

DECEMBER 2024

wiiw HEPA Research Study 6

The tobacco market in Bulgaria: A landscape report

Dimitar Sabev



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DIMITAR SABEV

Dimitar Sabev is Chief Assistant Professor at the Economic Research Institute, Bulgarian Academy of Sciences.

This research was funded by The Vienna Institute for International Economic Studies (wiiw). Wiiw is a partner of the Bloomberg Philanthropies' Initiative to Reduce Tobacco Use. The views expressed do not necessarily reflect the views of wiiw or Bloomberg Philanthropies.

Abstract

This study assesses the current state of Bulgaria's tobacco economy and analyses its recent trends from the viewpoint of tobacco control. First, it examines the national supply of tobacco and tobacco products along the value chain: farmers, processors, a cigarette factory and retail employment. Next, it analyses the demand for tobacco products in a country with particular consumption habits and elevated prevalence rates coinciding with a substantial increase in tobacco affordability in the last decade. The study examines Bulgaria's tobacco tax structure and the revenue generated from tobacco taxes. A macroeconomic model that utilised data on cigarette consumption, disposable income and cigarette prices yielded coefficients of -0.81 for the price elasticity of cigarette demand and 0.59 for the income elasticity of cigarette demand. Among the recommendations for strengthening the national tobacco control policy, the annual inflation indexation of the tobacco excise rates warrants attention.

Keywords: Excise, Taxation, Tobacco, Smoking

JEL classification: H23, I12, I18, L66

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Executive Summary

In recent decades, tobacco consumption and prevalence have sharply declined in many higher-income countries. However, Bulgaria, a European Union (EU) member state and a candidate for eurozone membership, exhibits one of the highest tobacco prevalence rates in the world, and troublingly, its tobacco demand continues to grow. Official data indicate that national per capita cigarette consumption rose by 84% from 2011 to 2023. This alarming trend poses a significant public health risk and necessitates serious attention and effective tobacco control measures.

This study assesses the current state of Bulgaria's tobacco economy and analyses its recent trends. First, it examines the national supply of tobacco and tobacco products along the value chain. Despite traditionally being a tobacco-producing country, Bulgaria's raw tobacco yield has decreased by 94% over the past 20 years. Nevertheless, tobacco farming continues to receive heavy subsidies, with public payments to tobacco growers that are more than double the market value of the raw tobacco produced. Over 92% of cigarettes consumed in Bulgaria are now imported, with the country's only remaining cigarette factory primarily producing for export. The total employment in tobacco growing, processing, manufacturing, distribution and retail sales makes up less than 0.4% of the national labour force, suggesting that any stricter tobacco control measures are unlikely to have a significant impact on overall employment levels.

When analysing the demand for tobacco products, various independent sources indicate that Bulgaria has one of the highest tobacco prevalence rates globally. The alarmingly high rate of smoking (33%) among Bulgarian girls aged 13-15 raises additional concerns. Notably, tobacco use in Bulgaria is more prevalent among affluent individuals, particularly high-income women, which warrants further investigation.

A significant finding of this study is the increased affordability of cigarettes in Bulgaria. Presently, only 1.98% of the per capita gross domestic product (GDP) is needed to purchase 100 packs of average-priced cigarettes, or only half as much as it cost in 2007. Another notable outcome is the substantial growth in the consumption of heated tobacco products (HTPs), which surged by 87.4% in 2023 after a 55% increase in 2022.

The study examines Bulgaria's tobacco tax structure and the revenue generated from tobacco taxes. For 2023, indirect tobacco tax revenues amounted to 4.2 billion Bulgarian leva (BGN; over EUR 2.1 billion). Tobacco excise duties in Bulgaria make up 5.7% of total public revenues – or almost three times as much as the EU average. This heavy reliance on indirect tobacco taxation partially explains the Bulgarian authorities' reluctance to implement stricter tobacco control measures. However, the study also confirms that Bulgaria has significant potential to raise excise taxes on tobacco products without negatively affecting the public revenue base.

In the case of Bulgaria, the nascent revision of the current EU Tobacco Tax Directive (TTD) is expected to require a minimum 55% increase in the current excise levels. The country follows an 'excise calendar' that envisions gradual increases in excise rates on tobacco products until 2026. Still, these prospective rates are far behind those of most EU member states (which are expected to be raised further).

A key component in any tobacco control policy is estimating the proper elasticity coefficients of tobacco demand. This study employs a macroeconomic model that utilises data on cigarette consumption, disposable income and cigarette prices. The post-estimation tests validate the robustness of the model, yielding coefficients of -0.81 for price elasticity and 0.59 for income elasticity. These figures can serve as an evidence-based starting point for developing scenarios on tobacco excise revenues and cigarette demand.

In conclusion, this study presents seven recommendations aimed at strengthening Bulgaria's national tobacco control policy. For years, the country has prioritised tobacco as a source of tax revenue, while cultural norms have hindered political interventions, leading its public health impact to be overlooked. As a result, health outcomes have remained unsatisfactory. It is now imperative to pursue more ambitious national tobacco control policies.

1. Introduction

After the Second World War, Bulgaria fell within the Soviet sphere of influence, and the communist dominance only ended in 1989. Since 2007, Bulgaria has been a member state of the European Union (EU). The country attained a high-income status in 2024, and it became a full member of the Schengen Area for borderless travel in 2025.

The tobacco market in Bulgaria is strictly regulated. The value chain of the tobacco industry consists of several thousand tobacco farmers, three or four purchasers and processors of raw tobacco, a single operational factory for cigarette production, several importers and wholesalers of tobacco products, and a widespread network of tobacco product retailers.

1.1. GENERAL INFORMATION

Bulgaria is a democratic republic situated in the middle of the Balkan Peninsula in the region of Southeastern Europe. The country covers an area of 110,994 square kilometres (km²) and has a population of 6,445,500 (as of 31.12.2023, according to the National Statistical Institute). Geographically, Bulgaria borders Serbia and North Macedonia to the west, Greece and Turkey to the south, Romania to the north, and the Black Sea – thus also Georgia, Moldova, Russia and Ukraine – to the east.

With a population density of roughly 60 people/km², Bulgaria is among the less populated European countries. The rapid depopulation after 1989 is a pronounced socioeconomic issue, with the general population declining by 21% during the 21st century. This has coincided with rapid aging: in 2023, Bulgaria had the third-highest median age of population in the EU (46.8 years), along with Italy, Portugal and Greece (Eurostat 2024). According to the World Bank (n.d.), as of 2022, Bulgaria had a crude death rate of 18 deaths per 1,000 people – the second-highest rate in the world. The life expectancy at birth of Bulgarians is 75.8 years, the lowest value in the EU.

In 2024, the World Bank included Bulgaria for the first time in the group of high-income countries (Metreau et al. 2024). According to Eurostat (2024), the per capita gross domestic product of Bulgaria for the previous year stood at EUR 14,580, or only 38.6% of the average EU level. When accounting for the purchasing power parity (i.e. different price levels in different countries), Bulgarian per capita GDP amounted to 63.9% of the EU average. After a 1.8% increase in the GDP in 2023, the European Commission expects Bulgaria's economic growth to stabilise at 1.9% in 2024 and to accelerate to 2.9% in 2025 (European Commission 2024: 128-129).

Bulgaria is divided into six statistical (NUTS 2) regions, 28 districts and 265 municipalities. The capital city of Sofia had an official population of 1.287 million people in 2023. According to the latest regional accounts, Sofia makes up nearly 43% of the national GDP.

Since 1997, Bulgarian monetary policy has adhered to a currency board regime with a fixed value of 1 EUR = BGN 1.95583. A major strategic goal of Bulgaria is joining the eurozone, which requires, among

other things, keeping inflation subdued and not exceeding the established limits for the public budget deficit. Bulgaria already joined the European Exchange Rate Mechanism (ERM II) in 2020. In July 2024, the Bulgarian Parliament passed a decision to speed up the process of introducing the common currency, with 1 January 2026 being specified as the best-case scenario.

Table 1 / Important macroeconomic indicators for Bulgaria

Indicator	Measure & year	Value
GDP at market prices	EUR m, 2023	93,948
GDP per capita	EUR, 2023	14,580
GDP growth	%, 2023	1.8
Inflation	HICP, %, 2023	8.6
Average net earning	EUR per month, 2023	780
Unemployment	%, 2023	4.3
Employment	% of the total population, aged 20-64, 2023	76.2
Budget balance	% of GDP, 2023	-1.9%
Government revenues	% of GDP, 2023	37.9

Source: Eurostat (2024)

1.2. TOBACCO MARKET

Although Bulgaria currently only produces small volumes of tobacco and cigarettes, the country was once the leading global exporter of cigarettes, most of which went to other countries in the former USSR (see Neuburger 2012). The country also topped the global ranking in per capita tobacco production. Currently, the external and internal markets are long lost for national producers, yet the domestic sales of tobacco products remain elevated due to the high national tobacco prevalence.

The Bulgarian tobacco and tobacco products market is strictly regulated and based on two major laws: the Law on Tobacco, Tobacco Products and Associated Articles (henceforth 'Tobacco Act') and the Excise Duties and Tax Warehouses Act (henceforth 'Excise Act'). In addition, numerous regulations pertain to the domestic supply of and international trade in tobacco products.

All farmers in Bulgaria who intend to cultivate tobacco must use certified seeds and be entered into a public register. The latter is only possible if they have signed contracts with a certified tobacco purchaser that declares it will buy up the farmer's expected tobacco yield. The tobacco purchasers themselves are subject to strict reporting on both projected and actual quantities of raw tobacco obtained from the farmers. However, to date, these regulatory measures have not been instrumental in preventing the leakage of raw tobacco into the illicit market. Indeed, according to one assessment, 'illegal hand-rolling tobacco is easily accessible in Bulgaria' (Calderoni et al. 2016).

As evident in the next section, even though the local raw tobacco output is rapidly shrinking, Bulgarian processing facilities import significant amounts of raw tobacco from neighbouring countries and then export the processed tobacco to third countries. In the cigarette sector, domestic production is limited, with only one national producer remaining operational, while the lion's share of national demand for tobacco products is covered by imports. The retail trade of tobacco products is a subject of further regulation and is principally restricted near schools and healthcare facilities. Nevertheless, the accessibility of tobacco products in Bulgaria remains high.

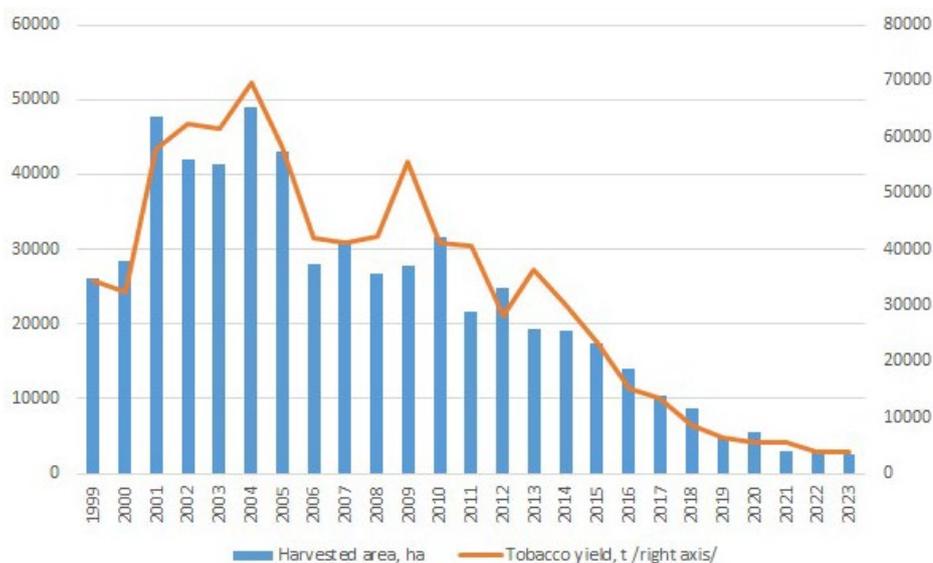
2. Supply of tobacco products

This section follows the supply chain of tobacco products in Bulgaria (i.e. tobacco farming, the processing of raw tobacco, cigarette manufacturing, and the international trade in tobacco and tobacco products) while also turning its attention to the issue of tobacco-related employment.

2.1. RAW TOBACCO PRODUCTION

According to the latest Agricultural Report of the Bulgarian Ministry of Agriculture and Food (MoAF 2024), which is based on 2023 data, tobacco was grown on a total of 2,502 hectares, which only corresponds to 0.07% of the arable land in Bulgaria for the year. The declared tobacco yield was 3,945 tonnes. In recent decades, tobacco production in Bulgaria shrank dramatically, as seen in Figure 1.

