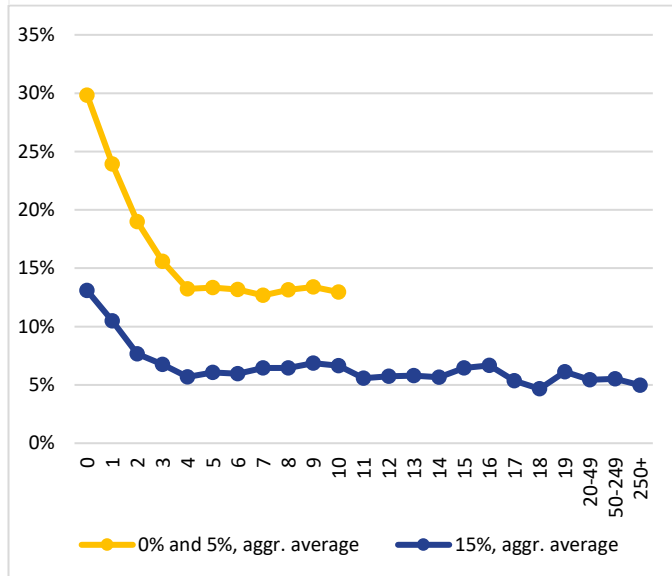
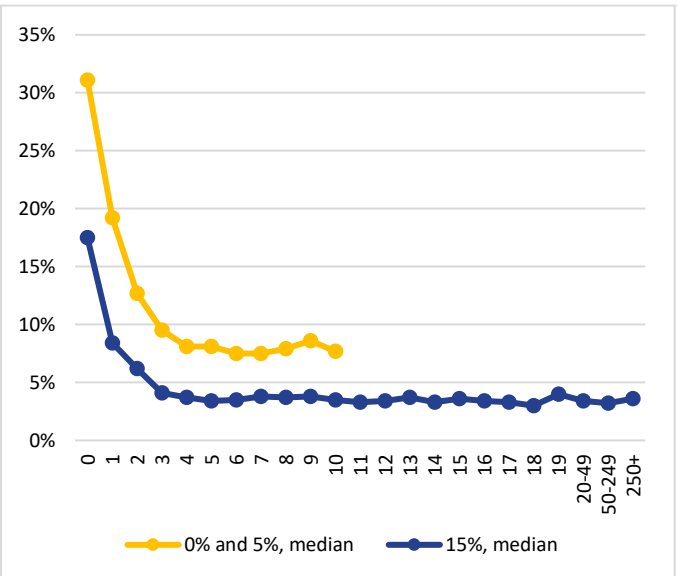


Figure 10 Profitability of enterprises by CIT rate, median, by enterprise size (number of employees), 2014-2018.



Only enterprises with income and estimated taxable profit > 0. Number of observations: 0% and 5% – 121.982, 15% – 116.638. Source: IDR, compiled by the author.

More information on sectoral differences between enterprises of different sizes and different CIT rates is provided in Table 8. It compares enterprises with 0-2 employees taxed at the special CIT rate with two control groups: 1) enterprises with 3-10 employees taxed at the special CIT rate and 2) enterprises with 0-2 employees taxed at the standard CIT rate. In order to focus the analysis only on the distribution of the most profitable enterprises, in all three groups only enterprises with the highest – median and higher (see Figure 10) – profitability were selected for comparison.

The table confirms the assumption that smaller enterprises taxed at the special CIT rate operate in less labour-intensive and potentially more profitable sectors. Among the most profitable enterprises with 0-2 employees taxed at the special CIT rate, compared to similar enterprises with 3-10 employees, a larger share operates in Real estate operations (L). Although the share of enterprises operating in Professional, scientific and technical (M) activities is similar – 18%-19%, in the first group relatively more enterprises – as many as 10% compared to 1% – engage in veterinary activities. Although the share of Wholesale and retail trade sector enterprises in the first group is only slightly lower (12% vs. 14%), there are significantly more wholesalers (45% vs. 33%) among them and fewer retailers (33% vs. 39%).

