

# The Impact of the Adoption of the Rehabilitation Tax Package in the Czech Republic on the Progressivity of Personal Income Tax

[Dopad přijetí ozdravného daňového balíčku v ČR na progresivitu daně z příjmů fyzických osob]

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Abstract: The article focuses on an overview of selected tax changes in the Czech Republic from 2024 as part of the adoption of the consolidation package. The article further deals with the analysis of the tax progressivity of the tax system of the Czech Republic in 2023 and 2024. The aim of the article is to describe selected tax changes in the Czech Republic and to evaluate the impact of changes in interval progressivity. Calculations are made on the basis of the effective tax rate, the progressivity of the average rate, the progressivity of the tax obligation and the progressivity of the after-tax income of the taxpayer receiving income from a dependent activity. 6 hypothetical situations of taxpayers are analyzed. Some of the tax changes under discussion include an increase in the corporate income tax rate, the abolition of the taxpayer discount, the limitation of the spouse discount, the introduction of a rate for employee health insurance, an increase in the tax on real estate, changes in work done outside of employment or an increase in social insurance rates for self-employed only. The results of the interval progressivity show that the highest tax progressivity is for low-income taxpayers and it decreases with increasing gross income. Taxpayers with child have interval progressivity and a lower effective tax rate. Furthermore, in 2024 compared to 2023, due to tax changes, the indicators of interval progressivity will change.

**Keywords:** interval progressivity, personal income tax, tax burden.

JEL classification: H24, K34

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#### Introduction

In its annual report for the year 2022, the Supreme Audit Office of the Czech Republic comments on several main fiscal problems of the Czech Republic. This is a growing structural deficit of the state budget and a growing rate of borrowing. The current problem is the rising rate of inflation and the drop in real wages. These problems, in terms of their values, are among the worst in the European Union. The priority of the current government is the need to stabilize public budgets (NKÚ 2023). According to the annual report of the National Budget Council for the year 2022, it follows that there is a need to consolidate public finances in view of the increase in debt servicing costs, which amounts to approximately CZK 75 billion in 2022 (Rozpočtová rada 2023).

According to the final report Evaluation of the effects of regulation, it is also necessary to quickly consolidate public finances in order to stop the pace of indebtedness, either on the revenue or expenditure side of the state or in a combined way (MFČR 2023a). Fiscal consolidation is also recommended, for example, in Marek, 2022, according to which state finances are not sustainable without change.

National debt has increased faster since 2020, which was a consequence of the Covid-19 pandemic. Along with the growth of the state debt, the balance of the state budget also grows



(2020: -367,400 million CZK, 2021: -419,700 million CZK, 2022: -360,400 million CZK). In the 1st quarter of 2023, the state debt increased to CZK 2,997 million, which represents 42.9% in relative terms (ČSÚ 2023, MFČR 2023b). To stabilize public budgets, the government of the Czech Republic prepared almost 60 measures in May 2023 with the aim of positively influencing the balance of the state budget. These measures are planned to take effect from 1 January 2024 and their impact will affect legal entities, but also natural persons, both employees and entrepreneurs.

These measures are implemented on the expenditure side (primarily within the framework of the subsidies provided), but also on the revenue side (primarily within the framework of corporate revenue tax) of the state budget. Ultimately, they should ensure savings in the amount of CZK 78.4 billion, ensure new revenues in the amount of CZK 72.3 billion, and the deficit of public finances should fall to 1.2 percent point of GDP (in 2022 it is 3.6 percent point). All this under the condition that this consolidation package will be accepted in the presented form (MFČR 2023c).

The current deficit of public finances does not reach the established international fiscal rules. Among other things, the Maastricht criteria determine that the public finance deficit should not exceed 3 percent point of GDP (Rybáček and Musil 2020). In view of the number of measures, this article does not deal with all tax changes, but only measures on the revenue side of the state budget.

The analysis of tax progressivity is important for many reasons. Tax progressivity, where higher incomes are subject to higher tax rates, helps to even out economic disparities in society. A system that appropriately takes income into account can motivate people to actively contribute to the economy and to meet their tax obligations. Changes in tax progressivity can respond to changing economic conditions and societal needs. The tax changes in the recovery tax package will affect different groups of the population, while the impact will be quite broad. The most affected group will probably be the middle class and low-income households, who will feel the increase in consumption taxes and the rise in the prices of basic necessities, as well as higher taxation on real estate. Households with children will be affected by the limitation of the low-income spouse discount. There will be an increase in mandatory levies for employees and self-employed persons, which represent a burden similar to taxes. At the same time, however, wealthier individuals will also feel a certain impact due to the changes in the structure of the higher personal income tax rate and the limitation of some tax reliefs.

