

Policy Note August 2020

Cigarette Tax Policy in Brazil

Recent trends, current challenges, and ways forward

Key Messages



Tobacco tax increases are effective even in the presence of illicit trade, as evidenced by the experience of Brazil during the years 2011–2014.

- The 2011 excise tax reform of the Imposto sobre Produtos Industrializados (IPI-Cigarro) helped reduce smoking prevalence and increase revenue collection.
- The expected revenue effect of the tobacco tax reform was achieved, despite increases in smuggling between 2008 and 2014.



Since 2014, progress has come to a standstill.

- Cigarette minimum prices and specific excise tax rates have not been adjusted in recent years, resulting in real minimum price reductions.
- The cigarette market composition has shifted down toward the cheapest cigarette segment, which has allowed smokers to continue smoking instead of quitting and has also led to higher youth experimentation and initiation.



Revenue collection from the IPI should have been higher than actual observed revenues, particularly in recent years.

- Collected revenues amount to less than the tax per pack at the minimum price multiplied by registered production quantity. This discrepancy cannot be explained by accumulation of stocks by factories, switching-down behavior, illicit trade, or the economic crisis.
- There have been no official explanations for why IPI revenues and the implicit average price from official revenue figures are so low. The lack of clarification about the eventual existence of an unexplained proportion of IPI cigarette revenues not being collected creates a reliability problem for tax authorities.
- Furthermore, if some of those cigarettes recorded in the volume and track and trace system (SCORPIOS) are being sold at lower prices or at prices lower than minimum legal price, while producing firms are not paying their taxes and accumulating tax debts, the country also faces a public health problem.



To gain back the momentum of the 2011–2014 tobacco tax policy success, Brazil should continue increasing tax rates and minimum prices. At the same time, tobacco tax administration should be strengthened to increase domestic tax compliance and reduce smuggling flows.

- Tobacco specific excise tax rates and minimum prices must increase by more than inflation and income growth to reduce cigarette affordability.
- International cooperation with Paraguay under the WHO Framework Convention on Tobacco Control and the Protocol to Eliminate Illicit Trade in Tobacco Products will strengthen tobacco tax administration, increase domestic tax compliance, and reduce illicit trade.

Introduction

Over the last thirty years, Brazil implemented effective policies to reduce tobacco consumption, making the country one of the world leaders in cigarette smoking prevalence reduction: from 33.35 percent at the end of the 1980s to 14.5 percent according to the Global Adult Tobacco Survey (2013).

However, recent evidence suggests that consumption has spilled over to illicit products. The share of illicit cigarettes in total cigarette consumption in Brazil increased from 16.6 percent in 2008 to 31.1 percent in 2013¹. Since 2013, the share has fluctuated: 28.6 percent (2012), 28.8 percent (2014), 42.8 percent (2016²), and more recently, 31.4 percent (2018³).

Tax increases and other tobacco control measures have been very effective in reducing smoking prevalence, despite a significant illicit trade problem. However, real cigarette revenue collection from IPI and other taxes reversed their trend after 2014.

Both the evidence of a significant illicit trade problem and the decrease in real cigarette revenue collection from 2014 levels seem to be the main factors delaying the implementation of new cigarette tax increases in Brazil. This Policy Note aims to contribute to the tobacco tax debate in Brazil by presenting a diagnosis of the main concerns regarding fiscal policies for cigarettes.