Comparing the most profitable special-rate enterprises having 0-2 employees with the most profitable standard-rate enterprises of the same size, the former are more inclined to engage in professional, technical and scientific activities (19% vs. 10%), as well as transportation and storage, healthcare and social work and information and communication activities. This can be explained by the fact that many these activities are relatively low-turnover activities, so most of the enterprises operating in them do not exceed the threshold for the application of the special CIT rate. Meanwhile,

such high-turnover activities such as real estate transactions are less common among enterprises taxed at the special rate than among those taxed at the standard rate (6% vs. 20%).

Table 8. Distribution of median and higher profitability enterprises between sectors, 2018

Economic activity	0-2 employees, special CIT rate		3-10 employees, special CIT rate		0-2 employees, standard CIT rate	
	Number	Share	Number	Share	Number	Share
Economic activity not declared	2.034	29,6%	629	12,2%	622	23,7%
M. Professional, scientific and technical activities	1.298	18,9%	952	18,4%	270	10,3%
G. Wholesale and retail trade	791	11,5%	737	14,2%	443	16,9%
L. Real estate operations	418	6,1%	193	3,7%	525	20,0%
H. Transportation and storage	395	5,7%	400	7,7%	113	4,3%
Q. Health care, social work	356	5,2%	323	6,2%	43	1,6%
J. Information and communications	311	4,5%	171	3,3%	66	2,5%
F. Construction	302	4,4%	648	12,5%	146	5,6%
C. Manufacturing	292	4,2%	435	8,4%	85	3,2%
N. Administrative and support service activities	220	3,2%	223	4,3%	112	4,3%
S. Other service activities	115	1,7%	91	1,8%	19	0,7%
D. Electricity, gas, steam supply and air conditioning	111	1,6%	47	0,9%	90	3,4%
K. Finance and insurance	63	0,9%	57	1,1%	40	1,5%
P. Education	61	0,9%	53	1,0%	8	0,3%
I. Accommodation and catering	46	0,7%	159	3,1%	18	0,7%
R. Arts, entertainment and recreation activities	45	0,7%	35	0,7%	19	0,7%
Total	6.871	100%	5.174	100%	2.625	100%

Only enterprises with income and estimated taxable profit > 0. Only enterprises with a median equal to or greater than: special rate: 0 employees - 31%, 1 employee - 19%, 2 employees - 13%, 3-10 employees - 8%; standard rate: 0 employees - 18%, 1 employee - 8%, 2 employees - 6%. Sectors E. Water supply etc. and B. Mining and quarrying are excluded due to the small number of enterprises. Source: IDR, compiled by the author.

Although the sectoral differences identified above between the groups of enterprises with the highest profitability may help to explain the differences in profitability, they can do only in part. It is important to underline another aspect. The most profitable 0-2 employee enterprises with the special CIT rate are particularly numerous among enterprises that have not declared their economic activities. In this group, enterprises whose economic activity is unknown make up the largest share – as much as 30%. This means that almost every third highest-profitability enterprise in this group has not declared the activities it carries out. This share is highest not only for the internal group comparison, but also between groups. Among enterprises with 3-10 employees, it amounts only to 12%. Among enterprises with 0-2 employees taxed at the standard rate – to 24%. This suggests that enterprises larger in terms of both number of employees and income tend to declare their economic activity more often.

