

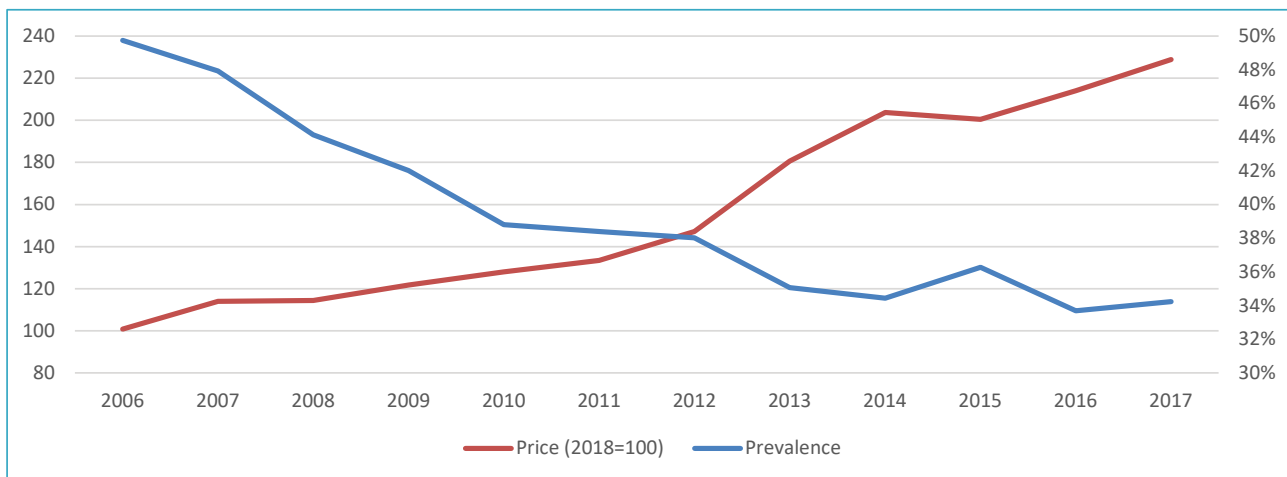


## EVIDENCE-BASED TOBACCO TAXATION POLICY IN SERBIA – SOME RECOMMENDATIONS FOR POLICY MAKERS

***Tobacco consumption and prevalence in Serbia are decreasing, but still are significantly higher than the EU-28 average***

According to the latest official data from 2017, 34.2 percent of Serbian adults smoke.<sup>1</sup> The share of daily smokers is 29.2 percent, significantly higher if compared to the EU-28 average of 18.4 percent<sup>2</sup>. Official price and prevalence data for the last 15 years

show a **link between the rising prices of cigarettes and the decrease of smoking prevalence** (Figure 1). During the period of the highest rise in prices (2011-2014), prevalence rates sharply declined. However, ever since the Government abandoned a strict tobacco control policy and adopted an excise calendar of gradual and even declining marginal increases of the specific excise,<sup>3</sup> smoking prevalence has remained relatively stable.



**Figure 1.** Prevalence and the price of cigarettes \*

\* Cigarette prices are defined as municipality/year average cigarette' unit values (ratio between total expenditure and quantity) and expressed in real terms (2018=100).

Source: Authors' calculation as per Household Budget Survey (HBS) data

The decline in prevalence was the highest among low-income households (18.6 percentage points) (Figure 2), whose members are the most sensitive to price changes compared to wealthier households. This research provides clear evidence

that **increasing tobacco excise would result in improvement in the living standard of low-income households**, which would, unlike the other two groups, decrease their total expenditures on cigarettes.

<sup>1</sup> Household Budget Survey (HBS) data (2017)

<sup>2</sup> [https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth\\_ehis\\_sk3e&lang=en](https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=hlth_ehis_sk3e&lang=en)

<sup>3</sup> Annual absolute increase which amounted around 2 percent of the retail price in 2018

## **TOBACCO CONSUMPTION IS A NATIONAL ISSUE - *What are the consequences of high smoking prevalence in Serbia?***

**High smoking prevalence imposes high health, economic, and social costs** on the Serbian society and is a barrier to economic development. Half of tobacco consumers worldwide die from tobacco-related diseases.<sup>4</sup> In Serbia, tobacco consumption is related to 15,000 deaths annually. The World Health Organization estimates that applying combined price and non-price measures would lead to 43.5 percent lower prevalence and could avoid more than 535,000 deaths over the next 40 years. From

the national public health perspective, lower consumption would likely lead to lower health costs, savings in the national health budget, and increased labor productivity. Although prevailing opinion, mostly shaped by the tobacco industry, is that an increase of excises would result in lower budget revenues, and decrease of GDP and employment, **this policy brief provides clear evidence that a tobacco tax increase would bring only beneficiary outcomes for the Serbian society.**<sup>7</sup>

