

KEY FINDINGS

1. **Affordability is the most significant determinant of tobacco consumption in each of the ten observed countries.**
2. **Making cigarettes less affordable reduces their consumption more than proportionally.**
3. **Trends in affordability from 2008-2018 vary across the SEE region. In some countries affordability remained constant (North Macedonia) or recorded a negligible decrease (Bulgaria), while in others, cigarettes have become significantly less affordable (Montenegro and BiH).**
4. **Decreased affordability should be a paramount consideration when designing tobacco taxation policies.**

Background

Affordability is an important tobacco control metric and provides useful insight into whether an increase in cigarette prices is sufficient to reduce consumption. The concept of affordability explains the relationship between the product price and disposable income. If growth in income is not followed by at least a proportional increase in real cigarette prices, cigarettes become more affordable, and therefore a consumption likely increases.

Despite a decline in smoking prevalence over the last two decades in Western Balkan countries, it is still high relative to the European Union (EU) average. The smoking prevalences in Western Balkan countries are more similar to their neighboring EU member countries that are more recent entrants.

Methods

This research analyzes trends in cigarette affordability in ten selected SEE countries, including five Western Balkan countries (Albania, Bosnia and Herzegovina (BiH), Montenegro, North Macedonia, and Serbia) and five EU members (Bulgaria, Croatia, Hungary, Romania and Slovenia). Two measures of affordability were used: increase in overall level of prices relative to increase in real tobacco prices (Tobacco Affordability Index, TAI) (Krasovsky, 2012) and percentage share of GDP per capita required to purchase 100 packs of cigarettes (2,000 cigarette sticks) (Relative Income Price, RIP) (Blecher & Van Walbeek, 2004).

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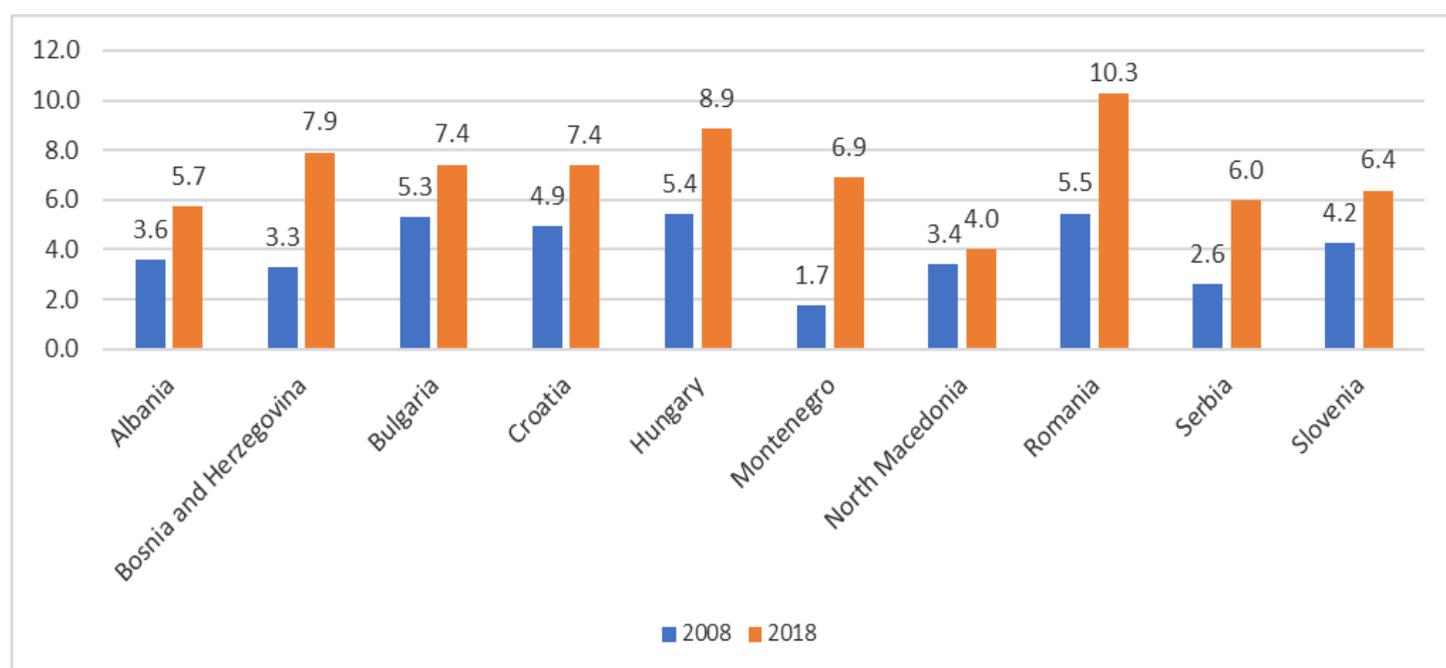


