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CIGARETTE TAXATION AND CONSUMPTION IN THE CZECH REPUBLIC. HAVE THESE FACTORS INFLUENCED TAX REVENUE?

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Abstract

The article evaluates the development of the tax burden on cigarettes in the Czech Republic from 1993 to the end of 2023. Tax burden is represented by effective tax rate. The research results show that the tax burden on these products is still increasing. Not only does the tax burden increase, but so does the price of these products. The regression analysis results show that quantities such as the price of cigarettes, the effective tax rate or the amount of cigarettes consumed are factories that positively influence tax revenue. Since the tax rate or the price of these products constantly increases, the tax revenue is also increasing. It increased almost six- fold over the entire analyzed period. At the same time, it was found that other factors, such as the average wage, also affect the tax revenue. It is necessary to consider that the cigarette consumption has been showing a downward trend in recent years. However, the reason is not only the increasing tax burden and the price of these products but also the transition of consumers to so-called e-cigarettes. A reduction in cigarette consumption may be reflected in the future by reducing healthcare costs, which will create potential reductions in public health insurance payments.

JEL classification: C50, H20, I10

Keywords: Cigarette, Cigarette Taxation, Cigarette Consumption, Laffer Curve, Tax Rate

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Introduction

Tobacco products are typified by a relatively high tax burden. The largest part of the tax burden is the excise duty. The average price of a pack of cigarettes in the Czech Republic in 2024 is CZK 135, and more than 60% of this price is excise duty. In general, the purpose of excise duties is to limit the consumption of commodities that are harmful to health. The main aim of excise duties is to ensure stable and high tax revenue due to the high tax burden and inelastic demand for these commodities. In the context of tax theories, this securing of a stable income is associated with other "dividends" in the form of a reduction in the consumption of health-harmful products and, thus, a decrease of other social costs that arise in society due to the consumption of these products (Gillman, 2021 as well as Dyreng et al., 2022).

The article aims to evaluate the impact of the tax burden, the price of cigarettes and consumption on the tax revenue from the cigarette tax. The tax burden is represented using the effective tax rate indicator. The period from 1993 to the end of 2023 is analyzed. The reason for choosing the starting year 1993 is that the Czech Republic was founded in that year. The last year is 2023 due to the availability of data for analysis. During this period, two laws on consumption taxes were in force, the first until the end of 2004. In 2004, due to the entry of the Czech Republic into the European Union and the need for tax harmonization, a completely new law came into force. Another goal is to assess the influence of the factors such as the value of the average wage or the number of packs of cigarettes that can be purchased for the average wage of a given year on the tax revenue from the cigarette tax. Last but not least, it will also be analyzed whether the tax burden or the average wage affects cigarette consumption. Cigarettes are the commodity whose tax burden is the largest in the long term in the context of commodities that are subject to excise duties. In addition, all commodities subject to excise duties enter the tax base to calculate value-added tax (Krzikallová & Tošenovský, 2020 as well as Omondero, 2023).

In theory, the excise duty on cigarettes is a composite tax. The tax rate depends on the number of cigarettes in a pack and the selling price. The tax burden on tobacco products increases almost every year. This is due, among other things, to the type of tax rate, which is both unitary and ad valorem. In the Czech tax system, in addition to the type of unit rate and ad-valour rate, there is also a minimum rate for one cigarette. The entire principle of the calculation thus takes place theoretically in several steps. It is necessary to consider the number of cigarettes and the selling price of the whole pack of cigarettes. The calculation is carried out for a pack of cigarettes (20 pcs) in such a way that the number of cigarettes in a pack is multiplied by the unit rate for one cigarette, and at the same time, the selling price of a pack of cigarettes is multiplied by a percentage rate. These resulting values are then added together. After that, the next part of the calculation is multiplying the minimum rate for one cigarette by the number of cigarettes. The cigarette tax is then the higher of the two amounts – either calculated from the minimum aggregate rate or the sum of the fixed and percentage parts. This makes the calculation of cigarette tax in the Czech Republic slightly specific to a certain extent, which, however, creates another unique point of the article.

