

POLICY BRIEF

ENHANCING PUBLIC HEALTH AND FISCAL STABILITY IN NORTH MACEDONIA THROUGH TOBACCO TAXATION:

TOBACCO TAX MODELING FROM NORTH MACEDONIA

- **Increasing excise taxes** on tobacco products will significantly improve public health by reducing smoking rates and preventing premature deaths.
- **Government revenues** will increase as a result of higher excise taxes, providing additional resources for public health programs.
- North Macedonia's **current tobacco tax levels** are below EU standards, creating opportunities to meet EU integration requirements faster by adopting a more ambitious excise tax strategy.
- **Complementary tobacco control measures**, such as smoking bans and public health campaigns, can reinforce the impact of excise tax increases, especially among youth and vulnerable groups.
- **A 16 percent annual excise tax increase** over two consecutive years (2025-2026) will generate substantial fiscal and health benefits, as projected through tobacco tax simulation modeling.

General facts

Tobacco smoking rates in North Macedonia are critically high, at 48.4 percent among adults in 2019, significantly exceeding Southeastern Europe's average of 37.6 percent, the European Union average of 18.4 percent, and the global average of 17 percent. Moreover, almost 81.4 percent of current daily smokers initiated smoking before 25 years of age, and 44.4 percent of smokers consume more than 20 cigarettes daily. These concerning statistics underscore the urgent need for effective tobacco control strategies and interventions to mitigate smoking's impact in the region.

In 2024, North Macedonia exhibited notably low cigarette prices, with packs priced between EUR 1.92 and EUR 2.88,¹³ while the average monthly net wage was EUR 629.1 (February 2024). North Macedonia also had the region's cheapest cigarettes, requiring only 0.03 percent of the average GDP per capita to purchase 100 packs of its best-selling brand, indicating high affordability. The current specific excise tax level is EUR 56 per 1,000 cigarettes, well below the European Union (EU)-required minimum of EUR 90 per 1,000 cigarettes. Moreover, the country's tobacco excise

¹ State Statistical Office, Statistical yearbook, 2024

constitutes 65.6 percent of cigarette prices in 2023, while the World Health Organization–recommended benchmark is that a minimum of 70 percent of retail price be devoted to excise tax. These statistics reveal considerable potential for improving tobacco tax policy in North Macedonia.

Despite the current level of taxation, cigarette prices remain relatively low. This observation is further supported by the recently published *Tobacconomics Cigarette Tax Scorecard*,² which highlights the concerning slow rate at which cigarettes are becoming less affordable. This failure to significantly reduce affordability issue presents a dual challenge: it discourages existing smokers from quitting and incentivizes young people to consider smoking initiation.

Tobacco taxation effectively curbs smoking rates and boosts public health. It reduces consumption by making tobacco less affordable, with evidence showing a 10-percent price hike can cut consumption by four to eight percent.³ The effect is typically even greater among young people and those in lower socioeconomic groups. Additionally, higher excise taxes generate significant government revenue, which can be used to support tobacco control and other public health initiatives.

This policy brief is based on a comprehensive study that examines the impacts of potential tobacco tax excise increases on various aspects related to cigarette consumption including prices, government revenues, and public health outcomes. By analyzing the effects of these tax increases, this study aims to provide evidence-based insights for policy makers to formulate effective tobacco tax policies.

TOBACCO TAX MODELING: FISCAL AND HEALTH IMPLICATIONS

This policy brief outlines the anticipated outcomes of a marked escalation in specific excise tax over two years (2024–2026), aiming to maximize health and fiscal benefits through an expedited excise strategy that proposes a yearly specific excise increase of 16 percent. The forecasts and assumptions herein are derived from the World Health Organization’s Tobacco Tax Simulation Model (WHO TaXSiM) and the Johns Hopkins University–Tobacconomics tobacco tax simulation model, intending to assess and illustrate the potential impact of increased excise taxes on

² Drope, J., Oo, S., Lee, H., Dorokhina, M, Guerrero-López, C., Rodriguez-Iglesias, G., Mugosa, A., Mirza, M., Bontu, A., & Chaloupka, F. (2024). *Tobacconomics cigarette tax scorecard* (3rd ed.). Baltimore, MD: Bloomberg School of Public Health, Johns Hopkins University. www.tobacconomics.org

³ Spasova Mijovic, Tamara, Bojana Hristovska Mijovic, Biljana Tashevskaa, & Marija Trpkova Nestorovska. (2023). *Tobacco tax modeling: Evidence from North Macedonia*. Tobacconomics Working Paper No. 23/10/1, Tobacconomics.

diminishing smoking consumption and prevalence and decreasing mortality and morbidity rates associated with adverse health effects from tobacco consumption.