Enterprises that have not declared their economic activity, as well as enterprises that carry out professional, scientific and technical activities, together make up almost half of all the most profitable 0-2 employee enterprises taxed at the special CIT rate. This prompts a more in-depth analysis of these enterprises. Table 9 compares the profitability of enterprises by economic activities and size. In all three size groups – 0-2 and 3-10 employee special-rate enterprises and 0-2 employee standard-rate enterprises – enterprises that have not declared economic activity are the most profitable – much more profitable than enterprises that have declared economic activity. The difference is particularly large for the smallest enterprises taxed at the special CIT rate. Among them, the median profitability of those that did not declare their economic activity is 27% – almost twice as large as enterprises that declared their economic activity. Among all enterprises that have not declared their economic activity, the smallest enterprises taxed at the special CIT rate are also the most profitable – 2 and more times more profitable than the other two groups of enterprises. The same is true of enterprises engaged in professional, scientific and technical activities. Among them, the smallest



enterprises taxed at the special rate are the most profitable both in comparison with the whole group of enterprises declaring economic activity and with other enterprise-size groups.

Table 9. Profitability of enterprises by CIT rate and sector of economic activity, median, by enterprise size (number of employees), 2014-2018.

Economic activity	0-2 employees, special CIT rate	3-10 employees, special CIT rate	0-2 employees, standard CIT rate
Economic activity not declared	27,4%	13,0%	10,6%
Economic activity declared	14,4%	7,9%	6,9%
M. Professional, scientific and technical activities	25,9%	14,8%	10,7%

Only enterprises with income and estimated taxable profit > 0. Source: IDR, compiled by the author.

Although highly profitable, most of these special-rate enterprises of 0-2 employees operating in professional, scientific and technical activities or not declaring their economic activities at all are not development-oriented. This can be seen by taking a closer look at the change in the size of such enterprises. In 2015, 494 such enterprises started operations, the profitability of which in the first year of operation was equal to or higher than the average of the entire population of enterprises of similar size and tax status (median, see Figure 10). Among them, there were 73 enterprises with 0 employees (15%), with 1 employee – 273 (55%), 2 employees – 148 (30%). In the third year of operation (2017), among enterprises that started operations with 0 employees, almost 50% remained with the same number of employees, another 33% ceased operations (another year later, there were 44% of those that ceased operations). The remaining 17% demonstrated expansion, although an absolute majority only up to 1 employee. Among enterprises that started with 1 employee, 55% remained at the original size or became smaller in the third year of operation, 16% ceased operations, 17% grew to 3 and more employees. Among the enterprises with 2 employees at the beginning of their activity, 61% remained the same size or shrank in the third year of operation, 11% discontinued operations, about a quarter grew (14% – up to 4 and more employees).

To sum up the two analyses in this section, is there evidence that the high profitability of enterprises subject to the special CIT rate is related to non-market income, i.e., sales of goods and services not at market prices but rather to sales to related parties at a higher-than-market price set by bilateral price agreements, or revenue from other sources? The evidence gathered suggests that it is in this way that enterprises with certain characteristics can achieve high profitability.

First, these are enterprises with exceptionally high profits. Although according to the method of three standard deviations used in the analysis, the cases of exceptionally high profits in the population of enterprises taxed at the special CIT rate amount to only slightly more than 2.500 or 2%, they accumulate a ten times higher share of profits – 21% of the profits of the entire population of special-rate enterprises. Moreover, the cases of exceptionally high profits are increasing, and their profits are growing rapidly – in the period of 2014-2018, the cases of exceptionally high profits increased almost twice, and their profits grew 3 times faster than the total profits of all enterprises taxed at the special CIT rate.

Nearly a quarter of exceptionally high-profit cases are concentrated in the professional, scientific, and technical activities sector, and almost half of them are enterprises engaged in business consulting and other management activities. A number of exceptionally high profit cases have also been detected in wholesale and retail, real estate operations, programming and consulting activities. Almost a quarter of exceptionally high-profit cases operate without reference to their economic activity, which might be related to the lower level of institutionalisation and organisational maturity of enterprises and some "indecision" with regards to their activities (see footnote 14). Although regulators apply strict transaction pricing rules to transactions between associates when assessing the market value of transactions, most of these sectors, which are often characterized by exceptional profits, are business service sectors with non-standard products, non-standard pricing, and often close proximity to the top management of enterprises that are the recipients of their services.