Figure 1 / Tobacco farming in Bulgaria – harvested area and tobacco yield



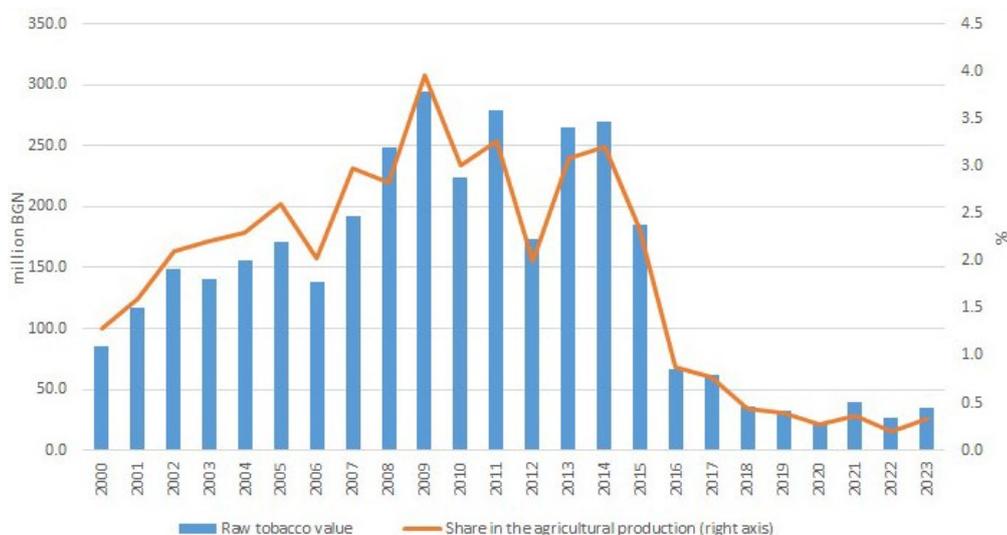
Source: MoAF (2024)

Between 2003 and 2023, total tobacco yield and the corresponding harvested area decreased by roughly 94%. This decline is even more pronounced when compared to the levels achieved under the socialist state's monopoly, Bulgartabac. The highest volume of tobacco production was achieved in 1976, with a yield of more than 164,000 tonnes – or 42 times as much as in 2023 (Yadkov 2003: 173).

According to the satellite economic accounts on agriculture, the value of the Bulgarian tobacco sold in 2023 amounted to BGN 33.6 million (EUR 17.2 million). This makes up only 0.3% of the final production of Bulgarian agriculture for the year (see Figure 2). Tobacco is rapidly turning into a marginal crop with a diminished contribution to the national primary sector. The short-term decrease in tobacco growing may be attributed to shortages in agricultural labour, depressed purchase prices and adverse weather

conditions. While the low added value in the first stages of producing tobacco products is one of the longer-term explanations, another is the lack of subsidies for tobacco growing on the EU level. In fact, it is telling that the tobacco crop is in a long-term decline in all EU countries – especially in Greece, Italy, France and Bulgaria – with an 80% decrease in the total EU tobacco yield between 2003 and 2023 (Eurostat n.d. 1). Nevertheless, a substantial national programme for subsidising tobacco growers is still in place in Bulgaria.

Figure 2 / The nominal value of tobacco yield and the raw tobacco share in agricultural output



Source: NSI (2024); author's calculations

BOX 1 / NATIONAL PROGRAM FOR SUBSIDISING TOBACCO GROWERS

In 2023, the Bulgarian government allocated BGN 70 million in national subsidies to tobacco farmers, a sum that is more than twice the market value of the raw tobacco produced. This state support, which previously benefitted up to 40,000 recipients, has been politically advantageous due to its alignment with the base of the Movement for Freedoms and Rights, a party that holds significant influence in Bulgaria. These subsidies, uncoupled from actual tobacco production, have been justified on the grounds that they aid small-scale farmers in peripheral regions. However, over the past decade, many beneficiaries have moved away not only from tobacco farming but also from agriculture altogether.

In 2024, due to the EU regulation that only allows active farmers to receive income subsidies, many former tobacco growers returned to the trade, causing the number of registered tobacco farmers to rise from 3,200 to nearly 8,000. Nevertheless, this figure is still five times less than the previous recipient base. The key question now is whether the government will retain the former volume of tobacco subsidies while distributing them among a smaller number of farmers, as advocated by the National Tobacco Growers' Association. If this occurs, national tobacco production will likely be strongly incentivised.

By dividing the reported total value of the tobacco yield by the quantity produced, it is easy to calculate an average price per kilogram of leaf tobacco. For 2022, this number was BGN 6.85. However, there is a substantial difference in the purchase price across different tobacco varieties and even within a single variety. Interviews with tobacco growers indicate that prices per kilogram might vary more than five times depending on whether the leaf is gathered from the lower (cheaper) or the higher (more expensive) part of the plant. Official data for 2019 indicate around BGN 3.50 as the average purchase price for a kilogram of Burley and Virginia tobaccos and above BGN 7 for a kilogram of Oriental tobaccos (Kasheva 2021). For the 2023 yield, the Tobacco Growers' Association speaks of 'record' prices, amounting to BGN 10 per kilogram of Basma, BGN 5.20 for Burley, and BGN 7.30 for Virginia (Slavcheva 2023).

Around two thirds of the total tobacco yield in Bulgaria consists of small-leaf tobaccos, such as Basma and Kaba-Kulak (i.e. the Oriental group of tobacco varieties). They are grown in the southern mountainous parts of the country, mostly in the Rhodopes, by small-scale farmers, often on tiny parcels of land. Provisional calculations on the primary economy of this small-scale farming speak of largely unfavourable terms. The average land under Oriental tobacco cultivation is 0.65 hectares (ha) per farmer.¹ Given an average yield of 1,800 kg/ha and an average purchase price of EUR 5 per kilogram, the gross annual financial result is below EUR 6,000. This sum is received once per year and fails to adequately compensate the more than a dozen manual operations that occupy the labour force of the extended family for months. This is one of the main explanations for the shrinking tobacco cultivation in Bulgaria in the last decade.

As regards the other tobacco varieties in Bulgaria, as of 2020, there were 42 firms growing Virginia tobacco, with an average of 30 ha of tobacco-cultivating land per farm. In addition, around 170 medium-scale farms were growing Burley along the Danube River, with less than 2 ha under tobacco cultivation each (Kasheva 2021: 5). Since Virginia and Burley tobacco allow for mechanisation of the major production operations, the value added is considerably higher for these bigger producers than for the small-scale growers of Oriental tobacco.

The number of tobacco growers in Bulgaria has varied considerably over the years. Until 2010, there were around 40,000 individual farmers, but this figure fell to just 3,200 in 2020. In 2024, the number of registered tobacco growers rebounded to roughly 8,000 due to the intense advocacy of the Tobacco Growers' Association (see Box 1 above; Jorgova 2024). Typically, many small-scale farmers do not cultivate tobacco each year but only when their families need extra money, such as for weddings or building new houses.

2.2. PURCHASING AND PROCESSING OF RAW TOBACCO

There are more than 40 public entities (i.e. domestic firms and international companies) entered in the public register of tobacco purchasers in Bulgaria. However, only three or four of them operate independently on a bigger scale. The biggest is Socotab, a subsidiary of the Swiss-based Socotab Frana and part of Universal Leaf Tobacco Inc., a US corporation. Since 2004, Socotab has been operating a EUR 30 million factory for raw tobacco processing located near Plovdiv. Its annual processing capacity is 15,000-20,000 tonnes of explicitly Oriental tobacco. Bulgarian raw tobacco covers only a part of this processing capacity; the share of tobacco from Greece (which is purchased and

¹ Author's calculations based on data from the Registry of Tobacco Growers summarised by Kasheva (2021).

imported by a subsidiary of the Bulgarian branch of Socotab based in the northern Greek city of Katerini) is more substantial. The 2023 revenue of Socotab amounted to BGN 135.5 million, which represented an annual growth rate of 13.5%.²

Alliance One Tobacco Bulgaria is another subsidiary of a big international company (the US-based Alliance One International) that was formerly active in purchasing Bulgarian tobacco. Until 2022, this company had annual revenues in the order of BGN 10 million. In 2021, Alliance One decided to close its operations in Bulgaria and relocate its regional business entirely to North Macedonia. As of May 2024, the company retained only two employees in Bulgaria. According to the company, the motives for this relocation pertained to different factors in the Bulgarian business environment, including the decreased number of tobacco farmers, the high purchase price of raw tobacco, the lower quality of Bulgarian tobacco, and customers' lower level of interest in Bulgarian Oriental tobacco.

Active in purchasing Bulgarian tobacco are two Greek-owned companies, Seke Kardzali and Missirian, with respective 2022 revenues of BGN 7.7 million and BGN 5.8 million. The first firm is a subsidiary of the Greek S.E.K.E. s.a., which purchases and processes tobacco across the Balkans and exports it to more than 30 countries around the world. The majority owner (51%) of the latter is the Kavala-based firm Missirian s.a.

It is worth noting that purchasing raw tobacco in Bulgaria is subject to strict regulation. The holders of purchase permits must submit to the relevant tobacco committee (on the district level) programmes for the estimated quantities of tobacco by varieties that will be purchased in the next production year. In addition, they must file (i) reports on the actual purchased quantity of tobacco within 30 days of the completion of the purchase, (ii) reports on the available quantities of tobacco from previous crops, and (iii) reports on the sold quantities – within the country, in an EU member state, or in a third country. Nevertheless, complying with all these formal obligations has not prevented the high share of illicit smoking tobacco on the Bulgarian market, as already noted.

2.3. CIGARETTE PRODUCTION

During the socialist era, Bulgaria was one of the major cigarette producers globally and, in some years, the leading cigarette exporter in the world. For instance, in 1980, national cigarette production exceeded 4.2 billion packs, 85% of which was exported (Yadkov 2003: 161). After the collapse of the socialist regime, the state-owned monopoly Bulgartabac entered a lengthy privatisation process, selling off its factories and processing facilities. The last remaining Bulgartabac factory (in Blagoevgrad) was closed in 2019, and its 2,000 employees were dismissed. The cigarette-producing machines were transferred to a cigarette factory in Banja Luka.

Currently, there is one cigarette producer in Bulgaria, Plovdiv-based KT International, which is controlled by a company registered in Lichtenstein. According to the annual financial reports filed in the Commercial Registry, the revenues of KT International for 2023 amounted to BGN 218.4 million (EUR 111.7 million), representing an annual increase of more than a 50%. However, this sum is not equal to the gross value of

² All figures on revenues, profits and sales of Bulgaria-based companies cited in this text are retrieved from the respective Annual Financial Reports, which are publicly available in the national Commercial Registry. Comments on corporate strategies are based on the Annual Operational Reports, also published in the Commercial Registry. Data on the number of employees are retrieved from APIS, a Bulgarian corporate database.

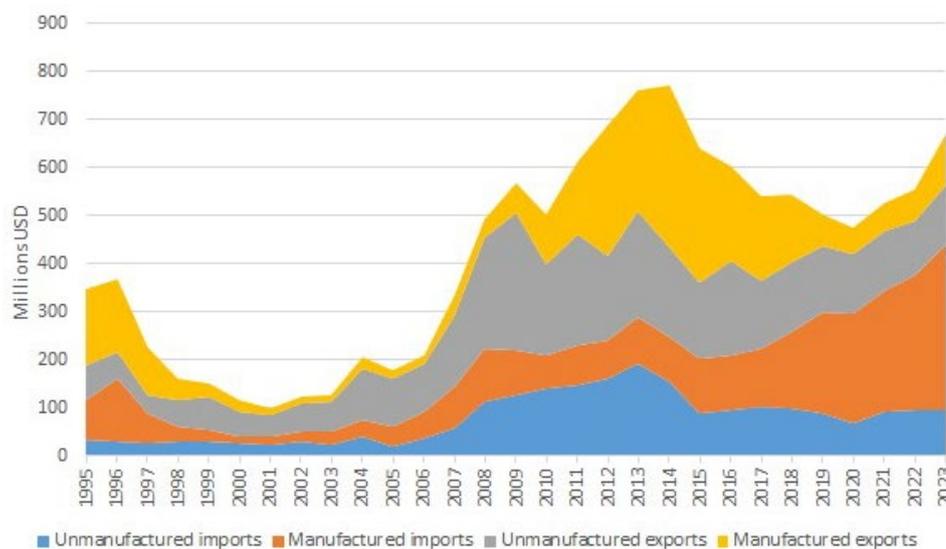
the sales; for the same year, the corporate report on the financial flows indicated that KT International received nearly BGN 470 million in payments from its clients while paying BGN 240 million in the form of indirect taxes (rather than income taxes). The declared net profit after taxes for the year was BGN 18.2 million.