The question remains whether the tax revenue will continue to increase with the growth of the tax burden, or whether the so-called Laffer point has already been reached in the Czech Republic (for more on the Laffer curve, see: Gunji et al., 2024 as well as Alba & McKnight, 2022) and with further increases in the tax burden, the tax revenue will decrease.

The structure of the article is as follows. In the introduction, the importance and topicality of the study topic is defined. The following section provides an overview of selected studies that have already dealt with the taxation of tobacco products. The core part of the text is its analysis, which investigates the influence of cigarette consumption or the effective tax rate on tax revenue. In the conclusion, the main results are summarized, and limitations and possibilities for further research in this area are presented.

Literature Review

A number of studies have analysed the tax burden on tobacco products in the past. For example, Yang and Lin (2024), Alshamleh et al. (2023) or Demir and Balki (2023) discussed the general aspects of excise duties' functioning and significance in the economy.

The extent to which the taxation of cigarettes affects their consumption has already been investigated by several studies worldwide. Prasada et al. (2024) examined aspects of tobacco taxation in India. In this state, an annual increase in the tax burden is typical. Based on the analysis for the period 2007 – 2022, it can be stated that the taxation of tobacco products led to a reduction in the consumption of these products. A decrease in consumption leads to an increase in the population's health, which is why the study by Bardach et al. (2022) recommends continuing the trend of increasing the tax burden on tobacco products. The study by Zvolská et al. (2023) also recommends increasing the tax burden on tobacco products. The argument for the increase is the high affordability of these products. David (2018) also mentions that the tax burden on tobacco products is insufficient and should be increased. The

tax burden on tobacco products is insufficient and should be increased. The reason is mainly the social costs of smoking. Another factor is the increased cost of health care, for example Vrabková and Vaňková (2022).

The term double dividend appears in the literature in connection with excise duties. According to Bella et al. (2023), the first dividend is given by limiting the consumption of harmful products, the second by tax revenue. e.g. in Indonesia, a 45% increase in the tax on tobacco products led to an increase in tax revenue and economic production or employment in the country. Boachie et al. (2022) examined the dependence of cigarette consumption on cigarette prices in Ghanda. Over the investigated period of more than 35 years, it emerged that the price elasticity of demand for cigarettes is negative, the higher value of negative elasticity is in the long period. Therefore, a cigarette tax is an appropriate tool to reduce the consumption of these commodities. On the contrary, the results of Kim and Lee (2021) mention that when the tax on cigarettes is increased, their consumption will not decrease. Also, Friedson et al. (2023) study confirms that taxing tobacco products and increasing the tax burden positively affect reducing the consumption of health-harmful commodities.

As the price level in the economy increases, cigarette prices typically rise as well. However, their increase is higher than the rate of inflation. The results of Laverty et al. (2023) examining cigarette price differences in 195 countries for the period 2014–2018 confirm that taxation is usually implemented using a composite type of tax rate. Rising cigarette prices are causing consumers to switch from more expensive premium brands to cheaper ones. Laverty et al. (2021) also performed the same analysis for the period 2004-2014 in EU countries. The results of the study confirmed the downward trend in cigarette consumption, as well as the fact that the tax burden on cigarettes is the highest in Europe compared to other continents in the world. Worrell and Hagen (2021), as well as Kalousova et al. (2020) confirmed the long-term connection between the price of cigarettes and consumption. In the case of possible changes in the legislative regulation, it is also desirable to consider the shift of some users to the consumption of e-cigarettes (Deng et al., 2023). In e-cigarette taxation, e.g., the results of studies by Saffer et al. (2020) or Cooper and Pesko (2024) proceed precisely as in the case of taxation of regular cigarettes.