The second set of evidence complements the first by drawing attention to the smallest enterprises with 0-2 employees and taxed at the special CIT rate. These enterprises are the most profitable – up to 3 times more profitable than both other special-rate enterprises and enterprises of the same size, which are not covered by the special CIT rate. Again, about half of the most profitable enterprises with 0-2 employees, which are taxed at the special CIT rate, are engaged in professional, scientific, and technical activities or have not declared their economic activities at all. In the context of their economic activity status, they are also distinguished by extremely high profitability, both in comparison with enterprises carrying out other economic activities or other enterprises similar in size that generally indicated their economic activities but are taxed at the standard CIT rate, and with enterprises subject to the same CIT rate but larger in size. In addition, the majority – 50%-60% of these high-profit enterprises are not development-oriented at all but tend to remain the same size or even shrink. The characteristics listed – operating in the professional, scientific, and technical services sector or the tendency not to disclose their economic activity at all, extremely small size, high profitability, lack of growth and often short period of operation – suggest that some of these enterprises are highly likely to be related to non-market income.

Of course, it is by no means absolute that the special CIT rate acts solely as an incentive to engage in tax optimisation in ways of questionable legality. Especially bearing in mind that the receipt of revenue from transactions whose price does not correspond to the market price is associated with efforts to avoid tax liabilities and is under the control of the tax administrator. Although the analysis shows that this is likely in the case of some enterprises and there is a lot of evidence to support that probability, however, among the cases of exceptionally high profits and / or profitability there are clearly also those that carry out high value-added market activities, so their high-performance results are the outcomes of exceptionally high productivity and competitiveness. Also, in some cases, exceptionally high profits/profitability may be due to the specifics of the activity itself, such as real estate operations, which are inherently characterised by high transaction prices and high price differences and fluctuations. However, on the other hand, from a different perspective, this specificity of the activities of some enterprises and the resulting high profit / profitability indicators do not allow them to be considered as a typical small business operating in the market and requiring state support. For these enterprises, the special CIT rate is a means of legally reducing tax liabilities and thus further improving the already high financial performance.

CONCLUSIONS

In the analysed period of 2014-2018, the special CIT rate was used by an average of 24.000 enterprises per year. That amounts to about 25% of all Lithuanian enterprises. Given the large scope of the special rate, this study sought to examine more fully its impact on the behaviour of micro-enterprises, focusing on the sources of profits of enterprises subject to the special CIT rate. **The comparison of enterprises taxed at different CIT rates revealed that the impact of the special CIT rate on corporate behaviour is more complex than originally foreseen. This influence is manifested primarily through differences in corporate profitability. Enterprises taxed at the special CIT rate are systematically more profitable than enterprises taxed at the standard CIT rate:** the profit margin of enterprises taxed at the 5% rate is about 3 times, and 0% rate – about 5 times higher than that of enterprises taxed at the 15% rate. These differences are marked regardless of the sector of economic activity of enterprises. **This confirms the hypothesis that the special CIT rate, as an institutional incentive, is associated with a greater motivation of enterprises to accumulate profits.**

The special CIT rate can affect the factor cost. It can directly reduce the cost of investment or working capital by reducing the cost of financing an enterprise's activities from internal sources, which in turn would increase returns through higher productivity or greater scale of activity. The introduction of the special CIT rate was based on exactly this scenario. However, the special CIT rate can also provide incentives for enterprises to become more profitable by reducing labour costs and replacing part of wage costs with less taxable dividends for holders of interest employed in the enterprise or with undeclared wage supplements for employees. Similarly, the special rate, by introducing different CIT regimes, may encourage economic operators to maintain non-market relationships motivated by lower corporate



income taxation incentives. The study analysed each of these three sources of profit separately, and the main findings of the study are set out below.

