

## POLICY BRIEF

### CROWDING-OUT EFFECT OF TOBACCO CONSUMPTION IN NORTH MACEDONIA

#### Key Findings

##### 1. Tobacco Consumption Trends

- Tobacco consumption increased across all income groups between 2018 and 2022.
- The share of household budgets allocated to tobacco increased from 10.3 percent in 2018 to 13.2 percent in 2022, particularly affecting low-income households.
- Tobacco consumption crowds out essential household expenditures, with more pronounced effects in low-income households.

##### 2. Crowding-Out and Crowding-In Effects

- **Crowding-out:** Tobacco expenditures reduced spending on food, clothing, health, housing, and communication.
- **Crowding-in:** Tobacco consumption was associated with increased spending on alcohol, entertainment, and dining out. This crowding-in effect was especially noticeable in high-income households, where spending on non-essential items like restaurants and bars rose in parallel with tobacco consumption.

##### 3. Income Group Analysis

- **Low-income households:** Tobacco expenditures crowded out spending on necessities such as food, health, and housing. Between 2018 and 2022, the share of low-income households' budgets spent on tobacco increased from 5.6 percent to 8.9 percent.
- **Middle-income households:** A reduction in spending on furniture, education, and recreation was observed as a result of tobacco expenditures. Middle-income households' tobacco budget share increased from 4.6 percent to 7.4 percent.
- **High-income households:** Although less impacted by the crowding-out effect, high-income households experienced reduced spending on furniture and housing. High-income households' budget share of tobacco spending rose from 3.2 percent to 5.3 percent.

#### Introduction

This policy brief outlines the findings from a comprehensive study on the crowding-out effect of tobacco consumption on household expenditures in North Macedonia. While tobacco use is widely recognized for its harmful health effects, it also places a significant financial strain on family budgets and quality of life. Research has increasingly shifted toward understanding how tobacco consumption affects household-level spending, particularly in households operating under constrained budgets. The “crowding-out” effect refers to the reduction in spending on essential goods and services—such as food, clothing, healthcare, and

education—when a household allocates a significant portion of its income to tobacco. This shift in spending often leads to so-called “secondary poverty,” where households that could maintain a decent standard of living are pushed into financial hardship due to tobacco expenditures (John et al., 2019).

North Macedonia, a middle-income country, faces one of the highest rates of tobacco consumption in Europe, with 48.4 percent of adults smoking in 2019. Notably, 81.4 percent of daily smokers started before the age of 25, and 44.4 percent of smokers consume more than 20 cigarettes daily—rates that are significantly higher than the European Union average. Men in North Macedonia smoke more frequently than women; as a result, households where men smoke tend to experience greater financial burdens compared to non-smoking households, contributing to economic disparities between households (WHO BCI study, 2022).

The country’s high poverty rate (21.8 percent in 2020) means that households spending a substantial share of their income on tobacco are likely at a greater risk of financial distress. Households with smokers spent 11.1 percent of their budget on average on tobacco products in 2020, diverting funds from critical categories like food, healthcare, and children’s development.

Despite North Macedonia ratifying the World Health Organization’s Framework Convention on Tobacco Control (FCTC) in 2006 and previously implementing a public smoking ban, recent relaxations of the policy have allowed smoking in many public places, particularly in bars and restaurants. As a result, most adults are exposed to secondhand smoke in social settings, thus compounding public health concerns. Furthermore, higher rates of smoking not only discourage quitting but also increase the likelihood of youth initiating smoking.