Janda and Strobl (2019) modelled the dependence of the consumption of tobacco products and the tax revenue from the excise duty on tobacco products using a regression model. According to their results, tax revenue and cigarette consumption should increase until 2028. A study by Zimmermannová et al. (2019) was also conducted in the Czech Republic. The results of this study mention that the excise duty has a negative impact on the consumption of cigarettes in the Czech Republic. A further increase in the tax burden on cigarettes can also lead to a widening of the tax gap and related tax losses due to illegal trade despite the high tax quota (Juruss et al., 2018). Despite the above facts, excise duty contributes significantly to tax revenue (Randelovic & Bisic, 2021, as well as Kukalová et al., 2021). If the goal is to maximize the tax revenue, it is recommended to increase the universal indirect tax, i.e. value-added tax (Sayari, 2023). In addition to the increase in the tax on cigarettes, the tax on ethanol was also increased in the Czech Republic. This is further analyzed by Nebeská et al. (2024). According to Ladrennikova and Busse (2020), when making changes in the field of excise duty, it is recommended that Western European countries follow the rules set in this area.

As indicated by the review of research studies, it has been confirmed that there is a dependency between the tax revenue of excise duties on cigarettes and the consumption of cigarettes. Research studies that have already been done in some cases only monitored the development of the percentage of the so-called ad valorem tax rate. This study removes this limitation, and the effective tax rate is used in the dependency analysis. Also, studies examining such a long period have not yet been conducted in the Czech Republic. Therefore, research potential and the possibility of eliminating the research gap in the existing area can be seen as well. In addition to the size of the tax burden represented by the effective tax rate or taxes expressed in CZK, the investigated factor is the total selling price of cigarettes. The inclusion of multiple investigated quantities together is another added value. All the listed dependencies are analysed in the Czech Republic. This country is chosen due to its location in Europe, as it emerged from the above research studies that European countries are characterized by a relatively high tax burden on cigarettes. The location of the Czech Republic in the centre of Europe is another reason for choosing this country. From the point of view of economic performance, for example, according to Eurostat (2024), this is a country that is neither above average nor below average in terms of financial performance or unemployment in the context of the average values of the European Union.

Methodology

The input data for the analysis are sourced from the following:

1) Data on the tax revenue of excise duty of tobacco products from the portal of the customs administration (Custom Administration, 2024).

2) Data on cigarette consumption in pieces, the average price of cigarettes and average wage from the portal of the Czech Statistical Office (Czech Statistical Office, 2024).
3) The author calculates the effective tax rate based on the formulation explained in the methodology subsection.
4) The author's research obtains the number of packs of cigarettes that can be purchased for an average wage as a proportion of the average wage and the average price of a pack of cigarettes.

All input data are from 1993 when the Czech Republic was established. Excise duties have been regulated by the Act on Excise Taxes all the time until now, but a significant change took place in 2004. From this year, tax administration is carried out by the customs administration, until 2004 it was the tax authorities. Considering the availability of data, the analysis is carried out for the period up to until 2023 or 2022. The average consumption of cigarettes per 1 citizen in the Czech Republic for the year 2023 has not yet been published by the Czech Statistical Office. Unless otherwise stated in the text, quantities such as average cigarette price, excise duty, and effective tax rate are calculated per pack of cigarettes (20 pcs), and average cigarette consumption is given for number of cigarettes.

The article uses standard positivist methodology, methods of description, comparison, deduction, analysis and synthesis. To assess the dependence between the analysed quantities of the regression and correlation analysis methods are used.

Since the nominal tax rate does not tell much about the real tax burden, values of the effective tax rate ETR are calculated, which, as stated by Drake et al. (2020) has a higher predictive power. The calculation is made according to (1):

$$ETR = \frac{TTP}{TP} \tag{1}$$

where TTP is the tax on tobacco products and TP is the price of the tobacco product. The calculation of the tax on tobacco products, specifically cigarettes, is implemented using (2):

$$ED = P * TR_{\%} + KS * TR_{KS} \tag{2}$$

where ED is the excise duty, P is the selling price of cigarettes including all taxes, TR% is the percentage tax rate, KS is the number of cigarettes in a box and TRKS is the unit excise tax rate per cigarette. In addition to excise duty, cigarettes in the Czech Republic are also subject to value-added tax, which is currently 21%. However, this tax is not the subject of this study.