Higher productivity or faster growth in the scale of activities through cheaper internal financing of activities is not a source of higher profitability for enterprises taxed at the special CIT rate. The finding is supported by the following study results:

1. Investments in tangible fixed assets of enterprises taxed at the special CIT rate are relatively rare and small. This was revealed by the analysis of another tax incentive, the reduction of taxable profits due to investments. Although the impact of this incentive and the consequent representativeness is not significant – only about one tenth of the business's total material investments in Lithuania are made using this benefit, its data allow to compare the investments of enterprises according to the paid income tax rate. In the period of 2015-2018, the intensity of investments in fixed assets declared by enterprises with the special CIT rate did not reach 0.3% from the amount of taxable profits of all special-rate enterprises. Meanwhile, the intensity of declared investments of enterprises taxed at the standard CIT rate was more than 30 times higher and averaged 9,3% from the total taxable profit of this group. Even considering that the financial incentives of special-rate enterprises to make use of investment-related tax incentive are lower and the associated relative administrative costs are higher, this difference is considered too large to argue that the special CIT rate has increased incentives for productive investment.
2. Enterprises taxed at the special CIT rate tend to store retained profit as current assets. They have a large surplus of current assets, much higher than those taxed at the standard rate and much higher than necessary to ensure the sustainable operation of the enterprises, compared to their current liabilities. This surplus shows a large share of retained and uninvested profits in corporate balance sheets.
3. Compared to standard-rate enterprises, enterprises subject to the special CIT rate are less productive and less inclined to expand more rapidly, increasing the scale of their activities and, as a result, increasing their returns. The annual income growth rate of these enterprises is not higher than that of enterprises of a similar size taxed at the standard CIT rate. In addition, only a small proportion of enterprises taxed at the special rate "grow out of" their special CIT status.

Lower declared wages can be a source of higher profitability for enterprises taxed at the special CIT rate. The finding is supported by the following study results:

1. Wages paid to employees of enterprises taxed at the special and standard CIT rate differ. On average, in the former it is significantly, even up to 3 times, lower than in the latter.
2. The lower wages of enterprises taxed at the special CIT rate are specifically related to the tax status of these enterprises. The groups of enterprises employing 4-10 and 11-20 employees are quite homogeneous in terms of wages, but the differences in wages between groups are large. These differences arise at the threshold of the special CIT rate. An illustrative example would be that an enterprise that employs 11 employees, which, because of its size, is not eligible for the special CIT rate, tends to pay significantly higher wages than an enterprise that employs 10 employees and is eligible for the special CIT rate.
3. Part of the impact of the special CIT rate on the wages of enterprises with 4-10 employees is related to the higher share of part-time employees, which in the latter enterprises, as in the whole population of micro-enterprises, is higher than in other enterprise size groups. However, such an explanation does not answer the question of why the wages of enterprises with the special CIT rate are lower than those of similar size enterprises with the standard CIT rate. This indirectly leads to the only other theoretically possible explanation – undeclared wage supplements or wages "in envelopes". Indirect evidence – lower wages, higher share of part-time workers, higher profitability and a clear link between wages and the CIT rate – suggests that enterprises with the special CIT rate may be more likely than other groups of enterprises to pay part of their wages as undeclared supplements, to avoid part of the tax liability related to workplace taxation. Still, this is an indirect argument. Meanwhile, the study cannot provide direct evidence of the extent of this phenomenon.



4. Among the enterprises taxed at the special CIT rate, the smallest enterprises with 1-3 employees stand out with remarkably high wage extremes. There are two opposite trends between these enterprises. On the one hand, the wages of most employees are the lowest among enterprises subject to the special CIT rate, while the highest earners earn the most. According to their specifics, these enterprises are mostly those whose employees are also interest holders in the enterprise. Thus, the most likely explanation for their wage characteristics relates to the conversion of interest holders' wage income into profits. Although these enterprises have the lowest wages, this is not due to low productivity or limited financial resources. In contrast, these enterprises earn 60% of the total profits taxed at the special CIT rate and their profit per employee is the highest among all special CIT rate enterprises.

