



The net impact of higher tobacco taxation on output, income, and employment is positive

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This policy brief is based on a research study entitled *Macroeconomic Impacts of Tobacco Taxation in Serbia* conducted by the Institute of Economic Sciences, Belgrade, Serbia

Key Findings

- **An increase in the specific tobacco excise tax by 43.6 percent (required to achieve harmonization with the European Union 2014 tobacco tax directive) results in:**
 - 14.75-percent reduction in tobacco consumption,
 - 4.3-percent-higher household expenditure on tobacco products, and
 - an additional 10.5 percent in government revenues from excises and VAT on tobacco products.
- **Depending on the structure of government spending of the additional revenues, net benefits from higher tobacco taxes can reach:**
 - RSD 16 billion increase in output,
 - RSD 4.5 billion increase in household income, and
 - increase in employment of 5,300 jobs.
- **Higher weighting of health services, social work activities, and education within the structure of additional government spending is positively associated with overall net impact on output, income, and employment.**

Background

Despite enormous health and related damage caused by tobacco use, governments in many emerging economies still hesitate to substantially increase excise taxes on tobacco products. This hesitation comes from the belief that reducing tobacco consumption may result in economic losses and/or decreases in public revenues that could not be compensated for by the improvements in public health.

However, research findings on the subject challenge such beliefs, as the evidence shows that the net

macroeconomic effects of reducing tobacco use are positive (National Cancer Institute, 2016; Bella et al., 2021).

Serbia has intensive manufacturing of tobacco products, with four companies producing cigarettes. The dominance of the tobacco industry creates a public image that cigarette manufacturing contributes significantly to employment, wages, creation of added value, and generation of public revenues. In fact, data show that the contribution of cigarette manufacturing to the Serbian economy is below the manufacturing sector average.



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The share of value added in the output of the tobacco industry is only 16 percent, 12 percentage points lower than the manufacturing average (28 percent).

Only 24 percent of value-addition created in cigarette production is disbursed on wages of employees (the average share for the manufacturing sector is 56 percent).

More than 70 percent of cigarettes produced in Serbia are exported without any taxation nor revenues for the government.

The main obstacle to a full-scale estimation of the macroeconomic impacts of tobacco taxation on the Serbian economy for many years was the lack of input-output tables, which were finally compiled in 2019. This is the first study in Serbia that empirically assesses the overall impact of tobacco taxation on economic output, household income, and employment based on data contained in these input-output tables.

Methodology

This brief presents the estimated net impacts of a tobacco taxation increase on overall output, household income, and employment in Serbia, based on two scenarios of increases in specific excise taxes on cigarettes (Table 1).

The net impacts are calculated as the sum of the following:

- i. estimated increase in household expenditure on tobacco products;
- ii. estimated decrease in consumption of goods and services crowded out by the increase in expenditures on tobacco products; and
- iii. simulated reallocation of the additional government revenues from higher tobacco taxation to spending on agriculture and food production, education and science, and health and social work.

For the purpose of this estimation, a macroeconomic model that captures intersectoral linkages between the tobacco industry and other sectors in Serbia was developed.

Table 1. Change in the structure of cigarette price in Serbia with 25% and 43.6% increases in the specific excise tax, 2019 (RSD)

		Price	Net of tax	Specific excise	Ad valorem excise	VAT	Tax share	Excise share
	initial	274.24	67.28	70.75	90.50	45.71	75.47%	58.80%
Scenario 1	25% increase	309.38	67.28	88.44	102.10	51.56	78.25%	61.59%
Scenario 2	43.6% increase	335.53	67.28	101.60	110.72	55.92	79.95%	63.28%

Source: Tobacco administration office in Serbia, authors' calculations



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Main results associated with Scenario 2 (43.6% increase in specific excise)

Quantity of cigarettes consumed

A price increase of 22.4 percent (resulting from a specific excise tax increase of 43.6 percent) leads to a **14.75-percent decrease** in the quantity of cigarettes consumed.

