

Enhancing Public Health and Fiscal Stability in North Macedonia through Tobacco Taxation (Evidence-Based Modeling, 2025–2030)

Background

Tobacco use in North Macedonia remains alarmingly prevalent. **48.4 percent¹ of adults** reported smoking, significantly surpassing regional and global averages—**37.6 percent² in Southeastern Europe, 17 percent globally,³ and 24 percent within the European Union.⁴** More than half of smokers (**51.3 percent**) begin smoking between the ages of **18 and 24**, and **44.4 percent** report consuming more than **20 cigarettes per day.⁵** These figures highlight the **urgent need for comprehensive tobacco control policies** and targeted interventions to reduce smoking and its associated harms in North Macedonia.

In 2025, the average price range for a pack of cigarettes in North Macedonia ranged between **EUR 2.20 for economy brands and EUR 3.09⁶ for premium brands**, the equivalent of 0.03 percent of GDP per capita for 100 packs of the of the best-selling brand of cigarettes. At the same time, the average monthly net wage was EUR 702.49 (February 2025). This aligns with previous year data **indicating high affordability** (price range of cigarettes EUR 1.92–2.88, averaging just 0.03 percent of GDP per capita for 100 packs in 2024). Notably, according to official data (State Statistical Office, Statistical yearbook 2025), **the real growth of net wages** in North Macedonia in recent years has ranged **between 8 percent and 10 percent annually**. Additionally, **inflation averages 3.5 percent**. This results in a **total increase in the population’s purchasing power of approximately 11 to 13 percent annually**.

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

¹ Hristovska Mijovic, B., Spasova Mijovic, T., Trenovski, B., Kozeski, K., Trpkova-Nestorovska, M., & Trajkova-Najdovska, N. (2020). Tobacco consumption in North Macedonia. Analytica, Skopje, North Macedonia.

² Zubović, J. and Vladislavljević, M. (Eds) (2019), “Impacts of tobacco excise increases on cigarette consumption and government revenues in Southeastern European countries”, Regional study: Research and policy report, Tobaccotaxation, available at: http://tobaccotaxation.org/cms_upload/pages/files/Regional-report-2019.pdf (accessed on 3 May 2024)

³ Prevalence, Tobacco Atlas, October 2023

⁴ Attitudes of Europeans towards tobacco and related products, special Eurobarometer 539 May-June 2023, published 2024

⁵ Hristovska Mijovic, B., Spasova Mijovic, T., Trenovski, B., Kozeski, K., Trpkova-Nestorovska, M., & Trajkova-Najdovska, N. (2020). Tobacco consumption in North Macedonia. Analytica, Skopje, North Macedonia.

⁶ Customs office data obtained through Law on access to public information

cigarettes. Hence, as of January 2025, the excise tax on cigarettes consists of a specific excise tax per cigarette of 3.773 MKD (EUR 0.061), 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. In comparison, the specific excise tax per pack of 20 cigarettes is 75.45 MKD (EUR 1.23). When the combined excise duty on cigarettes is lower than 3.773 MKD (EUR 0.061) per piece, a minimum excise duty of 4.003 MKD (EUR 0.065) per piece is applied.

As of 2025, the current specific excise tax level is EUR 61 per 1,000 cigarettes excise taxes, well below the European Union (EU)–required minimum of EUR 90 per 1,000 cigarettes. Moreover, the total tobacco excise (specific and ad valorem) constitutes 61 percent of weighted average price of the most sold brand of cigarettes in 2025,⁷ while the international best practice 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.

In order for tobacco tax policy to be effective in the long term, it must reduce the affordability of cigarettes, not just increase their price. This means that tax increases need to exceed both general inflation and real income growth. If prices of other goods and wages are rising quickly—as is the case in North Macedonia—then modest tax increases will not achieve the intended public health impact, as cigarettes become relatively cheaper and more accessible over time.⁸ This is especially important in countries like North Macedonia with low starting excise tax rates, where even large percentage increases might only slightly raise retail prices.

