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Taxation of Still Wine in the Czech Republic*

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Abstract

This paper deals with the taxation of still wine in the Czech Republic. The aim of the paper is to quantify the fiscal impact of the imposition of a non−zero excise duty rate on still wine on excise and value added tax revenue. The paper uses an analytical approach to assess the impacts using data collected on consumption, production and price of wine and elasticity of demand under several alternative tax rates. The results show that taxation of still wine has significant potential to increase tax revenues for public budgets. Tax revenues would increase by an amount between 4.7 and 5.3 billion CZK if the tax rates on still and sparkling wine were aligned. Moreover, several recommendations are formulated to remove the advantage of still wine over sparkling wine, while at the same time allowing support for small wine producers who would be more affected by taxation than large producers.

Keywords: still wine; fiscal impact; excise duty

JEL classification: H21

1. Introduction

Still wine is the only type of alcoholic beverage subject to zero excise duty in the Czech Republic. According to Council Directive 92/83/EEC, EU Member States shall apply an excise duty, inter alia, to wine, however, in accordance with Council Directive 92/84/EEC, the minimum rate of excise duty on wine shall be fixed at zero amount. Several EU Member States actively use this option and apply a zero rate of excise duty to still wine.

According to recent data, 15 out of 28 EU Member States (including the United Kingdom) apply a zero excise duty rate on still wine (European Commission, 2024; Government of the United Kingdom, 2023; Danish Customs and Tax Administration, 2024).

* This paper is based on the diploma thesis that deals with the taxation of still wine in the Czech Republic (Šmíd, 2025).

Examining the tax rates on still wine in relation to each country's geographic location provides an intriguing perspective. The highest tax rates on still wine in Europe are in the British Isles and the Nordic countries, followed by the Benelux countries, except for Luxembourg, and the Baltic States. This perspective suggests that wine-producing countries apply a zero tax rate on still wine, while non-zero tax rates are imposed by countries where wine is not produced or only in small quantities. This conclusion is supported by the data on the size of the vineyard area in each EU country according to the Eurostat database. This remarkable phenomenon throughout the EU can be summarised as follows:

- EU Member States with at least 500 hectares of vineyards apply a zero excise duty on still wine, with the sole exception of France.
- EU Member States with less than 500 hectares of vineyards impose a non-zero excise duty on still wine (European Commission, 2024; Eurostat, 2022; Government of the United Kingdom, 2023; Danish Customs and Tax Administration, 2024).

As demonstrated above, a zero tax rate on still wine in the Czech Republic is not an exception across the EU, but rather the standard for wine producing countries. Interestingly, still wine in the Czech Republic has been subject to a non-zero tax rate since 1993, but this was considerably lower than the tax rate on sparkling wine. Moreover, it was gradually reduced and from the beginning of the new millennium it was reduced to zero, where it has remained until now (Act No. 587/1992 Coll., of the Czech National Council on Excise Duties, as amended; Act No. 353/2003 Coll., on Excise Duties, as amended).

While many wine–producing countries in the EU apply a zero-excise duty on still wine, it raises questions about whether this beverage should be favoured over other alcoholic drinks, as it is fundamentally similar to them. Also, its consumption is associated with a number of negative externalities, and, at the same time, its taxation can also generate revenues for public budgets, apart from internalising negative externalities, as it is levied with relatively lower administrative costs and causes relatively lower distortions compared to other taxes (Cnossen, 2022).

The aim of this paper is to quantify the fiscal impact of the imposition of a non-zero excise duty rate on still wine on excise and value added tax revenues. The analysis estimates the impact on excise and value added tax revenues under three alternative excise duty rates on still wine, considering low, medium and high values of the price elasticity of demand. An alternative calculation is also made for the imposition of a reduced rate for small wine producers at the minimum level allowed by Council Directive 92/83/EEC, i.e. at half of the standard rate.

The analysis of the fiscal impacts of taxation of still wine can provide valuable insights for legislative decision–making regarding the determination of appropriate tax rates. This area remains underexplored, with a notable lack of studies specifically addressing this aspect of tax policy.

This paper begins with a review of the literature on negative externalities, tax incidence, and the price elasticity of demand relating to alcoholic beverages. The second section details the data and methods employed to analyse the fiscal impacts of taxation of still wine. The third section presents the results of the analysis, before a concluding section summarises and discusses the findings in a broader context.

2. Literature review

2.1 Negative externalities

Consumption of alcoholic beverages leads to various negative externalities that are not reflected in consumer prices, with society bearing the costs. Anderson and Baumberg (2006) categorize these negative externalities into tangible (economic) costs and intangible costs. Tangible negative externalities are further divided into direct costs - such as healthcare costs, treatment and prevention costs, crime–related expenses, and damages from traffic accidents – and productivity losses, including unemployment and premature deaths. Intangible costs encompass the suffering and loss of quality of life attributed to crime and health issues associated with alcohol consumption, which do not represent economic costs in the strict sense. Anderson and Baumberg (2006) estimate that the total tangible negative externalities in EU countries amounted to 0.9% to 2.4% of GDP in 2003, with approximately half stemming from direct costs and half from productivity losses. The authors also estimate the intangible negative externalities to range from 1.7% to 8.3% of GDP.

Arthur Pigou (1932) addressed the issue of negative externalities in his work “The Economics of Welfare”. He argued that when marginal social costs differ from marginal private costs, producers lack the incentive to internalize external costs. This discrepancy results in the production of quantities that exceed the socially optimal level, leading to market imbalances. To resolve this, Pigou proposed imposing a tax on producers equal to the external marginal cost of the negative externalities, which would eliminate excessive production and ensure an equilibrium quantity produced. Pigou’s analysis laid the groundwork for the concept of Pigouvian taxes, which are designed to address negative externalities by aligning private incentives with social welfare. His argument for government intervention in cases of externalities remains influential in economic thought today.

The Pigouvian tax can only be imposed if the government is able to levy a tax on each individual equivalent to the negative externality they cause, or if the relationship between alcohol consumption and negative externalities is linear. In this case, the marginal tax rate would equal the marginal social costs (Cnossen, 2007). However, Cnossen (2007) points out that nearly all negative externalities associated with alcohol are caused by just 10% of the non–abstaining population, who consume approximately one–third to one–half of all alcohol. Under such conditions, the average tax rate on alcohol inefficiently internalizes negative externalities, as it shifts most of the costs onto others who do not contribute to their creation. This can lead to excessive tax burdens (Pogue & Sgontz, 1989).