The study deals with how the consumption of cigarettes, the effective tax rate or the average price of cigarettes affect the tax revenue. In general, the equation can be modelled by (3):

$$y = b_0 + b_1 * X_1 + b_2 * X_2 + b_3 * X_3 \tag{3}$$

where Y is the tax revenue, X_1 is the average price of cigarettes, X_2 is the effective tax rate and X_3 is the average number of cigarettes consumed per year per 1 citizen.

In addition to examining the factors mentioned above, the next model will examine whether and how the average wage or the number of packs of cigarettes that can be purchased from the average wage affects this tax revenue. This model will subsequently be modified so that the variable x is cigarette consumption. The form of the model determined in equation (3) remains the formal notation.

All models will also be analysed for normality using the Shapiro-Wilk test, the Durbin-Watson test for the absence of autocorrelation of the residuals, the Breusch-Pegan test for heteroskedasticity, and the variance inflation factor will be used to check for multi correlation between the data. More about these tests, e.g. Ibrahim (2022), as well as Ding (2023).

Results

Table 1 presents the descriptive characteristics of the input data. Data on the mean, deviation, minimum, or maximum value are part of this descriptive statistics.

Table 1: Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Tax revenue	30	7.60	59.50	34.1107	18.51651
Average price	30	27.09	114.98	59.1040	24.32555
Effective tax rate	30	31.14	65.34	50.8711	11.67406
Consumption	30	1240.00	2354.00	2002.7567	231.36351
Average wage	30	5904.00	39858.00	21160.7333	9277.48452
Number of packs	30	209.36	449.64	352.4039	46.30049

Source: Author's own work.

After performing the basic characteristics of the input data for analysis using descriptive statistics, aspects of the excise tax revenue from tobacco products are subsequently analysed. The strength of the dependencies between the variables is verified using the Pearson correlation coefficient values in the correlation matrix in Table. 2.

Table 2: Correlation matrix

	Tax revenue	Average price	Effective tax rate	Consumption	Average wage	Number of packs
Tax revenue	1					
Average price	0.945067	1				
Effective tax rate	0.957652	0.889269	1			
Consumption	-0.321410	-0.573160	-0.286130	1		
Average wage	0.954561	0.982703	0.908279	-0.474450	1	
Number of packs	0.412128	0.305172	0.446828	0.256088	0.467259	1

Source: Author's own work.

The values of the coefficient in the table often show often a medium or very high degree of direct dependence between tax revenue and the analysed variables with the exception of variable consumption, where there is slight indirect dependence. The excise duty presented by effective tax rate on the average price of 1 pack of cigarettes positively affects the tax revenue. The higher the price, the higher the tax burden on each pack of cigarettes. Therefore, the remaining variables, such as the effective rate of excise duty are factors that have a positive effect on tax revenue. Since the consumption of cigarettes in the Czech Republic is decreasing, on the contrary, according to the results of the correlation analysis, this variable is a factor affecting the tax revenue negatively, which is expressed by the negative value of the correlation coefficient for this assessed pair of indicators. This result thus agrees with the conclusions of the study by Prasada et al. (2024) or Boachie et al. (2022). The results also indicate that other different variables can influence the tax revenue, an example is the average wage.

Based on the results of the correlation analysis, a model for quantifying the relationship between tax revenue of excise duty from tobacco products and the already mentioned quantities is compiled. In general, the model is defined by (3). In model 1, price, effective tax rate and cigarette consumption indicators will be examined first. Furthermore, model 2 will be created to examine the dependence of tax revenue on cigarette consumption, average wage and the number of packs of cigarettes an average wage can buy. Subsequently, the model will be modified, where the explained variable will be consumption and the variables x wage, effective tax rate and number of cigarette packs.

Table 3 shows the results of the first regression model. In accordance with Pradubsi and Suphirat's (2024) a significance level of 0.05 is chosen for all models.

Table 3: Regression model

	Model 1		Model 1		
	Coef.	Sig.	Coef.	Sig.	VIF
X_1 – Average price	0.595	0.001	0.376	0.009	1.445
X_2 – Effective tax rate	0.517	0.001	0.601	0.008	1.043
X_3 – Consumption	0.018	0.001	0.013	0.006	1.483
Constant	-62.516	0.001	-48.500	0.030	-
Observation	30.000		29.000		
R^2	0.980		0.604		
GG test – F	0.001	0.050	0.009	0.050	
Durbin-Watson test	1.540		2.306		

Source: Author's own work.