The article is further focused on the calculation of progressivity between the years 2023 and 2024 for natural persons as a result of tax changes. The article is structured into 6 parts, including an introduction and a conclusion. The introduction is followed by the second chapter, which deals with an overview of the literature devoted to tax progressivity. The methodology describes the methods and data used. Chapters 4 and 5 deal with tax changes and the calculation of progressivity, and the conclusion summarizes the main findings left it out.

#### 1 Literature review

According to Ratmanová (2009), the average tax rate increases with the taxpayer's income, and at the same time, this rate is always lower for taxpayers with child. According to Kubátová (2016), the progressivity of the personal income tax is higher for low-income people, and at the same time she found that this tax is progressive. Furthermore, Kubátová (2016) claims that based on interval but also global progressivity, personal income tax is more progressive in



Slovakia than in the Czech Republic. According to Genčev, Musilová and Široký (2018), global progressiveness in the period 2008–2016 was also progressive in the Czech Republic.

For example, Krajňák (2020) dealt with the progressivity of personal income tax in the Czech Republic. He found that the income tax between 1993-2018 was progressive in most cases (the exception was the period 2008-2012). At the same time, it was found that the progressivity of the tax increased in 2008 for taxpayers with average and lower incomes, and on the contrary, taxpayers with high incomes show lower values of progressivity. Krajňák (2021) further compared tax progressivity in 2021 and 2020 and found that in 2021, due to tax changes, the tax burden on taxpayers decreased and tax progressivity increased at the same time. The main factors of the tax burden include mainly the amount of gross income, the amount of items deductible from the tax base, i.e. non-taxable parts of the tax base, the amount of tax discounts and tax benefits or tax rates (Cotrut et al. 2020).

According to Verbist and Figari (2014), the personal income tax should be progressive, because it ensures a better redistributive function of the tax, according to the EUROMOD model. According to the research of Echevarría (2015), an increase in the progressivity of the tax can lead to a decrease in the supply of labor and, for most taxpayers, to a decrease in their savings. Furthermore, it can lead to a reduction in the rate of growth and inequality in the distribution of market and net incomes. According to Damjanovic and Ulph (2010), if the government is reluctant to introduce a more progressive tax system, it can distribute tax evasion claims less and less evenly. The results of Alstadsæter, Johannesen, Herry and Zucman (2022) suggest that curbing evasion by the wealthy can be an effective way to increase tax revenue, increase tax progressivity and ultimately reduce inequality and political variables play a role in shaping tax systems Profeta and Scabrosetti (2017) find that when a country's ruling coalition is left-wing, income taxes become more relevant. Moreover, when the largest governing party is stronger, the share of property taxes in GDP increases. The level of progressivity is also influenced by tax discounts or non-taxable parts of the tax base, the effect of which is that the effective personal income tax rate is lower than the nominal one (Kubátová 2016).

According to Limberg (2019), there is an increase in the progressivity of the income tax in those countries that are affected by the economic crisis. If the country is hit by an economic crisis, voters who are oriented to the "left" of the political spectrum or are affected by the economic crisis do not support increasing the progressivity of the personal income tax Garcia-Muniesa (2019). Economic policy-makers tend to reduce the tax burden on individuals before elections and increase it after elections (Foremny and Riedel 2014).

According to Doerrenberg and Peichl (2013), the higher the tax morale of taxpayers, the more progressive the tax system. The results of Eydam and Qualo (2023) confirm a statistically significant negative association between the progressivity of personal income tax and income inequality. They found that average and marginal tax rates have the potential to reduce income inequality. Even according to Bises, Bloise and Scialà (2023), there is a relationship between labor taxation and income inequality. A progressive income tax affects the income distribution of individuals Jung and Tran (2022). According to Peter, Buttrick and Duncan (2008), it is advisable for tax systems to be simplified or not to use a large number of tax bands and with it a higher number of tax rates. According to Mertens and Rawn (2013), a reduction in the effective personal income tax rate will lead to an increase in the demand for labor and may also affect household consumption.



## 2 Methodology

The article uses the basic methods of statistical inference as an analysis and comparison. The tax quota, which represents the ratio of tax revenue to gross domestic product (GDP) at current prices in %, is used to measure the tax burden of individual taxes internationally.

The effective tax rate (ETR) is calculated based on (1):  $ETR = \frac{T+I}{GI},$ 

$$ETR = \frac{T+I}{GI},\tag{1}$$

where T represents tax after tax credits and tax incentives, I represents insurance paid by the employee, and GI represents gross income. Although insurance is not a tax in the true sense of the word, for example, according to the OECD, it is considered a tax and also has an effect on the burden on the entity.

Three methods are used for the analysis of interval progressivity. Average rate progressivity (PAR) represents the change in average rate to change in income (2):

$$PAR = \frac{\frac{T_1}{Y_1} - \frac{T_0}{Y_0}}{Y_1 - Y_0},\tag{2}$$

where Y represents gross income and indices 0 and 1 represent the individual compared income groups of taxpayers.