Household expenditure on cigarettes

Increasing tobacco taxes results in **4.3-percent-higher** household expenditure on tobacco products. Subsequently, households will decrease expenditure on other goods and services by the same amount. Consumption of food, clothes, health, and education are most likely to be crowded out by higher expenditures on cigarettes (Vladislavjevic et al., 2021).

Public revenues

The increase in tobacco taxes results in **10.5-percent-higher** government revenues collected from excise taxes

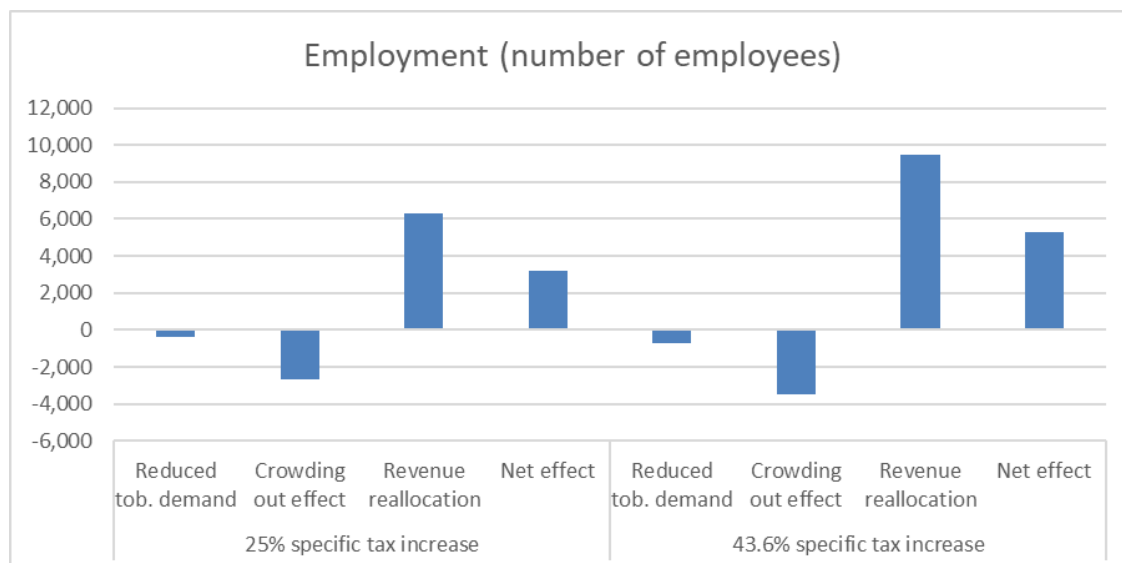
and VAT on tobacco products. The government can spend these additional revenues on goods and services that reduce poverty and improve the welfare of society.

Net gains

The analysis shows that the net impact of an increase in tobacco taxation on output, income, and employment is positive regardless of the assumed structures of government spending, as long as the government reallocates at least 80 percent of the additional revenues from tobacco taxation.

Depending on the structure of government spending of the additional revenues, the net benefits from a 43.6-percent specific excise increase can result in RSD 16 billion (€136 million) of additional output, a RSD 4.5 billion (€38 million) increase in household income and an increase in employment of 5,300 jobs.

Figure 1. Net impact of tobacco taxation increase on employment





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For instance, a net increase in employment is maximized if the government spends 25 percent of the additional revenues on agriculture and food production, 25 percent on education and science, and 50 percent on health and social work activities (Figure 1).

Joint consideration of the simulation outcomes indicates that higher weighting of health services, social work activities, and education within the structure of additional government spending is positively associated with overall net impact on output, income, and employment.

Policy Recommendation

Dedicate increased revenues from higher tobacco excise taxes for spending on health, social welfare, and education purposes.

Currently there is no legislation in Serbia that stipulates how government must spend excise tax revenues. A legal obligation of the government to spend a certain amount of excise taxes on socially desirable outcomes would not be only beneficial from the macroeconomic point of view but it would also increase support from taxpayers, including those who are smokers, for higher taxation of tobacco products. Implementation of this recommendation would result in overall short- to mid-term improvements of the macroeconomic performance of the Serbian economy along with positive externalities on public health and associated long-term socioeconomic benefits.

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