

CIGARETTE AFFORDABILITY IN MONTENEGRO

KEY FINDINGS

- **Short-term affordability trends:** During the recent period of high wage growth in Montenegro, cigarette affordability increased significantly from 2020 to 2023, with annual increases of 13 percent, 14 percent, and 7 percent, respectively.
- **Long-term affordability trends:** Compared to 2010, cigarette affordability in 2023 decreased by nearly 10 percent, reducing the ease of purchasing cigarettes.
- **Cigarette affordability for low-income groups decreased until 2019 due to rising prices and stagnant wage growth but has shown a sharp upward trend since.** By 2023, it took 35-percent fewer minutes of labor to buy a pack of cigarettes in the cheapest market segment compared to 2020.
- **Affordability elasticity:** Cigarette consumption in Montenegro is highly sensitive to changes in affordability. A 10-percent reduction in affordability leads to a 6.8–8.9 percent decrease in cigarette consumption, with the effect being particularly pronounced among lower- and middle-income households.

BACKGROUND INFORMATION

As a European Union (EU) accession country, Montenegro has made significant progress in harmonizing its excise policy with EU directives, which has resulted in efficient tax increases and, consequently, higher cigarette retail prices. Despite implementing these extensive tobacco control measures, cigarette prices still remain low compared to the European Union average (Trenda, 2023). Additionally, the Government of Montenegro initiated economic and fiscal reforms in 2022, nearly doubling minimum net wages, raising the average wage, and planning for a more expansive fiscal policy in the coming years.

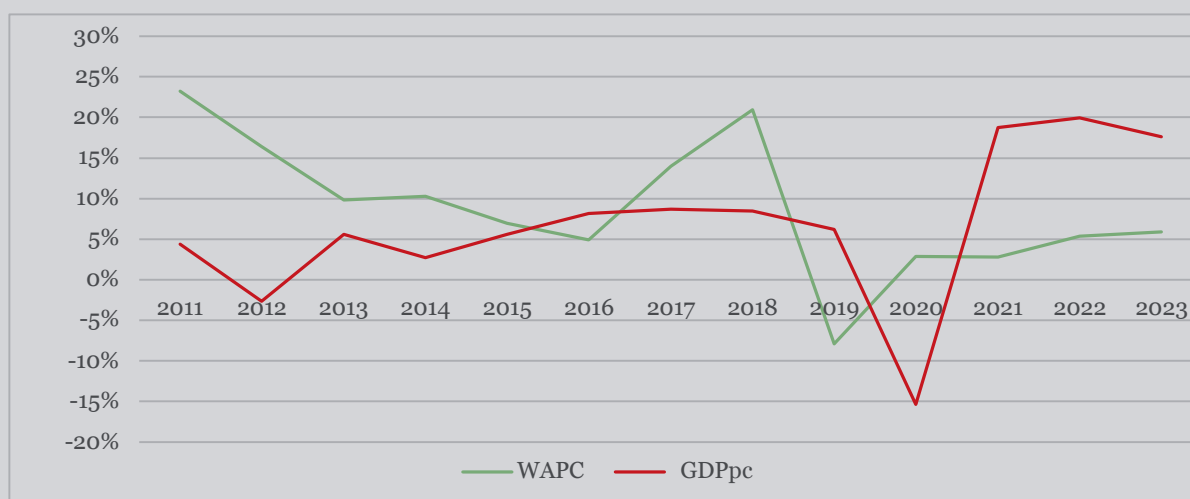
The recent period of high-income growth in Montenegro presents a unique context for evaluating tobacco tax policy. While considerable wage increases can lead to a higher standard of living and poverty reduction, they also pose a challenge to effective tobacco excise policy. As incomes rise, cigarette affordability increases, potentially counteracting the positive effects of higher taxes intended to reduce tobacco consumption. This dynamic underscores the crucial importance of considering both price and income effects when designing comprehensive and effective tobacco control measures.

RESULTS

Trends in affordability have fluctuated over time

Both affordability indicators, relative income price (RIP), defined as the share of GDP per capita required to purchase 100 packs of cigarettes, and minutes of labor (MoL), defined as minutes of labor needed to buy a cigarette pack, indicate that a greater proportion of income or labor is required to purchase cigarettes in 2023 compared to 2010. The estimation of the overall affordability trend showed that the average annual decrease in affordability in the observed period is approximately one percent, being the highest for the lowest-priced segment of the tobacco market (4 percent).

Figure 1. Annual growth rate of nominal GDP per capita and weighted average price of cigarettes (WAPC)



Source: Authors' calculations based on data from Ministry of Finance and Monstat

However, the observed period showed distinct episodes of rising and decreasing affordability, mostly influenced by income growth changes, which tobacco legislation did not adequately consider. There were two distinct periods during which affordability increased. The first occurred in 2019 when the government implemented a 25-percent reduction of specific excise tax due to market turbulence. The second period was observed during the final three years of the study

period and was mostly attributable to the post-COVID economic rebound and an expansive fiscal policy aimed at significant wage increases. In both mentioned period the annual growth rate of WAPC outpaced the GDP per capita growth (Figure 1).