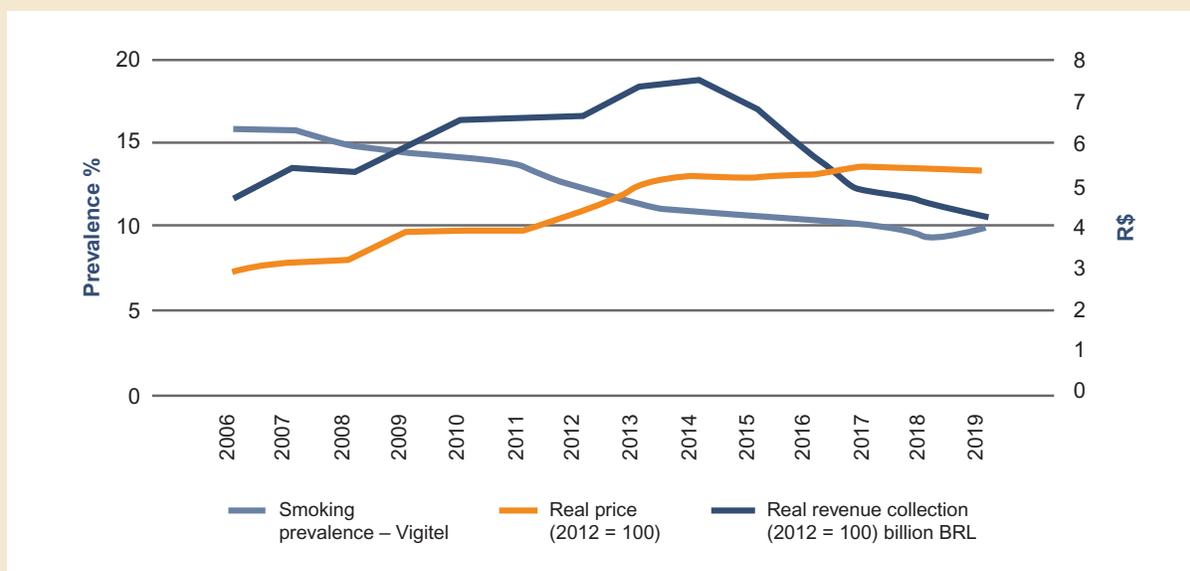
Overall Performance of the 2011 Reform

Since 2009, and particularly after the 2011 reform of the structure and rates of IPI-Cigarro⁴, Brazil implemented rate increases that effectively increased cigarette prices and reduced consumption. Tobacco tax rates that effectively increase prices create incentives for smokers to quit, reduce overall consumption of tobacco, and prevent potential smokers from initiating (Figure 1).

However, after increasing 25 percent between 2009 and 2014, real tax revenues decreased 43 percent between 2014 and 2019 at a faster rate than the decline in prevalence. This drop means

Figure 1

Adult Smoking Prevalence, Price, and Revenue Collection, Inflation Adjusted



Sources and Note: Vigitel Brasil 2018 – Surveillance of risk factors and protection for chronic diseases by telephone survey: Estimates of frequency and socio-demographic distribution of risk factors and protection for chronic diseases in the capitals of 26 Brazilian states and the Federal District in 2018 | Ministry of Health 2019. Revenue collection, price data, and Consumer Price Index based on Receita and Brazilian Institute of Geography and Statistics (IBGE).

that Brazil collects less tobacco tax revenues now than in 2009, when it started increasing tax rates. The small recovery in revenue collection between 2018 and 2019 meant only relative stabilization in nominal terms but a drop in real terms. Thus, the decrease in revenue collection may be the result of the combination of rising illicit trade and tax evasion (2014-2016), the economic crisis (2015-2017), declining smoking prevalence, and lack of inflationary adjustment of specific excise tax rates (2017-onwards).

Tax Policy Freezing and Consumer Pricing Behavior

Since 2016⁵, Brazil has not increased specific excise tax rates and minimum cigarette prices. As a result, cigarette prices have only increased as part of tobacco industry price strategy (which is below inflation rates). Consequently, despite cigarette price increases in nominal terms, the real price of the average cigarette pack measured by the Brazilian Institute of Geography and Statistics (IBGE) fell

from R\$ 5.52 in May 2016 to R\$ 5.22 in December 2019 (January 2012 values) (see Figure 2).

