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Tobacco Taxes in Latin America

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BRAZIL

ACCELERATING EFFECTIVE TOBACCO TAXES IN BRAZIL: TRENDS AND PERSPECTIVES

This Policy Brief was developed by the South American Network on Applied Economics/Red Sur and presents the main findings and policy recommendations resulting from the background study for Brazil, developed by Fundação Centro de Estudos do Comércio Exterior (FUNCEX / Red Sur), within the UIC-Red Sur project "Tobacco taxes in Latin America", as part of the global project coordinated by The University of Illinois at Chicago's (UIC) Institute for Health Research and Policy and supported by the Bloomberg Initiative To Reduce Tobacco Use.

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tobacconomics
Economic Research Informing Tobacco Control Policy

INTRODUCTION

Over the last thirty years, several policies have been implemented in Brazil to reduce tobacco consumption, making the country one of the world leaders in prevalence reduction: from around 35% at the end of the 1980s to a bit above 10% in 2016 according to Portes et al. (2018) and Brazil (2017). At the same time, recent evidence suggests that consumption has spilled-over to illicit products in a trend that has accelerated dramatically ever since the beginning of this decade to levels close to 45% of total consumption in 2016 (Szklo et al., 2017).

Tax increases and other tobacco control measures have been very effective in reducing prevalence, despite a significant illicit trade problem. However, tax revenues have been decreasing at a faster rate than the decline in prevalence. Thus, the decrease in revenue collection may be the result of the combination of rising illicit trade and declining smoking prevalence.

Both, the evidence of a significant illicit trade problem and the decrease in cigarette revenue collection seem to be two of the main factors delaying the implementation of new tax increases in Brazil. This Policy Brief aims to contribute to the tobacco debate in Brazil, showing how tobacco tax increases have reduced tobacco use in Brazil.

This policy brief presents evidence on the illicit cigarette market by analyzing the tobacco production chain. This policy brief updates price and income demand elasticities using new control variables and econometric techniques. Finally, the brief concludes with policy recommendations.

TOBACCO USE IN BRAZIL

According to the Pan American Health Organization (PAHO, 2018), the prevalence rate in Brazil by sex is 18.9% among males and 11.0% among females, with a ratio of 1.72 men smokers for each woman smoker. At the global level, this ratio is 5.8 males for every female. As usually observed worldwide, smokers in Brazil tend to concentrate in poorer sectors of society, with lower educational levels. According to statistical WHO information[1], 46% of health spending is financed with public funds from direct public provision or contributory social insurance schemes. Therefore, tobacco consumption has a significant impact on Brazil's fiscal dimension where healthcare expenditure attributable to tobacco use is 8%.[2]

TAX STRUCTURE OF TOBACCO IN BRAZIL

The first part of a comprehensive analysis of anti-tobacco policies in Brazil is to fully understand its tax structure.[3] Since the Law 12546/2011, tax increases came alongside minimum prices for cigarettes.[4] Tobacco taxes in Brazil are assessed both at the federal and state level, and the tax burden is constituted by five different taxes.

On the federal level, there are four taxes: (i) Industrialized Products Tax (*Imposto sobre produtos industrializados*, IPI); (ii) Tax for Social Integration program financing (*Programa de Integração Social*, PIS); (iii) Tax for Social Security financing (*Contribuição para o Financiamento da Seguridade Social*, COFINS); and (iv) Import duty (*Imposto sobre Importações*, II). The only subnational tax is the Merchandise and Service Circulation Tax (Imposto sobre comercialização de mercadoria e serviços, ICMS), which has different burdens depending on the State. Therefore, the total tax burden on tobacco products varies across the country and, on its upper bound, represents up to 78% of the final retail price.[5]

1> See **http://apps.who.int/nha/database/ViewData/Indicators/es**
2> Instituto de Efectividad Clínica y Sanitaria - IECS: **https://www.iecs.org.ar/tabaquismo-en-brasil/#tab-1-3**
3> Further references at the background paper "Activity 1: Research Plan and Description of anti-tobacco taxes in Brazil".
4> According to Secretariat of Federal Revenue of Brazil (*Secretaria da Receita Federal do Brasil*, SRFB) this price should be sufficiently elevated in order to accommodate all the cost (production and commercialization), taxes and a minimum profit margin of legal producers, therefore inhibiting tax evasion, predatory competition and warranting the minimum needed to finance public health expenses.
5> Considering that cigarettes are sold at the minimum price.