As of 2023, KT International had three international subsidiaries: in Italy, Russia and the United Arab Emirates (the former North Macedonian branch is currently in a liquidation process). Regarding its operations in Russia, KT International (2023) states that since cigarettes are not included in the list of prohibited export goods, it intends to continue its profitable business there, receiving payments in euros even after the beginning of the war with Ukraine. Only 14% of the reported sales of KT International (BGN 30 million) were realised on the domestic market, with the rest from exports to the Middle East, the EU, Africa, East Asia and the Balkans.

2.4. INTERNATIONAL TRADE OF TOBACCO AND TOBACCO PRODUCTS

Bulgaria covers its tobacco products consumption almost entirely with imports. The only remaining cigarette producer works predominantly for export. In addition, Bulgaria exports and re-exports substantial quantities of raw and processed tobacco. Figure 3 illustrates this dynamic over the last 28 years.

Figure 3 / International trade of Bulgaria with tobacco and tobacco products



Note: While 'unmanufactured' refers to raw and processed tobacco, 'manufactured' relates to all types of ready-to-use tobacco products.

Source: UN Trade and Development Data Hub (2024). All values are in current USD.

The figure above exemplifies the major developments in the international trading of Bulgarian tobacco and tobacco products during the covered period. Before the financial and economic crisis of 1997, Bulgaria exported a substantial quantity of cigarettes, mostly to the former USSR zone (i.e. Russia, Ukraine, Tajikistan, Uzbekistan and Azerbaijan). Russia practically stopped importing Bulgarian cigarettes in 1999, which coincided with a general period of subdued tobacco and cigarette imports and exports.

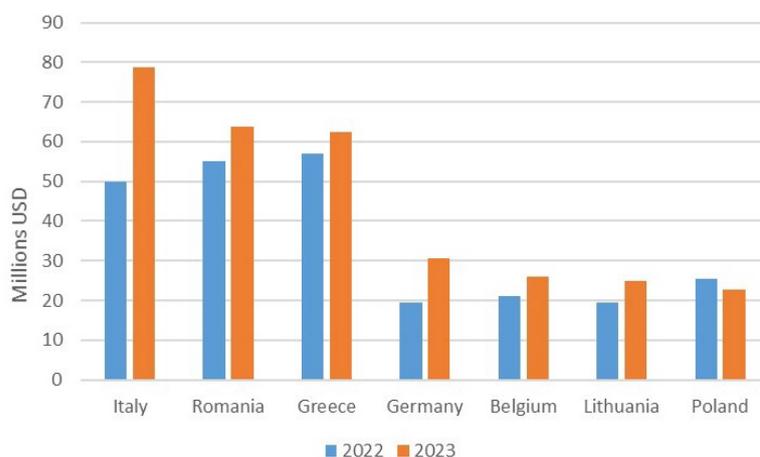
From 2004 on, Bulgaria steadily increased its exports (and re-exports) of raw and processed tobacco, which may be partially explained by the above-mentioned Socotab investments. Since 2011, the export of manufactured tobacco products has taken off, with total sales amounting to more than USD 1.8 billion for the 2011-2018 period. The highest export value of manufactured tobacco was achieved in 2014, with USD 340 million. It is noteworthy that 83% of the total export sales for that year were directed towards the United Arab Emirates. This record recalls the investigative reports that Bulgartabac was selling cigarettes to the so-called 'Islamic State' at that time, besides being responsible for a big part of the illicit cigarette market in Turkey (BNE IntelliNews 2017; see also Calderoni et al. (2016) and Marchenko (2021)). After making international headlines with its Middle East operations, Bulgartabac rapidly shrank this business and eventually closed its production operations entirely after selling its well-recognised trademarks to British American Tobacco. As a result, Bulgarian exports of cigarettes drastically dropped, to just USD 50-60 million per year.

An important development – visible in the aggregated data and confirmed by the financial report of KT International for 2023 (KT International 2023) – is the considerable growth in Bulgarian exports of manufactured tobacco in 2023. This additional export has been directed mainly towards European countries and 'other territories'. One might interpret this as an indication that KT International is eager to expand by trying new export niches and entering affluent markets prone to strict tobacco control, where it could compete with its lower production prices. The Merchandise Trade Matrix of UN Trade and Development reveals that the highest Bulgarian exports of manufactured tobacco in 2023 went to Spain (USD 14 million), Libya, Czechia, Italy and other countries.

As regards raw tobacco imports, the reported annual levels have been quite similar since 2015. One might conclude that this business has reached complete utilisation of the domestic processing capacity. About 37% of the raw tobacco imports of Bulgaria come from Greece and another 11% from North Macedonia.

However, the most pronounced development in the Bulgarian international tobacco trade is the elevated import of manufactured tobacco products, which reached the record value of USD 346 million in 2023. The major exporters of tobacco products to Bulgaria are shown in Figure 4.

Figure 4 / Major exporters of manufactured tobacco products to Bulgaria, 2022 and 2023



Source: UN Trade and Development Data Hub (2024). All values are in current USD

These seven exporting countries account for nearly 90% of all Bulgarian imports of manufactured tobacco products.

2.5. EMPLOYMENT IN THE BULGARIAN TOBACCO SECTOR

Following the remarks of some tobacco industry representatives³ that any infringement on their vested interests would result in widespread unemployment in Bulgaria, the actual employment created along the entire tobacco supply chain has been estimated – from tobacco farming to the retail trade of tobacco products. The numbers are summarised in Table 2, where some further clarifications are also given.

Table 2 / Employment created along the supply chain of the tobacco industry in Bulgaria

	Past peak employment (estimates)	Current employment (estimates)	Comments
Tobacco growing	180,000 families	3,000-6,000 people	Raw tobacco production declined by more than 90% over the last two decades (see Sec. 2.1). Many current growers are part-time or retired.
Tobacco processing	23,000 (during the socialist era)	300-400	Currently, the main employees in this sub-sector are Socotab, Missirian Bulgaria and SEKE Kardzali.
Manufacturing of tobacco products		672	Currently, the only employer in the manufacturing of tobacco products in Bulgaria is KT International.
Distribution	Not specified	Up to 1,000	The major distributor, Express Logistics and Distribution, provides about 400 jobs, also delivering mineral water and general logistic services. The business of Orbico Bulgaria, with around 1,200 employees, is more diversified away from tobacco products. Another big distributor, Tobacco Trade, employs 35 people. Most of the smaller distributors have roughly 10 employees.
Retail sales	Not specified	Minimal employment attributed	There are around 18,000 points of sale of tobacco products in Bulgaria, but they derive the lion's share of their revenues and profits from other products.
Total	More than 200,000	Fewer than 10,000	Currently less than 0.4% of total employment.

Sources: APIS corporate database (www.apis.bg/en), Yadkov (2003), author's research

Currently, tobacco growing, processing and manufacturing are barely an employer of structural significance for Bulgaria's economy. Nevertheless, concerns have been raised that thousands of small retailers depend on tobacco product sales and may lose their livelihood if stricter tobacco control measures were to be implemented. To refute this suggestion, the tobacco retail business might be assessed from the demand side. For 2023, the Bulgarian Customs Agency released for consumption 841.34 million packs of cigarettes.⁴ Given the 18,000 points of sale of tobacco products across the country, and assuming that they will operate seven days a week, this number results in average daily

³ Position of the Bulgarian Tobacco Association from 10 August 2021 concerning the project to create a National Council for coordinating the implementation in Bulgaria of the Framework Convention of the World Health Organization for tobacco control. Consultation No. 6145-K. Accessible [in Bulgarian] via the Public Consultations Portal of the Council of Ministers of the Republic of Bulgaria (www.strategy.bg/bg/public-consultations/6145).

⁴ The annual reports of the Customs Agency (2016-2024) are published [in Bulgarian] on the official website: here: <https://customs.bg/wps/portal/agency/about-us/agency-in-codes-and-facts>.

sales of 128 packs per point of sale. Only 5-6% of the final price of cigarettes remains with the retailer. Given the weighted average price per pack of BGN 5.65 as of 2023, the average net daily revenue from selling cigarettes amounts to BGN 35 for an average tobacco retailer. When recalculated on a monthly basis, this sum is below the national minimum wage. Thus, the sale of tobacco products alone could not cover the costs of a retail point that has to pay rent, salaries, bills, taxes, etc. Selling cigarettes is hardly a source of employment, but rather a way to attract consumers who will buy additional products with higher markups. This simple calculation proved that the tobacco industry's claim that any tobacco control measure would result in mass unemployment and business failures is greatly exaggerated.

In summary, while formerly providing a large employment base in Bulgaria, the tobacco industry is currently responsible for fewer than 10,000 jobs (and probably many fewer than that), which represents less than 0.4% of the national labour force.

3. Demand for tobacco products

Bulgaria is a traditional tobacco-producing country, and tobacco consumption, in its different forms, has been a part of the national social and cultural genesis (Neuburger 2013). The smoking behaviour of Bulgarians departs from the prevalent global trends in its very high levels of female smoking and in the elevated tobacco consumption among higher-income groups. Tobacco consumption among young Bulgarians is also at disturbingly high levels. Demand for alternative tobacco products (mostly for HTPs) has expanded considerably over the last few years.

3.1. SMOKING PREVALENCE

All studies on the prevalence of tobacco products in Bulgaria indicate elevated levels, with shares of current smokers being among the highest in Europe and beyond. Still more disturbing is that Bulgaria's tobacco prevalence is growing further. Table 3 summarises data on the national tobacco prevalence from different research sources.

Table 3 / Prevalence of tobacco products in Bulgaria according to different studies

Data Source	Prevalence	Notes
European Health Interview Survey for 2019	36.2% total 45.9% male 27.5% female	Sample: 7,540 individuals from 3,642 households. 29.1% daily, 7.1% occasional smokers. Covers the population aged 15 years and over. The highest prevalence of all studied European countries.
European Health Interview Survey for 2014	34.8% total 43.4% male 26.9% female	28.2% daily, 6.5% occasional smokers. The highest prevalence of all studied countries.
National Center of Public Health and Analyses for 2020	39.4% total 40.5% male, 38.7% female	Sample: 3,182 individuals. Measure: % of the adult population. 34.5% daily, 4.7% occasional smokers
WHO estimates for 2022	39.5% total 40.3% male, 38.7% female	Model estimates. Measure: current tobacco usage rates among people aged 15 years and older. Age-standardised
Euromonitor assessment for 2022	48% male 29% female	Model estimates. 1.3 million smoking males and 844,000 smoking females. One quarter of 15-year-olds are already smoking.
Household Budget Survey for 2021	44.84%	Sample: 3,060 households. Measure: percentage of households with positive cigarette expenditures
Exacta polling agency for 2020	41.4%	Sample: 1,005 individuals. Measure: share of smokers in the population over 18 years old. Only 35.8% of the respondents declared that they had never smoked.
Eurobarometer for 2023	37% total 49% male 27% female	Sample: 1,017 individuals. Measure: Current smokers, May-June 2023. 45% have never smoked; 18% used to smoke

Sources: Eurostat (n.d. 2), NCPHA (2022), WHO (2024), Euromonitor International (2023), Sabev and Petkov (2024), Eurobarometer (2024), Naseva et al. (2021)

In its extensive study of the health risk factors in Bulgaria in 2020 (NCPHA 2022), the National Center of Public Health and Analyses concluded that every third adult Bulgarian is a daily smoker. Nearly two thirds of all Bulgarian smokers initiated their tobacco consumption when they were 16-20 years old. The NCPHA study provided data on the intensity of smoking. On an average day, 47.5% of respondents smoked between one and 10 cigarettes, 44.7% between 11 and 20 cigarettes, and 7.8% over 20 cigarettes. Heavy smokers (20+ cigarettes per day) were mostly men; of the smoking male population, 14.2% were heavy smokers compared to only 3% of the female smokers.

The household budget survey (HBS) carried out by the National Statistical Institute (NSI) highlights household rather than individual rates of tobacco prevalence (specifically, households with positive cigarette expenditures). Anonymised data on Bulgarian households indicate that between 2015 and 2021, the household cigarette prevalence rose by 4.3 pp to reach nearly 45% (see analysis in Sabev and Petkov 2024).