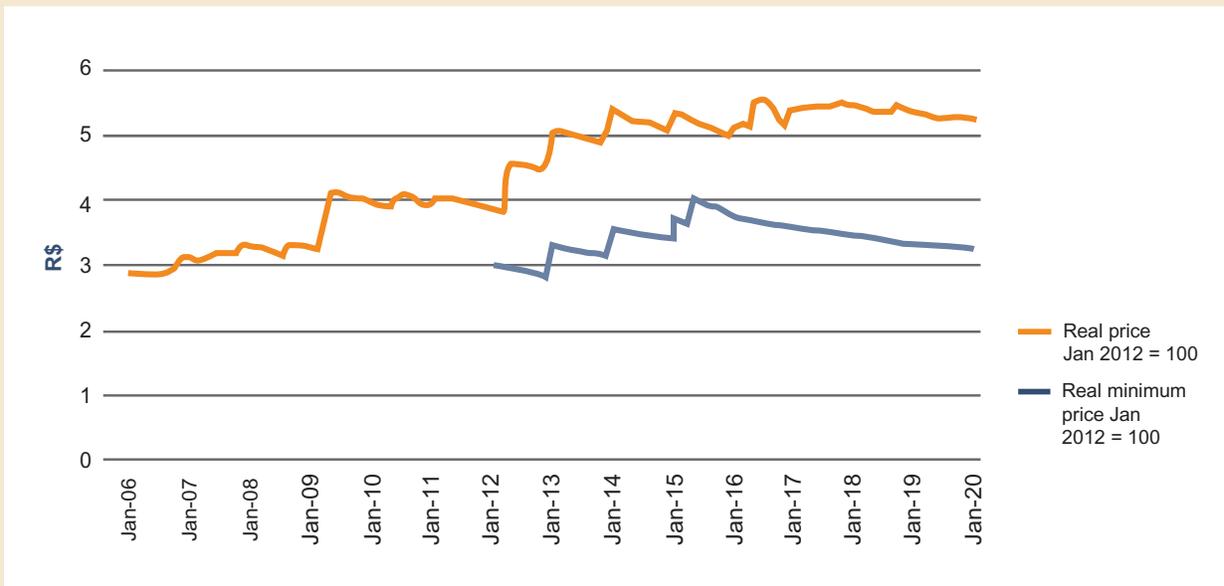
At the same time, the minimum price of cigarettes decreased in real terms by 12 percent between the same months, falling from R\$ 3.66 in May 2016 to R\$ 3.22 in December 2019 (January 2012 values). This has created opportunities for cheaper brands targeted to vulnerable populations and has reduced the effectiveness of the IPI-Cigarro.

The World Health Organization (WHO) emphasizes that tobacco tax policies must ensure a reduction in the affordability of tobacco products to protect public health effectively⁶. The 2011 tax reform⁷ produced a clear reduction in cigarette affordability, but this seems to have changed after May 2016. Since that month, affordability has remained quite stable, as an average monthly wage can buy around 250 packs of cigarettes per month.

The purchasing power for representative brands of cigarettes has been stable since 2016, despite the depressing effects of the Brazilian economic crisis.