The current tax regime was implemented in December 2011, again with periodic progressive adjustments. In terms of the taxation method, the incidence of IPI is now divided in two rules, the general one and the special one, and taxpayers are allowed to choose between them. The general rule is an ad valorem rate with an effective tax rate higher than those observed until the end of the 1990s. The tax rate is set at 300% with the calculation basis being 15% of the selling price; therefore, the effective tax rate is 45%. The special rule (which is optional) is composed by the sum of two installments, one ad valorem rate (with the same calculation basis observed in the general rule) and a specific tax charged differently on packs and boxes. Both rates have been progressively increased since 2011, reducing cigarettes affordability. Reduction in cigarette affordability is one of the key factors contributing to the decrease in tobacco use in Brazil.

RESEARCH FINDINGS

Tax increases and other measures have been effective in reducing prevalence. Legal cigarette production has been trending downwards in Brazil, in line with falling survey-based prevalence and consumption figures. However, legal sales and tobacco tax revenues have been decreasing at a faster rate. Part of this decrease may be the result of a significant illicit trade problem.

There are no official data on the size of the illicit trade market in Brazil, and estimates vary wildly due to different methodologies or covert interests (for example, tobacco industry estimates apparently over-report the size of the illicit market).

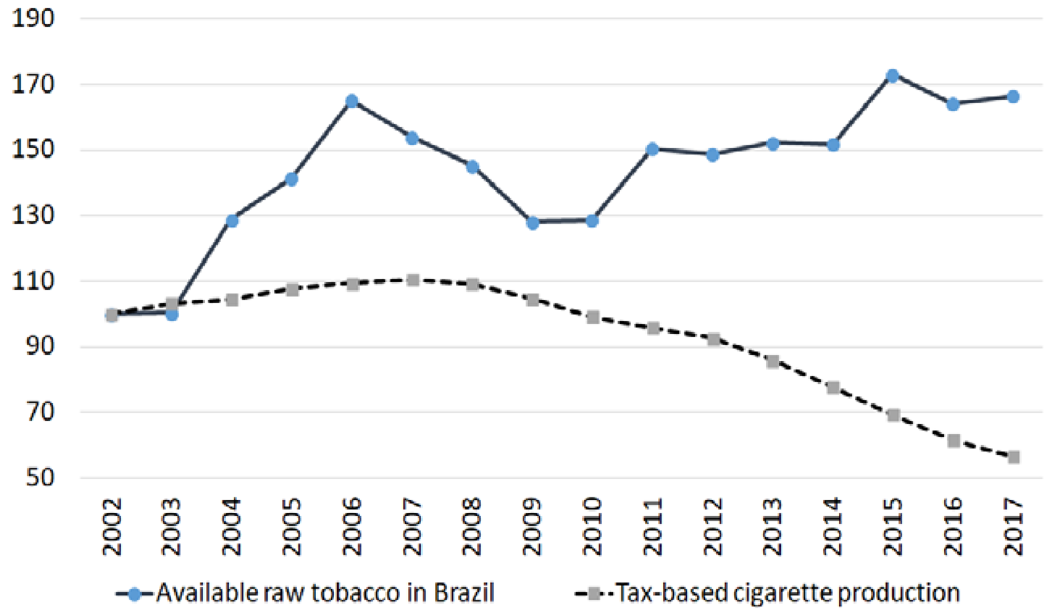
Another aspect of the Brazilian illicit tobacco market is the importance of Paraguay as a supplier of counterfeit tobacco products. This fact has been pointed out notably, by Ramos (2009), who stated that about 90% of potential Paraguayan illicit supply is absorbed by Brazil - trade diversion that includes legal Paraguayan production, illegal Paraguayan production and fakes of Brazilian brands produced both in Paraguay or elsewhere.