Cnossen (2007) also highlights that the price elasticity of demand for alcohol among heavy drinkers at the 95th percentile approaches zero. Given that this group is responsible for most of the negative externalities associated with alcohol consumption, the excise duty on alcohol serves as a very ineffective tool for reducing these externalities. In such circumstances, the alcohol excise duty primarily serves a fiscal purpose.

Kukalová, Moravec, Filipová, and Kučírková (2021) examined the fiscal significance of alcohol excise duties in the Czech Republic in relation to direct healthcare costs. They analysed the relationship between total healthcare costs associated with excessive alcohol consumption and the revenue generated from alcohol excise duties in the Czech Republic from 1998 to 2017.

Except for the first year examined, in all subsequent years, healthcare costs related to excessive alcohol consumption exceeded the revenue from alcohol excise duties. The largest discrepancy was recorded in 2009, with a difference of 14.63 billion CZK. Between 1998 and 2009, healthcare costs rose sharply from 9.66 billion CZK to 25.36 billion CZK (an increase of 163%), while revenue from alcohol excise duties stagnated during the same period. Over the entire analysed period, total healthcare costs increased by 139%, whereas revenue from alcohol excise duties grew by only 16% (Kukalová, Moravec, Filipová, & Kučírková, 2021; Act No. 587/1992 Coll., of the Czech National Council on Excise Duties, as amended; Act No. 353/2003 Coll., on Excise Duties, as amended).

The authors of the study highlight that direct healthcare costs associated with excessive alcohol consumption are just one of the negative externalities caused by alcohol consumption. On the other hand, excessive alcohol consumption also provides a benefit to public budgets in the form of savings on pensions due to premature deaths (Kukalová, Moravec, Filipová, & Kučírková, 2021).

According to Fogarty (2009), the excise duty on alcohol in most countries does not cover the negative externalities associated with its consumption. He recommends increasing the ex-

cise duty alongside other measures, particularly enhancing consumer awareness of the harmful effects of alcohol consumption and enforcing zero tolerance for driving under the influence, especially among young people. Christiansen and Smith (2012) reach a similar conclusion, stating that the most effective solution to negative externalities is a suitable combination of excise duty and government regulation.

Driving under the influence significantly contributes to the negative externalities associated with alcohol consumption. Levitt and Porter (2001) indicate that drunk drivers are thirteen times more likely to cause a fatal traffic accident than sober drivers. In the USA, Kenkel (1996) reports that approximately half of the negative externalities associated with alcohol stem from deaths of others due to accidents caused by drunk drivers, adding that optimal taxation of alcohol could be significantly lower if penalties for driving under the influence were more certain and severe. Herrnstadt, Parry, and Siikamäki (2015) also argue that strict financial penalties for driving under the influence make the most economic sense in terms of internalising negative externalities.

According to Janda, Lajksnerová and Mikolášek (2019), the current excise duty rates on beer and wine in the Czech Republic are generally below their optimal levels with significant room for increasing these taxes to better align with social costs associated with alcohol consumption. They emphasize that the fiscal component of the tax plays a crucial role in determining the optimal tax level, indicating that a well–designed tax policy could not only address externalities but also enhance government revenue. The analysis demonstrates that an increase in alcohol taxes could lead to improved public health outcomes and a reduction in the negative externalities associated with excessive alcohol consumption.

2.2 Tax incidence

Increasing the tax rate, not just for excise duties, may not be fully reflected in an increase in consumer prices. Similarly, a decrease in the tax rate may not lead to a corresponding reduction in prices for consumers. This is because the full reflection of a change in tax rates into consumer prices may not align with the price at which businesses maximise their profits.

Previous studies suggest that the impact of tax changes on consumer prices is not straightforward and depends on their magnitude. Smaller tax changes tend to result in price overestimation (i.e., the price change is greater than the tax change), while larger tax changes tend to lead to price underestimation (Karp & Perloff, 1989; Zápal, 2014). It appears that consumer prices respond asymmetrically to tax changes. An increase in the tax rate typically has a more pronounced effect on price and tends to be overestimated, whereas a decrease in the tax rate has a smaller impact on price and is often underestimated (Bergman & Hansen, 2019).

Bergman and Hansen (2019) also point out another factor influencing the extent to which changes in tax rates are reflected in consumer prices – distance from national borders. Based on an empirical study conducted in Denmark, they conclude that the reflection of an increase in tax rates into consumer prices is directly proportional to the distance from the German border. Near the German border, the reflection of an increase in excise duty into prices was found to be statistically insignificant, while its significance increased with greater distance from the border.

A meta–analysis of 30 studies conducted by Nelson and Moran (2020) concludes that beer prices tend to be overestimated in response to tax changes, whereas spirits fully reflect changes in tax rates in their prices. For wine, significant conclusions could not be drawn due to a smaller data sample, which the authors acknowledge as one of the limitations of their study. Nevertheless, several conclusions can be drawn from the meta–analysis (2020):

- Full reflection of tax changes in consumer prices is not entirely excluded.
- Consumer prices respond relatively quickly to tax changes, with long–term effects manifesting within months.
- Distance from borders can have a significant effect on price differences.

Zápal (2014) presented an interesting study tracking the transfer of tax changes into consumer prices by examining the impact of VAT changes following the Czech Republic's accession to the EU in 2004. Two significant changes occurred – a reduction of the standard VAT rate from 22% to 19% and the reclassification of several goods and services from a reduced 5% VAT rate in the standard VAT rate. The author concludes that the reduction in the standard VAT rate did not lead to a statistically significant change in consumer prices but was reflected only in an increase in margins for producers and retailers. For goods and services moved from the reduced VAT rate to the standard VAT rate, there was an average price increase of 5.5% after five months, which corresponds to approximately 40% reflection of the change in VAT rate into consumer prices.

2.3 Price elasticity of alcohol demand

Price elasticity of alcohol demand is a key factor influencing the effectiveness of public policies aimed at reducing alcohol consumption. Considering demand elasticity is also essential for estimating the impact of changes in tax rates on public revenue. In this paper, the price elasticity of demand for wine is utilised within the analysis. Price elasticity of demand is calculated using Equation 1:

$$\text{Price elasticity of demand} = \frac{\text{Change in quantity demanded (in \%)}}{\text{Change in consumer price (in \%)}} \quad (1).$$

In the literature, there are a large number of studies examining the price elasticity of demand for alcohol. However, the results obtained vary significantly, primarily due to spatial and temporal variability in the input data (although there are certainly other reasons as well). More accurate estimates of the true price elasticity of demand for alcohol are thus provided by meta-analyses that encompass a larger number of studies.