As of January 2024, North Macedonia introduced a new excise calendar that increases the specific excise by 0.23 MKD (EUR 0.0037) per cigarette annually on January 1st each year until 2030. This translates to an annual increase of 4.6 MKD (EUR 0.074) per pack of 20 cigarettes. Hence, as of January 2024, the excise tax on cigarettes consists of a specific excise tax per cigarette of 3.453 MKD (EUR 0.055), and an ad valorem excise tax of nine percent of the retail price of cigarettes, in accordance with Article 83 of the Excise Duties Law. For comparison, the specific excise tax per pack of 20 cigarettes is 69.06 MKD (EUR 1.12). When the combined excise duty on cigarettes is lower than 3.453 MKD (EUR 0.055) per piece, a minimum excise duty of 3.653 MKD (EUR 0.058) per piece is applied. At the same time, the EU-required minimum for specific excise is EUR 90 per 1,000 cigarettes, while in North Macedonia the current specific excise tax level is EUR 56 per 1,000 cigarettes, which is well below the EU-required minimum. Additionally, cigarette prices in North Macedonia are among the lowest compared to other EU and regional countries, indicating significant room for improvement in the tobacco excise tax policy in the country.

Utilizing current data on legal cigarette sales and tax structure, we employ tobacco tax simulation modeling to project revenue changes and public health impacts. Our tobacco tax model provides forecasts extending through 2025–2026. Our scenario proposes a more ambitious trajectory for a specific excise increase of 16 percent over a period of two consecutive years (2025 and 2026) in order to reach the EU-required minimum and to maximize both health and fiscal policy benefits. This alternative scenario adopts an accelerated excise plan, implementing an annual excise increase of 16 percent with corresponding price increases forecasted at 12.88 percent and 13.15 percent.

RESULTS

- ❖ **Under the accelerated excise scenario, the total revenue from excise taxes is projected to rise from EUR 244,729,628 in 2024 to EUR 304,306,236 by 2026. This demonstrates a consistent year-on-year growth, with an 11.56 percent increase from 2024 to 2025 and an increase of 11.46 percent from 2025 to 2026.**
- ❖ **Larger increases in the excise tax correspond to more significant health benefits, because fewer people start smoking and more smokers quit or reduce consumption. Raising tobacco excise taxes leads to significant health improvements by lowering the incidence of deaths attributable to smoking.**
- ❖ **Strategic use of excise taxes can serve dual purposes: contributing to public health goals by reducing tobacco consumption and reliably increasing government revenue for reinvestment in health and social programs.**

Government revenues from tobacco excise taxes show an upward trend with substantial annual growth. The overall tax revenue is expected to increase from EUR 311,882,758 in 2024 to EUR 382,075,269 by 2026. The percentage growth in total tax revenue remains constant at 10.7 percent for both years analyzed (2024 to 2025 and 2025 to 2026). The total revenue from excise taxes is projected to rise from EUR 244,729,628 in 2024 to EUR 304,306,236 by 2025. This demonstrates consistent year-on-year growth, with an 11.56 percent increase from 2024 to 2025 and only a slightly lower 11.46 percent increase from 2025 to 2026. This trend indicates a steady growth in excise revenue, reflecting the effectiveness of the implemented accelerated excise tax policy.