Data and anecdotal evidence also suggest a decisive role of Paraguay in the Brazilian tobacco shadow market. Even more interesting, Brazil is a paramount supplier of inputs for Paraguayan production of cigarettes, such as raw tobacco (unmanufactured), specific types of paper and materials for filters.

International trade data shows that Brazil has had a significant market share of Paraguayan imports of cigarette-related inputs, foremost unmanufactured tobacco and tobacco refuse – albeit decreasing more recently, yet above the 35% level in 2017. Moreover, the volumes of inputs imported by Paraguay are in excess of their potential legal demand (domestic consumption and accounted exports), suggesting an oversupply that means unrealistic inventories or, much more likely, production (illicitly) diverted elsewhere.

The research highlights significant difficulties when applying the technical requirements approach to evaluate potential production of cigarettes. Specifically for the Brazilian case, data shortcomings are widespread, including a lack of consistency from different data sources, difficulties in estimating consumption and methodological limitations in estimating the technical coefficients of transformation from inputs (tobacco, cellulose acetate tow filters, paper) to manufactured product (cigarettes). In particular there is big inconsistency between official data and legal sales and available tobacco in Brazil (tobacco production + imports – exports). Available raw tobacco in the country should decline similarly to legal cigarette sales, supposing rational farmers/merchants/manufacturers – for lower final usage, and less domestically available supply. To the contrary, Figure 1 shows precisely the opposite: these two links of the Brazilian cigarette production chain are at odds.

Figure 1. **Input vs. output trends in Brazil (av. 3Y, 2012=100)**



Source: IBGE (LSPA), COMTRADE, SISCOMEX (MDIC) and SRFB

There is a discrepancy between domestically available raw tobacco (input) and tax-based cigarette production (output) in Brazil. This trend has become more apparent over the last decade, with increasing available inputs and decreasing final outputs. Without running any technical requirement simulations, these numbers show an excessive amount of inputs given final taxable sales.

This trend could be explained as a problem with official estimations on tobacco leaf production, imports, exports or cigarette production. Any of these problems with the data potentially undermine the tobacco control and revenue control mechanisms. Alternatively, this trend could be indicative of evasion in the cigarette value chain in Brazil, including legal cigarette production in Brazil and legal production import and/or export of tobacco leaf. In this case, it could be related to evasion on the production of legal cigarettes or undeclared exports of unmanufactured tobacco (for example to Paraguay, fueling Paraguayan cigarette production). In this case, it could also be that this trend supports the evidence on illicit trade presented by Biz (2010) and Iglesias et al. (2012). The growing difference between these two series is also soft evidence of the increasing share of illicit cigarettes in Brazil - in a very indirect way, also could confirm the broad trends shown by Iglesias et al. (2017) and Szklo et al. (2018).

At the same time, in line with international evidence and previous research, the estimation of price and income elasticities show that even considering the illicit trade problem, tax increases that effectively increase final prices reduce tobacco consumption. The inelastic nature of demand for tobacco products suggests that further price increases will have a less than proportional effect on volumes, therefore relatively increasing tobacco-related tax revenues (especially specific taxes). Nonetheless, simulations in this research (short sample) suggest that taxed cigarette consumption should have been approximately 10 billon stick/per year higher over the last three years (from 2016 to 2018, the latter annualized). This gap potentially relates to tax evasion by domestic producers, further denting official efforts: Brazil is underachieving when it comes to revenues that could be generated by tobacco taxes. Further steps are necessary in order to contain consumption spillover to illicit cigarettes and to curb tax evasion.

POLICY RECOMMENDATIONS

Tobacco tax increases are the most effective and cost-effective tool to reduce tobacco consumption. A better control on illicit trade and evasion will enhance the effectiveness of tax increases in terms of health and revenue collection. Coordination between the government, independent researchers and civil society actors is key to enhance market knowledge, focus tobacco control policies and strengthen government interventions to curb the tobacco epidemic in Brazil. The main policy recommendations are outlined below:

- **Improve potential cigarette production estimates in Brazil**: Cross check the Brazilian Institute of Geography and Statistics (IBGE) surveys in order to confirm raw tobacco production figures and create ways to evaluate potential production by other inputs than tobacco leaf.

