

An Extended Cost-Benefit-Analysis of Tobacco Taxation in Brazil

Higher cigarette taxes reduce smoking and are more beneficial for poorer and younger Brazilians

Key messages

- A tobacco tax increase would reduce cigarette consumption and benefit the entire Brazilian population, above all, the poorer and the younger.
- A 10% price increase due to higher tobacco taxes reduces cigarette consumption by about 5%.
- Higher tobacco taxes lead to lower medical expenses on tobacco related diseases and a longer, healthier and more productive life.
- Tobacco tax increases is a very effective progressive policy as it benefits the poorer the most. For each 10% price increase (BRL 0.54), poor smokers lead to net income gains by about BRL 39.00 per month (in 2019 values).
- The illegal cigarette market in Brazil is very large and consumers of illicit cigarettes do not completely share the price increase and the associated benefits.
- Strong tax administration and enforcement to prevent illicit trade is key in reaping the socio-economic benefits of tobacco tax increases.

Introduction

About 150,000 Brazilians die from smoking related diseases every year. Smokers and their families also suffer from forgone income and worse living conditions. Medical costs from smoking amount to approximately BRL 38 billion per year. Progress has been made in recent years to reduce smoking prevalence, but more needs to be done to reduce tobacco consumption and improve Brazilians' quality of life.

This Policy Brief is based on research from Divino, et al. (2020), which finds that tobacco tax increases are highly effective to reduce cigarette consumption and improve quality of life for especially poorer and younger populations in Brazil. Moreover, the research finds that the government should also fight cigarette smuggling to guarantee the full benefit of tax increases for the entire society and public budget.

Tobacco tax increases and cigarette consumption

Cigarette prices in Brazil have continually increased over the last two decades and consequentially, the share of smoking adults has decreased from over 16 percent in 2006 to currently about 10 percent of the population. This relationship between cigarette taxes, prices, and consumption holds not only over time and across Brazilian regions, but also for developed as well as developing countries all over the world (Fuchs and Menezes, 2017).

The combination of existing federal and state taxes implies that retail cigarette prices differ among the 27 Brazilian states. The figure below illustrates that cigarette consumption is lower in states where taxes and cigarette prices are higher (Figure 1).

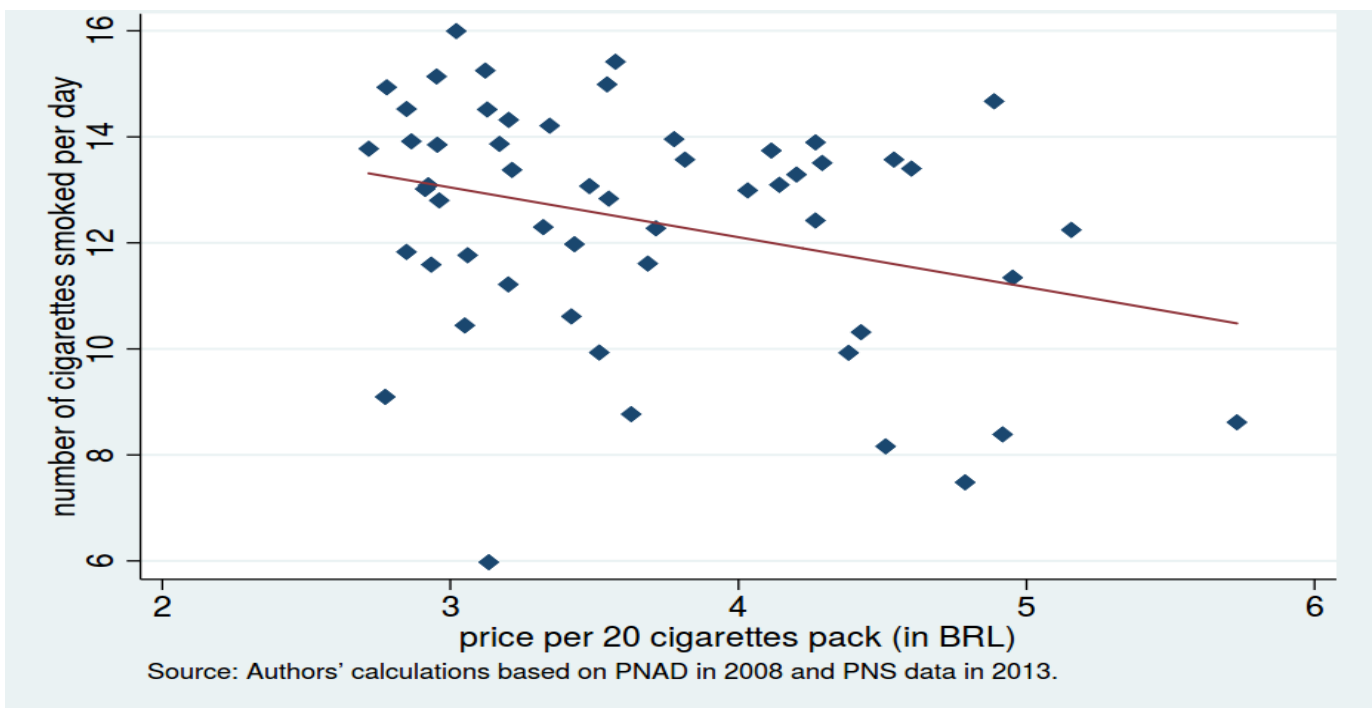
Although the effect of taxes on prices and consumption is intuitive and consistent, a new Catholic University of Brasilia research, based on data from the Brazilian Institute of Geography and Statistics (IBGE 2008 and 2013) and applying advanced econometric techniques, concludes that an increase in cigarette taxes that leads to higher cigarette prices, induces people to smoke less. This result applies to all income levels and age groups. Moreover, this smoking behavioral response is similar among males and females.