Figure 2

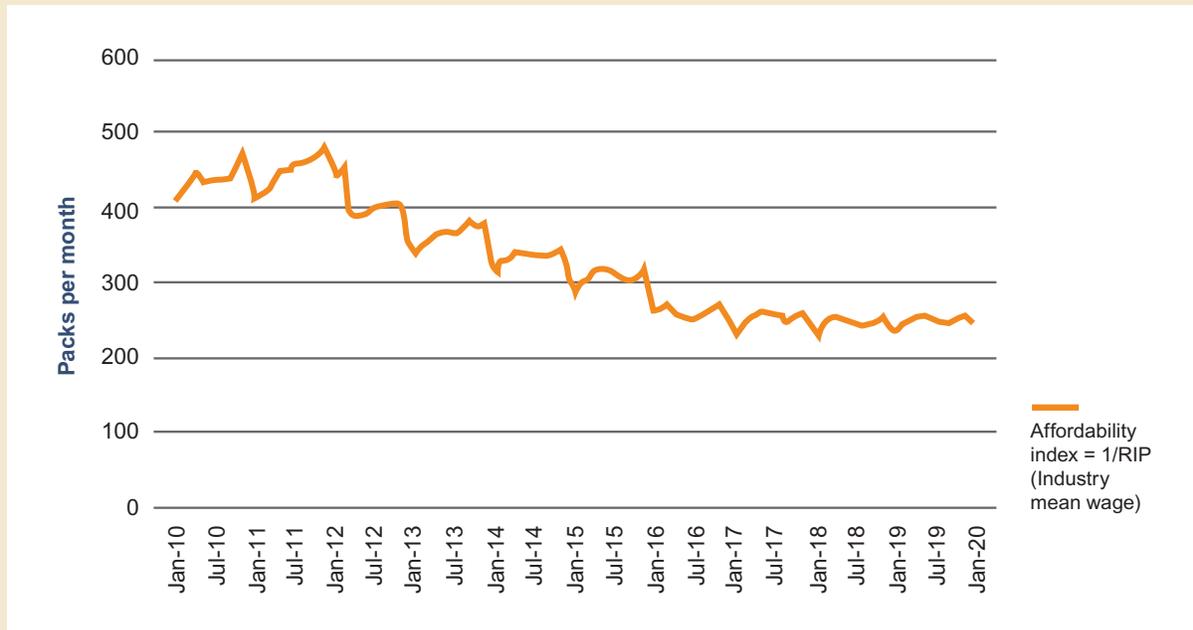
Real Price and Minimum Cigarette Price



Sources and Note: Nominal cigarette price (R\$ per pack): IBGE data. This price represents the average value per pack for the group of five types of cigarettes that the IBGE uses to calculate the consumer price index. The monthly variation rates were applied to the average value for September 1999 to obtain annual and monthly prices. Based on *A economia do controle do tabaco nos países do Mercosul e associados: Brasil* / *The economics of tobacco control in countries of Mercosur and associates: Brazil* (Iglesias, Roberto; Nicolau, Júlia).

Figure 3

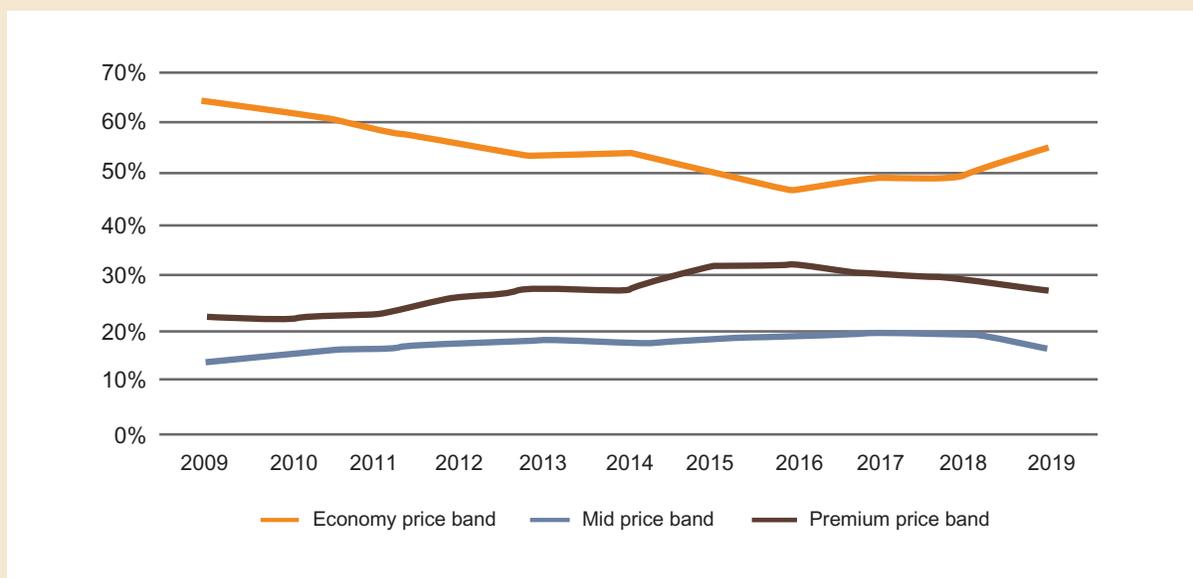
Affordability Index = Number of Packs an Average Wage Can Buy in a Month



Sources and Note: Relative income price (RIP) = price of a pack of cigarettes / average wage. Affordability index = 1/RIP. Nominal cigarette price (R\$ per pack): IBGE data Average wage = Mean Wage obtained from CAGED - Anuario RAIS.

Figure 4

Price-Segment Share in Total Sales, Brazil 2009–2019



Source: Euromonitor

The decline in market share for economy brands and growth of premium brands was a steady trend in Brazil even before the reform. Since 2009, the market share of economy brands has declined while premium brand market share increased.

However, after 2016, there was a change in the market share trend. The cigarette market composition has shifted downward to the cheapest cigarette segment (Figure 4), allowing smokers to continue smoking instead of quitting and leading to higher youth experimentation and initiation.