Nelson (2013) selected 578 studies based on predefined criteria, of which 182 contained estimates of price elasticity of demand (112 for beer, 104 for wine, 111 for spirits, and 66 for total alcohol). To be included in the meta–analysis, studies had to meet the following criteria:

- Contain estimates of price and income elasticity of demand along with standard errors.
- Not focus on alcohol taxes as a measure of price.
- Not be based primarily on data prior to 1950.
- Not rely on survey data.
- Not use firm data, brand data, or narrowly defined types of beverages.

In the meta–analysis, Nelson (2013) adjusted the data for outliers, dependence, heterogeneity, and publication bias. The results are cumulative weighted averages that are statistically significant. The findings of the study are summarised in Table 1.

Table 1: Result of the meta–analysis of price elasticity of alcohol demand – Nelson (2013)

	Weighted average of price elasticity of demand	95% confidence interval
Beer	−0.29	−0.25 to −0.33
Wine	−0.46	−0.38 to −0.54
Spirits	−0.54	−0.46 to −0.62
Alcohol	−0.49	−0.39 to −0.59

Source: Nelson (2013)

Nelson (2013) concludes that the price elasticity of demand for different types of alcoholic beverages varies significantly. Beer shows the lowest consumer response to price changes, while spirits exhibit the highest.

Nelson (2013) challenges Fogarty's (2010) assertion regarding the evolution of price elasticity over time. While Fogarty's meta–analysis across all types of alcohol suggested a decline in elasticity until 1953, followed by an increase until 1994, Nelson's analysis of elasticity for individual types of alcohol during the periods 1975−2005 and 1949−2005 did not demonstrate a statistically significant increase in elasticity. Nelson attributes this discrepancy to Fogarty's claim to changes in the structure of alcohol consumption over time. Whereas beer once dominated, current consumption is more evenly distributed among wine and spirits. According to Nelson, considering this structural change suggests that the price elasticity of demand for individual types of alcohol remains stable over time.

Fogarty's (2010) meta–analysis, extended with data collected by Fanta (2014), was followed by Boško (2020). The author supplemented the data with 10 newly published studies selected according to the same criteria. The resulting meta-analysis was based on 78 studies. Similar to Nelson (2013), the author adjusted the data for publication bias and assigned a weight to each elasticity estimate equal to the inverse of its standard error. The results of the meta–analysis are demonstrated in Table 2.

Table 2: Result of the meta–analysis of price elasticity of alcohol demand – Boško (2020)

	Weighted average of price elasticity of demand
Beer	−0.25
Wine	−0.30
Spirits	−0.27

Source: Boško (2020)

Boško (2020) concludes that the price elasticity of demand for individual types of alcohol is converging. While the price elasticity of demand for beer remains stable over the long term, the elasticity for wine and spirits has decreased in recent years, which she attributes to a growing preference for wine and spirits at the expense of beer. She concludes that the price elasticity of demand for alcohol ranges from −0.35 to −0.15.

Boško (2020) also arrives at an interesting conclusion that wine is the most affected by publication bias among all types of alcohol. This conclusion is supported by the observation that, particularly for high–quality wines in developed countries, their consumption may not decline despite an increase in price (Pierani & Tiezzi, 2009). However, studies that yield unexpected results have significantly lower chances of being published (Thornton & Lee, 2000).

In the literature, there are very few studies that quantify the price elasticity of demand for alcohol in the Czech Republic. Among the relevant works is a study of Syrovátka, Chládková and Žufan (2014), which focuses on the price elasticity of demand for wine during the years 1991 to 2012. Based on empirical data from the Czech Republic, the authors found that the price elasticity of demand for wine ranges from $\langle -0.2957; -0.1624 \rangle$ with an average value of −0.2357. It should be noted that the model is statistically significant at the 1% level of significance with a relatively low standard error and a relatively high coefficient of determination ($R^2 \doteq 0.95$).

The result of the study by Syrovátka, Chládková and Žufan (2014) indicates that the price elasticity of demand for wine in the Czech Republic might be even lower than estimated by the previous two meta–analyses of Nelson and Boško. On the other hand, the data used in this research are relatively old (up to 2012), and it cannot be excluded that there has been some development since then. It is also important to note that the price of wine during the studied period did not experience significant supply shocks due to major changes in excise duty rates.

3. Methodology and data

3.1 Data

The most accurate estimate of the average consumer price of wine in the Czech Republic is a crucial indicator for estimating changes in the consumer price of wine and the related change in wine consumption in the Czech Republic following the imposition of excise duty. Although data on the weighted average consumer price of wine are not directly provided in statistical reports, it can be calculated as the ratio of total household expenditures on wine consumption to wine consumption in individual years. These data are presented in Tables 3 and 4.

Table 3: Household expenditures on wine consumption in the Czech Republic from 2019 to 2023 (in millions CZK)

2019	2020	2021	2022	2023
27,879	28,965	31,518	32,725	34,354

Source: Euromonitor International (2024)

Table 4: Consumption of wine in the Czech Republic during the vintage years 2018/2019 to 2022/2023 (in millions of litres)

2018/2019	2019/2020	2020/2021	2021/2022	2022/2023	Average
199	217	230	222	230	220

Source: Ministry of Agriculture (2024); note: a vintage year is understood to be the period from 1 August to 31 July of the following year

Based on the data from Tables 3 and 4, the average consumer price of wine is calculated using the following Equation 2:

$$\text{Average consumer price of wine} = \frac{\text{Household expenditures on wine consumption}}{\text{Wine consumption}} \quad (2),$$

where "t" represents the calendar or vintage year.

Table 5: Estimated average consumer price of wine in the Czech Republic from 2019 to 2023 (in CZK/l)

2019	2020	2021	2022	2023	Average
140	133	137	147	149	141

Source: Euromonitor International (2024); Ministry of Agriculture (2024); own calculations

The estimated average initial consumer price of wine used in the analysis is 141 CZK/l.

The estimate of the average consumer price of wine in the Czech Republic is based on data that do not cover the same periods – expenditures (calendar year) and consumption (vintage year). Considering the average over a five–year period, this shortcoming is partially mitigated, however, it remains a simplifying assumption in this case.

Furthermore, it should be noted that the data in Tables 3 and 4 also include consumption and household expenditures on sparkling wine and intermediate products, which are already subject to excise duty. Again, this represents a simplifying assumption in the analysis, as the estimate of the consumer price is made for all wine, not just still wine. However, statistics from the Czech Customs Administration (2024) indicate that more than 90% of the total quantity of wine (including intermediate products) entering free tax circulation consistently pertains to still wine.