Progressivity of tax liability (PTO) represents the elasticity of tax liability with respect to gross income (3):

$$PTO = \frac{\frac{T_1 - T_0}{T_0}}{\frac{Y_1 - Y_0}{Y_0}} \tag{3}$$

After-tax income progressivity (PEAT) represents the elasticity of after-tax income with respect to gross income (4): (Široký, Friedrich and Maková, 2012) or (Kubátová, 2016).

$$PEAT = \frac{\frac{(Y_1 - T_1) - (Y_0 - T_0)}{Y_0 - Y_1}}{\frac{Y_1 - Y_0}{Y_0}} \tag{4}$$

Table 1 shows for clarity the interval progressivity measures used and their interpretation.

**Table 1:** Interpretation of indicators of interval progressivity

Indicators	Proportionate tax	Progressive tax	Regressive tax		
Average rate progressivity	= 0	>0	< 0		
Progressivity of tax liability	= 1	> 1	< 1		
After-tax income progressivity	= 1	< 1	> 1		

Source: Široký, Friedrich and Maková 2012, own processing

The advantage of the above-mentioned indicators is simple measurement and simple interpretation, as the indicators provide simple and specific data on the tax burden, which can be easily interpreted and used to compare different tax systems. On the other hand, the selection of data can lead to different interpretations of the results. For example, if only certain income bands are included, the results may be skewed or information on how specific tax policies affect different income groups may be missing. It can be difficult to distinguish the effect of taxation itself from the effect of public transfers.

Taxpayers' incomes are derived as multiples of the average wage, which is used to determine the maximum assessment base for calculating social insurance, which in the Czech Republic in



2023 amounts to CZK 40,324 (in 2024, this amount is not available, but it can be assumed that it will be larger).

Hypothetical taxpayers are divided according to individual incomes determined from multiples of the average wage, into 14 income groups, see Table 2. The range of income groups is determined with regard to covering all the effects of taxation, including the maximum assessment basis for calculating social insurance in the Czech Republic, which for the year 2023 was in the amount of CZK 1,935,552.

**Table 2:** Distribution of taxpayers into income groups

						$\overline{c}$								
Income group	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Multiple	0,5	0,75	1	1,25	1,5	1,75	2	2,5	3	3,5	4	4,5	5	5,5

Source: own processing

Furthermore, 6 hypothetical situations (S) are modelled:

- S1: A taxpayer who is only entitled to the basic taxpayer discount (in 2023 and 2024 in the amount of CZK 30,840),
- S2: A taxpayer who is entitled to a basic discount for a taxpayer and a student (in 2023 in the amount of 4,020 and canceled in 2024),
- S3: A taxpayer who is entitled to a basic taxpayer's discount and applies the tax benefit for the 1st child (in 2023 and 2024 in the amount of CZK 15,204),
- S4: A taxpayer who is entitled to a basic taxpayer's discount, for his wife and applies a tax discount for the 1st child aged 5 (in 2023 in the amount of CZK 24,840 and in 2024 he does not apply the discount for his wife),
- S5: A taxpayer who is entitled to a basic discount for a taxpayer, for a spouse and applies for tax benefits for 2nd child aged 5 and over (in 2023 and 2024 in the amount of CZK 22,320),
- S6: A taxpayer is entitled to a basic discount for the taxpayer, for the spouse and applies for a tax benefit for 3rd child aged 5 (in 2023 and 2024 in the amount of CZK 27,840).

It can be assumed that the tax or other levied burden on subjects will increase, but the change in progressivity may not be clear-cut. The key is which income groups will be hit the hardest by the tax increase. In some situations, it is assumed that the progressivity will not change much (for example S1, but dependend on income). It should be mentioned that the analysis is not focused on the self-employed.

## 3 Overview of measures of the recovery package

The government increased the corporate tax rate by 2 percentage point to 21%. In 2023, the corporate income tax rate was 19 % (MFČR 2023c). Compared to other countries in Europe, the current rate in the Czech Republic is one of the lowest. After its increase, it will be more of an average rate within European countries (MFČR 2023c). The Czech Republic has the largest tax burden among these countries, but in individual years, especially since 2016, it has been decreasing in all of these countries (the exception is Poland, where it is on the contrary increasing).

Another government proposal adjusted the personal income tax rate. Currently, incomes up to 48 times the average wage are taxed at a 15% tax rate and a 23% rate for the part of the tax base exceeding 48 times the average wage. The government proposal envisages that incomes up to 36 times the average wage will be taxed at a 15% tax rate and a 23% rate for the part of the tax base exceeding 36 times the average wage (MFČR 2023c). The Czech Republic has the lowest



tax burden among these countries, but in individual years, especially since 2016, it has been increasing, in all of these countries (the exception is 2021, in which there were legislative changes, for example the abolition of super gross wages, thereby reducing the tax burden on labor). Increasing tax rates for higher incomes increases progressivity because it increases the relative tax burden on wealthier individuals.