## **CURRENT TOBACCO TAXATION POLICY NEEDS REFORM - *Shaping national tobacco tax policy to reduce tobacco consumption***

### **SINCE 2015, SERBIA HAS NOT HAD A NATIONAL TOBACCO CONTROL STRATEGY.**

In order to achieve the ultimate aim of lower tobacco consumption, the Government could apply various price and non-price tobacco control measures. This policy brief provides a simulation for applying price measures, confirmed as the most effective control instrument by numerous studies around the world.<sup>8</sup>

Unlike other tax instruments, tobacco excise policy addresses negative externalities and discourages consumption. However, the current tobacco excise policy in Serbia is narrow, focusing exclusively on generating revenue rather than considering the costs and benefits that tobacco consumption produces in the long term.

## **CREATING AN EFFECTIVE NATIONAL TOBACCO TAXATION POLICY – *What does the IES research tell us?***

This research was based on annual Household Budget Survey microdata for the 2006-2017 period aiming to estimate price and income elasticities of cigarette use. Data on cigarette consumption were therefore collected at the household level.

Research shows that **an increase in price by 10 percent would reduce the overall cigarette quantity demanded by 6.6 percent.**

The research results show that the **demand for cigarettes is very sensitive to increases in income.** An income elasticity of 1.058 indicates that a household with 10 percent higher income has a 10.6 percent higher demand for cigarettes. Thus, **excise policy should be adjusted to keep pace with improvements in the living standard.**

<sup>4</sup> <https://www.who.int/news-room/fact-sheets/detail/tobacco>

<sup>5</sup> <http://www.politika.co.rs/sr/clanak/421887/Duvan-svake-godine-odnese-15-000-zivota-u-Srbiji>

<sup>6</sup> [http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0008/312596/Tobacco-control-fact-sheet-Serbia.pdf?ua=1](http://www.euro.who.int/__data/assets/pdf_file/0008/312596/Tobacco-control-fact-sheet-Serbia.pdf?ua=1)

<sup>7</sup> "Regional study - Albania, Bosnia and Herzegovina, Kosovo, North Macedonia, Montenegro, and Serbia - Impacts of tobacco excise increases on cigarette consumption and government revenue in SEE countries. Tobacco taxation project. 2019.

<sup>8</sup> [https://cancercontrol.cancer.gov/brp/tcrb/monographs/21/docs/m21\\_complete.pdf](https://cancercontrol.cancer.gov/brp/tcrb/monographs/21/docs/m21_complete.pdf)



**Figure 2.** Smoking prevalence (left) and smoking intensity (right panel) trends by income group

Notes: Smoking prevalence is defined as the share of the households with positive tobacco consumption while smoking intensity represents the number of cigarette packs a household with positive expenditures on cigarettes smoked per month. Cigarette prices are defined as municipality/year average cigarette' unit values (ratio between total expenditure and quantity) and expressed in real terms (2018=100).

Finally, results for the three different income groups have shown that **low-income households are the most price-sensitive (Figure 2)**. Between 2006 and 2017, the decrease in smoking prevalence was the highest among low-income households—18.6 percent (from 47 to 28.4 percent), whereas other two groups reduced prevalence by 17.5 and 10.7 percent, respectively.

In the period in which real prices more than doubled, lower smoking prevalence and intensity in the low-income group kept the total expenditure on cigarettes (including both consuming and non-consuming households) constant over the period and even slightly decreased their overall budget share spent on cigarettes, by 0.4 percentage points. On the other hand, in two other income groups real expenditures increased by about 20 percent, which led to a slight increase in total budget shares spent on cigarettes.

## IMPACT OF THE PRICE ON CONSUMPTION AND FISCAL REVENUES – *What would be the effect of a tobacco price increase on the national budget?*

**A 25 percent price increase, through a 44 percent higher specific excise duty and no change in ad valorem rate would reduce consumption of low-income households the most (21.6 percent) (Table1), whereas the reduction in the other two groups would be smaller (11.8 percent and 4.0 percent, respectively). In terms of expenditures, low-income households would spend 2.0 percent less on cigarettes, which would likely positively impact their living standard through**

**a reallocation of those funds to more beneficial expenditures, such as basic necessities, such as food and housing.** At the same time, despite a decline of 11.0 percent in overall consumption, the government would collect 17.4 percent additional revenues (EUR 171 million, 0.4 percent of GDP), and the major part of this increase would come from the middle- and high-income households. This is a clear argument for dismissing hypothesis that tobacco taxes are regressive. In fact, they benefit the poor.