All these studies highlight the heightened and further growing tobacco prevalence rates in Bulgaria. Still, given the complexity of the tobacco epidemic in this country, research on national tobacco consumption seems insufficient, especially regarding the socioeconomic background of smokers and their consumption of novel tobacco products.

3.2. TOBACCO USE AMONG YOUTH

Youth tobacco use in Bulgaria has turned into a major public health issue. According to Health Behaviour in School-Aged Children (HBSC), a 2018 study by the European Office of the World Health Organization, 38% of Bulgarian girls and 26% of Bulgarian boys aged 15 had smoked in the last 30 days (WHO Regional Office of Europe 2020: 93). This was Europe's highest share of smoking among 15-year-old girls and the second-highest share for 15-year-old boys. Bulgaria also had by far the highest smoking prevalence among 11-year-olds: 9% for girls and 8% for boys (ibid.: 92).

Table 4 / Youth tobacco prevalence in Bulgaria and other European countries, in %

	Tobacco Use	Tobacco use – boys	Tobacco use – girls	HTP use, both sexes
Bulgaria 2023	26.6	20.4	33.0	20.5
Bulgaria 2015	28.8	27.4	30.1	N.A.
Greece 2023	20.5	19.5	21.4	7.9
Czechia 2022	21.5	19	24.1	10.9
Lithuania 2022	14.2	14.2	14.2	5.5
Albania 2020	15.3	20.2	9.9	N.A.
Italy 2022	20.5	18.5	22.8	13.7

Sources: National GYTSs (2020-2023)⁵

The most recent comprehensive study on youth tobacco use in Bulgaria was conducted by the NCPHA in 2023, implementing the methodology of the Global Youth Tobacco Survey (GYTS) of the WHO (WHO 2023). According to this study, 26.6% of 13-15-year-old students in Bulgaria (20.4% of boys and 33% of girls) currently use some kind of tobacco product. Table 4 compares results for Bulgaria with all other recent GYTS studies conducted in the European region in the 2020-2023 period.

⁵ The list of all GYTS studies conducted in the European region is accessible from the Global Tobacco Surveillance System Data portal: <https://nccd.cdc.gov/GTSSDataSurveyResources/Ancillary/DataReports.aspx?CAID=1>

The data summarised above reveal that youth tobacco prevalence in Bulgaria is considerably higher than in other countries in the region, especially for girls and in the HTP segment. A positive development is the slight decrease (by 2.2 pp) in the total youth prevalence rate between 2015 and 2023, which is mainly due to decreasing prevalence among boys, accompanied by further growing prevalence among girls.

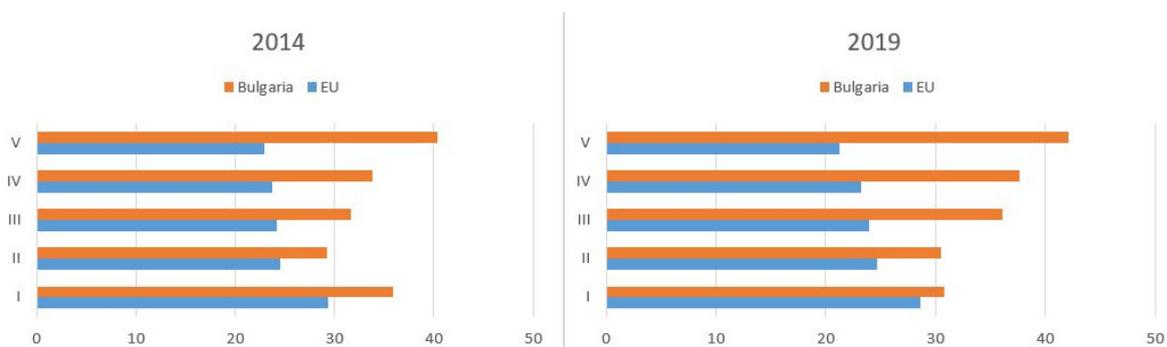
On the other hand, a disturbing trend is the diversification of tobacco products demanded by young Bulgarians. GYTS data reveal that in eight years, the share of young Bulgarians that used electronic cigarettes more than doubled, from 10.8% in 2015 to 23.3% in 2023 (and even 27.2% for girls). HTPs are equally popular, with 26.2% prevalence among girls and 14.2% among boys. The 2023 GYTS showed an overlapping use of tobacco products: instead of replacing traditional products (e.g. cigarettes and RYO tobacco), novel products complemented the youth tobacco demand, resulting in an elevated national prevalence rate.

3.3. GENDER AND INCOME ASPECTS OF TOBACCO CONSUMPTION IN BULGARIA

As noted, Bulgarian tobacco consumption diverges from the typical patterns for an upper-middle-income country and an EU member state in several important ways, including the high levels of female smoking and the heightened tobacco consumption in higher-income groups.

Several independent studies have shown that heightened tobacco consumption of more affluent Bulgarians is not a transient trait. A 2002 study by the World Bank based on 1995 data (Sayginsoy et al. 2002) estimated a 51.4% prevalence (on a household level) for the high-income group, 43.5% for the upper-middle-income group, and 32.3% for the low- and lower-middle-income groups. A 2023 study based on anonymised household data found a prevalence of 53.4% for the high-income group, 41.2% for the middle-income group, and 40.3% for the low-income group (Sabev and Petkov 2024). The European Health Interview Survey (EHIS) confirmed this pattern on the individual level (Eurostat n.d. 2): for 2019, tobacco prevalence in the highest income group (the fifth income quintile) was 42.1%, while the corresponding EU average was only 21.3%. In the lowest quintile, Bulgarian prevalence was close to the EU average (30.8% vs. 28.6%, respectively).

Figure 5 / Smoking prevalence (daily and occasional smokers) across income quintiles, in %



Note: Legend: I – lowest income quintile; V – highest income quintile

Sources: EHIS for 2014 and 2019 (Eurostat n.d. 2).

Although atypical, Bulgarian smokers' income distribution is not globally unique, as similar distributions have been observed, for instance, in Mexico, Romania and Russia (NCI and WHO 2016: 570–576). However, the typical global pattern is that more affluent and (presumably) more educated individuals and households limit self-inflicted harm to their health, as they are more aware of the detrimental effects of tobacco use. In contrast, the wealthiest Bulgarians have both higher smoking prevalence and higher smoking intensity, as measured by the number of cigarettes consumed per day.

This trait finds its major explanation in the elevated smoking prevalence levels of Bulgarian women in the highest income quintile (see Table 5).

Table 5 / Share of current smokers in Bulgaria and EU in the cross-section of gender and income, in %

Gender	Income quintile					Total
	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>	<i>V</i>	
Male and Female						
EU27	28.6	24.7	24	23.2	21.3	24.2
Bulgaria	30.8	30.5	36.1	37.7	42.1	36.2
Male						
EU27	35.8	30.9	29.3	27.8	24.5	29.2
Bulgaria	50.1	43.1	45.1	46.6	46.2	45.9
Female						
EU27	22.7	19.7	18.9	18.7	17.8	19.4
Bulgaria	18.5	20.7	27.7	29.3	37.3	27.5

Source: EHIS 2019 (Eurostat n.d. 2)

For Bulgarian men, smoking prevalence is elevated across all income groups. For women, however, the prevalence in the fifth quintile is twice as high as in the first quintile and twice as high as the EU average number for the female fifth quintile. The reasons behind the heightened smoking among Bulgarian women are mainly cultural and historical (Neuburger 2013). Smoking in the Balkans has traditionally been a 'man's business', and women who smoked in public were stigmatised until the middle of the 20th century. As American historian Mary Neuburger has explained, women's emancipation based on their decisive contribution to the national labour force and as providers for their families broke this taboo. Bulgarian women, especially high-earning professionals and intellectuals, came to regard smoking as a manifestation of their gender equality.

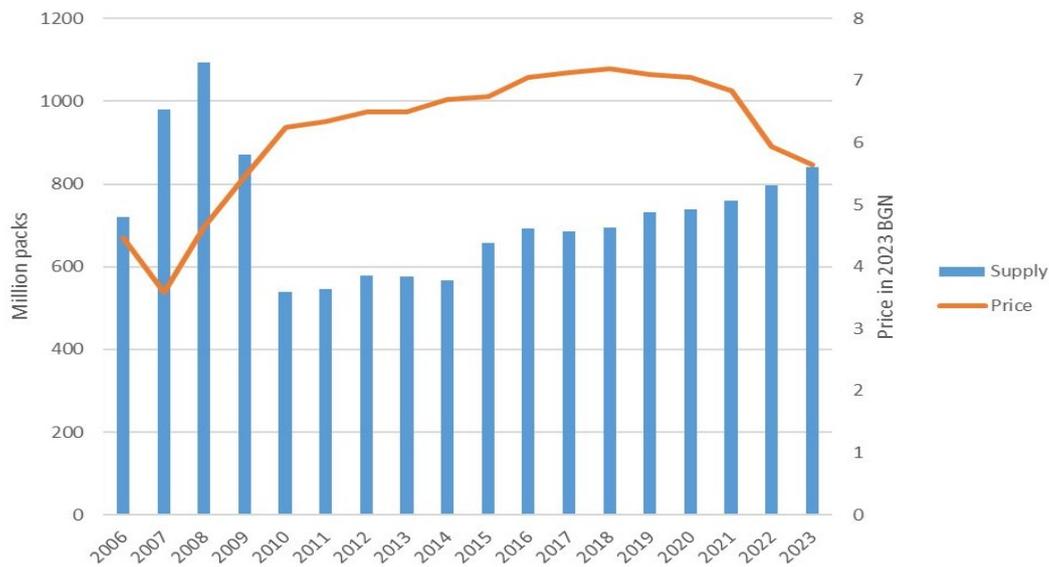
One of the few positive traits regarding demand for tobacco products in Bulgaria is the relatively high share of occasional smokers among high-income Bulgarian women. In the female fifth income quintile, the total prevalence rate of 37.3% resulted from 7.6% occasional and 29.7% daily smokers. One may hypothesise that many high-earning Bulgarian women approach smoking as a signifier of their independent status, consuming tobacco mostly on social occasions. The NCPHA study from 2020 confirmed this hypothesis, as 57% of the smoking women consumed fewer than 10 cigarettes per day (NCPHA 2022: 69).

3.4. CONSUMPTION OF CIGARETTES AND OTHER TOBACCO PRODUCTS

3.4.1. Manufactured cigarettes released for consumption

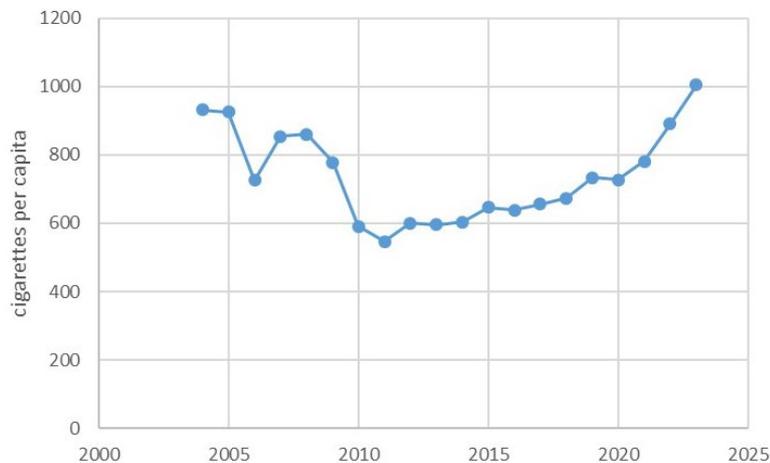
According to the Annual Report of the Bulgarian Customs Agency (Customs Agency 2024: 8), cigarettes released for consumption in 2023 amounted to 16,826,800,000 sticks, or 841.34 million packs, representing a 5.5% annual increase and the highest number since 2009 (see Figure 6, left axis). This volume looms even larger against the backdrop that the general population of Bulgaria decreased by 1.1 million people since 2009.