Another key indicator for the analysis is the baseline consumption of still wine in the Czech Republic prior to the introduction of excise duty. The data presented in Table 4 display the consumption of all wine in the Czech Republic, including sparkling wine and intermediate products.

The proportion of total wine consumption in the Czech Republic that is attributed to still wine can be calculated using statistics from the Czech Customs Administration (2024), which publishes data on the quantity of wine entering free tax circulation, broken down into still wines, sparkling wines, and intermediate products. This data is provided in Table 6.

Table 6: Quantity of wine entering free tax circulation and the assessed claims for the refund of excise duty on wine in the Czech Republic from 2019 to 2023 (in millions of litres)

	2019	2020	2021	2022	2023	Average
Total	234	234	241	234	232	235
of which still wine	216	216	218	211	212	215
of which sparkling wine and intermediate products	17	19	23	23	20	20
Assessed tax refund (in million CZK)	1.73	1.59	1.28	2.44	1.77	1.76
Assessed tax refund (in million litres)	0.07	0.07	0.05	0.10	0.08	0.08

Source: Czech Customs Administration (2024)

Using data from Table 6, the consumption of sparkling wine and intermediate products is calculated as the difference between the quantity of sparkling wine and intermediate products entering free tax circulation and the assessed claim for tax refund. The average annual consumption of sparkling wine and intermediate products amounts to 20 million litres. The estimated consumption of still wine in the Czech Republic prior to the introduction of excise duty is then calculated as:

$$\text{Consumption}_{\text{still wine}} = \text{Consumption}_{\text{total}} - \text{Consumption}_{\text{sparkling wine and intermediate products}} \quad (3).$$

By substituting the data from Tables 4 and 6 into Equation 3, the estimated annual average baseline consumption of still wine in the Czech Republic before the introduction of excise duty is 199 million litres.

It is also necessary to point out the simplifying assumption, as wine consumption is reported in vintage years, while the quantity entering free tax circulation is reported in calendar years. Again, this shortcoming is partially mitigated by averaging over a five–year period.

An alternative estimate of the fiscal impact of the excise duty on still wine is also conducted in the analysis for the imposition of a reduced tax rate for small wine producers, set at 50% of the standard tax rate. To this end, it is necessary to estimate what portion of domestic still wine consumption was produced by local small wine producers (i.e., producers with an average annual production of up to 1,000 hectolitres of still wine).

Table 7: Production of wine in the Czech Republic during the vintage years 2018/2019 to 2022/2023 (in millions of litres)

2018/2019	2019/2020	2020/2021	2021/2022	2022/2023	Average
68	48	59	58	57	58

Source: Ministry of Agriculture (2024); note: a vintage year is understood to be the period from 1 August to 31 July of the following year

Statistics on the breakdown of domestic wine production into still wines, sparkling wines, and intermediate products are not available. For simplification, it is assumed that the structure of production is the same as the structure of consumption. On average, still wine accounts for 91% of total wine consumption in the Czech Republic (199 / 220; see above; hereinafter referred to as "share of still wine").

In 2020, there were a total of 18,099 hectares of vineyards in the Czech Republic (Czech Statistical Office, 2021; Eurostat, 2022). This implies that, on average, there is a production of 32.1 hectolitres of wine per hectare of vineyard (58,000,000 / 100 / 18,099). It can further be calculated that 1,000 hectolitres of wine are produced on average from vineyards covering an area of 31.2 hectares (1,000 / 32.1).

Table 8: The area of vineyards managed by producer size group and the number of growers in the Czech Republic in 2020

Size Group of Vineyards (in ha)	Number of Grape Growers	Area of Vineyards	
		In ha	In %
< 30	16,430	7,763.6	42.9
≥ 30	111	10,335.7	57.1
Total	16,541	18,099.4	100.0

Source: Czech Statistical Office (2021)

The area of vineyards smaller than 30 hectares is managed by 99.3% of growers, who, however, only manage 42.9% of the total vineyard area in the Czech Republic (Czech Statistical Office, 2021). With some simplification, it can be concluded that growers managing vineyard areas smaller than 30 hectares are small wine producers with an average production of up

to 1,000 hectolitres of wine per year. The estimated total production of still wine by domestic small wine producers is then calculated as follows:

$$\text{Still wine production}_{\text{small producers}} = \text{Wine production} \times \text{Share of still wine} \times \times \text{ Area of vineyards in \%}_{\text{small producers}} \quad (4).$$

The estimated annual quantity of still wine production by domestic small wine producers, after substituting into Equation 4, amounts to 22.6 million litres. The share of still wine production from domestic small wine producers in total still wine consumption is then calculated as follows:

$$\text{Share of production by small producers in total consumption}_{\text{still wine}} = \frac{\text{Still wine production}_{\text{small producers}}}{\text{Consumption}_{\text{still wine}}} \quad (5).$$

After substituting into Equation 5, the estimated share of still wine production from domestic small wine producers in total still wine consumption is 11.3%.

3.2 Methodology

The impact estimate is conducted at three alternative rates of excise duty on still wine, specifically at 8 CZK/l, 16 CZK/l, and 23.4 CZK/l. The last rate reflects the current rate of excise duty on sparkling wine in the Czech Republic. For each of the tax rates, the estimate is made under the assumption that it will be a flat tax rate. An alternative estimate for each of these rates is also carried out for the imposition of a reduced tax rate for small wine producers, set at 50% of the standard tax rate. This is the minimum possible rate that can be imposed in accordance with the Council Directive 92/83/EEC, which states that the reduced rate for small producers must not fall below 50% of the standard tax rate.

For each tax rate, the estimate is conducted at three alternative values of price elasticity of demand for still wine. Based on the literature review, the following values of price elasticity were selected: −0.15 (low), −0.3 (medium), and −0.45 (high).

Each combination of an excise duty rate and an elasticity assumption is considered separately. The following options are defined:

- Option 1a: Flat excise duty rate 8 CZK/l.
- Option 1b: Standard excise duty rate 8 CZK/l, reduced excise duty rate 4 CZK/l.

- Option 2a: Flat excise duty rate 16 CZK/l.
- Option 2b: Standard excise duty rate 16 CZK/l, reduced excise duty rate 8 CZK/l.
- Option 3a: Flat excise duty rate 23.4 CZK/l.
- Option 3b: Standard excise duty rate 23.4 CZK/l, reduced excise duty rate 11.7 CZK/l.