**Table 1.** Impact of price increase on consumption and government revenues

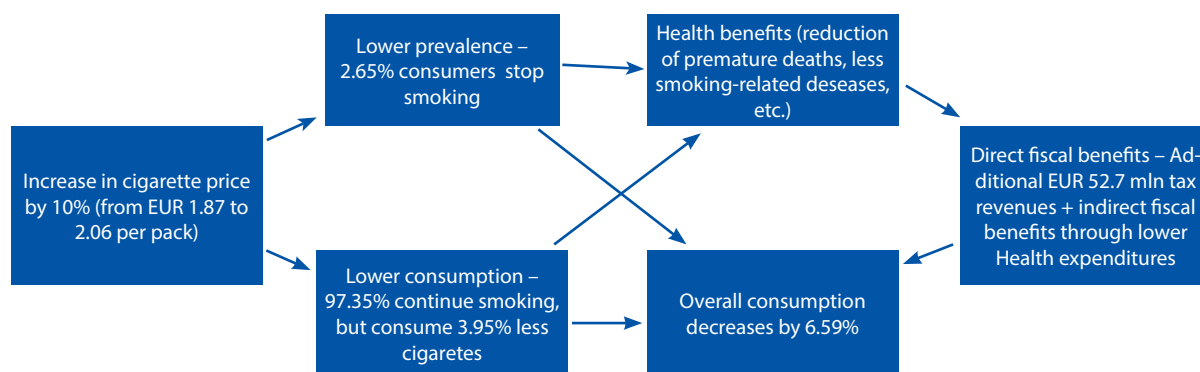
Income group	Consumption			Revenue			Spending on tobacco		
	Baseline <sup>1</sup>	Scenario <sup>1</sup>	Change	Baseline <sup>2</sup>	Scenario <sup>2</sup>	Change	Baseline <sup>2</sup>	Scenario <sup>2</sup>	Change
Low	162.0	127.0	-21.6%	236.3	244.7	3.5%	302.9	296.9	-2.0%
Middle	238.4	210.1	-11.8%	347.7	404.8	16.4%	445.8	491.2	10.2%
High	271.0	260.1	-4.0%	395.3	501.0	26.7%	506.8	608.0	20.0%
<b>Total</b>	<b>671.4</b>	<b>597.3</b>	<b>-11.0%</b>	<b>979.3</b>	<b>1,150.5</b>	<b>17.5%</b>	<b>1,255.4</b>	<b>1,396.1</b>	<b>11.2%</b>

<sup>1</sup> In million packs; <sup>2</sup> In million euros

Source: Own calculation based on Ministry of finance data and estimated elasticities

From a policymakers' perspective, this is a "win-win" situation. In the short-term, excise revenues would be higher, while in the long-term, lower

consumption would result in significant savings in the health and productivity expenditures.



**Figure 3.** What would happen if cigarette prices, ceteris paribus, increased by 10 percent?

## **POLICY RECOMMENDATIONS – What are the most important policy-relevant findings of the conducted research and main risks?**

Price measures are not sufficiently used as an instrument to reduce tobacco consumption. This research finds that **a significant increase of the excise would have beneficial effects on the Serbian society.**

**Key message 1 – Increasing the excise and price of cigarettes would reduce overall tobacco consumption, which should be the ultimate aim of the tobacco tax policy. A price increase of 10 percent would decrease total consumption by 6.6 percent, reduce smoking prevalence by 2.6 percent and smoking intensity by 3.95 percent.**

**Key message 2 – A price increase of 25 percent (achieved by a 44 percent specific excise increase) would positively impact the living standard of low-income households. Low-income households would reduce their consumption of cigarettes by 21.6 percent, decreasing their tobacco spending by 2.0 percent.**

**Key message 3 – The beneficiary effects of a tax increase would also be reflected in the budget. A 25 percent price increase would generate EUR 171 million in additional revenue, which accounts for 0.4 percent of GDP.**

### **About the project**

The Institute of Economic Sciences from Belgrade, Serbia is coordinating a regional network of researchers in Southeastern Europe on tobacco taxation. The project is funded by the University of Illinois at Chicago's (UIC) Institute for Health Research and Policy to conduct economic research on tobacco taxation in Serbia. UIC is a partner of the Bloomberg Initiative to Reduce Tobacco Use. The views expressed in this document cannot be attributed to, nor do they represent, the views of UIC, the Institute for Health Research and Policy, or Bloomberg Philanthropies.