Tobacco taxation is a proven and effective policy tool for reducing smoking prevalence and improving public health. It is recognized as one of the core interventions for tobacco demand reduction by the World Health Organization’s Framework Convention on Tobacco Control (WHO FCTC). Implementing tobacco taxation not only helps decrease tobacco consumption but also generates additional tax revenues, making it a win-win policy approach. Tobacco excise tax increases that raise prices reduce the affordability and appeal of smoking (National Institutes of Health, National Cancer Institute and World Health Organization, 2016). A substantial body of evidence demonstrates that higher tobacco taxes lead to decreased tobacco consumption. For example, a 10 percent price increase can reduce consumption between four and eight percent. Excise taxes also generate significant revenue for governments, which can be used to support tobacco control and public health initiatives.

⁷ Data obtained by the Customs office through the Law on access for information

⁸ World Health Organization Regional Office for Europe. (2022). *Tobacco Control Playbook, 2nd edition*. Chapter: “Tobacco taxes and prices.” Available at: <https://www.euro.who.int/en/health-topics/disease-prevention/tobacco/publications/2022/tobacco-control-playbook.-2nd-ed.-2022>

TOBACCO TAX MODELING: FISCAL AND HEALTH IMPLICATIONS

This policy brief presents projected outcomes from a sustained excise tax increase strategy spanning the period **2025–2030**, with a focus on optimizing public health and fiscal returns through an annual tobacco excise increase of six and 12 percent. The analysis is based on the **World Health Organization’s Tobacco Tax Simulation Model (WHO TaXSiM)**, which enables assessment of the potential effects of excise tax policy on smoking prevalence, tobacco-related mortality, and government revenue. The forecasts presented demonstrate how structured, evidence-based tax reforms can substantially reduce tobacco consumption and generate long-term health and economic benefits for North Macedonia.

This analysis evaluates the impact of sustained excise tax increases (six percent and 12 percent annually) from 2025 to 2030, focusing on government revenue, tobacco consumption, smoking prevalence, and health outcomes. The projections are based on the WHO TaXSiM model, incorporating data on cigarette sales, tax structures, and economic indicators such as GDP and wages. The model assumes estimated price elasticities specific to North Macedonia to account for consumer responsiveness.

This brief presents two simulation scenarios for 2025–2030, using 2025 as the baseline year:

- Scenario I: Adheres to the current excise calendar, with a six percent annual increase in specific excise tax per piece of cigarette, reflecting recent policy trends (prescribed by the Law on Excise)
- Scenario II: Proposes a more ambitious 12 percent annual increase in the specific excise tax, designed to outpace annual wage and inflation growth, thereby strengthening the real price impact of tobacco taxation and enhancing its effectiveness in reducing consumption and increasing fiscal revenues

These scenarios aim to provide policymakers with evidence-based insights into how different excise tax strategies can influence cigarette affordability, government revenues, and consumption trends within North Macedonia’s evolving economic context.

Table 1: The structure of excise taxes per pack and per cigarette in 2025

Brand segment	Price per Pack (MKD / EUR)	Specific Excise (MKD / EUR)	Ad Valorem (9%) (MKD / EUR)	Total Excise (MKD / EUR)	Total Excise per Cigarette (MKD / EUR)
Economy	135 MKD ≈ €2.20	75 MKD ≈ €1.22	12.15 MKD ≈ €0.20	88 MKD ≈ €1.42	4.3805 MKD ≈ €0.07
Medium	160 MKD ≈ €2.61	75 MKD ≈ €1.22	14.40 MKD ≈ €0.24	90 MKD ≈ €1.47	4.493 MKD ≈ €0.07
Premium	190 MKD ≈ €3.10	75 MKD ≈ €1.22	17.10 MKD ≈ €0.28	93 MKD ≈ €1.50	4.628 MKD ≈ €0.08

Note: Conversion rate used for MKD to EUR is the rate of 61.5 MKD per 1 EUR (National Bank of the Republic of Macedonia).