The assumptions of the analysis are as follows:

- The supply of still wine to final consumers is carried out exclusively by taxable persons registered as VAT payers in the Czech Republic.
- There is no consumption of still wine produced by small wine producers in other EU Member States in the Czech Republic.
- Still wine produced by small wine producers in the Czech Republic is consumed exclusively within the tax territory of the Czech Republic.
- The excise duty on still wine and the VAT calculated from it are fully reflected in the consumer price of still wine.

Below are the reasons for the selection of these assumptions in the analysis, briefly discussed and explained.

1) The supply of still wine to final consumers is carried out exclusively by taxable persons registered as VAT payers in the Czech Republic:

This assumption was necessary due to the difficulty in estimating how much still wine is supplied by non-VAT-registered producers. For estimating the impact of excise duty on VAT revenue, it was essential to focus on VAT-registered entities, as data on non-registered suppliers are unavailable.

2) There is no consumption of still wine produced by small wine producers in other EU Member States in the Czech Republic:

This assumption was introduced because the analysis considers a reduced excise duty rate for small wine producers, which must also apply to producers in other EU Member States based on the principle of reciprocity. However, it is not possible to estimate the consumption of still wine from small wine producers in other EU countries, and thus this factor was excluded to focus on the domestic market.

3) Still wine produced by small wine producers in the Czech Republic is consumed exclusively within the tax territory of the Czech Republic:

Similar to assumption 2, this assumption reflects the consideration of a reduced excise duty rate for small producers within the Czech Republic. While some domestic small wine producers

may export their wine, the analysis is limited to domestic consumption due to a lack of data on export quantities.

4) The excise duty on still wine and the VAT calculated from it are fully reflected in the consumer price of still wine:

This assumption is central to the estimation of additional VAT revenue. If the tax burden were only partially passed on to consumers, the estimated tax revenue would differ. While the assumption of full tax transmission is a simplification, it is commonly used in fiscal analyses as a reasonable approximation for estimating the impact of tax changes on consumer prices and VAT revenues. A more detailed discussion of tax incidence can be found in Chapter 2.2 of this paper.

The input data for the analysis from the previous subsection, including the research variables, are summarised in the following Table 9.

Table 9: Input data and variables of the analysis

Average Initial Consumer Price of Wine (in CZK/l); hereinafter as "**wine price**"	141
Annual Average Baseline Consumption of Still Wine (in millions of l); hereinafter as "**baseline consumption of still wine**"	199.4
Share of Still Wine Production from Domestic Small Wine Producers in Baseline Consumption of Still Wine; hereinafter as "**share of small producers of still wine**"	11.3%
*Tax Projection (including VAT) into the Consumer Price of Wine after the Introduction of Excise Duty; hereinafter as "**tax incidence**"	100%
Variable: Excise Duty Rate on Still Wine (in CZK/l); hereinafter as "**excise duty rate**"	8 (4) / 16 (8) / 23.4 (11.7)
Variable: Price Elasticity of Demand for Still Wine; hereinafter as "**elasticity**"	−0.15 / −0.3 / −0.45

Source: see section 3.1.; *research assumption

The estimate of the change in the consumer price of wine (in %) after the imposition of excise duty (hereinafter as "**price change**") is calculated using Equation 6:

$$\text{Price change}_{s/r} = \frac{\text{Excise duty rate}_{s/r} \times (1 + \text{VAT rate})}{\text{Wine price}} \times \text{Tax incidence} \quad (6),$$

where "s" represents standard excise duty rate, and
"r" represents reduced excise duty rate.

The estimate of the change in the consumption of still wine (in %) after the imposition of excise duty (hereinafter as "**change in consumption**") is calculated using Equation 7:

$$\text{Change in consumption} = \text{Elasticity} \times \text{Price change}_s \times (1 - \text{Share of small producers of still wine}) + \text{Elasticity} \times \text{Price change}_r \times \text{Share of small producers of still wine} \quad (7).$$

The estimate of the annual average consumption of still wine (in litres) after the imposition of excise duty (hereinafter as "**consumption of still wine after taxation**") is calculated using Equation 8:

$$\text{Consumption of still wine after taxation} = \text{Baseline consumption of still wine} \times \times (1 + \text{Change in consumption}) \quad (8).$$

The estimate of the revenue from excise duty on still wine (in CZK; hereinafter as "**revenue from excise duty on still wine**") is calculated using Equation 9:

$$\text{Revenue from excise duty on still wine} = \text{Excise duty rate}_s \times \times \text{Consumption of still wine after taxation} \times (1 - \text{Share of small producers of still wine}) + \text{Excise duty rate}_r \times \text{Consumption of still wine after taxation} \times \times \text{Share of small producers of still wine} \quad (9).$$

The estimate of the revenue from VAT on the excise duty on still wine (in CZK; hereinafter as "**VAT revenue from excise duty on still wine**") is calculated using Equation 10:

$$\text{VAT revenue from excise duty on still wine} = \text{Revenue from excise duty on still wine} \times \text{VAT rate} \quad (10).$$

The estimate of the loss of VAT due to the decrease in the consumption of still wine after the imposition of excise duty (hereinafter as "**loss of VAT from the decrease in still wine consumption**") is calculated using Equation 11:

$$\text{Loss of VAT from the decrease in still wine consumption} = \text{Wine price} \times \left(\frac{\text{VAT rate}}{1 + \text{VAT rate}}\right) \times \times \text{Change in consumption} \times \text{Baseline consumption of still wine} \quad (11).$$

The overall estimate of the tax impact of imposing excise duty on still wine (in CZK; hereinafter as "**total tax impact**") is then calculated as the sum of Equations 9, 10 and 11, i.e.:

$$\text{Total tax impact} = \text{Revenue from excise duty on still wine} + \text{VAT revenue from excise duty on still wine} + \text{Loss of VAT from the decrease in still wine consumption} \quad (12)$$

4. Results

A summary of the individual options of the analysis of the fiscal impacts of taxation of still wine in the Czech Republic is presented in Table 10. Complete results for each option, with a detailed breakdown of the impacts, are provided in the appendix.

Table 10: Summary of results of the analysis of the fiscal impacts of taxation of still wine (in millions of CZK)

Option	Standard rate	Reduced rate	Elasticity		
			–0.15	**–0.3**	**–0.45**
1a	8 CZK/l	–	1,860	1,790	1,720
1b	8 CZK/l	4 CZK/l	1,755	1,690	1,625
2a	16 CZK/l	–	3,680	3,500	3,320
2b	16 CZK/l	8 CZK/l	3,476	3,310	3,145
3a	23.4 CZK/l	–	5,328	5,012	4,695
3b	23.4 CZK/l	11.7 CZK/l	5,035	4,746	4,456

Source: own calculations

The analysis of the impacts of introducing various rates of excise duty on still wine shows that each of the assessed options leads to a decrease in consumption of still wine, with the extent of this decrease varying depending on the price elasticity of demand and the specific rate of excise duty. Although the increase in price due to the imposition of excise duty causes a decline in still wine consumption, the overall tax impact is positive in each option, including a positive effect on VAT collection.

