

# IMPROVING TOBACCO TAX POLICIES IN BOSNIA AND HERZEGOVINA

## INTRODUCTION

Tax policy is one of the most effective means of reducing the consumption of tobacco products, which has been shown in multiple studies carried out by leading researchers in the field of health economics (Acharya et al. 2016, Chaloupka et al. 2010, John 2008, Bader et al. 2011, Ross et al. 2003, WHO, 2016, etc.). In countries with medium and low income levels, the price elasticity of demand for tobacco products ranges between -0.2 and -0.8 (Acharya et al. 2016). In other words, a 10% increase in the price of tobacco products can reduce consumption between 2%-8%, resulting in positive effects on the health of the population, and also creating an increase in revenue for the government.

Based on the current data on the number of smokers in Bosnia and Herzegovina, the mortality attributable to tobacco products is projected to be 600,000 (WHO, 2016). In line with the suggestions of the WHO report on tobacco control<sup>1</sup>, it is possible to improve the existing policy in such a way that both the number of smokers and the consumption of tobacco products are reduced. Similar findings are reported in this policy brief from research conducted by the University of Banja Luka (UNIBL). Based on data on changes in excise taxes, consumption of tobacco products, and the micro-data from the Household Consumption Survey, the UNIBL study confirms that a significant increase in excise taxes can provide additional benefits for society, through a decrease in consumption of tobacco products and faster increases in state excise tax revenues.

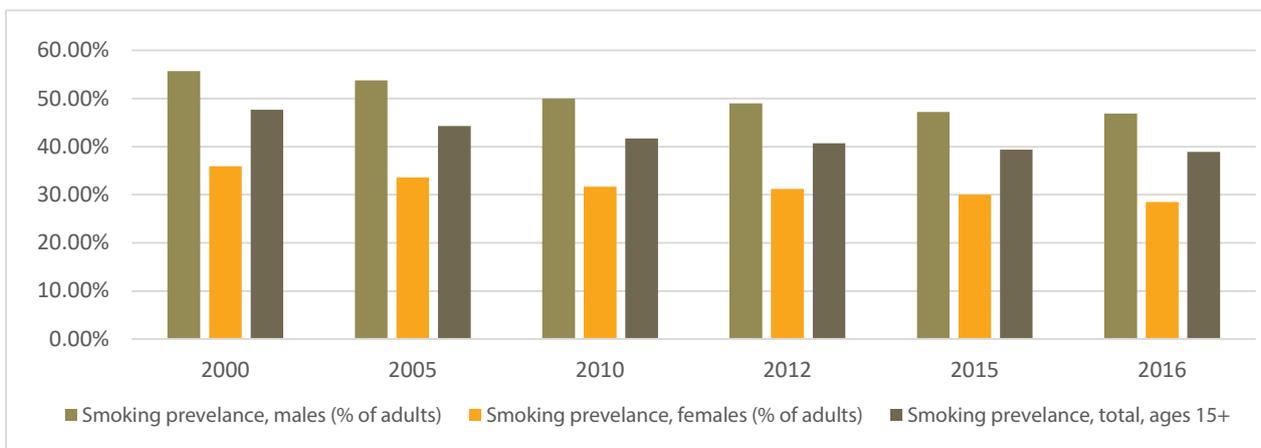
## TOBACCO USE TRENDS IN BOSNIA AND HERZEGOVINA

Since 2006, consumption of tobacco products has had a tendency to decline steadily, yet it is high among youth as 12% of 15 to 18 year old's are estimated to be current smokers.

Although it is slowly declining since 2000, the World Bank estimates that 38.9% of the Bosnia and Herzegovina population older than 15 years are daily smokers (see Graph 1). The

proportion of smokers in Bosnia and Herzegovina is still considerably higher than in most European Union (EU) countries. The study showed that in all of the households surveyed, approximately 41% had an individual that smoked cigarettes. On average, Bosnia and Herzegovina households spent an estimated 5.4% of the monthly budget on cigarettes.