During the observed period, the tobacco industry also contributed to increased cigarette affordability by approximately five percent, on average, through pricing strategies.

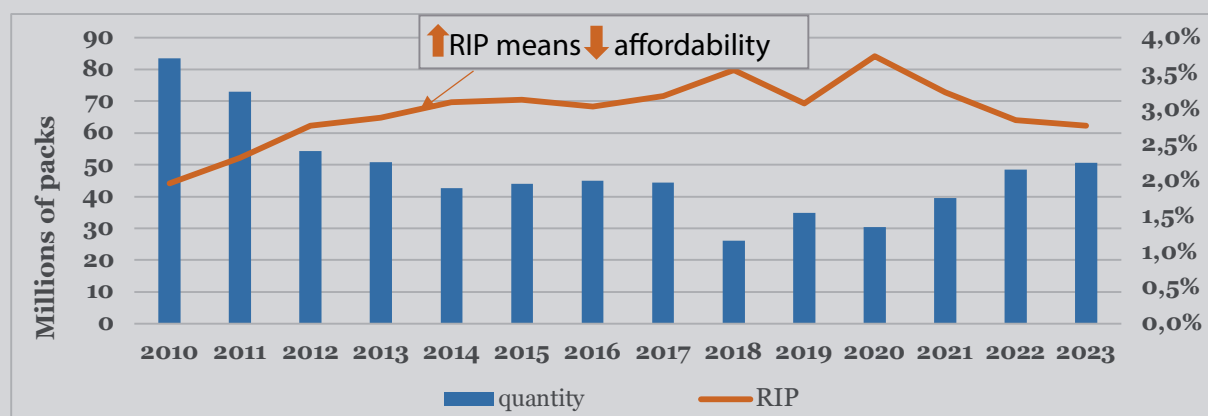
Regional and sociodemographic disparities

- Considering sociodemographic variables, the findings indicate that cigarettes are less affordable for specific groups, particularly households without employed members, those in the northern region, households with a higher proportion of elderly members, and those headed by women.
- Throughout the observed period, cigarette affordability was slightly higher (by 1.21 percentage points) for wealthier households compared to low-income households, largely due to the lower income and living standards of the poorest population segment.

Cigarette demand is highly responsive to changes in affordability

In the context of robust income growth, as evidenced in recent years in Montenegro, the effectiveness of tobacco tax policy largely depends on the impact of affordability changes on consumption patterns. Figure 2 illustrates the strong correlation between legal sales, serving as a proxy for cigarette consumption, and the RIP indicator from 2010–2023. A period of declining consumption from 2010 to 2018 corresponds with price increases and declining affordability. On the other hand, consumption notably increased after 2020 despite rising prices, likely due to the impact of rising incomes on increased affordability, along with reducing illicit market share.

Figure 2. Quantity of cigarettes sold and affordability



Source: Authors' calculations based on data from Ministry of Finance

The findings using **micro HBS** (Household Budget Survey) data from 2005–2015, 2017, and 2021 indicate that a 10-percent decrease in affordability leads to a 6.8-percent reduction in cigarette consumption, with the effect being more pronounced among lower- and middle-income groups. This implies that policies aimed to reduce affordability can be particularly effective in these population segments.

Using **macro aggregate data** on quantity and prices per cigarette brand from 2010 to 2023, the results showed that the short-run affordability elasticity is estimated at -0.51, while in the long run, a 10-percent decrease in affordability would lead to nearly a 8.9-percent reduction in per capita consumption.

RECOMMENDATIONS

Government should:

- **Prioritize the WHO recommendation and implementation of Article 6 of the WHO FCTC (World Health Organization Framework Convention on Tobacco Control)** by ensuring that tax increases are substantial enough to counteract the effects of inflation and income growth. Implementing economically responsive tax policies can reduce cigarette affordability, helping lower the prevalence of tobacco and related health risks.
- **Integrate the affordability elasticity indicator into the design of tobacco control policies.** In countries with rapid income growth—where increased consumer spending power may lead to higher tobacco use—affordability elasticity can be a valuable tool for guiding tax adjustments enough to decrease both the affordability of tobacco products and overall consumption.
- **Monitor cigarette affordability trends across different market segments and socioeconomic groups.** Changes in affordability can influence smoker behavior in various ways, including encouraging cessation, reducing consumption, or prompting brand switching. To ensure the overall effectiveness of tobacco control policies, these trends should be closely monitored and taken into account in policy decisions.
- **Work towards harmonizing Montenegro's tobacco tax regulations with the upcoming EU Tobacco Tax Directive** by raising minimum taxes and incorporating affordability considerations, as this would yield more effective policy outcomes once the directive is adopted in the coming years.

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