The highest of the considered rates of excise duty on still wine, which corresponds to the current rate of excise duty on sparkling wine, would lead to an increase in public budget revenues of approximately 4.70 to 5.33 billion CZK. This increase is primarily due to revenue from excise duty, which amounts to 4.24 to 4.52 billion CZK, while the additional income from VAT is estimated at 0.45 to 0.80 billion CZK, alongside a decrease in still wine consumption of 3 to 9%, depending on the price elasticity of demand.

The estimated increase in public budget revenues of approximately 4.70 to 5.33 billion CZK represents about 0.26% to 0.30% of total tax revenues in the Czech Republic in 2023 (Ministry of Finance, 2024).

The differences in the total tax impact between options with a flat excise duty rate and those with a reduced excise duty rate are illustrated in Table 11.

Table 11: The difference in the total tax impact between options with a flat excise duty rate and those with a reduced excise duty rate

	Elasticity					
	−0.15		−0.3		−0.45	
	In mil. CZK	In %	In mil. CZK	In %	In mil. CZK	In %
1a – 1b	104	5.6%	99	5.6%	94	5.5%
2a – 2b	204	5.6%	190	5.4%	175	5.3%
3a – 3b	293	5.5%	266	5.3%	239	5.1%

Source: own calculations; note: the relative difference is expressed as a percentage of the total tax impact of the option with a flat excise duty rate

The results from Table 11 indicate that the imposition of a reduced excise duty rate for small wine producers does not lead to a dramatic decrease in tax revenues compared to the option with a flat excise duty rate. These decreases range from 5.1% to 5.6% of the potential tax impact of the option with a flat excise duty rate, due to the relatively low share of still wine consumption from small producers in the total domestic consumption of still wine (11.3%).

A closer look at the results of the analysis shows that the excise duty rate of 23.4 CZK/l (i.e., the highest of the rates considered in the analysis) indicates that there is still considerable room for increasing the excise duty rate on still wine beyond this threshold. However, the goal of tax policy should not be to maximise tax revenue. The potential to raise the excise duty rate on still wine above 23.4 CZK/l can be viewed more in the context of internalising the negative externalities associated with still wine consumption.

5. Discussion

The aim of this paper is to quantify the fiscal impact of imposition of a non–zero excise duty rate on still wine on excise and value added tax revenues. The results of the analysis indicate that, due to the imposition of a non–zero excise duty rate, total tax revenues for public budgets would increase by approximately 1.72 to 1.86 billion CZK (at a rate of 8 CZK/l), 3.32 to 3.68 billion CZK (at a rate of 16 CZK/l), and 4.70 to 5.33 billion CZK (at a rate of 23.4 CZK/l).

Furthermore, the results suggest that the introduction of a reduced tax rate for small wine producers set at 50% of the standard tax rate would lead to a decrease in total tax revenues of approximately 5.1 to 5.6% compared to the option with a flat excise duty rate.

For a proper understanding of the results, it is essential to recognize that this analysis quantifies only the amount of tax revenues. It is undisputed that taxation of still wine would have more far–reaching consequences, which, however, are not evaluated in this analysis.

Taxation of still wine could potentially lead to a decrease in employment in the winemaking and viticulture sectors, which would impact income taxes and social security contributions, as well as possibly increase unemployment benefits, although such an impact would be temporary.

The question of the increase in the black market for still wine remains uncertain. The analysis results indicate that the highest tax rate considered in this analysis (23.4 CZK/l) under the upper limit of demand elasticity (–0.45) would lead to a decrease in still wine consumption of approximately 9%. In this context, it does not seem likely that the increase in the black market for still wine would be significant.

Other impacts of still wine taxation must also include administrative costs for the tax authority, encompassing both one–time costs associated with adjustments to information systems and ongoing costs related to tax administration. Additionally, one cannot overlook the induced costs of still wine taxation borne by taxpayers.

In terms of demand elasticity and the related decrease in still wine consumption following its taxation, it is important to highlight an impact that may not be immediately apparent. If there is a decrease in still wine consumption after taxation, the question arises as to whether and where consumers will redirect their spending. If consumers substitute still wine consumption with other goods (or services), there will be an increase in tax revenues from those goods (services). However, some studies suggest that different types of alcoholic beverages may even be complements – see for example Syrovátka, Chládková, and Žufan (2014) and Syrovátka, Chládková, and Žufan (2015). Under such circumstances, there could even be a decrease in tax revenues from the other types of alcoholic beverages.

It should be emphasized that the results of the analysis are highly sensitive to demand elasticity. Since the cited meta–analyses of studies come from foreign sources, it cannot be ruled out that specific conditions in foreign markets result in different demand elasticity for wine compared to the Czech Republic. For this reason, there is a risk that actual domestic demand elasticity may differ from these values. A more accurate estimate of the price elasticity of demand for wine, particularly under Central European (and specifically Czech) conditions, would lead to a refinement of the estimates of the fiscal impacts of wine taxation.

One of the purposes of excise duties is to reduce consumption of products that cause negative externalities and to internalize these negative externalities through taxation. However, an unanswered question remains as to what extent taxation of still wine at the analysed rates would truly achieve this goal or how significant negative externalities caused by still wine actually are.

Future research should therefore focus on quantifying the secondary impacts of still wine taxation, which would lead to a more comprehensive estimation of the overall effects on public budgets and social implications. This includes specifically quantifying the impact on income taxes, social security contributions, unemployment benefits, the effect of an increase in the black market, as well as the administrative and induced costs of taxation and its impact on tourism. A specific area of focus should be the quantification of negative externalities associated with still wine consumption before and after its taxation.

With respect to the results of this paper and the discrimination against sparkling wine compared to still wine, the author recommends considering the following steps to rectify market conditions:

- Considering the positive impact on public budgets, increase the excise duty rate on still wine to 23.4 CZK/l.
- Considering the decrease in public budget revenues by several hundred million CZK compared to the flat rate, implement a reduced excise duty rate for small wine producers at 11.7 CZK/l in order to support small wine producers.
- To eliminate the inequality between the taxation of sparkling and still wine, introduce a reduced excise duty rate of 11.7 CZK/l for small producers of sparkling wine as well.

