Assessing tobacco tax reform and effects of the illicit market in Brazil

Tax reform has the potential to increase tobacco tax revenue, smooth fiscal imbalance, decrease tobacco use, and lower health care demand from tobacco-related diseases.

Key messages

- A tobacco tax reform, along the lines of the proposed Constitutional Amendment Bill 45/2019, has the potential to increase total tax collection and reduce fiscal imbalance.
- If the proposed reform is implemented, the cigarette tax burden would be the same across all Brazilian states.
- In order to avoid decreasing tobacco tax revenues in any state, the proposed reform must increase the cigarette tax burden to 83 percent.
- After the proposed tobacco tax reform, the average consumer price would increase to 9.8 BRL per low-cost cigarette pack and 16.4 BRL per premium-brand pack, while smok-ing would decrease by 25.3 percent and 39.9 percent, respectively. That would result in additional tax revenues of 5.4 billion BRL per year.
- Efforts to reduce illicit trade would increase revenues. A 10 percent reduction in the size of the illicit cigarette market would lead to an increase of 8.5 percent in total tobacco tax revenue, which corresponds to about 1.6 billion BRL of extra revenue per year.
- A tobacco tax reform coupled with a reduction in the illicit cigarette market has the po-tential to bring multiple benefits to the Brazilian society, including additional tax reve-nue for healthcare costs during the COVID-19 pandemic and to reduce chronic fiscal im-balance.

Introduction

There are two Constitutional Amendment Bills in the National Congress that could result in a change in the tax system at both national and subnational levels. The tax reform would affect cigarette taxation, harmonizing tobacco tax levels across the states. How this would affect tobacco consumption and tobacco tax revenue are empirical questions.

This Policy Brief presents results of the research conducted by UCB that analyzes the potential impacts of the tax reform on tobacco taxation policy. The research simulations assumes adoption of Amendment Bill 45/2019, that is, a general consumption tax (GST) applied at the federal level and subnational levels, replacing the current system with different taxes at federal, state and local levels (IPI, PIS/Cofins, ICMS and ISS). Additionally, the research assumes adoption of the federal excise tax on tobacco under discussion (Tobacco Excise Tax – TET). The research includes simulations of the impacts on cigarette prices, consumption, and cigarette tax revenue resulting from alternative tax schemes. Results show that the reform scenarios can

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increase tobacco taxation, reduce cigarette consumption, and increase tax collection.

Tax reform and cigarette taxation

The tax reform will result in a federal tax on cigarettes (TET) and a consumption tax (GST) that will also be levied on cigarettes. Thus, the tax burden on cigarettes will be the sum of both taxes, TET and GST.

This research adopted Odair and Gobetti's (2019) calculations and uses uniform rates for the new Tax on Goods and Services (GST). That is, it assumes a Federal GST of 10.3 percent, and a state and municipal GST of 16.7 percent. In this way, a unique, nationwide GST of 27 percent is applied to all goods and services traded in the country.

Cigarette consumption in Brazil

Cigarette consumption varied across the Brazilian states. The research divides cigarettes into different price categories: PC1 or cigarettes purchased below the minimum price; PC2 or cheaper cigarettes, and PC3 or premium brands. Following Divino et al. (2019), PC1 was classified as illicit (or illegal) market. The distribution of smokers by price categories across the Brazilian states indicated a strong heterogeneity, with PC1 having the higher market shares in states boardering Paraguay, Peru and Bolivia in the baseline scenario of the tax reform. Under the current combination of existing federal and state taxes, the tax burden on cigarettes differs among the 26 states and Federal Disctrict.

Tax reform simulations

The research replicates the 2018 cigarette total tax revenue. This baseline scenario was used to calibrate simulations and calculate the effects of alternative cigarette tax reforms. Simulations of three scenarios to guide policy decisions are illustrated in Table 1. Additionally, based on the

Table 1 - Tax reform simulations across different scenarios

	Baseline	Scenario I	Scenario II	Scenario III
Tax collection (BRL Bi year)	13.5	17.2	18.9	14.6
Change (Baseline ref)	---	27.34%	40.06%	8.16%
Change (Illicit -10%)	8.41%	8.59%	8.49%	8.31%
PC2: **Cheaper cigarettes (BRL)**	**6.40**	**7.57**	**9.83**	**7.63**
Tax burden	73.93%	77.85%	82.95%	78.17%
Share in tax collection	56.89%	53.64%	55.78%	59.50%
Consumption (% change)	---	-9.88%	-25.33%	-6.69%
PC3: **Premium brands (BRL)**	**8.67**	**12.65**	**16.43**	**9.17**
Tax burden	67.77%	77.85%	82.95%	69.60%
Share in tax collection	43.11%	46.36%	44.22%	40.50%
Consumption (% change)	---	-20.85%	-39.96%	-1.04%

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results across Brazilian States and using a proxy for the illicit market, th research simulates the impacts of a reduction in the illicit market on cigarette tax revenue.