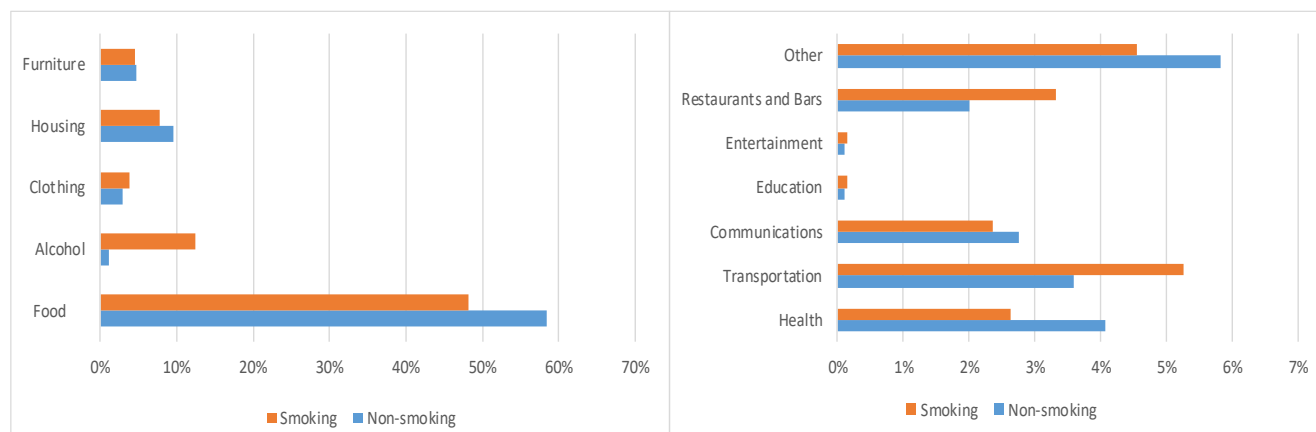
## Results

Tobacco use in North Macedonia is diverting household budgets away from essential spending, particularly in low-income households. Smoking households are sacrificing necessities such as food and healthcare for tobacco and related expenditures, contributing to financial strain and secondary poverty. These findings highlight the need for targeted policies to reduce tobacco consumption and improve household welfare, particularly for the most vulnerable groups.

The analysis in Figure 1 reveals notable differences in spending patterns between smoking and non-smoking households. Non-smoking households allocate significantly higher shares of their budgets to essential goods such as food and beverages [10.3 percentage points (p.p.) more], housing and utilities (1.8 p.p. more), and health (1.4 p.p. more) than households with smokers. In contrast, smoking households spend more on transportation (1.6 p.p. more), bars and restaurants (1.3 p.p. more), clothing (0.8 p.p. more), and especially alcohol (11.3 p.p. more), suggesting that tobacco and alcohol are complementary goods. Both household types spend similar amounts on education, due to free and mandatory primary and secondary schooling, and only small differences are observed in expenditures on communications and furniture.

These findings suggest that smoking households prioritize non-essential spending like alcohol and dining out, which crowds out expenditures on food at home (which tends to be healthier and less costly) and housing. This highlights a clear distinction in consumption preferences, with tobacco use shifting spending away from essential items toward less productive expenditures.

**Figure 1.** Budget shares spent on products from different groups by smoking and non-smoking households



Source: Authors' calculations based on Household Budget Survey data

In conclusion, this analysis highlights the significant impacts of tobacco consumption on household budgets in North Macedonia. Smoking households allocate a larger portion of their income to non-essential goods, which results in reduced spending on vital needs such as food, health, and housing, particularly among low-income households. Middle-income households see a crowding-out effect on discretionary spending like education and recreation, while high-income households exhibit increased spending on alcohol and entertainment alongside tobacco use. Moreover, the gender disparity in smoking prevalence, with men smoking more frequently, exacerbates these financial pressures in male-headed households.. Overall, tobacco spending negatively affects household welfare across all income groups, but the crowding-out effect is most significant for low-income households, especially in regard to spending on necessities. High-income households experience a smaller impact.

### Policy Implications and Recommendations

The findings of this study highlight the urgent need for targeted interventions to reduce tobacco consumption in North Macedonia, particularly among low-income households. The following policy recommendations are proposed.

#### 1. Strengthen Tobacco Control Measures

- **Increase Tobacco Taxes:** Raising taxes on tobacco products can reduce consumption, particularly among low-income households. Evidence suggests that higher taxes can deter smoking and reduce its financial burden on

household budgets. Youth and lower-income individuals are most sensitive to price, and thus more likely to decrease consumption or quit (or not initiate).

- **Enforce Smoking Bans:** Reintroducing and enforcing strict bans on smoking in public places, including restaurants and bars, would help reduce public exposure to secondhand smoke and potentially lower overall consumption.

## 2. Promote Public Health Campaigns

- **Awareness Campaigns:** Launch targeted public health campaigns to raise awareness about the negative financial and health impacts of tobacco use, particularly for young people and low-income families.
- **Early Intervention Programs:** Initiate programs in schools and communities to prevent young people from starting to smoke, as most smokers begin before the age of 25.

## 3. Expand Access to Smoking Cessation Programs

- **Quit-Smoking Programs:** Provide access to counseling, nicotine-replacement therapies, and other cessation aids, particularly for youth and low-income populations.
- **Primary Healthcare Integration:** General practitioners should be involved in smoking cessation efforts, providing support for smokers who wish to quit.

## 4. Strengthen Research and Monitoring

- Continued research and data collection on tobacco consumption trends, as well as their impact on household budgets is essential to measure progress in reducing tobacco use, mitigating its economic burden on households, and evaluating the effectiveness of implemented tobacco control policies.

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