This paper presents one of the first studies that systematically addresses the quantification of the fiscal impacts of still wine taxation in the Czech Republic. The main contribution of this paper is the quantification of the fiscal effects of imposing a non–zero excise duty rate on still wine, an area that has not been adequately analysed to date. This study provides a fresh perspective on potential strategies for increasing tax revenues from still wine taxation and can serve as a foundation for future legislative decision–making. The findings of this research may enhance informed decision–making regarding adjustments to tax rates and their impacts on public budgets. Thus, this study represents a significant step toward a deeper understanding of the effects of this tax policy.

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References

Act No. 353/2003 Coll., on Excise Duties, as amended.

Act No. 587/1992 Coll., of the Czech National Council on Excise Duties, as amended.

Anderson, P., & Baumberg, B. (2006). *Alcohol in Europe*. London: Institute of Alcohol Studies. ISBN 92-79-02241-5.

Bergman, U. M., & Hansen, N. L. (2019). Are Excise Taxes on Beverages Fully Passed through to Prices? The Danish Evidence. *Finanzarchiv. 75(4), 323-356*. https://doi.org/10.1628/fa-2019-0010

Boško, A. (2020). Price Elasticity of Alcohol Demand: A Meta-Analysis. *Master's thesis. Charles University, Faculty of Social Sciences, Institute of Economic Studies. PhDr. Tomáš Havránek, Ph.D.*

Cnossen, S. (2007). Alcohol Taxation and Regulation in the European Union. *International Tax and Public Finance. 14, 699-732*. https://doi.org/10.1007/s10797-007-9035-y

Cnossen, S. (2022). Excise Taxation To Preserve Health and To Protect the Environment: A Review. *Canadian Tax Journal / Revue Fiscale Canadienne. 70, 159-184*. https://doi.org/10.32721/ctj.2022.70.supp.cnossen

Council Directive 92/83/EEC of 19 October 1992 on the harmonization of the structures of excise duties on alcohol and alcoholic beverages.

Council Directive 92/84/EEC of 19 October 1992 on the approximation of the rates of excise duty on alcohol and alcoholic beverages.

Czech Customs Administration. (2024). *Statistická data z oblasti výroby, dopravy a dovozu vína a meziproduktů*. Retrieved on August 17, 2024. Available at: https://www.celnisprava.cz/cz/dane/statistiky/Stranky/vino.aspx#InplviewHash02a8ec4a-b046-4bab-8604-ff3563433c91=SortField%3DModified-SortDir%3DDesc

Czech Statistical Office. (2021). *Vinice (strukturální šetření) - 2020*. Retrieved on June 1, 2024. Available at: https://csu.gov.cz/docs/107508/eca5193a-6043-216c-ba5b-31bef198dc97/2702012111.pdf?version=1.0

Danish Customs and Tax Administration. (2024). *Den juridiske vejledning 2024-1*. Retrieved on March 30, 2024. Available at: https://info.skat.dk/data.aspx?oid=124

Euromonitor International. (2024). *Consumer Expenditure on Wine*. Retrieved on August 17, 2024. Available at: https://www.portal.euromonitor.com

European Commission. (2024). *Taxes in Europe Database v3*. Retrieved on March 30, 2024. Available at: https://ec.europa.eu/taxation_customs/tedb/index.html

Eurostat. (2022). *Wine-grower holdings by production*. Retrieved on March 30, 2024. Available at: https://doi.org/10.2908/VIT_T1

Fanta, N. (2014). Price Elasticity of Alcohol Demand: A Meta-Analysis. *Bachelor thesis. Charles University in Prague, Faculty of Social Sciences, Institut of Economic Studies. PhDr. Tomáš Havránek, Ph.D.*

Fogarty, J. (2009). A review of alcohol consumption and alcohol control policies. *Worldwide Hospitality and Tourism Themes. 1(2), 110-132*. https://doi.org/10.1108/17554210910962503

Fogarty, J. (2010). The Demand for Beer, Wine and Spirits: A Survey of the Literature. *Journal of Economic Surveys. 24(3), 428-478*. https://doi.org/10.1111/j.1467-6419.2009.00591.x

Government of the United Kingdom. (2023). *UK Trade Tariff: excise duties, reliefs, drawbacks and allowances*. Retrieved on March 30, 2024. Available at: https://www.gov.uk/government/publications/excise-tax-types-excise-duty-rates-and-supplementary-guidance

Herrnstadt, E., Parry, I. W., & Siikamäki, J. (2015). Do alcohol taxes in Europe and the US rightly correct for externalities? *International Tax and Public Finance. 22(1), 73-101*. https://doi.org/10.1007/s10797-013-9294-8

Christiansen, V., & Smith, S. (2012). Externality-Correcting Taxes and Regulation. *The Scandinavian Journal of Economics. 114(2), 358-383*. https://onlinelibrary.wiley.com/doi/10.1111/j.1467-9442.2012.01701.x

Janda, K., Lajksnerová, Z., & Mikolášek, J. (2019). A General Equilibrium Model of Optimal Alcohol Taxation in the Czech Republic. *Prague Economic Papers. 28(5), 589-611*. https://doi.org/10.18267/j.pep.706

Karp, L. S., & Perloff, J. M. (1989). Estimating Market Structure and Tax Incidence: The Japanese Television Market. *The Journal of Industrial Economics. 37(3), 225-239*. https://doi.org/10.2307/2098612

Kenkel, D. S. (1996). New estimates of the optimal tax on alcohol. *Economic Inquiry. 34(2), 296-319*. https://doi.org/10.1111/j.1465-7295.1996.tb01379.x

Kukalová, G., Moravec, L., Filipová, D. B., & Kučírková, L. (2021). Evaluation of estimated direct health expenses on tobacco- and alcohol-related diseases in context of excise taxes revenues in the Czech Republic. *Cent Eur J Public Health. 29(2), 143-152*. https://doi.org/10.21101/cejph.a5538

Levitt , S. D., & Porter, J. (2001). How Dangerous Are Drinking Drivers? *Journal of Political Economy. 109(6), 1198-1237*. https://doi.org/10.1086/323281

Ministry of Agriculture. (2024). *Situační a výhledová zpráva: Réva vinná a víno - 2024*. Available at: https://mze.gov.cz/public/portal/-a51708---yhXXmVfu/publikace-situacni-a-vyhledova-zprava-reva-vinna-a-vino-2024

Ministry of Finance. (2024). *Účetní výkazy za Českou republiku za účetní období roku 2023, Souhrnný výkaz nákladů a výnosů státu - 2023.* Available at: https://www.mfcr.cz/assets/attachments/2023-12-31_Souhrnny-vykaz-nakladu-a-vynosu-statu-2023.pdf

Nelson, J. P. (2013). Meta-analysis of alcohol price and income elasticities – with corrections for publication bias. *Health Economics Review. 3(1), 1-10*. https://doi.org/10.1186/2191-1991-3-17

Nelson, J. P., & Moran, J. R. (2020). Effects of Alcohol Taxation on Prices: A Systematic Review and Meta-Analysis of Pass-Through Rates. *The B.E. Journal of Economic Analysis & Policy. 20(1)*. https://doi.org/10.1515/bejeap-2019-0134

Pierani, P., & Tiezzi, S. (2009). Addiction and the Interaction between Alcohol and Tobacco Consumption. *Empirical Economics. 37, 1-23*. https://doi.org/10.1007/s00181-008-0220-3

Pigou, A. C. (1932). *The Economics of Welfare.* 4th ed. London: Macmillan.