According to another proposal, a sickness insurance rate of 0.6% was introduced, to be borne by the employees. In 2023, there was a sickness insurance rate for employers only, at 2.1% (until 2019 it was 2.3%). The total social insurance rate for employees is 6.5%, and after this increase it will be 7.1%. However, it will still be a low rate within the Visegrad Four countries. In Poland it is 13.71%, in Slovakia it is 9.4% and the total social security contribution in Hungary is 18.5% (MFČR 2023c). For low and middle income workers, the rate increase will have a relatively larger impact, as they pay a higher percentage of their earnings into retirement insurance up to the cap. For high earners who have already reached the cap, the impact on their overall tax burden will be less significant as they will not pay more than the maximum amount.

The total share of social security in GDP in the Czech Republic is one of the highest among OECD countries. Total contributions to social security, including healthcare, amount to 33.8% on the employer's side and 11.6 % on the employee's side, which are also some of the highest rates in OECD countries.

There was also an adjustment of the discount for a wife or husband (hereafter referred to as wife) with low incomes. In 2023, the discount amounts to CZK 24,840 and can be applied if the person's total income is less than CZK 68,000. The new regulation limits this discount to a person who, in addition to the required income, also takes care of a child under 3 years of age. The current rules for applying this discount have been valid since 2009. The reason for this restriction is to support the motivation of people to enter the labor market (MFČR 2023c). Limiting this credit may lead to less progressivity, as the credit was intended to reduce the tax burden on single-income families. Its limitation leads to a relative increase in the tax burden for families with lower incomes, which reduces the progressivity of the tax system.

Furthermore, the discount for placing a child in a preschool was cancelled, the maximum amount of which corresponds to the minimum wage in a given year. The reason for this introduction is that people with high incomes tend to use this discount, as people with lower incomes do not use this discount due to the low tax base (MFČR 2023c).

Another proposal is the cancellation of the student discount, the amount of which is CZK 4,020. The reason is that only people with higher incomes will use this discount, and other students will not use this discount due to the low tax base (MFČR 2023c). Abolishing the student discount may reduce progressivity as it is a relief that is more targeted at lower and middle income groups. The abolition of this discount increases the tax burden of these groups, which may contribute to a decrease in tax progressivity. Another proposal is the abolition of membership contributions to trade unions as a non-taxable part of the tax base due to their selective definition (MFČR 2023c).

The tax burden on natural persons will increase as a result of the reduction or cancellation of tax discounts, or non-taxable parts of the tax base. This should lead to a higher effective tax rate.



The government proposal also includes an increase in social insurance contributions for the self-employed. In 2023, the minimum assessment basis for social insurance is 25%. The government proposal envisages a 5% increase per year until 2026. Part of the proposals also includes an increase in the assessment base for advances, by 5 percentage points, to 55% (MFČR 2023c). Furthermore, there should be an adjustment of social and health insurance levies for agreements about the execution of the work and at the same time their records. The expected changes from 2025 represent the introduction of a limit of 25% of the average wage at one employer for the limit for insurance participation. For other agreements on the performance of work with other employers, the insurance participation regime is valid for other labor relations (MFČR 2023c).

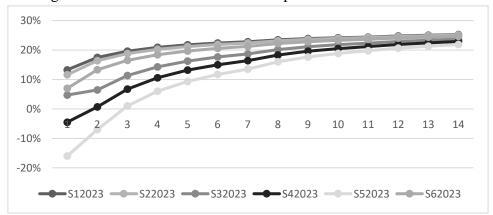
In addition, there was an increase in the tax rates on immovable property and, from 2025, the introduction of their annual valorization according to the development of inflation through the inflation coefficient. The proposal also includes the introduction of a state coefficient of 1, which will be state income (MFČR 2023c). The total share of real estate tax on GDP is negligible in the Czech Republic and one of the lowest within OECD countries.

Another proposal is the abolition of the exemption of non-monetary income of employees provided as benefits, for example for sporting events, etc. The reason is that, for reasons of administration, these benefits are used more by larger companies. Other government proposals are the adjustment of meal vouchers and the meal voucher flat rate. That is, their unification in the case of tax creditability for the employer and exemption for the employee. Another proposal is to reduce the income exemption from gambling raffles to 50,000 CZK from the original 1,000,000 CZK.

The government further limited the exemption for the sale of securities and shares. Another proposal is to increase the tax on selective gambling (such as dice, roulette, etc.) from 23% to 30%. There will be an adjustment in the budgetary determination of these taxes, namely that income from online gambling will be part of the state's income, and income from land-based gambling will be 65% of municipal income and the remaining part of state income. Furthermore, the cancellation of the deduction of payments for examinations verifying the results of further education and unification of selective exemptions into a general limit of up to CZK 50,000 per year (MFČR 2023c).