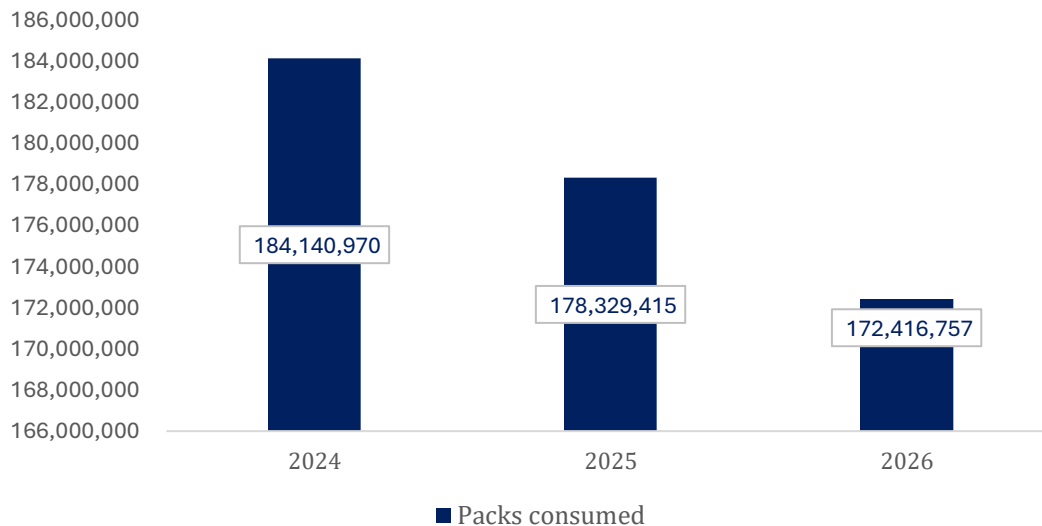
Table 1. Estimated effects of accelerated cigarette excise tax increases on government revenue (EUR and % change)

Total revenue and tax revenue	2024	2025	2026
Total revenue from excise (EUR)	244,729,628	273,021,684	304,306,236
Total tax revenue (EUR)	311,882,758	345,231,805	382,075,269
Total tax revenue (% change)		10.69%	10.67%
Total revenue from excise (% change)		11.56%	11.46%

Source: Authors' calculations

The consistent decline in the number of packs consumed is indicative of the tax measure's success in discouraging tobacco use. The incremental percentage changes year over year also suggest that consumers are progressively responding to price increases by reducing their tobacco purchases. There is a year-over-year decrease in consumption, with a -3.16 percent change from 2024 to 2025, followed by a slightly steeper -3.32 percent change from 2025 to 2026. The incrementally larger percentage decrease could indicate that the tax's impact on consumption is cumulative or that its deterrent effect becomes stronger over time. The consistent negative trend in both the raw number of packs consumed and the percentage change reflects an effective excise policy. The ongoing reduction in consumption suggests that the tax increases are consistently influencing consumer behavior.

Figure 1. Estimated effects of accelerated excise increase on tobacco consumption



Source: Authors' calculations

The excise tax's impact on reducing smoking prevalence seems to have a dual beneficial effect.

First, there is a notable gradual reduction in the percentage of the population that smokes. This is likely to result in lower overall health system costs due to a reduction in tobacco-related illnesses and a healthier workforce, which can have broader economic benefits through higher productivity, since evidence demonstrates that healthier workers are far more productive. Second, the corresponding decrease in smoking rates is projected to result in a growing number of individuals who avoid premature death. The data estimate a significant number of lives could be saved annually as a direct consequence of reduced smoking prevalence. In 2025, it is estimated that 2,333 smokers would avoid premature death and 2,462 more in 2026. The rising number of avoided premature deaths year over year suggests that the health benefits of reduced smoking prevalence accumulate over time. This is a significant public health outcome, potentially improving the quality of life for thousands of individuals and reducing the emotional and financial burden on families and communities.

Table 2. Estimated effects of accelerated excise increase on smoking prevalence (in %) and number of smokers who avoid premature death

Year	Smoking prevalence	Number of smokers who avoid premature death
2024	48.40% ↓	
2025	47.85% ↓	-2333 ↓
2026	47.28% ↓	-2462 ↓

Source: Authors' calculations

CONCLUSION & RECOMMENDATIONS FOR OPTIMIZING TOBACCO TAXATION FOR PUBLIC HEALTH AND FISCAL BENEFIT

- ❖ Boosting excise taxes on tobacco significantly promotes public health by reducing premature deaths caused by smoking and increases government revenue through enhanced taxation.
- ❖ Implementing these policies positions North Macedonia favorably in its EU integration journey, meeting essential tobacco tax thresholds for accession more quickly and advancing the country's objectives related to joining the EU.
- ❖ Enhancing non-price tobacco control measures, like re-implementing smoking bans in enclosed public areas, has positive public health effects. Smoke-free policies significantly lower exposure to secondhand smoke and likely lower smoking prevalence over time, especially as children see few smokers. Research shows that this wider policy approach boosts the beneficial public health outcomes of higher tobacco excise taxes as well.
- ❖ Launching thorough public and educational campaigns to inform all segments of the population, especially young people, about the health dangers of tobacco use plays a crucial role in decreasing smoking rates.

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This Policy Brief was prepared by researchers from the Analytica think tank from North Macedonia.