Figure 6 / Consumption and real price of cigarettes, 2006-2023



Source: Customs Agency (2024); author's calculations

Figure 7 / Average per capita cigarette consumption in Bulgaria



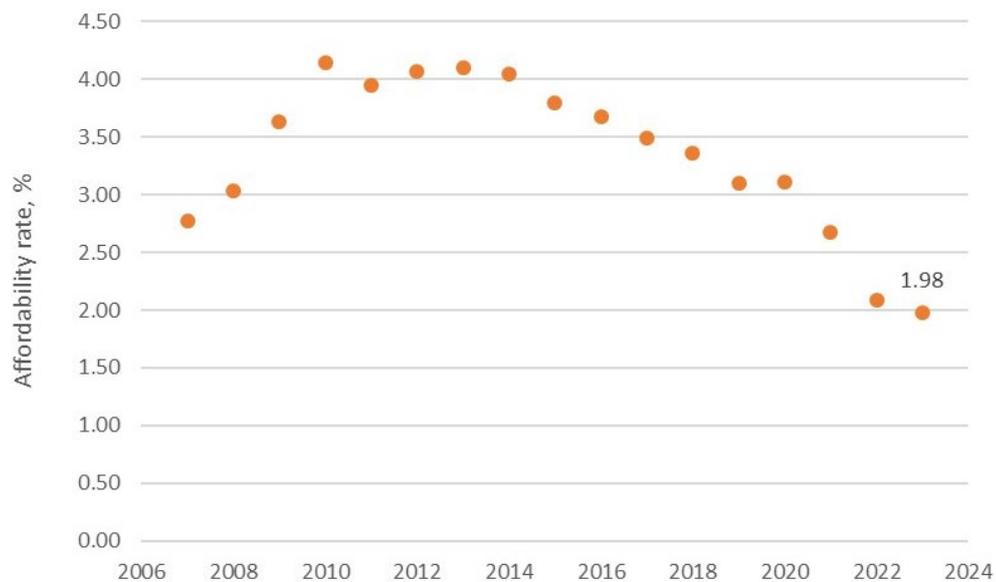
Source: NSI (2024)

This growth in the quantity of cigarettes released on the Bulgarian market is reflected in a record high level of individual cigarette consumption (at least for the last 20 years). Recalculated per capita, the 2023 results of the Bulgarian HBS showed that the average cigarette consumption stood at 1,005 pieces a year, a 12.8% annual increase. Compared to 2011, when the average cigarette consumption in Bulgaria was at its lowest point, the per capita values for 2023 represented an 84% increase. In other words, per capita cigarette consumption in Bulgaria has almost doubled in 12 years.

3.4.2. Affordability and real price of cigarettes in Bulgaria

The substantial increase in the affordability of cigarettes in Bulgaria over the last decade is among the most important trends in the national tobacco market. The established measure of cigarette affordability (i.e. the percentage of GDP per capita needed to buy 100 packs of cigarettes) for 2023 was at its lowest point for the last 17 years of Bulgaria's EU membership.

Figure 8 / Cigarette affordability rates in Bulgaria, 2007-2023



Sources: Eurostat (XXX), Customs Agency (2024); author's calculations

Affordability rates shown in the figure above slightly differ from previous estimations (Sabev et al. 2023: 11), mainly because no conversions of currency rates or CPI have been used here. The estimations above follow the straightforward logic proposed by the WHO, meaning that the AWP of cigarettes on the Bulgarian market (as reported by the Customs Agency) for a given year has been related to the corresponding per capita GDP levels measured in current prices.⁶

Between 2007 and 2010, the affordability of cigarettes in Bulgaria sharply decreased, by nearly 50%, from 2.77% to 4.14%. At that point, cigarette affordability in Bulgaria was the lowest across the EU member states and the second lowest in Europe (Blecher et al. 2013). Over the next four years, Bulgaria's cigarette affordability was almost stagnant. Starting from 2014, there followed a decade of

⁶ Data on GDP per capita in units of national currency were retrieved from Eurostat (2024).

constantly increasing cigarette affordability. In fact, between 2007 and 2023, the cigarette affordability rate more than doubled, to only 1.98%.

Such cigarette affordability is atypical for a middle-income country like Bulgaria and more akin to the rates in the wealthier part of the EU. Three facts contribute to this peculiar development: (i) a steady rise in the national per capita GDP; (ii) stagnant and declining real prices of cigarettes (see Figure 6); and (iii) the general inflationary environment since 2021, with cigarette prices lagging behind those of most other consumer goods (i.e. declining relative price of cigarettes).

The elevated consumption of cigarettes in Bulgaria may be largely explained by the specific development of cigarette prices over the period. The AWP of cigarettes released for consumption in 2023 was BGN 5.65, an annual nominal increase of 4%. However, when taking 2023 as the base year and adjusting the average price of cigarettes, the real price of cigarettes in Bulgaria has actually been declining since 2018. The price factor also influenced demand for cigarettes sold in Bulgaria in another way, namely, via the considerable price differential with other EU countries, with Bulgarian cigarettes now having the lowest prices compared to those of other EU countries. Given the legal possibility of covering at least part of their personal consumption with cheaper cigarettes sold in Bulgaria,⁷ many Bulgarian expats in the EU (officially 870,000 people), foreign tourists and citizens of neighbouring EU countries (e.g. Greece and Romania) add to the core domestic cigarette demand. There is a substantial financial incentive for doing this; for example, when bringing the allowed 40 packs of cigarettes bought in Bulgaria to France, one could save EUR 295 (given the average 2023 price levels).

The fact that the volumes of cigarettes released for consumption, as reported by the Customs Agency, do not only cover the cigarette consumption of Bulgarian smokers is evident from the following demand-side calculations. When dividing the 841.34 million packs released for consumption in 2023 by the estimated 2.187 million Bulgarian smokers, the average value for 'cigarettes per smoker per day' would surpass 21, while the OECD data indicate that the corresponding number for other upper-middle-income countries varies between 10 and 17 (OECD Data Explorer n.d.). In 2019, the highest recorded values of the indicator were 17.1 for Turkey and 17.4 for Croatia. The OECD assessment for Bulgaria was 15.2 cigarettes per smoker per day as of 2019.

3.4.3. The market of alternative tobacco products

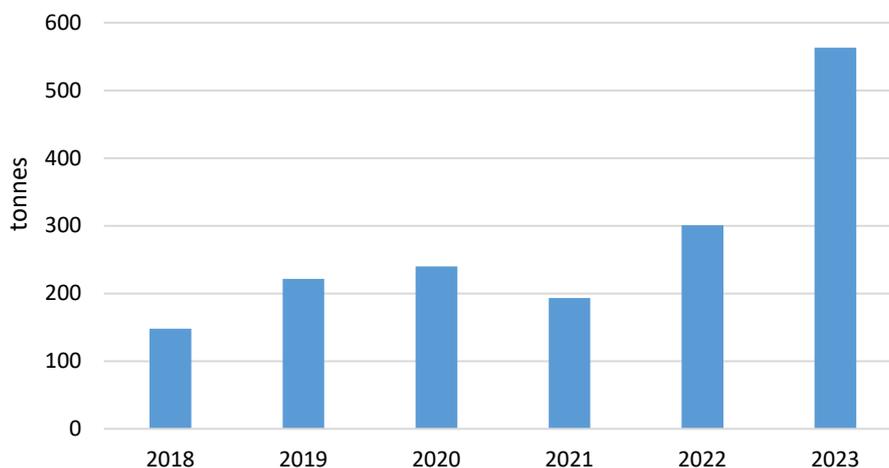
An important independent source for assessing the consumption of alternative tobacco products in Bulgaria is the Special Eurobarometer, which focuses on the general attitudes of EU citizens towards tobacco and related products (Eurobarometer 2024). Face-to-face interviews with 1,017 Bulgarians were conducted in May and June 2023; the minimum age of the respondents was 15 (therefore, the survey did not fully reflect the elevated consumption of novel tobacco products among adolescents). The results indicate that most Bulgarian tobacco consumers still prefer manufactured cigarettes; 92% of them consumed cigarettes daily, while the EU average was 69%.

⁷ Carrying 40 packs of cigarettes for private consumption is allowed when crossing land borders between EU states. The quantity allowed when travelling by air is limited to 20 packs per person.

Only 2% of the tobacco users, both for the EU27 and Bulgaria, used HTPs, and another 3% used e-cigarettes, daily. However, the level of familiarity with these products was much higher in Bulgaria. About 14% of Bulgarian tobacco users stated that they have consumer experience with HTPs and 16% with e-cigarettes; the average values for the EU were respectively 7% and 14%. It may be deduced from this that the Bulgarian smoking population, with its generally higher tobacco prevalence and intensity, is more willing to experiment with these novel products.

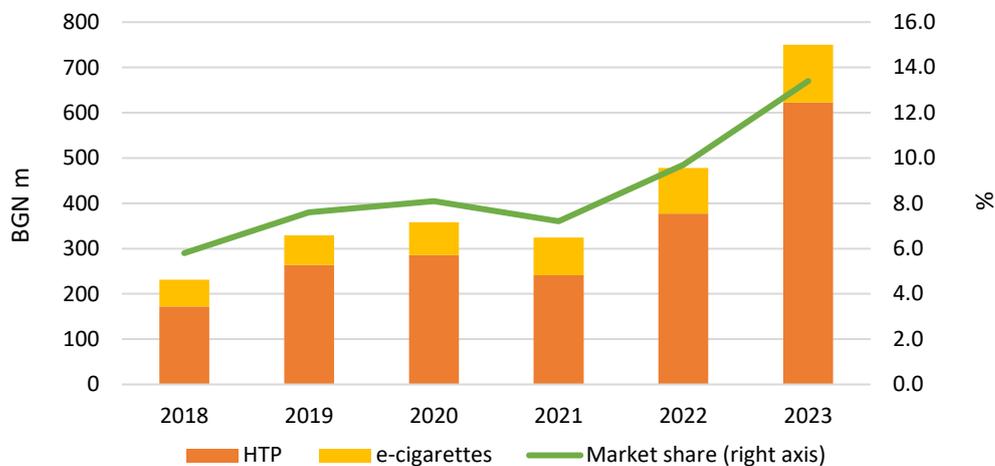
The increasing popularity of HTPs is illustrated in Figure 9 below. According to the Customs Agency, the quantity of HTPs released for consumption in 2023 was 563,400 kilograms (roughly equal to 1.85 billion HTP sticks), up by 87.4% in just a single year. The sharp increase in the consumption of HTPs came despite a 13.9% nominal increase in their excise duties for the year.

Figure 9 / Heated tobacco products released for consumption in Bulgaria



Source: Customs Agency Annual Reports for 2018-2023

Estimations on the nominal sales of novel tobacco products are aligned with this trend. Between 2018 and 2022, the combined sales of HTPs and e-cigarettes in Bulgaria grew by 110% in nominal terms. For 2023, Euromonitor recorded an even steeper increase in the sales of novel tobacco products, especially of HTPs. According to this source, HTP sales in Bulgaria in 2023 hit the record volume of BGN 623 million (nearly EUR 320 million), resulting from BGN 112 million in sales of heating devices and BGN 511 million in sales of heating sticks. The continuing growth in sales of HTPs and e-vapor products led to their combined market share of 13.4% of the national tobacco products market. The Euromonitor on the tobacco market in Bulgaria generally concludes that there was 'robust growth' in the sales of HTPs and e-vapor products in 2023 and that they had 'growing appeal', while the volumes of cigarette sales was constantly increasing (Euromonitor International 2024b).

Figure 10 / Sales of novel tobacco products and their market share in 2023

Sources: Customs Agency (2024), Euromonitor International (2024b); author's calculations

Thus, the notion that novel tobacco and nicotine products help people to quit smoking traditional cigarettes does not hold, at least for Bulgaria. About 55% of Bulgarian users of HTPs stated that this did not lead them to reduce their general tobacco consumption, while the figure for the EU, was about 34%. In addition, for e-cigarettes, the levels of reducing consumption of traditional cigarettes as a consequence of using these novel products are considerably lower for Bulgaria than the average EU values.

On the other hand, smoking tobacco (used for hand-rolled cigarettes) is not as popular in Bulgaria as it is in some Western European countries. According to the Customs Agency (2024), the quantities of smoking tobacco with paid excise duty in 2023 decreased by 0.9%, reaching 513.8 tonnes. When converting this quantity into cigarettes (1 cigarette = 0.7 grams of tobacco), it is equal to 36.7 million packs of 20 sticks. This is roughly 4% of the number of manufactured cigarettes in the same year. A Eurobarometer survey conducted in 2023 (Eurobarometer 2024) confirmed that the percentage above is close to the national RYO prevalence rate, estimating that only 3% of Bulgarian smokers consume hand-rolled cigarettes daily and a further 1% every week (the average values for the EU were 18% and 3%, respectively). It is important to note that in a tobacco-producing country, consumption of smoking tobacco without paid excise duties could be substantial.