## 4 Tax progressivity

Figure 1 shows the average effective tax rate in the Czech Republic in 2023.



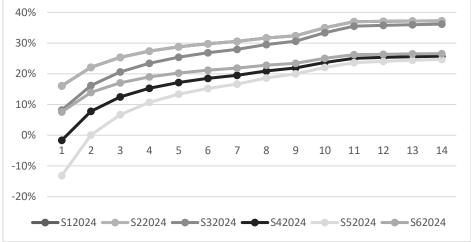
**Figure 1:** Average effective tax rate in the Czech Republic in 2023

Source: own processing



Figure 2 shows the average effective tax rate in the Czech Republic in 2024.

**Figure 2:** Average effective tax rate in the Czech Republic in 2024



Source: own processing

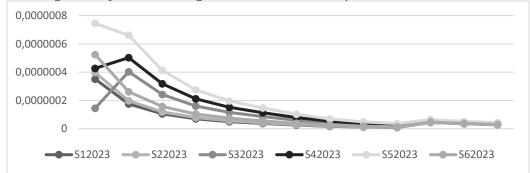
For all situations, it can be observed that the average effective tax rate is higher in 2024, due to the increase in the social insurance rate and the cancellation of selected tax rebates. In both monitored years, the average effective tax rate increases with increasing gross income. In 2024, S2 copies the situation of S1, for the reason that in 2024 the discount for the student and the tax subject should be cancelled, so it can only apply the discount for the taxpayer in both situations. In the 1st income group in both years, it is possible to see a negative effective average tax rate for S5 and S6, which is caused by the application of the tax bonus, which arose due to the use of the tax allowance for child. In 2023, there is also a negative value for the 2nd income group at S6. At the same time, it can be seen in both years that the effective tax rate decreases with each additional situation, due to the application of a greater number of tax discounts, respectively for taxpayers with child. The biggest changes are in S4, S5 and S6 in the 2nd - 6th interval. Overall, it can be said that in the case of model situations, the effective tax rate will increase in 2024 due to the consolidation package. The growth is between 0.6 to 7.09 perceeting points depending on the situation. The biggest changes are between S4, S5 and S6.

The combination of tax measures results in a higher effective tax rate, which means that taxpayers will pay a higher percentage of their income to the government in taxes and levies in 2024 than in 2023. Higher social security contributions mean that individuals have a smaller share after the levy of income available. This reduces net income while nominal income remains the same, leading to a higher effective rate. An increase in social security contributions also has an impact on labor costs for employers, which can lead to reduced employment or stagnant wages. For lower and middle income households, this increase may lead to a decrease in disposable income, which will limit their consumption and saving options. In the long term, problems associated with greater social inequalities and financial stress in families could also arise. These factors can contribute to a higher dependence on social benefits and state support, which can burden the state budget and create additional pressure for tax system reforms (however, this is not part of this analysis).

Figure 3 shows the progressivity of the average rate in the Czech Republic in 2023.



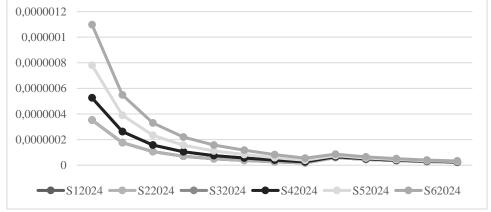
**Figure 3:** Progressivity of the average rate in the Czech Republic in 2023



Source: own processing

Figure 4 shows the progressivity of the average rate in the Czech Republic in 2024.

**Figure 4:** Progressivity of the average rate in the Czech Republic in 2024



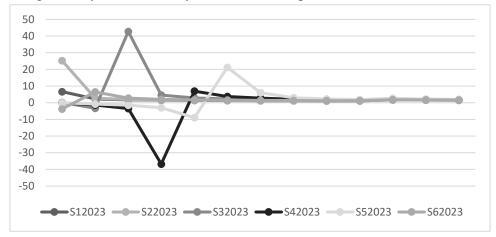
Source: own processing

The progressivity of the average rate is higher in 2023 compared to 2024 in most analyzed situations. The exception is the interval of income group 1st - 2nd for S4, S5 and S6, where the discount is not applied to the wife and further to the income group 9th - 11th for all situations where changes in the personal income tax rate are also reflected. In the case of average rate progressivity, there are significant changes in most situations. The exception is S1 and S3, in which the progressivity is the same in individual years up to the 9th income group. The biggest changes are in S4, S5 in the interval 1-3. Fluctuations in the interval of people with low incomes are caused by the fact that these people achieve a tax bonus, and in the case of the transfer of people with higher incomes, a given fluctuation occurs. Overall, it can be said that in the case of model situations, the progressivity of the average rate will rather decrease in 2024 due to the influence of the consolidation package. The change is between -0.00000011 to 0.00000035 depending on the situation. The biggest changes are between S4, S5 and S6. A reduction in the progressivity of the average rate means that the difference in the tax burden between low and high-income groups is narrowing. The reduction in the spousal allowance has a greater impact on lower and middle-income households because it represented a larger relief for them relative to their total income. Similarly, increases in social insurance will hit people with lower incomes harder. The tax changes lead to the fact that people can no longer fully use tax credits, which relatively increases their tax burden. Lower-income households are more sensitive to tax changes because more of their income goes to basic needs. Reduced progressivity may result in greater financial pressure on these households, which may lead to a reduction in their purchasing power.