For model 1, the F value for the Goldefeld-Quandt test (GG test) is lower than the significance level, so there is no heteroskedasticity in the model. The distribution type was also verified. What is a problem with model 1 is the results of the Durbin-Watson test.

Therefore, in the second part of Table 3, a modified regression model 1' is compiled. The first difference method for data transformation is used. All coefficients in model 1' are again positive, confirming that the mentioned variables positively effects tax revenue. The

Goldefeld-Quant test or the result of the Durbin-Watson test confirming that the data do not show autocorrelation and heteroscedasticity. The Variance Inflation Factor is also below the value of 10 for the variables in the 1' model, which, according to Salmeron-Gomez et al. (2024), means that there is no multicorrelation of the data. Model 1´ is thus fully statistically plausible. In general notation, the model is determined by equation (4):

$$y = 0.376x_1 + 0.601x_2 + 0.013x_3 - 48.5 \quad (4)$$

The tax revenue is thus statistically dependent on the price of cigarettes, the effective tax rate and their consumption.

The price of cigarettes, the effective rate or their consumption positively influences tax revenue. In the correlation matrix examining the dependence between all analysed variables, the indicator of cigarette consumption came out with a negative correlation coefficient. Therefore, model 2 will be compiled to evaluate the dependence of the tax revenue on other factors like the average wage in a given year or the number of packs of cigarettes that a consumer can buy if he receives the average wage. The results for model 2 are also presented in Table 4.

Table 4: Regression analysis

	Model 2			Model 3		
	Coef.	Sig.	VIF	Coef.	Sig.	VIF
X_1 – Consumption	0.025	0.001	2.071	-	-	-
X_1 – Effective tax rate	-	-	-	14.899	0.016	5.722
X_2 – Average wage	0.002	0.000	2.476	0.036	0.001	5.826
X_3 – Number of packs	-0.094	0.022	2.053	2.947	0.001	1.224
Constant - revenue	-34.436	0.001	-	-	-	-
Constant - consumption	-	-	-	962.561	0.001	-
Observation	30.000			30.000		
R^2	0.961			0.616		
GG test – F	0.001	0.050	-	0.001	0.050	-
Durbin-Watson test	1.881			1.850		

Source: Author's own work.

The equation for model 2 has the form determined by (5):

$$y = 0.025x_1 + 0.002x_2 - 0.094x_3 - 34.436 \quad (5)$$

The equation confirms that consumption has a positive impact on tax revenue. This is in agreement with the results in the previous model. However, it is necessary to consider that cigarette consumption is decreasing. The results of studies by Janda and Strobl (2019), Bardach et al. (2022), as well as Cotti et al. (2022) also discuss the fact that the consumption of tobacco products is decreasing. Variables in model 2 are statistically significant, since the value of the Durbin-Watson test is close to 2, it can be assumed that there is no data correlation.

In addition to this factor, the fact that wages in the Czech Republic have increased significantly since 1993 also positively impacts tax revenue. While the average wage in 1993 could buy approximately 200 packs of cigarettes, in the last analysed year, it was possible to buy almost 350 packs for the average wage. Consumption will be the explanatory variable in the previous regression model. It will examine how consumption is influenced by both the tax aspect, which in this case is represented by the effective tax rate, and also other economic factors, which in this study are the average wage and the number of packs of cigarettes that can be purchased from the average monthly wage.