Scenario I: Six percent annual specific excise increase

Scenario I assumes a six percent annual increase in the specific excise tax, reflecting North Macedonia’s current excise policy as defined by the Excise Law. Though this policy ensures steady fiscal returns with excise revenue increases from EUR 258 million in 2025 to EUR 345 million in 2030, and total tax revenue increases from EUR 329 million to EUR 436 million, it falls short of delivering meaningful reductions in tobacco use. Overall, cigarette consumption under Scenario I slightly increases, from 180.6 million packs in 2025 to 181.9 million in 2030. Smoking prevalence and the number of individuals avoiding premature death also show small increases. This highlights the core limitation of the current tax policy. While it is fiscally stable, it lacks the size to meaningfully alter smoking behavior that would deliver tangible public health gains. The evidence suggests that a six percent annual excise increase is insufficient for meaningful tobacco control, as it does not counteract rising incomes or reduce cigarette affordability.

Crucially, the modest price increase driven by this six percent tax increase does not outpace the country's average annual growth in purchasing power (estimated between 11 and 13 percent, combining real wage growth and inflation). This highlights the disconnect among wage growth, inflation, and the modest excise tax increase. As a result, cigarettes remain affordable, which fails to meet the basic principles of effective tobacco control.

This underscores the need for more aggressive excise tax increases (e.g., 12 percent) to counteract rising incomes and ensure cigarettes become less affordable.

Table 2: Estimated impact of a six percent annual specific excise tax increase on government revenue (in EUR and % change)

Year	Total revenue from excise (EUR)	Total tax revenue (EUR)	Total tax revenue (% change)	Total revenue from excise (% change)
2025	258,222,974	329,183,120		
2026	273,780,375	348,252,268	6.02%	5.79%
2027	290,265,663	368,439,840	6.02%	5.80%
2028	307,776,405	389,859,960	6.03%	5.81%
2029	326,377,870	412,590,371	6.04%	5.83%
2030	345,982,291	436,290,005	6.01%	5.74%

Source: Authors' calculations

Scenario II: 12 percent annual excise tax increase

Scenario II proposes a **more ambitious 12 percent annual increase** in the specific excise tax, **designed to outpace annual wage and inflation growth**, thereby strengthening the real price impact of tobacco taxation and enhancing its effectiveness in reducing consumption and increasing fiscal revenues.

The justification for the 12 percent increase lies in the rapid growth of purchasing power in North Macedonia, driven by real wage increases of eight to 10 percent annually and inflation increases of three to 3.5 percent. With disposable incomes rising each year, cigarettes remain highly affordable, which undermines the impact of more modest tax increases. Considering the smoking prevalence of 48.4 percent, one of the highest in Southeastern Europe, the need for stronger fiscal measures to achieve meaningful public health outcomes and align with EU standards is clear.

This scenario generates significantly higher revenues, with excise revenue rising from EUR 258.2 million in 2025 to EUR 403.6 million in 2030, and total tax revenue growing from EUR 329.2 million to EUR 501.5 million. Average annual growth reaches 9.34 percent for excise revenues and 8.78 percent for total revenue, confirming the strong fiscal performance of this excise tax policy path.

Overall, a **12 percent annual excise tax increase delivers higher fiscal revenues and significantly stronger public health benefits**, making it a **more effective instrument for both revenue mobilization and tobacco control**.

Table 3: Estimated impact of a 12 percent annual specific excise tax increase on government revenue (in EUR and % change)