Figure 5 shows the progressivity of tax liability in the Czech Republic in 2023.

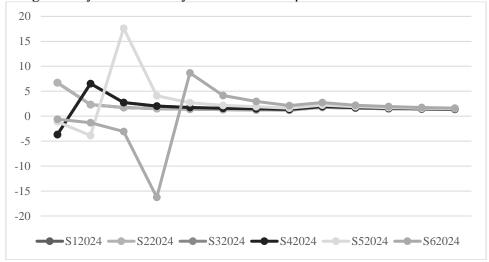
Figure 5: Progressivity of tax liability in the Czech Republic in 2023



Source: own processing

Figure 6 shows the progressivity of tax liability in the Czech Republic in 2024.

Figure 6: Progressivity of tax liability in the Czech Republic in 2024



Source: own processing

According to the values of the indicator of progressiveness of the tax liability, it is evident that the personal income tax is progressive in 2023 and 2024 for most of the analyzed situations, as its amount is greater than 1. We can see a regressive course in 2024 in the case of S3, S4, S5 and S6 for the 1st - 2nd income interval, then S5 for the 2nd - 3rd and S6 for the 2nd - 5th interval. In 2024, we can see a regressive course in several cases, and this in addition to the previous one for S5 for the interval 3rd - 5th and S6 for the interval 5th - 6th. The progressivity of the tax obligation was higher in 2023 than in 2024 in most of the analyzed situations. Exceptions are all situations for the income group interval 9th - 11th. Overall, it can be said that in the case of model situations, due to the consolidation package, the progressivity of the tax liability will rather decrease in 2024. The change is between -42.29 to 39.05 percent points depending on the situation. The biggest changes are between S4, S5 and S6. In principle, the greatest progressivity is found among people with low incomes, and in the case of income growth, there is rather a decrease in progressivity. This corresponds to a lower effective tax rate. Moderate growth again occurs in the income interval, when a higher tax rate is applied to



taxpayers. The consolidation package affects the progressivity of the analyzed situations much more compared to the average rate progressivity indicator. The development of the indicator is more fluctuating, especially for lower incomes. Eliminating the student credit and limiting the low-income spouse credit increases the effective tax burden on low and middle-income households. This move reduces the disposable income of these groups. Persons whose incomes have just exceeded the limit for the application of the 23% rate have seen a significant increase in the effective tax burden and an increase in this indicator. As a result, they are subject to a more progressive tax regime, as any additional income above this threshold is subject to a higher rate. Because the transition from a lower to a higher rate causes a relatively large jump in the tax burden for persons who have just found themselves in this zone. This jump results in a sharper increase in the average tax rate, meaning that these individuals face a higher progressive burden than those on lower incomes. For individuals whose incomes are well above the threshold for the 23% rate, the effect of progressivity may be less pronounced. These individuals already pay 23% of a significant portion of their income, so their average rate increases more slowly. As their incomes rise, the share of income subject to the higher rate stabilizes, so their effective tax rate rises less sharply than for those just above the threshold, where each additional income does not lead to such a dramatic increase in their average rate. In practice, this means that their tax system is still progressive, but at a more moderate pace.

Figure 7 shows the progressivity of income after taxation in the Czech Republic in 2023.

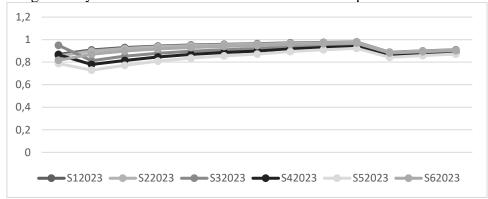
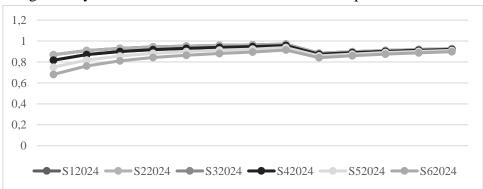


Figure 7: Progressivity of income after taxation in the Czech Republic in 2023

Source: own processing

Figure 8 shows the progressivity of income after taxation in the Czech Republic in 2024.