Model 3 shows the dependence between consumption and the effective tax rate, the average wage and the number of packs of cigarettes that can be purchased for this wage.

$$y = 14.889x_1 + 0.036x_2 + 2.947x_3 + 962.561 \quad (6)$$

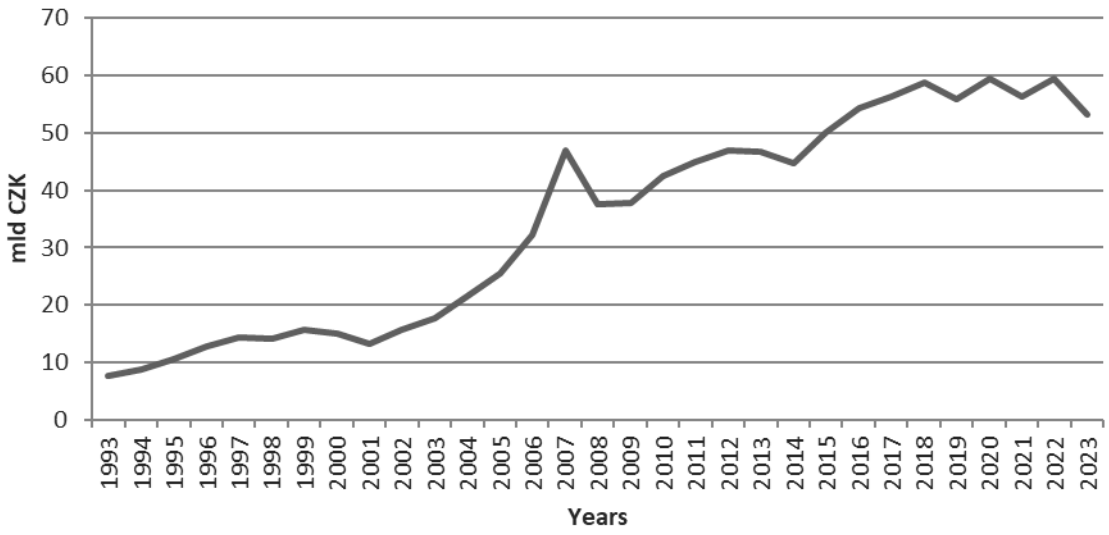
This result confirms the positive impact of the number of cigarette packs or wages on consumption. With higher earnings, consumers have more opportunity to purchase more selected commodities. Thus, wage growth is a factor affecting cigarette consumption. F for the Goldefeld-Quandt test, the significance levels of the X_N variables, and the value of the DW test are in accordance with the requirements to ensure the reliability of the regression model. The VIF value disproved multi-correlation. Despite the above facts, it is appropriate to mention one more aspect, and that is e-cigarettes, the consumption of which is increasing and thus gaining in popularity. The electronic cigarette represents a modern alternative for those who want to

limit the inhalation of harmful substances from regular cigarettes.

The regression and correlation analysis confirmed that the price of cigarettes or the effective tax rate positively effects tax revenue. The research question remains whether, with a further increase in the tax burden, tax revenue will increase. The trend in the development of the tax burden on cigarettes is increasing, and further increases in the tax burden are expected in the Czech Republic in the future as well. At the same time, the consumption of cigarettes per person is decreasing. However, the reason is not only the price increase but also the growing popularity of e-cigarettes. This causes a drop in demand for classic cigarettes. These facts must be considered when expecting further tax revenue and also possible adjustments in the field of e-cigarette taxation, not only at the national level but also in the context of common rules established by the European Union.

The tax revenue from tobacco products from 1993 to 2023 is shown in Figure 1. Tax revenue shows an increasing trend until the end of 2022, with minor exceptions. Tax revenue increased almost six fold during the analysed period. However, it is necessary to consider the fact that it occurred in 2023. This is a logical conclusion because, due to the structure of the tax rate, with decreasing consumption, tax revenue will also decrease. Another note that is desirable is related to about the Laffer curve theory. It can be stated that the Czech Republic has already reached Laffer's point for excise duty on tobacco products. This conclusion agrees, for example, with Lee et al. (2023) that further increases in tax rates due to a very high tax burden may no longer result in higher tax revenue in several countries. The reason may not be only the tax burden, but the already mentioned trend of growth in the popularity of e-cigarettes.

Figure 1: Tax revenue



Source: Author's own work.