An alternative tobacco product that is not very popular in Western Europe but finds widespread use in the Balkans is the waterpipe tobacco used with so-called hookah, shisha or nargile. Its quantities are reported by the Customs Agency (2024) together with those of fine-cut tobacco, and it is difficult to determine its exact volumes. Just for the sake of illustration, data indicate that 17.8 tonnes of illicit tobacco was detained in 2023, of which more than one quarter (5 tonnes) was waterpipe tobacco.

Nargile has a certain appeal among young Bulgarians because it is considered a less harmful tobacco product, has an exotic air, and has a social aspect to its consumption. A 2020 survey undertaken by the Bulgarian Smoke-free Life Coalition covering 644 respondents aged 18-35 found a 15.6% prevalence of nargile use among young Bulgarian smokers (Naseva et al. 2021). It is important to note that the less-harmful appeal of hookah is delusionary. Quantitative research based on the cited empirical data found that nargile use is a statistically significant factor for the later use of other tobacco products. When

starting tobacco use with a nargile, the probability of remaining in the smoking population in later years is 2.8 times higher ($p=0.044$) compared to other tobacco products (ibid.).

As regards other alternative tobacco products (e.g. chewing tobacco, snuff and nicotine pouches), their popularity among Bulgarians is low, with annual sales below BGN 1 million in each category.

3.4.4. Industry data on the Bulgarian tobacco market

Euromonitor (2023) provides comprehensive data on the market of tobacco products in Bulgaria based on information gathered from multiple sources, including trade associations, company research and trade press. Since these data could be influenced by the tobacco industry, they cannot be relied upon entirely, but they do help to provide a general market picture.

Table 6 / The market of tobacco products in Bulgaria, in BGN m

	2018	2019	2020	2021	2022	18/22, %
HTPs	172	264.1	285.2	241.4	377.2	119.30
E-vapor	46.5	49.3	55.8	62.4	82.3	76.99
Smoking tobacco	53.2	56	60.8	62	74.7	40.41
Cigars & cigarillos	28.9	32.4	30	38.9	42.1	45.67
Cigarettes	3,021.4	3,208.1	3,193	3,290.6	3,930.6	30.09
Total	3,322	3,609.9	3,624.8	3,695.3	4,506.9	35.67

Source: Euromonitor (2023); author's calculations

The table above shows that the tobacco market in Bulgaria grew by 36% in nominal terms between 2018 and 2022 (inflation for the studied period was 24.9%). Sales of all categories of tobacco products were on the rise, with the steepest increase being for novel tobacco products (HTPs and e-vapor products). Whereas novel products made up 6.6% of the total tobacco market in 2018, their share rose to 10.2% in 2022, according to Euromonitor.⁸

As of 2022, Philips Morris held a 93% share in the HTP market. The number of tobacco heating devices sold is estimated at 0.7 million units, collectively worth BGN 68 million.

Euromonitor also estimated that the most popular cigarette brand in the Bulgarian market in 2022 was Rothmans (21.7%), followed by Karelia (18.5%) and Davidoff (7.1%). The only remaining Bulgarian producer, Plovdiv-based KT International, only held a 7.6% market share with its three major brands: King's, Marilyn and Corset. Therefore, 92.4% of the Bulgarian cigarette market was supplied with imported cigarettes. Most probably, this share decreased further in 2023 and 2024.

⁸ As noted, these numbers should be interpreted with caution. For instance, for 2022, Euromonitor reported total cigarette sales of BGN 3.93 billion, whereas the Customs Agency reported total sales of BGN 4.33 billion.

4. Tobacco taxation in Bulgaria

Tobacco taxation is the most effective single measure for tobacco control (Chaloupka 2017). For many countries, it also provides a constant stream of public revenues, as it is a major source of indirect taxes. In the case of Bulgaria, these two goals have not been well aligned in the last few years, with tobacco taxation being more of a tax-collection tool than an instrument to promote public health. This section analyses the institutional framework of the tobacco tax and its fiscal role in Bulgaria.

4.1. INSTITUTIONAL FRAMEWORK RELATED TO TOBACCO PRODUCTS AND TOBACCO CONSUMPTION

The 2021 WHO Report on the global tobacco epidemic (WHO 2021) found that Bulgaria stands with the highest-achieving countries globally in four of the six MPOWER⁹ tobacco control measures: monitoring the prevalence of tobacco use, promoting smoke-free environments, requiring health warning labels, and raising taxes on tobacco. However, legal compliance does not necessarily lead to real-world implementation of a tobacco control measure. For instance, a comprehensive ban on smoking in closed public spaces was introduced in June 2012, yet the level of compliance with this regulation is moderate, fetching only five out of 10 points, according to the WHO. Regarding tobacco taxation, the average tax share in the final price of cigarettes stood at 85.3% in 2020, which is considerably higher than the regional and global averages. Nevertheless, due to the relatively low retail price of cigarettes, this fact did not prevent tobacco becoming more affordable over the last decade.

All requirements of Directive 2014/40/EU of the European Parliament and the Council ('Tobacco Products Directive') have been introduced into Bulgarian legislation, and the country also complies fully with the provisions of the EU Council's Directive 2011/64/EC on tobacco taxation.

Two legislative bodies regulate the production and taxation of tobacco products in Bulgaria: the Tobacco Act and the Excise Act. In addition, the Health Act stipulates tobacco control measures related to public health.¹⁰

An important feature of the Bulgarian tobacco control legislation is Article 53(3) of the Health Act, which obliges the Ministry of Finance to transfer to the Ministry of Health 1% of all excise revenues collected from the sale of alcohol and tobacco products. These funds are meant to finance national programmes aimed at limiting the consumption of tobacco products, fighting alcohol abuse, and preventing the consumption of narcotic substances. Given the 2023 figures, this provision would result in prevention funds worth BGN 36.7 million, mainly from tobacco excise duties. However, Bulgarian governments have never distributed such sums for this purpose, and the Ministry of Finance provides no explanations for why this Bulgarian law has been neglected.

⁹ www.who.int/initiatives/mpower

¹⁰ For further details, see the 2022 landscape study of Smoke-free Life Coalition (Sabev et al. 2023)

An important development in the field of tobacco control was the July 2024 decision of the Sofia Administrative Court to revoke a fine imposed by a health inspector for using HTPs in a closed public space (thus making unlawful all previous fines imposed for HTP use). This ruling was made possible by a loophole in the Health Act that prohibits tobacco smoking but not other forms of tobacco use. Due to the Bulgarian political crisis (with seven general elections in only three years), the proposed introduction of an adequate definition of 'smoking' in the Health Act has been delayed.

4.2. TOBACCO TAX STRUCTURE

The taxation of tobacco products in Bulgaria is specified in the Excise Act, which fully complies with the European Council's Directive 2011/64/EC. Regarding manufactured cigarettes, a mixture of ad valorem (calculated based on the retail price) and specific excise (per 1,000 cigarettes) duties is applied. In addition, minimal levels of cigarette excise duties are stipulated.

In December 2022, the Bulgarian Parliament adopted a new excise calendar, which introduced a gradual increase in the minimal excise duties on cigarettes to be achieved by a series of slight increases in the specific excise rates while decreasing the ad valorem rate. The excise rates on smoking tobacco, cigars/cigarillos and HTPs were also updated. E-liquids became subject to excise duties for the first time. The new excise calendar entered into force on 1 March 2023.

Table 7 / Excise calendar on tobacco products

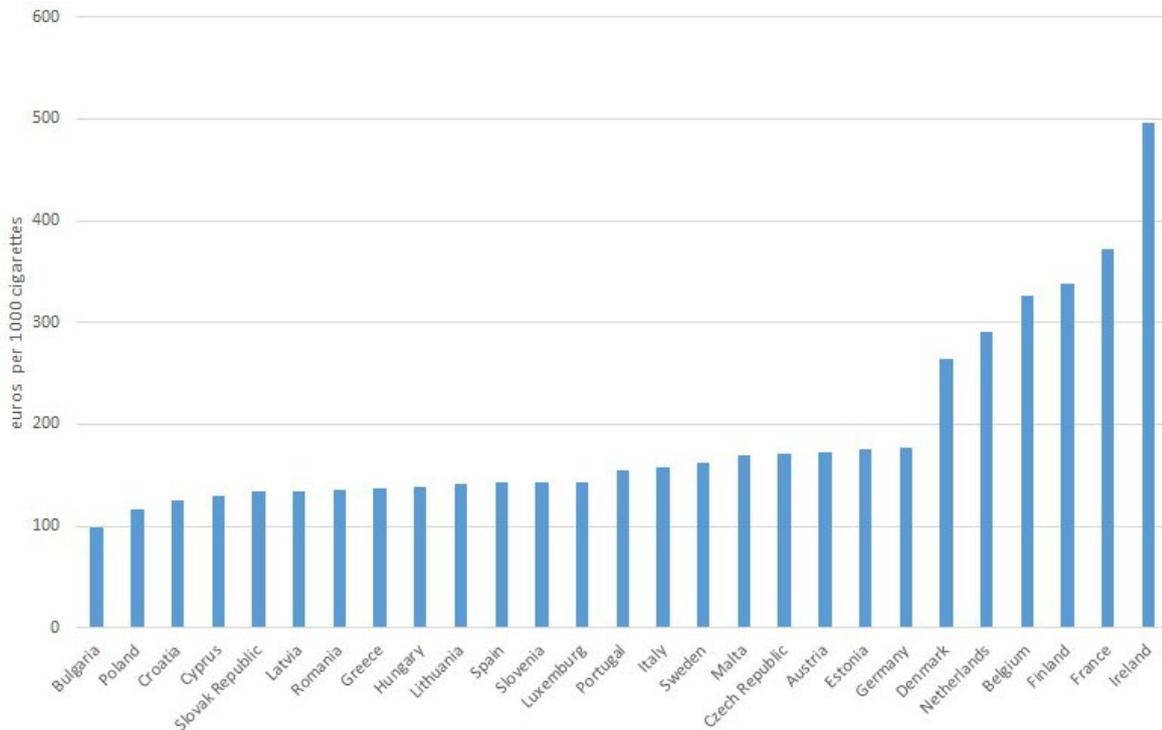
	Specific excise, BGN per 1,000 pcs	Cigarettes Ad valorem, % of the retail price	Minimum rate, BGN/EUR per 1,000 pcs	Cigars & cigarillos, BGN per 1,000 pcs	Smoking tobacco, BGN/kg	HTPs, BGN/kg	E-liquids, BGN/ml
01.03.2023	117.5	23.5	185.5 / 94.84	297	167	282	0.3
01.01.2024	126	22	194 / 99.19	327	184	331	0.35
01.01.2025	134.5	20.5	202.5 / 101.46	360	202	380	0.4
01.01.2026	143	19	211 / 107.88	396	222	400	0.45

Source: 2022 Excise Act, art. 37-39

According to the excise calendar, by 1 January 2026, the minimum excise duty on cigarettes will reach BGN 211 (EUR 107.88) per 1,000 sticks. This number is somewhat higher than the current minimal excise rate stipulated in Directive 2011/64/EC (EUR 90 per 1,000 cigarettes) – yet far below the excise levels alluded to in the draft revision of the Tobacco Tax Directive (Financial Times 2022). The draft revision included a formula for determining nationally specific minimal excise rates on cigarettes that takes into account the price level in the specific member state. Given the 2023 Price Level Index for Bulgaria, this formula would result in a national minimal excise rate of nearly EUR 154 per 1,000 sticks in 2024 (Sabev et al. forthcoming). This indicates that excise levels under the current excise calendar must be increased by roughly 55% to comply with the pending new requirements. It is also worth noting that some have argued that the new minimal excise rates on the EU level for cigarettes have to be markedly higher than those proposed before the 2023 inflation spike (Lopez-Nicolas 2023).

Figure 11 shows that Bulgaria's current cigarette excise levels are inadequate compared to those of most EU member states. Poland, the country with the second-lowest cigarette excise taxes in the EU, has set its minimal rates at 17.5% above Bulgaria's.