- **Focus on the cellulose acetate tow and the raw tobacco supply in Brazil**: Create a track and tracing mechanism for cigarette inputs, including acetate tow and raw tobacco production, imports and sales, expanding SRFB SCORPIOS system. Acetate tow is particularly interesting because just a handful of companies dominate its global supply.

- **Impose a Tobin-tax on cigarette inputs**: A small tax rate levied in every step of the production chain would help tracing the tobacco flow from farmers to final products.

- **Increase surveillance on the Paraguayan border**: Besides focusing on illicit cigarette flows from Paraguay to Brazil, Federal Police operations should also focus on illicit raw tobacco flows from Brazil to Paraguay.

- **Enhance the understanding of the Paraguay/Brazil cigarette production chain**: Trace the actors involved, scope bilateral flows of inputs and outputs and confirm potential changes on Brazilian illicit production structure with the emergence of actors specialized in "fakes" of best-selling brands that run their production-chains almost entirely "in the shadows".

- **Strengthen law enforcement on illicit activities:** Not only focusing on illicit trade but focusing on tax evasion.

- **Continue to increase real cigarette prices through increases in taxes and minimum prices:** The government should also consider alternative strategies to reduce stockpiling and other tactics to anticipated tax increases implemented by actors involved in production-retail-consumption.

- **Create retail control mechanisms on top of enhancing production control mechanisms:** An example would be to demand personal identification when buying cigarettes, as done with restricted drugs such as antibiotics. SCORPIOS system should be amplified to cigarette inputs such as acetate tow and cigarette-related papers.

Strengthening cigarette tax administration will enhance the effectiveness of future price increases, both in terms of their effect on reducing smoking prevalence and in recouping revenues lost to illicit trade.

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Within this global initiative, Red Sur led the regional research "Tobacco taxes in Latin America", which mobilized seven research centers to study the different options for tobacco tax policies in Argentina, Brazil, Ecuador, Mexico and Peru.

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No.	Country Study title	Research Team	Center/Country
1	Accelerating effective tobacco taxes in Argentina: **The impact of tax reforms**	Martín González-Rozada and Julio Berlinski	Instituto Torcuato Di Tella (ITDT/Red Sur) **Argentina**
2	Accelerating effective tobacco taxes in Argentina: **Fiscal and productive aspects**	Ricardo Rozemberg, Gabriel Bezchinsky and Ariel Melamud	Centro iDeAS, Universidad Nacional de San Martín (UNSAM) **Argentina**
3	Accelerating effective tobacco taxes in Brazil: **Trends and perspectives**	Livio Ribeiro and Vilma Pinto	Fundação Centro de Estudos do Comércio Exterior (FUNCEX/Red Sur) **Brazil**
4	Accelerating effective tobacco taxes in Peru: **Towards sustainable policies**	Carlos De los Ríos, Hugo Córdova and Marco Ugarte	Instituto de Estudios Peruanos (IEP) **Peru**
5	Accelerating effective tobacco taxes in Ecuador: **The impact of tax policy**	Pedro Páez, Paola Minda, María Dolores Almeida, Ximena Amoroso and Sebastián Burgos	Pontificia Universidad Católica del Ecuador (PUCE) **Ecuador**
6	Accelerating effective tobacco taxes in Mexico: **Tax policy and health costs**	Claudia Córdova, Rodrigo Bolaños, Dalia Toledo, Alejandro Alegría and Liliana Alvarado	Laboratorio de Políticas Públicas (ETHOS) **Mexico**
7	Accelerating effective tobacco taxes in Mexico: **Special taxes, consumption, inequality and poverty**	Luis Huesca, Linda Llamas, Cuauhtémoc Calderón and Abdelkrim Araar	Centro de Investigación en Alimentación y Desarrollo (CIAD) **Mexico**

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