Revenues from non-market transactions can be a source of higher profitability for some of enterprises taxed at the special CIT rate. The finding is supported by the following study results:

1. The analysis of profit outliers revealed that the profits of enterprises taxed at the special CIT rate are unevenly distributed. Among them, a small share of enterprises – 2% – gets a disproportionately high – 21% – share of the profits of the total special CIT rate enterprise population. Furthermore, exceptionally high-profit cases are on the rise. In addition, in the period of 2014-2018, the profit of exceptionally high profit enterprises grew 3 times faster than the total profit of all enterprises taxed at the special CIT rate. Nearly a quarter of these exceptionally high-profit cases are concentrated in the professional, scientific, and technical sectors, with most enterprises providing hard-to-account and non-standard-priced "personal trust-based" business services. Almost a quarter of the cases of exceptionally high profits have not indicated their economic activity, which is related to the lower level of institutionalisation and organisational maturity of such enterprises and some "indecision" regarding the performed activity.
2. It is likely that non-market transactions, as a source of higher profitability, may be more prevalent among the smallest enterprises with 0-2 employees and taxed at the special CIT rate. First, these enterprises are the most profitable – on average up to 3 times more profitable than both other enterprises with the special CIT rate and enterprises of the same size that do not benefit from the special CIT rate. Second, among these enterprises, the enterprises with the highest profitability are again the most inclined to provide difficult-to-account and non-standard pricing professional, scientific and technical activities or not to disclose their economic activities at all. The former are more profitable than other enterprises engaged in economic activities, and the latter are generally the most profitable – again a paradoxical situation, when the highest financial results are achieved by enterprises in a highly fluid state. Third, the majority – 50%-60% – of these highest-profitability enterprises with one of the above operating statuses are not development-oriented at all but tend to remain the same size or even shrink.

In summary, the special CIT rate provides additional incentives for enterprises to use it to accumulate profits. However, the special rate did not become a productive incentive that, as expected, would motivate greater profit accumulation through business expansion. On the contrary, the benefit is more likely to act as an incentive to obtain higher returns from non-productive, lower taxation-motivated sources, such as non-market transactions by economic agents or reductions in labour costs through "cheaper" profits. In a stylised picture, a typical special-rate enterprise has 1-2 employees and compared to a typical standard-rate enterprise, is more profitable, more inclined to operate in the service sector or not disclose its economic activity at all, less productive, pays lower wages, invests less often, has more current assets and does not grow any faster. Clearly, this picture stands far from the model of contemporary growth-hungry entrepreneurship that was originally intended.

From the **perspective of policy recommendations**, the main conclusion of the study is that the special CIT rate is not an effective business policy instrument to achieve the objectives it was aimed at. The special rate did not act as an incentive for productive reinvestment in the development of small businesses, but by reducing the relative taxation of profits in relation to the taxation of income from other sources, it created a structural "pull" to shift the latter to less taxable profits.

The special CIT rate applies to all enterprises that meet the income and employment requirements set for it. However, this population of enterprises is heterogeneous. It undoubtedly includes enterprises that face a lack of financial resources for development, are looking for opportunities to grow and, after a while, grow out of the status of beneficiaries. However, the beneficiaries also include enterprises that should not be able to benefit from the special CIT rate, as the special rate serves as a channel for them to accumulate profits from non-productive sources. There is reason to believe that the latter enterprises form a significant part. Here are some illustrative examples identified in the study that show that the validity of some enterprises' entitlement to special corporate taxation is quite questionable. These are enterprises that received EUR 100.000 and more of estimated taxable profit in the first year of operation to which the 0% CIT rate was applied; enterprises that earned the profit of EUR 200.000 or profit that was exceptionally high in their size group, which was taxed at the special rate of 5%; enterprises engaged in real estate operations, the specifics of which often guarantee high financial performance.