**Graph 1.** Prevalence of tobacco consumption in Bosnia and Herzegovina, 2000 to 2016



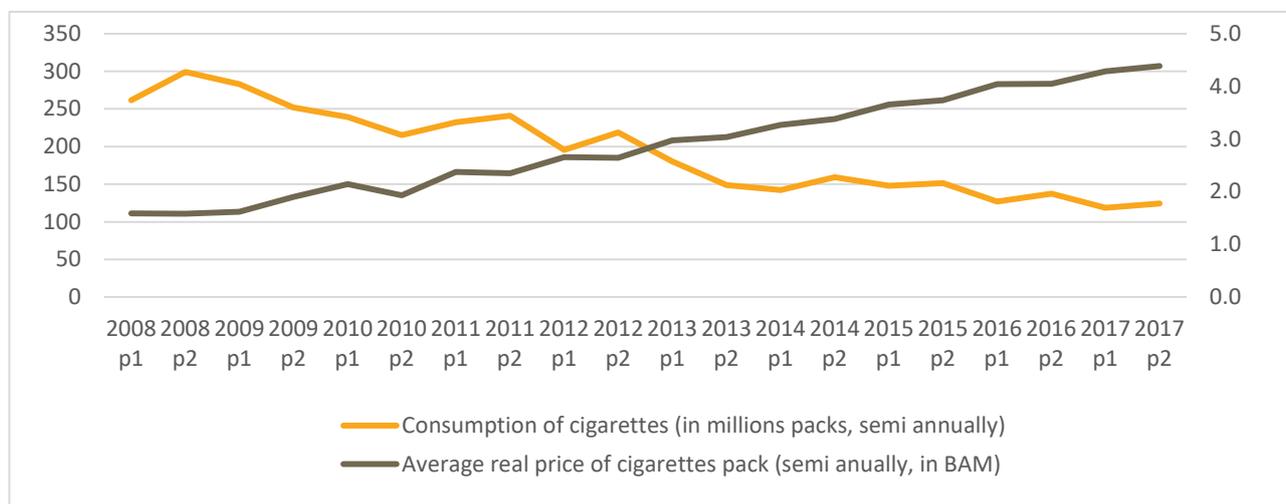
Source: The World Bank, 2018

<sup>1</sup> WHO, Tobacco Control in Bosnia and Herzegovina, 2016, page 2: "With a stronger set of policies, the prevalence can be reduced by 25% in the next 5 years, 32% in 15 years and 38% in the next 40 years in both entities: the Federation of Bosnia and Herzegovina and the Republika Srpska."

Graph 2 shows the trend in cigarette prices in Bosnia and Herzegovina and consumption of cigarettes, on a semi-annual basis. Data on issued excise stamps of the Indirect Taxation Authority were used in order to create a series of displayed data. The average price is the ratio of the value of total excise stamps issued to domestic and imported cigarettes and the quantities

of excise stamps. The amount of cigarette consumption in packs is equal to the number of excise stamps issued. The introduction of a fixed excise in the second half of 2009 and its increase in the coming period reflected the increase in the price of a cigarette pack, as well as the reduction in consumption, as demonstrated in the chart.

**Graph 2.** Movement of prices and consumption of cigarettes in Bosnia and Herzegovina - semi-annual data (2008-2017)



Source: Author calculations based on data from ITA, 2018

The trend of decreasing consumption could be attributed to the harmonization of the regulations of tobacco prices and tobacco products with the regulation of the EU. However, the prices in the EU are still higher when compared to Bosnia and Herzegovina. The EU-28 weighted average price of cigarettes is €4.80, while the

most popular brand of cigarettes in Bosnia and Herzegovina was €2.66 in 2017.

Since prices of tobacco products in the EU are considerably higher when compared to the prices in Bosnia and Herzegovina, there is significant space for tax and price increases.