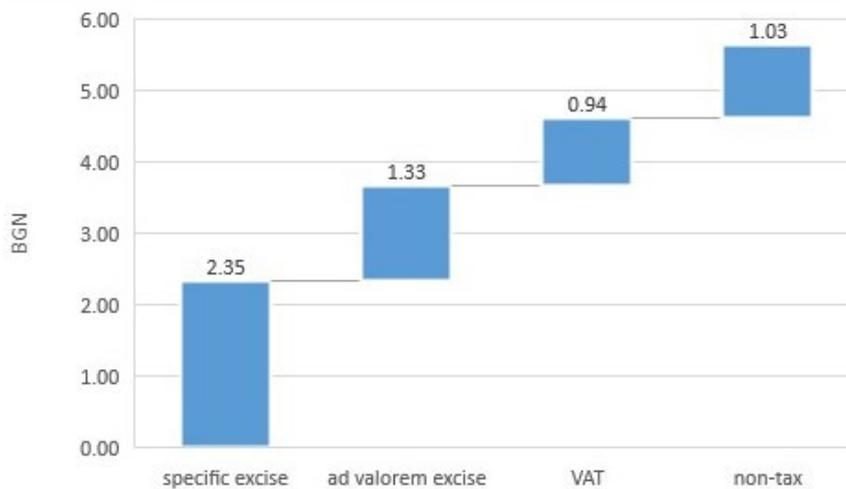
Figure 11 / Minimal excise rates on cigarettes in the EU, as of 01.01.2024



Source: Taxes in Europe Database (2024)

As of 2023, the actual average excise rate on cigarettes was BGN 184.53 per 1,000 sticks, or EUR 1.89 per pack. The tax share (made up of the specific excise, the ad valorem excise and the VAT) in the AWP of cigarettes was 81.76%. The excise share alone was 65.13%. Figure 12 shows the decomposition of the average weighted retail price of cigarettes in Bulgaria in 2023.

Figure 12 / Components of the average weighted retail price of cigarettes, 2023

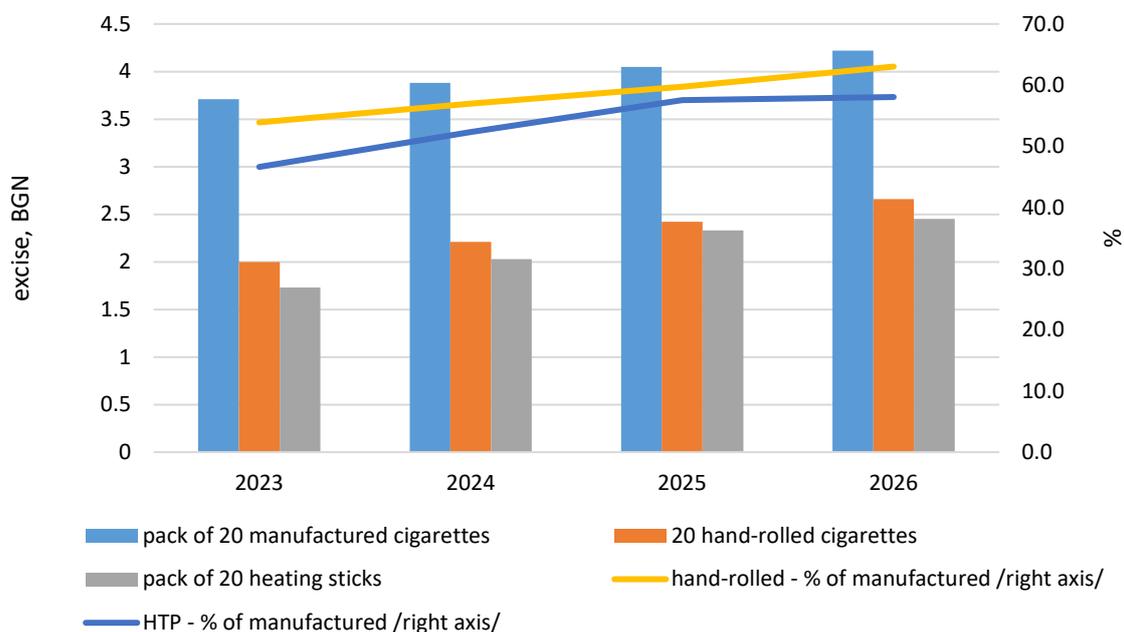


Source: author's calculations

Regarding smoking tobacco, given a conversion rate of 0.7 grams per hand-rolled cigarette, the level of taxation in 2023 was around BGN 2.34 per 20 sticks – that is, only 63% of the excise level for 20 manufactured cigarettes. Following the current excise calendar, the excise on smoking tobacco will grow faster than the excise on manufactured cigarettes, reaching 73% of the excise levels of cigarettes by 2026. Importantly, according to the draft revision of the EU Tobacco Tax Directive, the excise gap between cigarettes and fine-cut tobacco must be narrowed.

HTPs, which are rapidly gaining in popularity in Bulgaria (see Figure 10), currently enjoy an even bigger tax advantage compared to manufactured cigarettes. Excise duties on HTPs in Bulgaria are levied based on the weight of contained tobacco. Recalculated on a per-pack basis (1 stick corresponds to 0.305 g of HTP, thus 1 kilogram of taxed tobacco corresponds to roughly 164 packs of 20 sticks), the excise duty collected from a pack of sticks was less than 47% of the duty imposed on a pack of cigarettes, as of 2023 (Tobacco-free Kids n.d.). This proportion will grow to 58% by 2026, according to the excise calendar. Figure 13 highlights the excise differential of manufactured cigarettes, smoking tobacco and HTPs.

Figure 13 / Current and projected excise duties (in BGN, left axis, and in relative terms, right axis) of manufactured cigarettes, smoking tobacco and HTPs



Source: Excise Act; author's calculations

To sum up, Bulgaria largely adheres to the minimal excise rates on cigarettes set by Directive 2011/64/EC. Due to the low domestic retail prices, these rates make up more than 65% of the average selling price of cigarettes, while the VAT adds another 16.67%. Thus, the tobacco industry remains with roughly an 18% share, and 82% of the price is collected as taxation (as of 2023). This high share of indirect taxation in the retail price of cigarettes in Bulgaria is a positive feature from the point of view of tobacco control (earning 4.5 out of 5 points in the global Cigarette Tax Scorecard; Drope et al. 2024). Yet its impact on tobacco consumption is being diminished by the lower retail price and increased affordability of cigarettes.

The lower excise duties on tobacco products other than cigarettes (e.g. RYO tobacco and HTPs) raise additional concerns. The tax advantage of RYO tobacco deserves special attention, as it is often used by younger smokers. At the opposite end of the price spectrum, cigars and cigarillos (i.e. the luxury segment) remain undertaxed, at below BGN 0.3 apiece.

Until October 2018, the excise duty levied on a pack of heating sticks was equal to only 26% of the excise duty for a pack of manufactured cigarettes. This very low taxation level resulted in 21% of Bulgarians aged 25-39 having 'at least tried' HTPs, compared to 10% for the EU (Eurobarometer 2024). After heated disputes, the excise duty on heated tobacco was raised – but it is still less than half of the excise levels for manufactured cigarettes. The tobacco industry supports, via industry-financed think tanks (Institute of Market Economy 2023), the existence of such a tax differential because HTPs are supposedly less detrimental to human health and have to compete with cemented habits of smoking 'regular' cigarettes. In general, the claims that HTPs and novel tobacco products cause less damage to health remain unsubstantiated.

The excise calendar of 2023 levied for the first time excise duties on nicotine-containing tobacco substitutes and especially on various liquids for e-cigarettes. The market for e-cigarettes and the corresponding liquids has not been visibly affected by the new excise duty. Even with the new excise calendar, tobacco heating devices – as well as cigarette paper, filters and other smoking paraphernalia – have remained free of excise.

Bulgarian tobacco tax policy is strongly influenced and even shaped by the tobacco industry – a fact openly admitted by the Ministry of Finance. The Ministry describes this interference of the tobacco industry as an example of positive collaboration and a way of avoiding 'unwanted effects on business, fiscal stability and the consumers' (Antonov et al. 2022).

4.3. TOBACCO TAX REVENUES

During the last decade, indirect tobacco taxation turned into a major source of revenues for the Bulgarian government. The excise revenues from cigarettes and other tobacco products reached the record amount of BGN 3.345 billion in 2023, representing nominal annual growth of 11.2%.¹¹

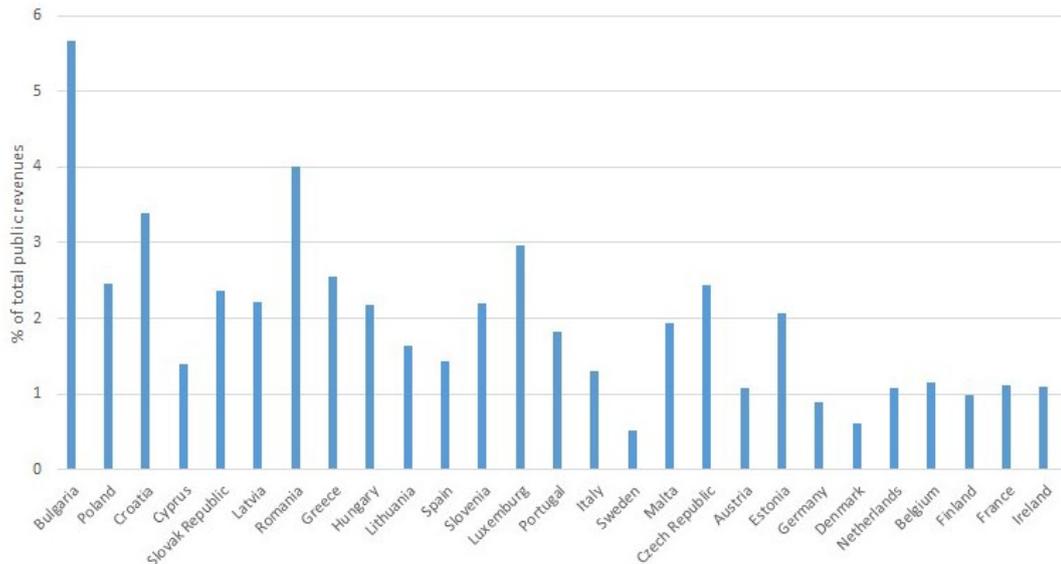
Tobacco taxation also includes a VAT rate, which is set at 20%. Given the reported number of cigarettes with paid excise duty (841.34 million packs) and the average weighted price, the VAT revenues from cigarette sales alone amounted to BGN 789 million in 2023. The VAT revenues from smoking tobacco, HTPs and other tobacco products are harder to calculate, but BGN 100 million is a reliable estimation based on the Customs Agency's records of the released quantities.

Thus, the combined excise and VAT revenues from tobacco products for 2023 exceeded BGN 4.2 billion, or more than 12.2% of all tax revenues of Bulgaria for the year. To put this number into perspective, all income taxes from non-financial corporations collected by the National Revenue Agency in 2023 amounted to BGN 4.823 billion (MoF, 2024).

¹¹ According to the preliminary Ministry of Finance reports for 2024, this figure grew further, to BGN 3.856 billion, which represents a nominal annual increase of 15.3%.

An earlier study estimated the tax revenues from tobacco products (including VAT) on the EU level at 2.7% of the total tax revenues collected in 2016 (European Commission 2020: 11). Figure 14 displays newer data (for 2022) on the share of tobacco excise tax (excluding VAT) in the total public revenues of the EU member states. It is clearly visible that Bulgaria is an outlier in this respect, collecting 5.67% of its public revenues from tobacco excises, whereas the average value for the EU member states was below 2%.

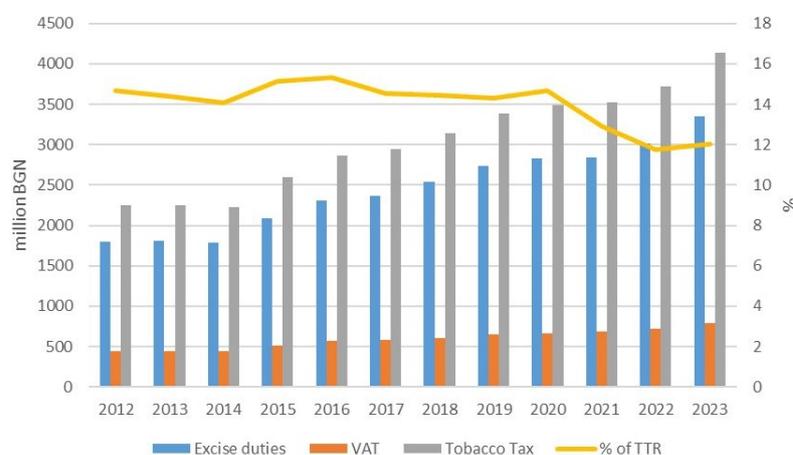
Figure 14 / The share of tobacco excise revenues in the total public revenues, 2022



Source: Taxes in Europe Database (2024)

Figure 15 addresses the same phenomenon from a national perspective. Note the methodological differences between both figures. While Figure 14 only estimates the contribution of excise taxes, Figure 15 also tracks the VAT revenues from tobacco products. In addition, the denominator in the second case is only the funds collected via national taxes (direct, indirect and others). Nevertheless, in both figures, it is evident that tobacco taxation plays a major – and oversized – role in Bulgarian fiscal policy.