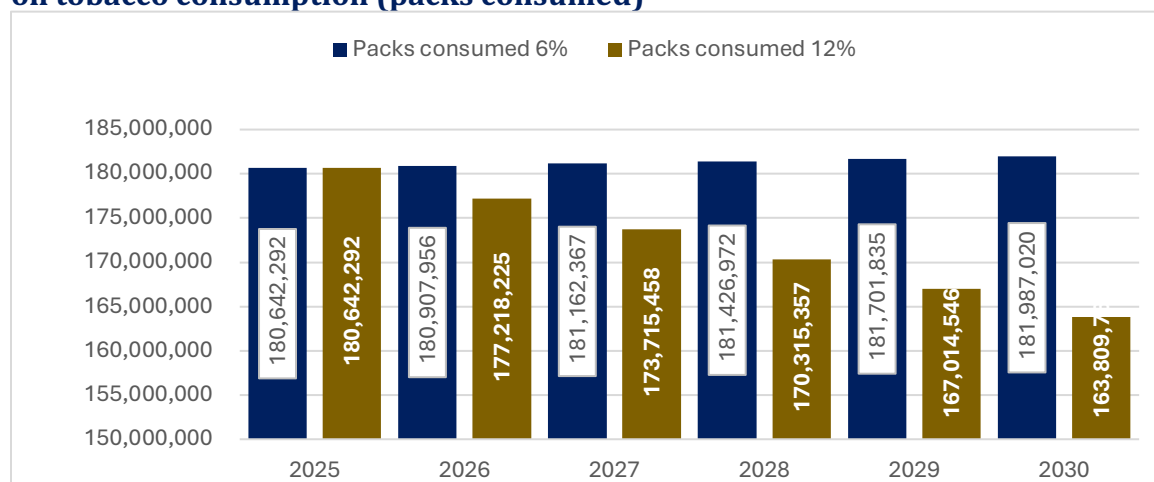
Year	Total revenue from excise (EUR)	Total tax revenue (EUR)	Total tax revenue (% change)	Total revenue from excise (% change)
2025	258,226,974	329,183,120		
2026	282,277,983	357,777,778	8.69%	9.31%
2027	308,437,182	388,841,977	8.68%	9.27%
2028	337,211,090	422,998,251	8.78%	9.33%
2029	368,867,510	460,562,737	8.88%	9.39%
2030	403,560,593	501,502,874	8.89%	9.41%

Source: Authors' calculations

At the same time, a **12 percent annual increase** in excise reduces consumption from 180.6 million packs in 2025 to **163.8 million by 2030**, a **9.3 percent cumulative decline**, with steady annual decreases of about **1.9 percent**. **Smoking prevalence drops from 48.4 percent to 46.7 percent**, confirming a gradual, but impactful effect on tobacco use across the population. **The model projects that the annual number of smokers who will now avoid premature death begins at 1,361 in 2026 and stabilizes around 1,500** in the following years, due to reduced consumption of cigarettes, which is a significant public health gain.

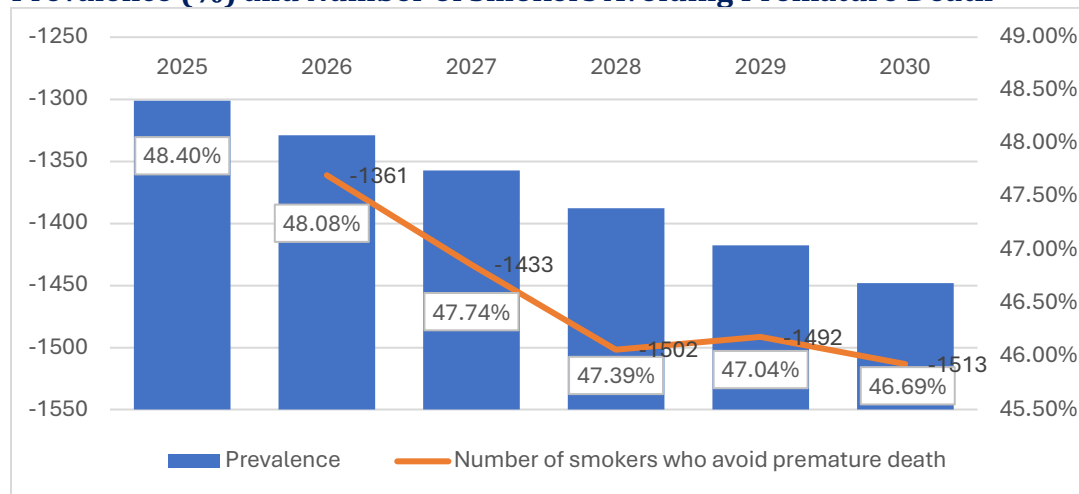
Overall, only the larger **12 percent annual increase achieves the dual goals of higher government revenue and lower tobacco use**, making it the more effective fiscal and public health policy.