The increasing tax burden will also cause the consumption of cigarettes abroad to increase, as countries such as Poland and Slovakia, which are close to the Czech Republic, have a lower tax burden on cigarettes. At the same time, such a high rate will lead to the fact that the officially reported consumption will decrease again because the high tax burden will lead according to Nevzorova et al. (2020) or Juruss et al. (2018) to the growth of tax evasion and the consumption of tobacco products that will not be ring-fencednoted by the customs administration. An increase in the tax burden may also be reflected in the fact that consumers will look for cigarettes of non-premium brands, which are, therefore, cheaper.

Conclusion

The article evaluated the dependence of the tax revenue from the tax on tobacco products on the price of cigarettes, effective tax rates, and cigarette consumption in the Czech Republic. It examined the period since 1993, i.e., the period since the Czech Republic's was established.

The regression analysis results confirmed that, with minor exceptions, most of the analysed variables have a positive impact on tax revenue. Specifically, the results of the regression analysis confirmed the positive impact of the price of cigarettes, the effective tax rate, and consumption. The average wage was also a factor positively influencing tax revenue.

From the point of view of the price of cigarettes, the reason for the positive effect is the construction of the tax rate, where the basis of the tax is also the selling price of a pack of cigarettes. With a higher selling price, the tax burden and, thus, tax revenue automatically increases without increasing the nominal tax rate. The effective rate also has a positive impact, as tax revenue increases with the tax burden's growth. Despite this fact, tax rates in the Czech Republic often increase. According to David (2019), the tax burden on these commodities would have to increase fourfold for the tax on cigarettes to cover all emerging social costs and medical expenses associated with treatment. Therefore, the tax burden on these products can also be expected to increase in the coming years. In the context of tax changes, the European legislation governing cigarette taxation differs from the legislation in other countries. While reforms increasing the tax burden on cigarettes are frequent in European countries, e.g. in Japan, according to Oshio and Nakamura (2022), there is no increase in the tax burden, and the trend is relatively constant.

The factor that, according to the regression analysis, also had a positive impact on the tax revenue is the consumption of these cigarettes. The more cigarettes are consumed, the more tax will be collected. The taxpayer buys cigarettes or any other commodity from his income. This income is usually a wage. Wages in the Czech Republic are growing faster than the increase in the price of a pack of cigarettes, so this factor also positively impacts tax revenue. With a higher income, you can buy more of these commodities.

The state aim is to collect as much as possible in taxes. However, it is a question of whether the tax revenue will continue to increase with a higher tax rate in the future. One of the factors is the slightly decreasing trend of cigarette consumption that occurred in 2021 and 2022. However, the reason is not only the change in the tax burden of these products but also the growing support for e-cigarettes. The consideration of this factor can be the topic for further research studies in this area. Currently, these data are not available for a sufficiently long time series to allow the creation of a regression model. Not including this factor at present is thus a slight limitation of this study.

This study was conducted in the Czech Republic. The reason for choosing this country as representative is the relatively frequent changes in the legislative adjustment of tax rates and that the Czech Republic belongs to countries with average economic performance. When choosing a different country, the results may be slightly different, which is the next limitation of this study.

The results of the study find wide application, both on a practical and academic level. On a practical level, the application of the results comes into consideration in the creation of economic and tax policies dealing with the area of taxation of tobacco products. The stated results can also serve as inspiration for the possible creation of legislation regulating the taxation of e-cigarettes. On the academic level, the practical output is in expanding the level of scientific knowledge, which is determined by the length of the examined period and the specific way of constructing the tax base. The results can thus be compared with other research studies with states with a set tax rate either only in units or only in percentages. The potential for application in this area is also on a practical level when other states are considering adjusting this tax rate to a so-called composite excise tax, as is the case in the Czech Republic. These results can be used at the domestic level as support for any further considered adjustment of cigarette tax rates, as this tax burden is significantly lower.

As it follows from this study, but also from tax theories in general, the increased tax burden on commodities that are harmful to health is justified. The costs arising from this consumption are higher than the often levied cigarette tax. Therefore, it can be concluded that it is the right decision to increase the tax burden in the future. The regression analysis results confirm that this increase would be reflected in higher tax revenue. However, it is necessary to respect the current popularity of e-cigarettes in this decision and consider higher taxation of these products if the goal is to maximize tax revenue and reduce the social costs associated with the consumption of these health-damaging products.

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