## TOBACCO TAX STRUCTURE

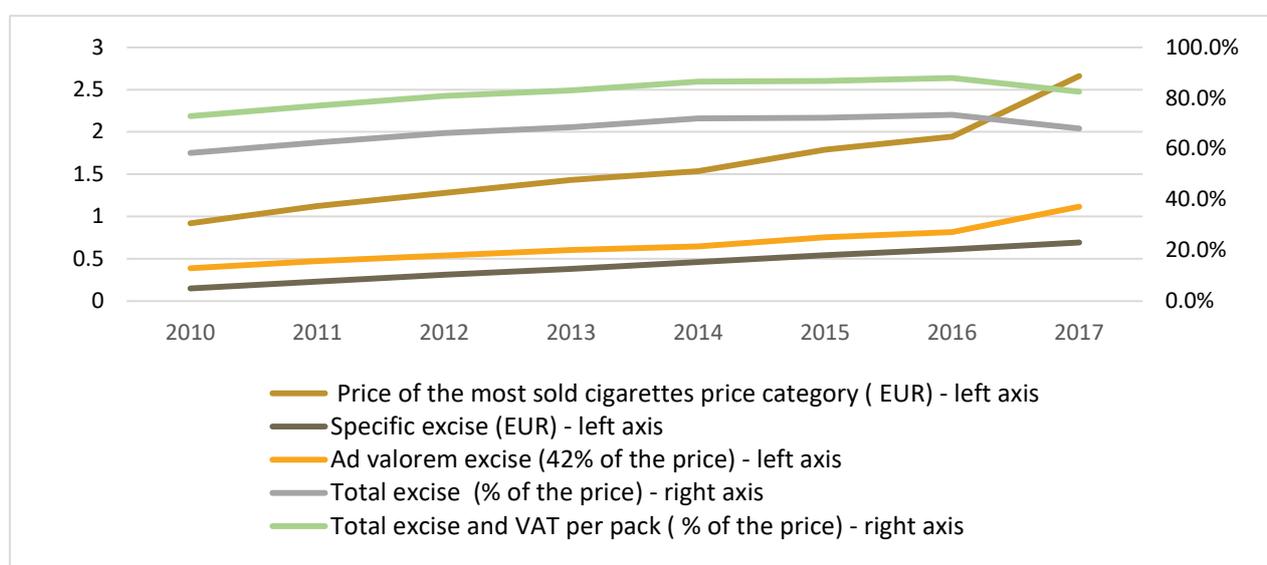
Tax policy of tobacco products is under the responsibility of the Indirect Taxation Authority of Bosnia and Herzegovina

The analysis of the institutional framework suggests that the Indirect Taxation Authority of Bosnia and Herzegovina is the only excise policymaker, while the Ministry of Health is completely excluded from this significant process and does not have any ability to influence the creation of an excise policy as a means of controlling tobacco. In this way, the consumption of tobacco products is largely a consequence of the decision of the Board of Directors of the Indirect Taxation Authority of Bosnia and Herzegovina, which is particularly focused on achieving stable and predictable excise revenues.

Current excise policy relies on ad valorem excise taxes accounting for 42% of the retail price. The law also includes a gradual increase in specific excise duties (see Graph 3), currently accounting for one third of the most popular brand price.

The reliance on ad valorem excise enables significant variation in the retail price of tobacco, as the tax is calculated as a percent of the price. The price of the most sold cigarettes is going up in Graph 3, while the total excise tax burden is declining, as the ad valorem part of the excise increases faster than the specific part. This may also create a significant gap between cheap and expensive brands, allowing consumers to switch to cheaper brands even when ad valorem taxes go up.

**Graph 3.** Structure of tobacco tax in the period 2010-2017



Source: Authors' calculations based on data from the Official statistics

The process of adjusting to the EU regulations should be followed by a significant tax increase in order to meet the minimum prescribed excise duty of € 90 per 1000 cigarettes. The retail price per 1000 cigarettes of the most popular brand in Bosnia and Herzegovina is € 77.5.

The share of excise taxes in the retail price is 67.95% in Bosnia and Herzegovina, which is almost in line with the best practices recommended by the World Health Organization.<sup>2</sup> However this includes a significant amount of ad valorem taxes. Adjusting Bosnia and Herzegovina's tax structure to EU regulation would require a significant increase in specific excises in order to reach the EU minimum.

## EVIDENCE BASED FINDINGS ON TOBACCO TAXES

In order to estimate the influence of excise policy, the evaluation of the elasticity of demand for cigarettes was carried out using econometric techniques. Econometric analysis was performed using both macro and micro data based on a household consumption survey in 2011 and 2015. Econometric analysis based on the macroeconomic data for the 2008-2017 period showed the existence of a statistically significant impact of price growth on cigarette consumption. The coefficient of elasticity ranges from -0.71 to -0.83. This means that an increase in the price of cigarettes by 10% would lead to a decrease in the consumption of cigarettes in the range of 7.1% to 8.3%, all other factors remaining constant. Econometric analysis based on micro data was performed on the sample of households who participated in the Household Budget Survey, conducted in Bosnia and Herzegovina in 2011 and 2015. The estimated value of the coefficient of

elasticity of demand for cigarettes in relation to the change in prices is statistically significant at the level of 1%, and amounts to -0.65. This implies that a rise in the price of cigarettes by 10% leads to a fall in demand for cigarettes by 6.5%, all other factors remaining constant.