**Figure 8:** Progressivity of income after taxation in the Czech Republic in 2024

Source: own processing



According to the values of the indicator of progressivity of income after taxation, it can be seen that the personal income tax is progressive in 2023 and 2024 for all analyzed situations, as its amount is less than 1. The progressivity of income after taxation is higher in 2024 compared to 2023 in most analyzed situations. The exception is the course of S4, S5 and S6 for the interval 1st - 2nd and in the case of all situations for the income intervals 9th - 11th. The course of this indicator is similar in both years, with the exception of S4, S5 and S6 for the 1st - 2nd interval and for all situations it is the 8th - 10th interval, which is caused by the change in the personal income tax rate. Overall, it can be said that in the case of model situations, there will be an increase in the progressivity of income after taxation in 2024 due to the influence of the consolidation package. The change is between -0.12 to 0.05 percent points depending on the situation. The biggest changes are between S4, S5 and S6. The introduction of a higher tax rate (23%) on high incomes means that the very rich pay a much higher percentage of their income in taxes. A higher Social Security rate may mean that lower and middle income groups pay relatively more than the wealthy, who exceed this ceiling for the maximum assessment base. The abolition of the student discount and the limitation of the spouse discount, as mentioned, led to an increase in the tax burden on specific low-income groups. These changes may have reduced their net income after tax. Lower income groups, who have less after-tax disposable income, may face greater financial hardship. This can lead to a reduction in their ability to consume. Greater after-tax inequality can have negative effects on the overall economy. Lower consumption by the middle and lower income groups, which have a higher propensity to consume, may slow down GDP growth.

#### Conclusion

A consolidation package was approved in the Czech Republic, which brought about a number of changes in the tax system of the Czech Republic. The aim of this package is to increase the state's tax revenues, or to reduce state expenditures. This fact will affect the tax burden on taxpayers and probably increase it. The reason for this tax package is the high state debt of the Czech Republic caused primarily by the Covid-19 pandemic. It is likely that it would increase dangerously in the coming years without any government intervention. Around 60 measures were discussed, most of which came into force as of 1 January 2024. Among the selected changes are an increase in the corporate income tax rate from 19 % to 21 %, the introduction of the employee health insurance rate to 0.6 percentage point, an increase in real estate tax, the abolition of the taxpayer's discount, the limitation of the spouse's discount for persons who care for a child under 3 years of age, cancellation of trade union contributions and deductions for payments for examinations verifying the results of further education as a non-taxable part of the tax base. Other changes are in the area of work performed outside of employment, gambling, non-monetary benefits, etc.

The results of the progressivity of the average rate showed the progressive development of this indicator in all analyzed situations. Higher progressivity was reported for lower income taxpayers. In the case of the progressiveness of the tax liability and the progressiveness of income after taxation, a progressive course was also recorded, with exceptions. The effective tax rate was higher throughout its entire course in 2024 than in 2023.

#### References

- [1] ALSTADSÆTER, A., N. JOHANNESEN, SLG. HERRY and G. ZUCMAN, 2022. Tax evasion and tax avoidance. *Journal of Public Economics*, **206**. ISSN 0047-2727.
- [2] BISES, B., F. BLOISE and A. SCIALÀ, 2023. Labor share as an "automatic stabilizer" of income inequality. *International Tax and Public Finance*. ISSN 1573-6970.