Trends in affordability vary across the region

Real prices of the most-sold cigarette brand have increased in all observed countries over the period 2008–2018 (Figure 1). The most dynamic growth was

recorded in Montenegro, where cigarettes became almost three times more expensive over the ten-year period. Prices also increased significantly in BiH.

Figure 1. Real prices of the most-sold cigarette brands, 2008 vs. 2018 (2017 international \$)



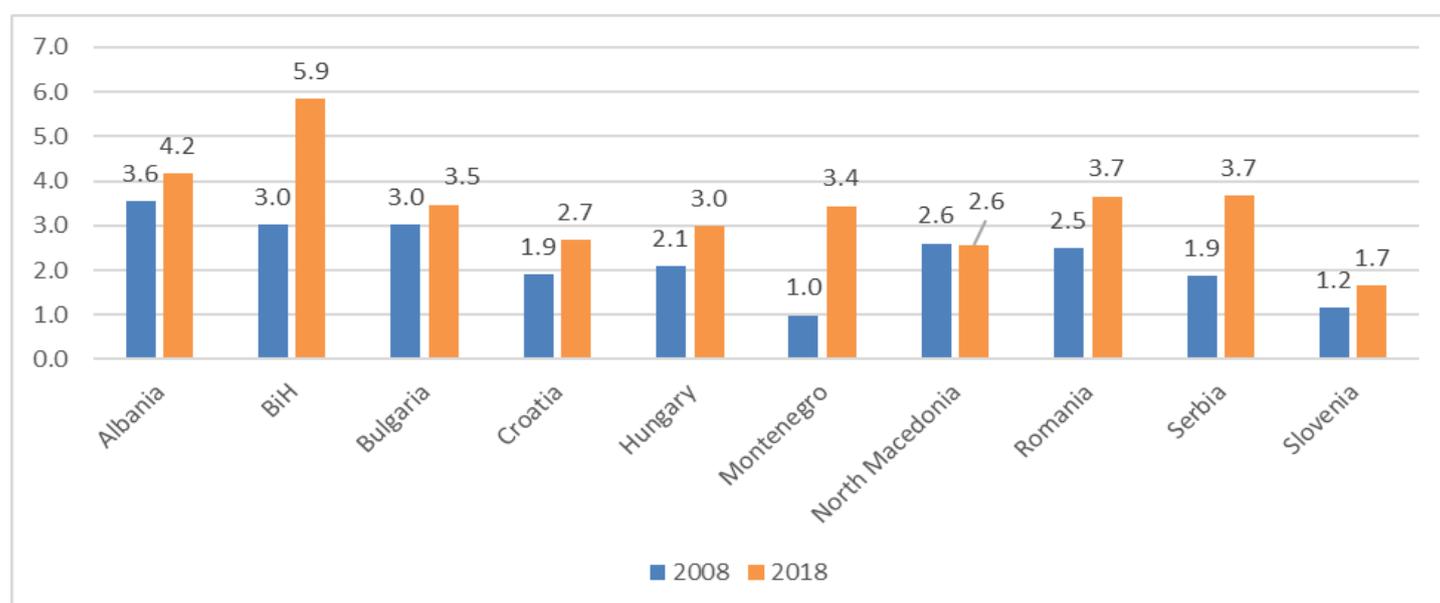
Source: Authors' calculations using WHO and IMF data