The estimations also show that, although higher taxes decrease cigarette sales, tax revenues increase.

Socio-economic benefits of tobacco tax increases

The UCB research team simulated a tax reform that raises final cigarette prices by BRL 0.54,

Figure 1: Price and consumption of cigarettes across the Brazilian States



“A tobacco tax increase would thus positively contribute to public finance, especially in a scenario of fiscal imbalance as currently faced by the Brazilian economy.”

equivalent to 10 percent of current cigarette prices of the most sold brand. Although the Brazilian tax structure is complex, the study concludes that the best way to implement a tax increase is through a raise in PIS/COFINS. By raising PIS/COFINS by about 5 percent on average, cigarette prices increase about 10 percent. PIS/COFINS is a federal tax that might be adjusted by the government and whose revenue is earmarked to social programs and social security expenses. These expenses specifically benefit the most vulnerable groups in society. Therefore, the tobacco tax reform would also reduce inequality in the country in addition to other social benefits.

The total benefits for the individual and for society go way beyond the public finance improvement.

Firstly, the higher price is almost compensated by the consumption reduction. Despite the 10 percent price increase, smokers effectively will spend only BRL 5 more on cigarettes per month on average. The 10 percent price increase not only induces smokers to consume fewer cigarettes, but also discourages initiation of smokers, while incentivizing others to quit smoking. In total, the estimates indicate that after the tax reform, there would be an income increase of about BRL 39 among the poorer half of smokers in the country. This income increase corresponds to 10 percent of monthly food expenditures in a common household.

Most importantly, former smokers will live longer and will be able to enjoy their enhanced income for a longer period. They will also suffer less from diseases and poor living conditions. Due to the lower chance of suffering from cancer and other tobacco related diseases, smokers, as well as the entire health system will benefit from the avoided medical expenses. Once these additional effects are taken into account, the final result is that smokers would even experience income gains of about 5 percent, on average.

Poorer individuals enjoy the largest gains. Brazilians with the lowest incomes would have BRL 39 more money at their disposal every month. A tobacco tax increase is thus highly progressive because its positive effects are stronger for poorer populations. Therefore, it can be concluded that higher cigarette prices are more beneficial for the most vulnerable groups in society rather than against them, as is sometimes put forward by those who oppose cigarette taxes. People below the age of 30 also benefit more from the proposed tax reform than any other age group. Tax raises thus clearly benefit the future of Brazil.

Strengthened tax administration and enforcement efforts

A particular problem in Brazil is that illegal cigarette sales account for a significant fraction of the entire market.ⁱ Despite some efforts to contain illegal production and smuggling, Brazil is still among the countries with the largest share of the illicit cigarette market. The calculated effects of the proposed tax reform refer to the entire cigarette market in Brazil. Yet our results also indicate that the smoking behavior and sensitivity to price increases differ according to whether an individual obtains cigarettes from the formal or informal market.

In response to increases in cigarette prices in the legal market, illegal cigarette prices could also increase, however, there will be no effect on tax collection for the government because sellers do not pay taxes in the illegal market. Illegally sold cigarettes, by definition, do not pay taxes and thus the proposed tax reform might not affect their prices, as is the case in the legal market. Consequentially, those who buy illegally will not adjust their consumption and cannot benefit in the same way from lower medical expenses and more years of productive life. It thus becomes obvious that any step towards a reduction of the illegal cigarette market automatically leads to positive effects for the health system, public budget, and the entire society.

Recommendations

- **A tobacco tax increase is needed to further reduce consumption and would benefit the entire Brazilian population, above all, the poorer and the younger.**
- **The government should continue to act against cigarette smuggling to guarantee full gains of the tax reform to the society.**
- **The government should increase tobacco taxes and fight cigarette smuggling concomitantly in order to protect public health by reducing tobacco use and preserve the public budget by avoiding tobacco-related medical expenses and lost productivity.**

References

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¹ The attempts to measure the illicit cigarette market in Brazil show different estimations, ranging from 31.5 to 45 percent, as illustrated in Table 9 of Ribeiro and Pinto (2019).