Following a large tax reform, it is normal to observe switching-down behavior. However in the case of Brazil after 2016, switching down was further encouraged by the lack of adjustment of specific rates and minimum prices for inflation and income growth.

The current tax and minimum price policy stance is threatening the tobacco control progress made so far in Brazil. Besides maintaining current smokers and slowing the speed of smoking prevalence reduction, evidence shows youth experimentation

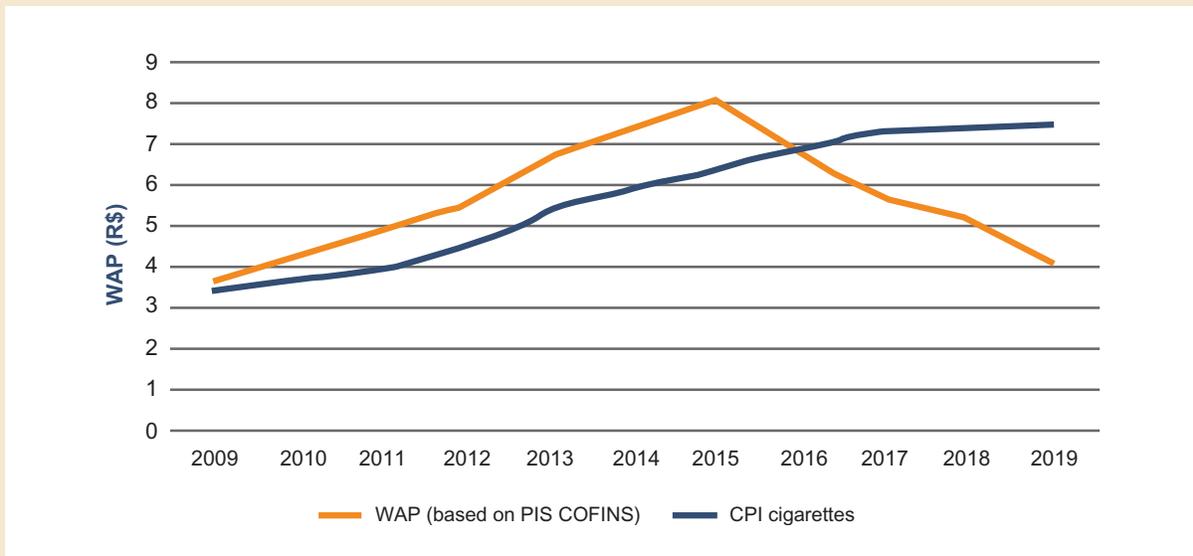
and experimentation has also increased in recent years. About 23 percent of Brazilian adolescents between 13 and 17 years old still experiment with cigarettes⁸. Experimenting leads to consumption, and recent surveys show an increase in young smokers (5.7 percent in 2013 vs. 6.6 percent in 2015)⁶. At the same time, the proportion of young adult (18 to 24) smokers increased from 7.2 percent in 2015 to 8.5 percent in 2017⁹.

Tobacco Industry Pricing Strategy and Tobacco Revenue Collection

Between 2009 and 2015, the market share of economy brands declined while the market share of premium and middle price brands grew. At the same time, the tobacco industry increased average prices (measured via the PIS-COFINS¹⁰) more than the IBGE cigarette price basket (Consumer Price Index (CPI) trend for cigarettes) (Figure 5). Consequently, tax revenue increased as shown in Figure 1. However, it appears that the market value went down after 2015.