Some other examples, while not so unambiguous, also raise the question of the validity of special CIT rates. Should it be applicable to enterprises that pay lower-than-market wages and employ workers on a part-time basis but earn high profits? And what about high-profitability enterprises without employees or with one employee, the size of which has not changed for many years? If an enterprise has relatively large current assets but does not invest productively, should it be considered to be in need of tax support?

The study cannot provide direct answers to all its questions. Some of the answers are indirect and may require further investigation. However, the study provides sufficient evidence to formulate a policy recommendation to abandon special CIT rates and replace them with more differentiated small business policy instruments that would allow to focus aid on enterprises that are motivated to invest and grow and reduce possibilities for non-motivated enterprises to use public tax support as incentives for counterproductive returns. The stability and longevity of special CIT rates appear to be more based not on economic, as confirmed by international studies (e.g., European Commission, 2015), but on political reasons. About a quarter of Lithuanian enterprises use the benefit. It is for that part that the abolition of the special CIT rate would mean less profit. Thus, the issue is obviously politically complex and the success of its solution, among other factors, would depend to a large extent on the level of economic and social validity of the policy instruments proposed instead of special CIT rates.



REFERENCES

- Ahmad, N., & Seymour, R. G. (2008). *Defining Entrepreneurial Activity: Definitions Supporting Frameworks for Data Collection* (2008/01; OECD Statistics Working Papers).
- Awasthi, R., & Engelschalk, M. (2018). *Taxation and the Shadow Economy: How the Tax System Can Stimulate and Enforce the Formalization of Business Activities* (No. 8391; Policy Research Working Paper, Issue March). <http://econ.worldbank.org>.
- Baumol, W. J. (1990). Entrepreneurship: Productive, Unproductive, and Destructive. *Journal of Political Economy*, 98(5), 893–921.
- Council of the EU. (2017). *Recommendation for a Council Recommendation on the 2017 National Reform Programme of Lithuania and delivering a Council opinion on the 2017 Stability Programme of Lithuania*.
- Dirvanskienė, R., Kuodytė, V., & Kriaučiūnas, M. (2019). *Analizės pagrindų parengti bendriniai ir specializuoti, skatinamojo ir atgrasančiojo pobūdžio "šešėlio" mažinimo priemonių pasiūlymai dėl veiklos sričių, kuriose daugiau negu 50 proc. įmonių moka mažesnius negu MMA vidutinius atlyginimus*.
- Douhan, R., & Henrekson, M. (2007). The Political Economy of Entrepreneurship: An Introduction. In M. Henrekson & R. Douhan (Eds.), *The Political Economy of Entrepreneurship*. Edward Elgar.
- European Commission. (2015). *SME taxation in Europe: An empirical study of applied corporate income taxation for SMEs compared to large enterprises*.
- Finansų ministerija. (2004). *Lietuvos Respublikos pelno mokesčio įstatymo 40 straipsnio 2 dalies ir Lietuvos Respublikos gyventojų pajamų mokesčio įstatymo 15 straipsnio 2 dalies įgyvendinimo taisyklės* (Issue balandžio 9 d.).
- Finansų ministerija. (2009). *Aiškinamasis raštas dėl Lietuvos Respublikos pelno mokesčio įstatymo 4, 5, 12, 13, 17, 18, 26, 31, 33, 34, 35, 38, 40, 41, 55 straipsnių pakeitimo ir papildymo ir įstatymo papildymo X¹ skyriumi įstatymo projektas* (XIP-1222). <https://e-seimas.lrs.lt/portal/legalAct/lt/TAK/TAIS.355148?jfwid=1c3ypn0v91>
- Haltiwanger, J. C., Lane, J. I., & Spletzer, J. (1999). Productivity Differences across Employers: The Roles of Employer Size, Age, and Human Capital. *American Economic Review*, 89(2), 94–98.
- Henrekson, M. (2007). Entrepreneurship and institutions. *Comparative Law and Policy Journal*, 28(4), 717–742.
- Henrekson, M., & Sanandaji, T. (2010). The Interaction of Entrepreneurship and Institutions. In *IFN Working Paper* (Issue 830).
- LR Seimas. (2001). *Lietuvos Respublikos pelno mokesčio įstatymas*. Suvestinė redakcija nuo 2018-01-01 iki 2018-12-31.
- LRVK. (2016). *Šešėlinė ekonomika. Pokyčiai per dešimtmetį*.
- Medina, L., & Schneider, F. (2018). Shadow Economies Around the World: What Did We Learn Over the Last 20 Years? In *IMF Working Paper* (WP/18/17).
- North, D. C. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge University Press.
- Rodrik, D., Subramanian, A., & Trebbi, F. (2004). Institutions rule: The primacy of institutions over geography and integration in economic development. *Journal of Economic Growth*, 9(2), 131–165.
- Saez, E. (2010). Do Taxpayers Bunch at Kink Points? *American Economic Journal: Economic Policy*, 2, 180–212.
- Versli Lietuva. (2018). *Labai mažos įmonės Lietuvoje: ekonominė reikšmė ir augimas*.