The results of the econometric estimate of elasticity of demand are in line with the results of similar surveys carried out on the sample of low- and middle-income countries, which showed that the demand elasticity coefficient in these countries has a value ranging from -0.5 to -1. The results provide significant inputs for creating effective taxation of cigarettes consumption in the years to come. They demonstrate that a significant increase of excises is of vital importance if the increase of budget funds and reducing consumption are priorities for policy makers.

## CONCLUSIONS

Tobacco tax policy in Bosnia and Herzegovina currently neglects public health protection and the reduction of tobacco product consumption. At the same time, there is a lack of dialogue and transparency between different interested parties when it comes to basic data on tobacco control. In addition, the specificity of Bosnia and Herzegovina and their complex political systems

strictly separate competencies. The Indirect Taxation Authority is operating at the state level, while health policies are in the hands of the entities.<sup>3</sup>

Based on all of the above, the fundamental problems of the existing tobacco taxation system are as the follows:

<sup>2</sup> <http://www.who.int/tobacco/economics/taxation/en/index1.html>

<sup>3</sup> Bosnia and Herzegovina is a state that consists of a confederal system of government in which power is rotated between three ethnic communities (Bosniacs, Croats and Serbs). Within this, there are two political entities: one is the Bosniac-Croat Federation (FBiH), populated mainly by Bosnian Croats and Bosnian Muslims (the latter now termed Bosniacs), the other is Republic of Srpska (RS), an entity in which Bosnian Serbs form the majority, and the Brčko District - BD.

- Although prices of tobacco products are increasing slowly, Bosnia and Herzegovina have a lot of room to catch up with the higher prices of tobacco products in the EU.
- Tax and price increases have reduced tobacco use in BiH. That tobacco use is still high implies that further tax increases and other tobacco control measures are needed.

The obtained research results indicate that it is possible to improve the taxation policy for tobacco products using the following recommendations:

### **Measure 1. Adopt an evidence-based system of tobacco taxation.**

- In line with the conducted research in Bosnia and Herzegovina, which showed that the elasticity of demand for cigarettes ranges from -0.65 to -0.83, it is necessary to consider the effects of a more dynamic increase in excise taxes on tobacco products. The results of the study show that a 50% increase in price as a result of a significant increase of excises, along with other unchanged factors, would lead to a decrease in demand for tobacco products between 32.5%

and 41.5%. The current approach relying on ad-valorem excise should be reconsidered as it enables strong variation of the retail prices depending on the specific brand of cigarettes.

### **Measure 2. Create a strategic framework for tobacco control that focuses on necessary adjustments needed to align with EU regulations in tobacco taxation**

- It is necessary to increase the excise taxes on tobacco products reaching the level of EU regulations suggesting the overall excise to reach € 90 per 1000 cigarettes. The EU-28 weighted average price of cigarettes is €4.80, which is much higher than the €2.66 price of the most popular brand of cigarettes in Bosnia and Herzegovina in 2017. There is a still enough space for tax increase as an additional incentive for the reduction of consumption. The creation and implementation of the new strategic framework must take into account the principles of participation and coordination of all stakeholders (Indirect Taxation Authority, Ministry of Health, and Civil Sector) taking into account the overall interests of society.

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This policy brief was funded by the University of Illinois at Chicago (UIC) as a key partner of the Bloomberg Philanthropies Initiative to Reduce Tobacco Use.

## **ABOUT THE PROJECT**

The project "Accelerating progress in taxation of tobacco and tobacco products in low- and middle-income countries" is part of an international initiative focusing on taxation of tobacco and tobacco products. The regional network in the Western Balkans is coordinated by the Institute of Economic Sciences, Belgrade, Serbia. The University of Banja Luka (UNIBL) was funded by the University of Illinois, Chicago (UIC), the Research and Health Policy Institute, to conduct economic research on tobacco taxation in Bosnia and Herzegovina. The research team of UNIBL is comprised of researchers from the UNIBL Center for Entrepreneurship and Technology Transfer and the Center for Project Management and Entrepreneurship at the UNIBL Faculty of Economics. UIC is a key partner of the Bloomberg Philanthropies Initiative to Reduce Tobacco Use. The views and opinions expressed in this document cannot be attributed to, nor do they represent the views of the UIC, the Research and Health Policy Institute, or the Bloomberg Philanthropies.