Figure 5

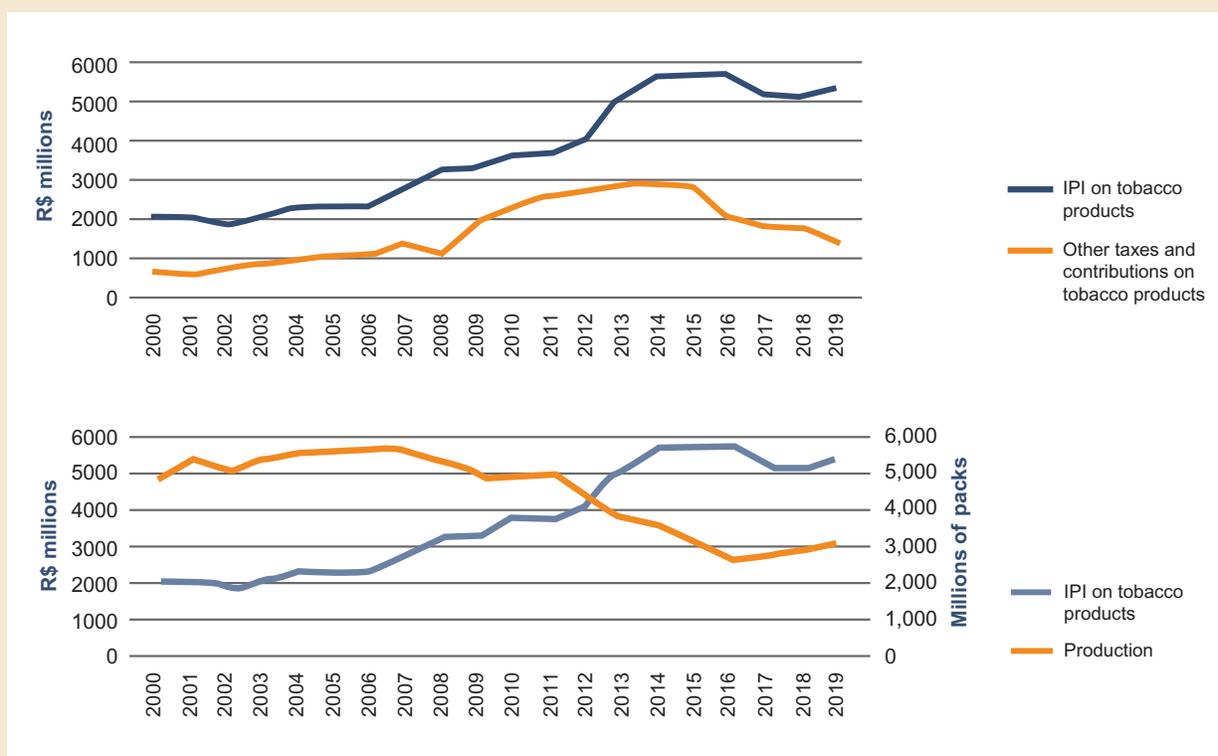
Cigarette Weighted Average Price (WAP) and average price from CPI index



Sources and Note: Nominal cigarette price (R\$ per pack): IBGE data. This price represents the average value per pack for the group of five types of cigarettes that the IBGE uses to calculate the consumer price index. The monthly variation rates were applied to the average value for September 1999 to obtain annual and monthly prices. Based on *A economia do controle do tabaco nos países do Mercosul e associados: Brasil / The economics of tobacco control in countries of Mercosur and associates: Brazil* (Iglesias, Roberto; Nicolau, Júlia.). WAP obtained using reverse engineering combining fiscal rules data, PIS COFINS revenue collection data and legal production reported by Receita.

Figure 6

Revenue Collection and Cigarette Production



Source: Receita Federal.

Thus, the tax increase implemented in Brazil after 2011 did not lead to increased demand for cheaper cigarettes. Before 2015, the weighted average price was higher than the CPI for cigarettes, which is in line with market share data presented in Figure 4. After 2015, the trend seems to change as a result of a pricing strategy in the context of an economic crisis. This pricing strategy may have reduced government revenues.

As tobacco companies focused their market strategy on cheaper brands sales, ad valorem taxes presented a relative reduction vis-à-vis revenues based on specific component taxes. For example, comparing the revenue collection trend of the IPI mixed structure to other taxes like a pure ad valorem tax, there is an increasing gap between both sources of revenue. As the PIS-COFINS tax structure is only based on the cigarette value, revenue collection follows the same trend as cigarette value. On the other hand, as the IPI is based on a specific and ad valorem structure, the

decrease in cigarette value seems to be partially offset by increases in sales (Figure 6).