ANNEX 1: DIRECT AND INDIRECT IDR INDICATORS USED IN THE STUDY

The indicator used in the study	IDR data subclass / data	IDR display	Explanations
<i>Direct indicators from Interdepartmental Tax Data Repository (IDR)</i>			
Income (revenue)	Amount of income	Corporate income tax declarations PLN204 and PLN204A	The amount of income included in the tax base
Profit before tax	Profit (loss) before tax	Corporate income tax declarations PLN204 and PLN204A	= "sales revenue" - "cost of sales" - "operating expenses" + (-) "profit from financial and investment activities" - "extraordinary items"
Corporate income tax (CIT) rate	Corporate income tax rate, per cent	Corporate income tax declarations PLN204 and PLN204A	The corporate income tax rate is actually applied to corporate profits before tax
Estimated taxable profit	Estimated taxable profit amount	Corporate income tax declarations PLN204 and PLN204A	= "profit before tax" - "reduction of taxable profit due to investments" - "loss on disposal of securities and derivatives" - "loss taken over from other entities of the group"
The number of employees	Number of insured persons	Insurers	Average number of insured persons during the reporting quarter (average number of insured persons at the beginning of the quarter and at the end of the quarter). The annual indicator is obtained by averaging the data for the quarters with the number of insured persons > 0
Added value	Total added value	VAT returns	Added value created by the enterprise
Wages	Insured amount	Insurers	Amount of remuneration or declared income from which insurance contributions are calculated
Declared amount of investment in fixed assets	Reduction of taxable profit due to investments	Corporate income tax declarations PLN204 and PLN204A	The amount of actually incurred investments in the groups of fixed assets indicated by which enterprises can reduce their taxable profits.
<i>Derived indicators</i>			
Profitability (profit margin)	Estimated taxable profit amount; Amount of income	Corporate income tax declarations PLN204 and PLN204A	= "estimated taxable profit amount" / "amount of income"
Average wages	Insured amount; Number of insured persons	Insurers	Average annual wages per employee. = "wage bill" / "number of employees"
Number of employees	Number of insured persons	Insurers	= "number of insured persons" +1, if the legal form of the enterprise is "Individual Enterprise"; +2, if the legal form of the enterprise is "General Partnership" or "Limited Partnership"
Productivity	Total added value; Number of insured persons	VAT returns Insurers	Value added per employee. = "value added" / "number of employees"
Current ratio	Amounts declared	Balance sheets	= ("current assets" + "other current assets" + "cash") / ("current liabilities" + "amounts payable during the year" + "other current liabilities" + "other payables and current liabilities")

Source: IDR (<http://tds.ivpk.lt/lt/DV/list>), compiled by the author.