- [3] COTRUT, M. et al., 2020. European tax handbook 2020. Amsterdam: IBFD. ISBN: 978-90-8722-690-9.
- [4] ČSÚ, 2023. Hlavní makroekonomické ukazatele [online]. [cit. 18. 7. 2023]. Available from: https://www.czso.cz/csu/czso/hmu\_cr.
- [5] DAMJANOVIC, T. and D. ULPH, 2010. Tax progressivity, income distribution and tax non-compliance. European Economic Review, 54(4), 594-607. ISSN 0014-2921.
- [6] DOERRENBERG, P. and A. PEICHL, 2013. Progressive taxation and tax morale. *Public Choice*, **155**(3-4), 293–316. ISSN 1573-7101.
- [7] ECHEVARRÍA, C., 2015. Income tax progressivity, growth, income inequality and welfare. *SERIEs*, **6**, 43–72. ISSN 1869-4195.
- [8] FINANČNÍ SPRÁVA, 2023. Údaje z daňových přiznání [online]. [cit. 18. 7. 2023]. Available from: https://www.financnisprava.cz/cs/dane/analyzy-a-statistiky/udaje-z-danovych-priznani.
- [9] FOREMNY, D., and N. RIEDEL, 2014. Business Taxes and the Electoral Cycle. *Journal of Public Economics*, **115**, 48–61. ISSN 1879-2316.
- [10] GARCIA-MUNIESA, J., 2019. Economic crisis and support for progressive taxation in Europe. *European Societies*, **21**(2), 256–279. ISSN 1461-6696
- [11] GENČEV, M., D. MUSILOVÁ and J. ŠIROKÝ, 2018. A Mathematical Model of the Gini Coefficient and Evaluation of the Redistribution Function of the Tax System in the Czech Republic. *Politická ekonomie*, **66**(6), 732–750. ISSN 2336-8225.
- [12] HAMPL, M., 2023. Výroční zpráva za rok 2022 [online]. [cit. 18. 7. 2023]. Available from: https://www.rozpoctovarada.cz/vyrocni-zprava/vyrocni-zprava-za-rok-2022/.
- [13] JUNG, J. and CH. TRAN, 2022. Health Risk, Insurance and Optimal Progressive Income Taxation. *Working paper number 2017-01*, Towson University Department of Economics.
- [14] KUBÁTOVÁ, K., 2016. Interval and global progressivity of the income tax from wages in the Czech and Slovak Republics. *Acta Oeconomica Pragensia*, **23**(1), 54–67. ISSN 0572-3043.
- [15] KRAJŇÁK, M., 2020. Is Personal Income Tax on Dependent Activity in the Czech Republic Progressive? *Politická ekonomie*, **68**(5), 534–553. ISSN 2336-8225.
- [16] KRAJŇÁK, M., 2021. Evaluation the impact of the personal income tax reform in the Czech Republic in 2021 on effective tax rate and tax progressivity. *Journal of Tax Reform*, 7(2), 134–145. ISSN 2412-8872.
- [17] LIMBERG, J., 2019. Tax the rich'? The financial crisis, fiscal fairness, and progressive income taxation. *European Political Science Review*, **11**(3), 319–336. ISSN 1755-7739.
- [18] MAREK, D., 2022. Státní rozpočet: neslavný rekord [online]. [cit. 18. 7. 2023]. Available from: https://www.dreport.cz/blog/statni-rozpocet-neslavny-rekord/.
- [19] MERTENS, K. and M. O. RAWN, 2013. The Dynamic Effects of Personal and Corporate Income Tax Changes in the United States. American Economics Review, **103**(4), 1212–1247. ISSN 0002-8282.
- [20] MFČR, 2023a. Závěrečná zpráva z hodnocení dopadů regulace k návrhu změnového zákona v souvislosti s konsolidací veřejných rozpočtů [online]. [cit.



- 18. 7. 2023]. Available from: https://www.mfcr.cz/cs/legislativa/legislativnidokumenty/2023/zaverecna-zprava-ria-51775/.
- [21] MFČR, 2023b. Čtvrtletní zpráva o řízení státního dluhu České republiky 1. čtvrtletí 2023 [online]. [cit. 18. 7. 2023]. Available from: https://www.mfcr.cz/cs/verejny-sektor/rizeni-statniho-dluhu/publikace/dluhove-portfolio-ctvrtletni-informace/2023/ctvrtletni-zprava-o-rizeni-statniho-dluh-50979/
- [22] MFČR, 2023c. Vláda představila Ozdravný balíček za bezmála 150 miliard [online]. [cit. 18. 7. 2023]. Available from: https://www.mfcr.cz/cs/aktualne/tiskove-zpravy/2023/vlada-predstavila-ozdravny-balicek-za-be-51211/.
- [23] NKÚ, 2023. Výroční zpráva o činnosti NKÚ za rok 2022 [online]. [cit. 18. 7. 2023]. Available from: https://www.nku.cz/assets/publikace-a-dokumenty/vyrocnizprava/vyrocni-zprava-nku-2022.pdfhttps://www.rozpoctovarada.cz/vyrocnizprava/vyrocni-zprava-za-rok-2022/.
- [24] OECD, 2023. Tax Revenue [online]. [cit. 18. 7. 2023]. Available from: https://data.oecd.org/tax/tax-revenue.htm.
- [25] PETER, K. S., S. BUTTRICK and D. DUNCAN, 2008. Global Reform of Personal Income Taxation, 1981-2005: Evidence from 189 Countries. *Working paper number 11*, Georgia State University.
- [26] PROFETA, P. and S. SCABROSETTI, 2017. "The Political Economy of Taxation in Europe." *Hacienda Pública Española / Review of Public Economics*, **220**(1), 139-172.
- [27] RYBÁČEK, V. and P. MUSIL, 2020. Relation between Government Balance and Debt. *Politická ekonomie*, **68**(4), 462–482. ISSN 2336-8225.
- [28] ŠIROKÝ, J., V. FRIEDRICH and K. MAKOVÁ, 2012. Testing the Predicative Ability of the Tax Progressiveness Indices. *E+M Ekonomika a Management*, **15**(1), 4–16. ISSN 2336-5064.
- [29] QUALO, H. and U. EYDAM, 2023. Income inequality and taxes an empirical assessment. *Applied Economics Letters*. ISSN 1350-4851.
- [30] VERBIST, G. and F. FIGARI, 2014. The Redistributive Effect and Progressivity of Taxes Revisited: An International Comparison across the European Union. *FinanzArchiv/Public Finance Analysis*, **70**(3), 405-429. ISSN 0015-2218