Figure 15 / Tobacco taxation in Bulgaria – revenues and share in the total tax revenues (TTRs)



Sources: Ministry of Finance (n.d.), Customs Agency annual reports; author's calculations

Bulgaria's atypically large reliance on tobacco taxation explains the risk-averse attitude of the national fiscal authorities towards any tax-related tobacco control measures. Tobacco tax revenues in Bulgaria are being sustained and increased by keeping excises – and, thus, the end prices – of tobacco products at their lowest level. Any measures that would negatively affect the number of national tobacco consumers are being purposefully avoided.

5. Price and income elasticity of cigarettes in Bulgaria – a macro model

Knowing the exact elasticity of cigarette demand is crucially important for both tobacco control and fiscal policy. Elasticity coefficients indicate how demand will respond to certain underlying changes, most often in prices and disposable incomes. As such, they are instructive on the new levels in tobacco consumption and tax revenues when implementing certain policy interventions.

A thorough study on the elasticity of cigarette demand in Bulgaria (based on household budget survey data from 1995) was published in 2002 by a World Bank research team (Sayginsoy et al. 2002). It estimated a price elasticity of -0.802 and an income elasticity of 0.335. These results are generally aligned with the elasticity of cigarette-demand estimations for the Balkans (ranging from -0.4 in Kosovo, North Macedonia and Albania to -1 in Montenegro and Bosnia and Herzegovina for the price elasticity) (Vladisavljevic et al. 2022) and for the middle-income countries globally. They need updating, however, as the data they were based on were collected three decades ago – as well as in a period of profound socioeconomic transformations and in a year with a 100% annual national inflation.

To this end, a macro model has been constructed based on official data for the last 20 years (2004-2023), where the cigarette demand is a linear function of cigarette price and disposable incomes:

$$Y_t = \alpha + \beta_1 \cdot P_t + \beta_2 \cdot DI_t + \varepsilon_t$$

Y_t stands for the national per capita cigarette consumption, P_t is the price variable, DI is disposable income, and ε_t is the error term. This simple regression model could be expanded by adding different variables related to tobacco consumption (e.g. the median age of the population or a dummy variable on tobacco control policy). However, the basic three-variable model has been preferred here for two main reasons: the high collinearity of socioeconomic indicators with data on income, and the very high explanatory power of the simpler model.

The National Statistical Institute (NSI) publishes annual data on per capita cigarette consumption derived from the Household Budget Survey (HBS). Eurostat data for the GDP per capita expressed in purchasing power parity has been used to approximate the individual disposable income; the annual values were corrected for inflation using 2023 as the base year. The price variable P_t required additional transformations. First, annual tobacco price indices were derived from the monthly tobacco price indices reported by the NSI. Second, the annual tobacco price indices were divided by the total consumer price indices for the respective year. In this way, annual price developments strictly for tobacco products were isolated.

To calculate elasticity coefficients, three variables – for demand, price variable and income – were transformed to logarithmic form. Before proceeding with the linear regression model, the hypothesis of the non-stationarity of data was checked by applying the Augmented Dickey-Fuller (ADF) unit root test. The ADF test failed to confirm the non-stationarity of data in their levels, with corresponding p-values for $Z(t)$ of

0.6785 for the demand variable, 0.0518 for the price variable, and 0.9609 for the income variable. These results did not disprove the existence of a unit root provoking spurious regression of the time series.

The non-stationarity hypothesis was tested again with the first differences of the studied variables. The p-values for $Z(t)$ amounted to 0.0114 for the demand variable, 0.0011 for the price variable, and 0.0080 for the income variable. This led to the conclusion that the variables are integrated of order one. The results of the above tests are shown in Table 8.

Table 8 / T-statistics of the Augmented Dickey-Fuller Test

Variables	ADF test		ADF critical values		
	Z (t) at I (0)	Z (t) at I (1)	1%	5%	10%
Cigarette consumption	-1.19	-3.39**	-3.75	-3.00	-2.63
Price variable	-2.85	-4.07*	-3.75	-3.00	-2.63
Income variable	0.03	-3.50**	-3.75	-3.00	-2.63

Note: * significant at 1%; ** significant at 5%

Source: author's calculations.

Since variables of the macro model are integrated of order one, the hypothesis of their long-term cointegration can be tested using the Johansen procedure (Becketti 2013), with a null hypothesis of no cointegrating equation for the variables. The optimal number of lags for the test has been estimated at two based on the final prediction error value. The results are shown in the table below.

Table 9 / Johansen test for cointegration

Trend: constant		Number of obs. = 18		
Sample: 2006-2023		Lags = 2		
Max. rank	Trace statistic	5% critical value	Max. statistic	5% critical value
0	41.18	29.68	27.05	20.97
1	14.11*	15.41	13.80*	14.07
2	0.33	3.76	0.33	3.76

Note: * indicates that the corresponding cointegrating rank is statistically significant, implying the existence of a long-run relationship.

Source: author's calculations

As is evident, trace statistics and max statistics do agree by rejecting the null hypothesis at the first rank, which means that there exists one cointegrating equation between the studied variables. Therefore, one must infer the presence of a long-term relationship (cointegration) between cigarette consumption, cigarette prices and disposable incomes in Bulgaria. Thus, the corresponding elasticity coefficients can be estimated by a linear ordinary least squares (OLS) regression model.

This model is statistically significant and has a very high explanatory power, as it explains nearly 95% of the variations in the per capita cigarette consumption for the period studied. The estimated coefficients of price elasticity (-0.813) and income elasticity (0.585) are both statistically significant and have very similar standard error values, of 0.046 and 0.047, respectively.

Table 10 / OLS regression of cigarette consumption, cigarette prices and GDP per capita

Log Consumption	Coef.	Std. Err.	T	P > t	95 % Conf. Interval	
Log Price	-0.81	0.05	-17.69	0.00	-0.91	-0.72
Log GDP	0.58	0.05	12.36	0.00	0.49	0.69
cons	1.61	0.44	3.67	0.00	0.69	2.54

Number of obs. = 20
F (2, 17) = 158.82
Prob > F = 0.00
R-squared = 0.96
Adj. R-squared = 0.94

Source: author's calculations

A series of post-estimation tests has been applied: a Breusch-Pagan test for heteroscedasticity, a Breusch-Godfrey test, Ramsey's RESET test, a portmanteau white noise test, a variance inflation factor test, and a skewness/kurtosis test. All the applied post-estimation tests confirmed the robustness of the model.

Table 11 / Results of the post-estimation tests of the macro model

Test	Null hypothesis	Value
Breusch-Pagan test	Constant variance	Chi2(2) = 1.83 prob > chi2 = 0.40
Breusch-Godfrey test lags (2)	No serial correlation	Chi2 = 1.17 Prob > chi2 = 0.56
Ramsey's RESET test	The model has no omitted variables	F (3, 14) = 1.99 Prob > F = 0.16
Portmanteau test	Residuals are white noise	Q statistic = 12.19 Prob > chi2(8) = 0.14
Variance inflation factor test	N.A. /measure of multicollinearity/	Mean VIF = 1.57
Skewness / kurtosis test	Normality of residuals' distribution	chi(2) = 0.34 Prob > chi2 = 0.84

Source: author's calculations

Based on the procedure laid down in Tables 8-11, one may infer that the results of this macro model are consistent and robust, estimating for Bulgaria a price elasticity of cigarette demand of -0.81 and an income elasticity of cigarette demand of 0.59.

The macro model utilises highly aggregated data from a relatively short period of time (i.e. 20 years). For this reason, estimating the elasticity of cigarette demand in Bulgaria is still an open question that requires more sophisticated research methods and more reliable and ample data sources. Nevertheless, before having more precise calculations on the price and income elasticities based on individual data, the estimations of this macro model can serve as an evidence-based starting point.

6. Conclusion and recommendations

Tobacco consumption in Bulgaria takes enormous proportions, with cigarette prevalence rates being among the highest globally and continuing to grow. According to the Global Burden of Disease study (IHME 2019), tobacco use and exposure is the fourth most severe health risk factor in Bulgaria.

Tobacco taxation is a major source of revenue for the Bulgarian public budget, securing more than 12% of total tax receipts. It is well known that taxation is the single most effective tobacco control measure. Further raising tobacco excise duties, which are currently the lowest among the EU member states, could help to increase (at least in the medium term) the stream of tobacco tax revenues while at the same time limiting tobacco consumption and bringing public health improvements.

Despite being the single most effective control measure, tobacco taxation must not remain a single measure – that is, taxation has to be accompanied by other instruments to influence public behaviour and thereby contain the spread of the tobacco epidemic. This is even truer in the case of Bulgaria, a traditional tobacco-producing country whose smoking behaviour visibly diverges from the typical global patterns.

Bulgaria is not unique in any of its tobacco-related peculiarities. Among other things, it has a high share of female smokers, a high share of youth tobacco consumption, higher smoking rates among more affluent individuals, substantial fiscal dependence on tobacco, declining real prices, a growing affordability of cigarettes, and advanced experimentation with alternative and novel tobacco products. However, Bulgaria is distinctive in that it combines all these negative tobacco-related traits, creating a specific framing that turns tobacco consumption into a social norm. Accordingly, it should be addressed by a complex of intertwined instruments that combines price determinants of tobacco consumption with social, cultural and psychological measures.

Based on the study on the tobacco landscape in Bulgaria, and following the above reasoning, seven general recommendations about tobacco control in Bulgaria could be distilled:

- › Raising tobacco excise duties above the minimum prescribed in the current version of Directive 2011/64/EC and moving them towards the median EU values (i.e. introducing the rates alluded to in the draft revised TTD). This has to be implemented quickly by overriding the current excise tax calendar.
- › Any future national legislation on tobacco taxation should contain provisions on inflation indexation. Annual adjustments of tobacco taxes are needed to prevent the declining real price of tobacco products.
- › Tax measures of tobacco control must be accompanied by a comprehensive strategy for limiting tobacco consumption in Bulgaria along the lines of the WHO's MPOWER initiative. Measures and policies that will prohibit the visibility of tobacco products, as well as tailored media campaigns targeting youth and female tobacco use, are especially important.
- › Implementation of tobacco control measures needs strengthening, especially when it comes to selling tobacco products to adolescents and smoking in public spaces and workplaces.

- › A new legislative initiative is needed to prohibit the use of so-called smokeless tobacco in closed public spaces.
- › National agricultural subsidies for tobacco growing should be quickly limited and eventually terminated.
- › More information and research on Bulgarian tobacco consumption is needed in three main directions:
 - (i) to provide reliable quantitative data for estimating elasticity coefficients of cigarette demand;
 - (ii) to conduct a comprehensive, in-depth study of the major social, cultural and psychological drivers of national tobacco consumption; and
 - (iii) to estimate the total economic and health cost of the widespread national tobacco consumption, which will motivate more vigorous tobacco control measures.

For decades, Bulgaria has overlooked the public health impact of tobacco consumption – first, due to its high importance as a source of hard currency or tax revenues, and second, due to the prevailing cultural norms and the high political costs when trying to address them. This neglect has led to poor public health outcomes. The time has come for more ambitious national tobacco control policies.

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IMPRESSUM

Herausgeber, Verleger, Eigentümer und Hersteller:

Verein „Wiener Institut für Internationale Wirtschaftsvergleiche“ (wiiw),
Wien 6, Rahlgasse 3

ZVR-Zahl: 329995655

Postanschrift: A 1060 Wien, Rahlgasse 3, Tel: [+431] 533 66 10, Telefax: [+431] 533 66 10 50
Internet Homepage: www.wiiw.ac.at

Nachdruck nur auszugsweise und mit genauer Quellenangabe gestattet.

Offenlegung nach § 25 Mediengesetz: Medieninhaber (Verleger): Verein "Wiener Institut für Internationale Wirtschaftsvergleiche", A 1060 Wien, Rahlgasse 3. Vereinszweck: Analyse der wirtschaftlichen Entwicklung der zentral- und osteuropäischen Länder sowie anderer Transformationswirtschaften sowohl mittels empirischer als auch theoretischer Studien und ihre Veröffentlichung; Erbringung von Beratungsleistungen für Regierungs- und Verwaltungsstellen, Firmen und Institutionen.

