## PROBLEM BACKGROUND

Youth smoking in Bosnia and Herzegovina is a pressing issue inside of a wider problem of high smoking prevalence in the country. With more than 41 percent of adults smoking in 2019, which is significantly above the world average, smoking represents one of the major health risks in the country. Among daily smokers, more than 20 percent started smoking daily before the age of 18, while almost 60 percent started between the ages of 18 and 24 (Mićić et al., 2020). According to WHO's Global Youth Tobacco Survey conducted in Bosnia and Herzegovina in 2018 and 2019, more than 15 percent of students aged 13 to 15 have tried smoking.

Initiating smoking behavior at a young age considerably raises the likelihood of becoming a daily smoker in later years. Therefore, the policy measures such as significant and regular tax increases, as well as other public policies and interventions aimed at preventing or delaying the onset of smoking initiation among youth are critical for decreasing smoking prevalence in adulthood.

Our previous research has demonstrated empirically that raising tobacco prices through specific tax increases is the most successful strategy in reducing overall smoking prevalence in Bosnia and Herzegovina. This policy brief is based on our study which examined if such fiscal measures, along with other influencing factors, can serve as an effective policy tool against the initiation of smoking among adolescents.

## DATA AND METHODOLOGY

The study is based on the Global Youth Tobacco Survey (GYTS) microdata, conducted in 2018 and 2019 in B&H, covering 10,829 eligible students in grades 7-9 of primary and the first year of secondary school. A split-population duration model was applied to determine the impact of cigarette price increases on youth smoking initiation in B&H.

## **RESULTS**

The results highlight a difference in smoking prevalence between genders, in which 42.87 percent of males and 36.01 percent of females experimented with smoking. Age-related trends show that by the age of 12, about 13 percent of individuals experimented with smoking, while by the age of 17, this share increases to 64 percent. As individuals advance through their teenage years, there's a noticeable increase in the percentage of them who have tried smoking at least once, which is especially evident after the age of 14 when the portion of those becomes more pronounced.

The research identifies several critical factors influencing youth smoking initiation:

**Price Elasticity of Smoking Initiation**: The average estimated elasticity stands at -0.491, suggesting that a 10 percent increase in tobacco prices would reduce the

probability of smoking initiation on average by 4.9 percent.

**Parental Influence**: Students with one or both parents smoking are more likely to initiate smoking, highlighting the role of parental behavior in shaping youth smoking habits.

**Peer Influence**: The likelihood of smoking initiation is 2.5 times higher when close friends smoke, emphasizing the significant impact of peer pressure.

# **Indirect Effect of Prices Through Parents and Peers:**

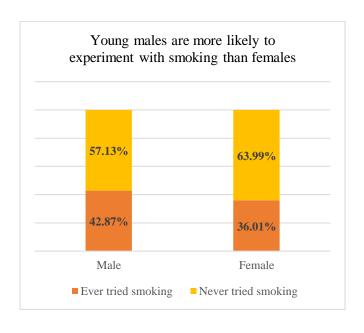
The smoking behavior of parents and peers stands out as a very influential predictor for smoking initiation. Since increases in taxes, and therefore prices, affect the smoking behavior of both parents and peers, there are also significant indirect effects of price on smoking initiation.

**Exposure to Anti-Tobacco Media:** Exposure to anti-tobacco media campaigns showed a significant deterrent effect on youth smoking initiation. Students who have been exposed to anti-tobacco messages 30 days prior to taking a survey are less likely to start smoking by 11 percent.

**Pocket Money**: A direct correlation exists between the availability of pocket money and smoking initiation. A higher amount of pocket money leads to a higher probability of smoking initiation, suggesting that financial autonomy can facilitate access to tobacco.

**School Environment**: Exposure to smoking within school premises positively influences smoking initiation, indicating that the school environment is a critical factor in shaping smoking behaviors.

Each of these elements is crucial in shaping youth smoking initiation, demanding appropriate evidence-based policies that address these areas to effectively mitigate smoking among the youth in B&H.



#### POLICY RECOMMENDATIONS

The findings of the study call for a multifaceted approach to curb the smoking pandemic in B&H.

## Increase the tobacco excise tax

The analysis showed unequivocally that excise tax increases have both direct and indirect effects on youth smoking initiation. Increasing tobacco prices through raising excise tax directly decreases demand for tobacco products among youth, but there are also strong indirect effects, as parents and peers will be less inclined to smoke if an increase in the excise tax makes tobacco less affordable. This increase in the specific excise tax should be in the amount that makes tobacco significantly less affordable, exceeding the sum of inflation and economic growth.

# Implement smoke-free laws in all public places, especially in schools

Exposure to secondhand smoke significantly raises the chances of an individual becoming a smoker. It is crucial to limit young people's exposure to both peer and parental smoking, as these factors heighten the risk of smoking initiation. An important public policy measure in this regard is the banning of smoking in public areas. This includes not only educational settings like schools, but also extends to public venues such as cafes and shopping malls. As of late 2023, smoking in public areas is still not prohibited in the whole country (Republic of Srpska). Also, the existing regulations in this area are not stringently enforced and require stricter implementation.

# Strict enforcement of the law that forbids selling tobacco products to youth

Inhibiting youth access to cigarettes is a fundamental initial step in reducing youth smoking prevalence. Although Bosnia and Herzegovina established a legal age limit of 18 for tobacco purchases, young individuals still find it relatively easy to acquire cigarettes, since this law is not fully implemented in practice. Cigarettes should be made inaccessible to young people by stricter enforcement including regular inspection, especially in the areas near schools. Also, the law that defines the distance of shops from schools where it is possible to sell cigarettes to adults should be greater (currently set at 100 meters).

## Raise awareness of adverse effects of smoking

Public awareness campaigns addressing the issue of smoking are a critical instrument in anti-smoking strategies. Educating youth about the detrimental health consequences of smoking, not only through campaigns but also through formal education programs (included in the curriculum) from an early stage can considerably mitigate the risk of taking up the habit. However, for these campaigns to be effective, they must be thoughtfully constructed and conveyed in a manner that resonates with young audiences to ensure the intended message is successfully received.

## Cigarette prices

10 percent increase in tobacco prices would reduce the probability of smoking initiation on average by 4.9 percent. This factor is also indirectly exhibited through parents and peers.



#### **Parents**

Students with one or both parents smoking are more prone to initiate smoking, highlighting the role of parental behavior in shaping youth smoking habits.

**Factors** affecting vouth **smoking** initation

# Peers

The likelihood of smoking initiation is 2.5 times higher when close friends smoke, emphasizing the significant impact of peer pressure.



## Pocket money

A direct correlation exists between the availability of pocket money and smoking initiation, suggesting that financial autonomy facilitate access to tobacco.



#### Exposure to anti-tobacco media

A significant role of media and exposure to anti-smoking campaigns in reducing smoking initiation. Evidence was found both in the literature and in our model.



### **School Environment**

Exposure to smoking within school premises positively influences smoking initiation, indicating that the school environment is a critical factor in shaping smoking behaviors.

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