IPI Revenue Collection and IPI Tax Credit

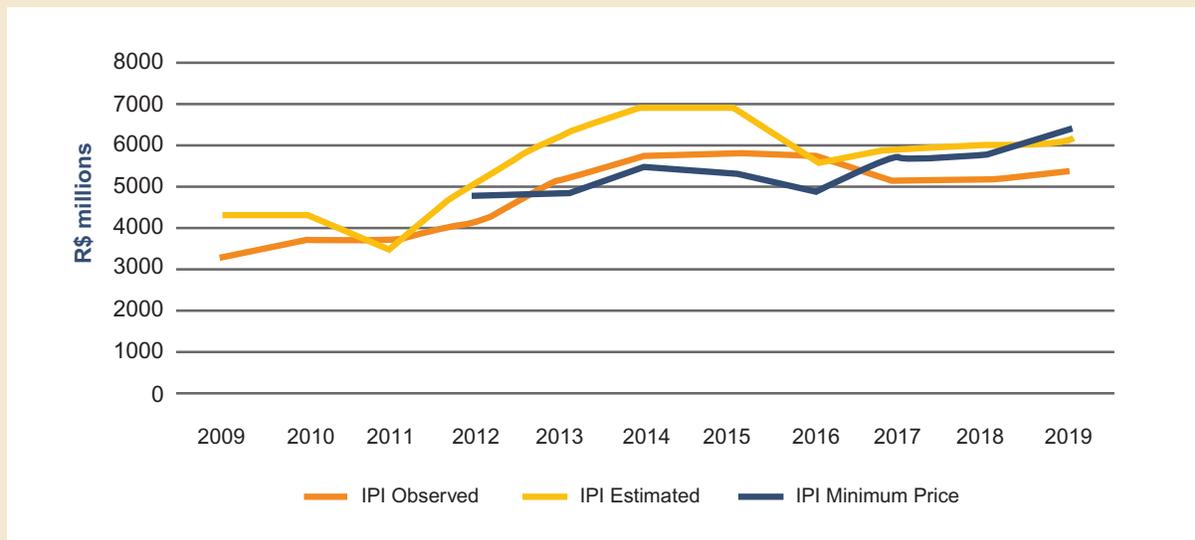
Cigarette IPI revenue collection presents some other issues requiring further inquiry. The revenue per pack has decreased abnormally due to unclear reasons. From official information it is difficult to explain or understand the current revenue trends.

Simply dividing the total IPI revenue collection over total production reveals this inexplicable result. The IPI revenue collection per pack was BRL 1.83, 1.80, and 1.74 in 2017, 2018, and 2019 respectively. However, if all the packs are sold at the minimum legal price, the IPI collected per pack must be BRL 2.00.

Using the average implicit price (obtained from PIS-COFINS revenue collection), the estimated cigarette IPI revenue collection should have been

Figure 7

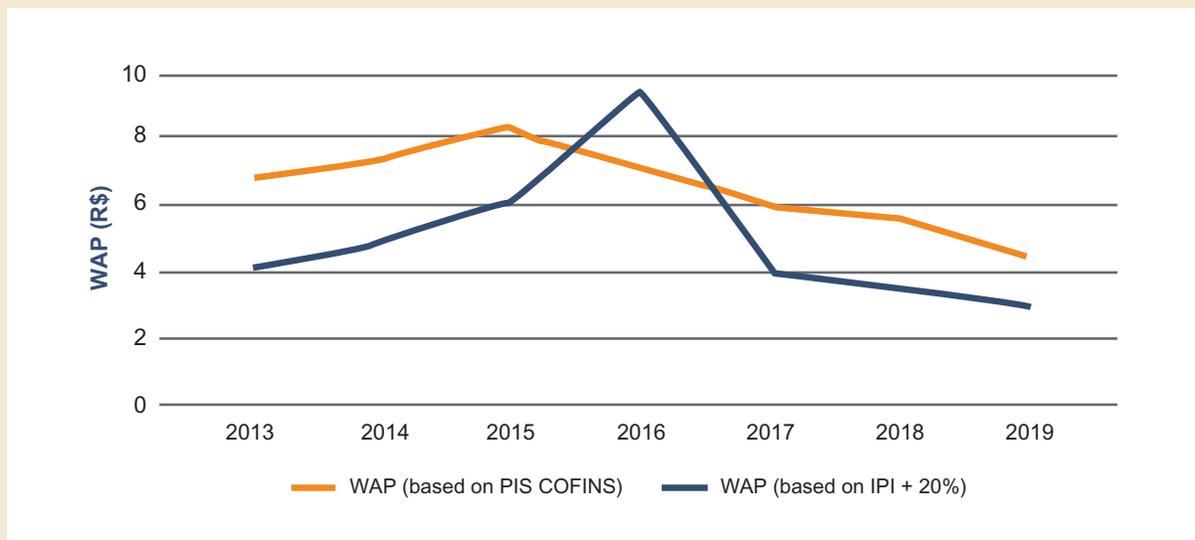
IPI Estimated vs. IPI Observed



Sources and Note: Receita Federal and author's own estimations. IPI estimated using PIS-COFINS tax rates to rebuild the WAP. Minimum price estimated using Receita data and regulation.