Scenario I - No Brazilian state loses tax revenue

In the first scenario, a TET combined with the GST yields a cigarette tax burden where none of the Brazilian states face a decrease in tobacco tax revenue collected in its respective territory. From Table 1, this scenario corresponds to a tax burden of 77.85 percent currently in place in Mato Grosso. In this scenario, GST is 27.0 percent and the TET is 50.85 percent across the Brazilian states. As a result, the aggregate tax revenue increases by around 27.34 percent relative to the baseline.
This increase results in higher cigarette prices. The average price in category 2 (Cheaper cigarettes) is 7.57 BRL and 12.65 BRL in price category 3 (premium brands). These new prices correspond to increases of 18.3 and 45.9 percent in comparison to the 2018 baseline prices, respectively. Cigarette consumption also decreases substantially compared to the baseline. Specifically, the decrease is 9.9 and 20.8 percent, for categories 2 and 3, respectively.

"In a scenario where none of Brazilian states experience any reduction in tobacco tax revenue collected in its territory, the aggregate tax revenue increases by around 27.34 percent."

Scenario II - Maximum excise tax

The second scenario is a maximum-excise-tax scenario that allows the Brazilian government to align the TET rate such that the aggregate tobacco tax revenue is maximized under the condition that no federal state experiences any reduction in tobacco tax revenue collected in its territory (due to price effect on consumption).
The interaction of different factors including consumption structure, price sensitivity (which depends on income factors), and the size of the illicit market result in tax revenue decrease in some states earlier than in others. To maximize tax revenue and with no state suffering any decrease in tobacco tax collection the TET should be set to 55.95 percent.
In this scenario, the overall tax burden on cigarettes is 82.95 percent (GST 27.0 percent plus TET 55.95 percent). The average price for cheaper cigarettes (PC2) is 9.83 BRL and 16.43 BRL for premium brands (PC3). These new prices correspond to increases of 53.6 and 89.5 percent in comparison to the 2018 baseline prices. Consumption decreases by 25.3 and 40 percent for categories 2 and 3, respectively.

Scenario III – Specific federal excise tax with no revenue loss

In the third scenario, a specific tax value is chosen such that none of the Brazilian states experiences any loss in tax collection in its territory. The value obtained for the TET under this constraint is BRL 3.89 per pack. In this scenario, the average price increases by 11.5 percent, resulting in a decrease in consumption of 4.6 percent. Revenue collection increases by BRL 1.1 billion per year.
The tax reform has a differential impact by price category. While the cheaper cigarette prices increase by 19.2 percent, premium cigarette prices rise by only 5.8 percent. This heterogeneous effect can also be observed in consumption where smokers consuming cheaper brands reduce smoking by 6.7 percent, while premium brand smokers reduce consumption by only 1.0 percent.

"States with larger illicit markets would benefit even more from a reduction in the illicit cigarette market due to a higher increase in tax collection."

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Reduction of the illicit market

The research also simulates the effects of a 10% discretionary decrease in the illicit market, as illustrated in Table 1. Under this assumption, the new consumers entering the legal market will be splitted between price categories 2 and 3, meaning that the legal market will increase accordingly. The major findings are that in some Brazilian states where the share of the illegal market is larger, such as Mato Grosso do Sul and Acre, tax collection increases by up to 21.6 percent. In other states like Roraima, where the size of the illegal market is currently about 20 percent, the revenue change is still positive, but only about a fourth of that in Mato Grosso do Sul. If the fight of cigarette smuggling is intensified on a national scale, the states with greater access to illegal products would reap the largest relative gains of such public policy.

Recommendations

- **The tax reform currently under discussion in the national congress should increase cigarette taxes and prices, government revenues, while decreasing cigarette consumption.**

- **The Tobacco Excise Tax should be high enough so that no Brazilian state loses tobacco tax revenue. In fact, states should take advantage of this opportunity to increase tax revenue.**

- **The additional tax colledction should be either earmarked for social programs and health expenses or used to support the public health system and deter people from smoking.**

- **It is still advantageous for the Government to intensify the fight against cigarette smuggling nationwide in order to reduce smoking and rise tax colletion.**

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