Figure 1: Estimated impact of six percent and 12 percent specific excise tax increase on tobacco consumption (packs consumed)



Source: Authors' calculations

Figure 2: Estimated Impact of a 12 Percent Excise Tax Increase on Smoking Prevalence (%) and Number of Smokers Avoiding Premature Death



Source: Authors' calculations

In addition, the benefits from the 12 percent increase in the excise are observed in health benefits for youth. Based on the projected reductions in smoking initiation, the number of premature deaths averted among young smokers ranges from 576 to 624 per year over the 2026–2030 period (Table 4). This represents a substantial and sustained public health gain, particularly when accumulated over time.

Table 4: Estimated number of young smokers who avoid premature death (in absolute numbers)

Year	Number of Youth Smokers	Prevalence (%)	Change in Number of Youth Smokers (not initiating)	Averted Premature Deaths
2025	38,607	12.40%		
2026	37,715	12.39%	-892	-624
2027	36,844	12.38%	-871	-610
2028	35,993	12.37%	-851	-596
2029	35,151	12.36%	-842	-590
2030	34,328	12.35%	-823	-576

Source: Authors' calculations

These results confirm that beyond fiscal gains, more ambitious tobacco tax policy can deliver significant health benefits, reinforcing its value as a dual-purpose tool for both public health protection and fiscal sustainability.

Key messages

- **A 12 percent annual excise tax increase is needed to outpace inflation and real income growth, reduce cigarette affordability, and deliver both public health and fiscal gains.** Under this scenario, excise revenue rises from EUR 258.2 million in 2025 to EUR 403.6 million in 2030, total tax revenue increases from EUR 329.2 million to EUR 501.5 million (annual growth 9.3 percent), and smoking prevalence declines from 48.4 percent to 46.7 percent, preventing about 1,500 premature deaths annually.
- **Youth smoking prevention is a critical priority:** With 51.3 percent of smokers in North Macedonia initiating smoking between ages 18–24 and around 74 percent of the youth “initiators” starting to smoke before age 13, addressing youth smoking is very important to reducing lifelong addiction. A 12 percent excise tax increase could prevent between 823 and 892 youth from initiating smoking each year (2026–2030) and avert between 576 and 624 premature deaths annually over the same period, highlighting the need for stronger tax policies to deter smoking initiation and reduce future health burden.

Recommendations for optimizing tobacco taxation for public health and fiscal benefit

Strengthening tobacco excise policies presents a unique opportunity for North Macedonia to advance both public health and fiscal objectives. The evidence indicates that sustained increases in tobacco taxation lead to measurable reductions in smoking prevalence and premature mortality, while simultaneously generating substantial government revenue.

Key Recommendations:

- **Adopt more ambitious excise tax increases:** Raising tobacco excise taxes can significantly reduce tobacco consumption, prevent premature deaths, and ensure long-term revenue stability for the government. North Macedonia should ensure that excise tax increases exceed real income growth and inflation. In addition, increasing the specific excise tax by at least 12 percent annually would reduce affordability (currently 0.03 percent of GDP per capita for 100 packs) and reach the European Union Tobacco Tax Directive’s minimum of EUR 90 per 1,000 cigarettes by 2028, supporting EU accession and public health goals.
- **Address taxation of new tobacco products:** Regularly adjust excise taxes on heated tobacco products and e-cigarettes in concert with increases in cigarette taxes to

reflect their growing popularity and ensure that affordability decreases for these products, too. This approach will help prevent substitution from traditional cigarettes to these other harmful products.

- **Reinforce non-price tobacco control measures:** The reintroduction and strict enforcement of smoking bans in enclosed public spaces should complement fiscal measures. These interventions reduce both direct and second-hand exposure to tobacco smoke, amplifying the health impact of excise tax policies.
- **Expand public awareness and prevention campaigns:** Comprehensive, evidence-based education initiatives, especially targeting youth, are essential to altering social norms and reducing tobacco initiation rates. Such campaigns should communicate the health risks of smoking and the benefits of cessation, while reinforcing support for tax-based interventions.

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