Figure 8

Cigarette Prices: Estimation of the Cigarettes Weighted Average Price (WAP)



Sources: Receita and author's own estimations.

larger than the observed one (Figure 7). There appears to be a 20 percent discrepancy between observed and estimated tax revenue collection (using the average implicit price from PIS COFINS revenue collection).

Figure 7 also shows that even assuming all registered cigarettes are being sold at the minimum price - that is, calculating the tax amount per pack at the minimum price and then multiplying that by the registered legal production - tax revenue amounts should be higher than observed revenues, especially between 2017 and 2019. Part of this could be explained by the IPI credit/debit system. The tobacco industry can subtract from its cigarette IPI obligations tax already paid in the purchasing of inputs on which IPI is also levied, mainly processed tobacco.

Even assuming that the 20 percent discrepancy can be fully explained by the IPI credit system, the observed revenue collection and implicit cigarette prices resulting from this collection are noticeably low. The paradox is confirmed when comparing the average implicit price (the estimated weighted average price, or WAP) obtained using IPI and PIS-COFINS, both estimations should follow similar trends (Figure 8). Market prices, obtained as weighted average prices from PIS-COFINS collection, are significantly higher than the estimated IPI +20 percent implicit price, which means that collection is below potential, and other factors besides the tax credit system are affecting tax revenues.

In other words, the discrepancy observed in Figure 7 between the observed collection and the one at the minimum price or at implicit prices given by the PIS COFINS collection reveals a situation in which potential revenues are not being collected. This under collection is not related to smuggling as only official data is used. Therefore, a better understanding of this issue is needed in order to effectively implement fiscal policies for tobacco products and increase controls along the tobacco supply chain.

Tax Evasion and Illicit Inflows into Brazil

The illicit market share declined from 2017 to 2018⁸. The decline in the consumption of illegal cigarettes in Brazil was followed by an increase in the consumption of legal cigarettes. At the same time,

there was an increase in the total volume of illegal cigarettes seized along the country's land borders and highways by the Brazilian authority in charge of fiscal and law enforcement. Illegal cigarettes prices have increased in the past years (VIGITEL, 2019) and smokers who have switched to cheaper illegal cigarettes may now be quitting smoking or reducing consumption¹¹. For all those reasons, the risk of increasing illicit trade flows is low.

However, more can be done to further disincentivize illicit flows into Brazil. As the Working Group on Tobacco Tax Reduction¹² recommended, by increasing controls and law enforcement mechanisms, Brazil will increase the costs of illicit trade. This will also reduce illicit and undeclared production in Brazil as well as tax avoidance and evasion. Revenues from increasing tobacco taxes can fund these strategies of control and monitoring.

Policy Recommendations

Effective actions can be implemented for increasing tax revenue and reducing smoking prevalence. Regular increases of cigarette taxes and minimum prices are necessary to achieve health and fiscal policy objectives.

At the same time, illicit trade should be addressed through stronger tax enforcement to stop tax evasion by national companies.

Finally, domestic tax avoidance and evasion plus illicit inflows should be addressed in the following ways:

First, the policy of authorizing new brands at minimum prices from companies without solvency nor willingness to pay taxes should be reviewed.

Second, a meaningful dialogue with neighboring country authorities about illicit cigarette flows is needed. Coordination in taxes is a must as well as enforcement of excise taxation and health graphic warnings. Bilateral discussions and activities under the Mercosur agreement should be encouraged. The WHO Framework Convention on Tobacco Control and the Protocol to Eliminate Illicit Trade in Tobacco Products provide a framework for discussion and agreement.

Finally, a discussion of the impacts of specific excise tax rate and minimum price adjustments should be initiated.

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