Pogue, T. F., & Sgontz, L. G. (1989). Taxing to Control Social Costs: The Case of Alcohol. *The American Economic Review. 79(1), 235-243.*

Syrovátka, P., Chládková, H., & Žufan, P. (2014). Wine consumption in the Czech Republic and the prices of alcohol. *Agricultural Economics. 60(2), 89-98*. https://doi.org/10.17221/114/2013-agricecon

Syrovátka, P., Chládková, H., & Žufan, P. (2015). Consumer Demand for Wine and Beer in the Czech Republic, and Their Mutual Influences. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis. 63(6), 2119-2125*. https://doi.org/10.11118/actaun201563062119

Šmíd, M. (2025). Taxation of Still Wine in the Czech Republic. *Diploma thesis. Prague University of Economics and Business. Faculty of Finance and Accounting. doc. Ing. Hana Zídková, Ph.D.*

Thornton, A., & Lee, P. (2000). Publication bias in meta-analysis: its causes and consequences. *Journal of Clinical Epidemiology. 53(2), 207-216*. https://doi.org/10.1016/S0895-4356(99)00161-4

Zápal, J. (2014). Consumption Tax Incidence: Evidence from Natural Experiment in the Czech Republic. *Acta VŠFS. 8(2), 149-166*.

Appendix

Option 1a – Flat excise duty rate 8 CZK/l (in millions of CZK)

Elasticity	–0.15	–0.3	–0.45
Price change	6.85%	6.85%	6.85%
Change in consumption	–1.03%	–2.05%	–3.08%
Consumption of still wine after taxation (in millions of l)	197.3	195.3	193.2
Revenue from excise duty on still wine	1,579	1,562	1,546
VAT revenue from excise duty on still wine	331	328	325
Loss of VAT from the decrease in still wine consumption	–50	–100	–151
Total tax impact	**1,860**	**1,790**	**1,720**
Of which excise duty	1,579	1,562	1,546
Of which VAT	281	228	174

Source: own calculations

Option 1b – Standard excise duty rate 8 CZK/l, reduced excise duty rate 4 CZK/l (in millions of CZK)

Elasticity	–0.15	–0.3	–0.45
Price change$_s$	6.85%	6.85%	6.85%
Price change$_r$	3.42%	3.42%	3.42%
Change in consumption	–0.97%	–1.94%	–2.91%
Consumption of still wine after taxation (in millions of l)	197.4	195.5	193.6
Revenue from excise duty on still wine	1,490	1,475	1,461
VAT revenue from excise duty on still wine	313	310	307
Loss of VAT from the decrease in still wine consumption	–47	–95	–142
Total tax impact	**1,755**	**1,690**	**1,625**
Of which excise duty	1,490	1,475	1,461
Of which VAT	265	215	165

Option 2a – Flat excise duty rate 16 CZK/l (in millions of CZK)

Elasticity	–0.15	–0.3	–0.45
Price change	13.69%	13.69%	13.69%
Change in consumption	–2.05%	–4.11%	–6.16%
Consumption of still wine after taxation (in millions of l)	195.3	191.2	187.1
Revenue from excise duty on still wine	3,124	3,059	2,993
VAT revenue from excise duty on still wine	656	642	629
Loss of VAT from the decrease in still wine consumption	–100	–201	–301
Total tax impact	**3,680**	**3,500**	**3,320**
Of which excise duty	3,124	3,059	2,993
Of which VAT	556	441	327

Source: own calculations

Option 2b – Standard excise duty rate 16 CZK/l, reduced excise duty rate 8 CZK/l (in millions of CZK)

Elasticity	–0.15	–0.3	–0.45
Price change$_s$	13.69%	13.69%	13.69%
Price change$_r$	6.85%	6.85%	6.85%
Change in consumption	–1.94%	–3.87%	–5.81%
Consumption of still wine after taxation (in millions of l)	195.5	191.6	187.8
Revenue from excise duty on still wine	2,951	2,892	2,834
VAT revenue from excise duty on still wine	620	607	595
Loss of VAT from the decrease in still wine consumption	–95	–190	–284
Total tax impact	**3,476**	**3,310**	**3,145**
Of which excise duty	2,951	2,892	2,834
Of which VAT	525	418	311

Option 3a – Flat excise duty rate 23.4 CZK/l (in millions of CZK)

Elasticity	–0.15	–0.3	–0.45
Price change	20.02%	20.02%	20.02%
Change in consumption	–3.00%	–6.01%	–9.01%
Consumption of still wine after taxation (in millions of l)	193.4	187.4	181.4
Revenue from excise duty on still wine	4,525	4,385	4,245
VAT revenue from excise duty on still wine	950	921	891
Loss of VAT from the decrease in still wine consumption	–147	–294	–441
Total tax impact	**5,328**	**5,012**	**4,695**
Of which excise duty	4,525	4,385	4,245
Of which VAT	803	627	451

Source: own calculations

Option 3b – Standard excise duty rate 23.4 CZK/l, reduced excise duty rate 11.7 CZK/l (in millions of CZK)

Elasticity	–0.15	–0.3	–0.45
Price change$_s$	20.02%	20.02%	20.02%
Price change$_r$	10.01%	10.01%	10.01%
Change in consumption	–2.83%	–5.67%	–8.50%
Consumption of still wine after taxation (in millions of l)	193.7	188.1	182.4
Revenue from excise duty on still wine	4,276	4,151	4,027
VAT revenue from excise duty on still wine	898	872	846
Loss of VAT from the decrease in still wine consumption	–139	–277	–416
Total tax impact	**5,035**	**4,746**	**4,456**
Of which excise duty	4,276	4,151	4,027
Of which VAT	759	595	430

Source: own calculations