In 2018, using percentage share of GDP required to buy 2000 cigarettes of the most-sold brand, tobacco was the most affordable in Slovenia and North Macedonia where it took 1.7 and 2.6 percent of GDP per capita respectively to purchase 2000 cigarettes. The least affordable cigarettes were in BiH and Albania where it required 5.9 and 4.2

percent of GDP respectively to purchase 2000 cigarettes. Between 2008 and 2018, the highest decrease in affordability was recorded in BiH and Montenegro in 2018, and the lowest in North Macedonia and Bulgaria (Figure 2).

Decrease affordability to reduce consumption of cigarettes in Southeastern Europe

Figure 2. Trends in RIP, 2008 vs. 2018 (percent)



Source: WHO, Global Health Observatory data

When measured with the Tobacco Affordability Index (TAI), the change in affordability strongly depends on income changes. Following the onset of the global financial crisis in 2009, all analyzed countries except Albania experienced a decrease in GDP per capita, which resulted in sharp decreases in tobacco affordability (Table 1). However, as soon

as the global economy started recovering (2011–2012) tobacco affordability stabilized and cigarettes even became more affordable in North Macedonia and Bulgaria. Episodes of sharp affordability decreases were quite rare, occurring only in Montenegro (2012 and 2019), Serbia and BiH (2013–2014) and Hungary (2012–2013).

Table 1. Tobacco Affordability Index (2009-2019), (GDP per capita * consumer price index)

Country/Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Albania	1.2	-0.9	-9.9	-1.4	-4.6	-7.2	0.7	5.5	4.9	2.2	3.3	0.5
BiH	n/a	n/a	-5.7	-10.9	-5.5	-10.4	-3.9	-5.9	-2.3	-3.9	-3.4	n/a
Bulgaria	-19.3	-21.5	2.5	3.4	0.9	-0.3	2.8	0.3	3.2	1.9	4.8	-3.8
Croatia	-19.1	-2.6	-5.9	-3.1	-8.4	-6.8	0.8	3.6	2.8	1.8	-1.2	-11.1
Hungary	-10.9	-3.6	9.0	-14.2	-12.3	-8.9	0.6	-1.2	-0.1	0.5	-3.0	-11.2
N. Macedonia	-0.9	3.5	4.0	1.2	2.9	-0.6	-3.8	-3.6	-5.6	-2.2	-3.0	-4.5
Montenegro	n/a	n/a	n/a	-19.1	-5.6	-3.6	2.9	-1.0	-4.2	-17.3	10.8	-5.5
Romania	-20.3	-27.4	-1.5	0.4	-1.6	-2.0	-1.0	-0.1	6.0	2.9	0.8	-8.6
Slovenia	-12.4	-6.1	-4.0	-6.8	-7.7	-1.5	-1.2	2.9	2.6	5.0	2.7	-8.6
Serbia	-13.9	-4.6	-3.4	-7.6	-14.1	-11.9	6.0	-4.2	-2.8	-0.7	-0.8	-5.9
Average	-12.0	-7.9	-1.6	-5.8	-5.6	-5.3	0.4	-0.4	0.4	-1.0	1.1	-6.5

Source: Authors' calculations using national statistics and EUROSTAT data



POLICY RECOMMENDATIONS

- 1. Use a tobacco affordability indicator when designing tobacco taxation.** The tobacco affordability indicator should annually monitor price changes of the most popular brands as well as the cheapest brands since users might substitute to cheaper brands or other products.
- 2. In countries that apply a tobacco excise calendar policy, such calendars should be reformed to include the affordability index.**
- 3. Other tobacco control policies (MPOWER) should not be neglected when designing effective tobacco control policy.** There are many policy evaluations that confirm the effectiveness of well-designed comprehensive tobacco control programs, and some which also show that the effects of tobacco taxation are often enhanced when part of such programs (Wakefield & Chaloupka, 2000).

References

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