

THE ECONOMIC LOGIC OF SMUGGLING



This new study presented by IDESF is part of a sequence of studies that aim at understanding how smuggling crimes are structured and what makes them so prominent in the bordering areas of Brazil.

This analysis started to be made in 2013, when we began the researches for the study "The Cost of Smuggling". Two main points were identified in this first study: the first one is how harmful smuggling is for societies, and the second one is the greatest reason why people do this type of criminal activity, which is the Profit made through the sale of such products.

As far as social losses are concerned, there is a great deal of areas which are affected by such criminal activities. To begin with, there is the fact that youngsters drop out of school in order to become criminals, then there is the destructuring process of societies in bordering regions, where the informality of economic activities forces citizens with no professional education into crime, and ultimately there are the numbers regarding criminality, which match the numbers registered by states where there is war, after all ONU considers the rate of 60 homicides per 100 thousand inhabitants as being very similar to a scenario of war. Unfortunately, we can often find these numbers in cities located in bordering regions dominated by smuggling operations.

Thus, we understand the core of the problem to be faced. After we observe that certain products can provide a 900% profit rate, we need to think of a rational way to combat this dynamics in which there is such a disparity between the prices of legal goods sold in Brazil and smuggled goods that enter the Brazilian market without being taxed.

Half way between the price of legal goods and the price of contraband, there is one of the most complex and unfair tax systems among the developing countries.

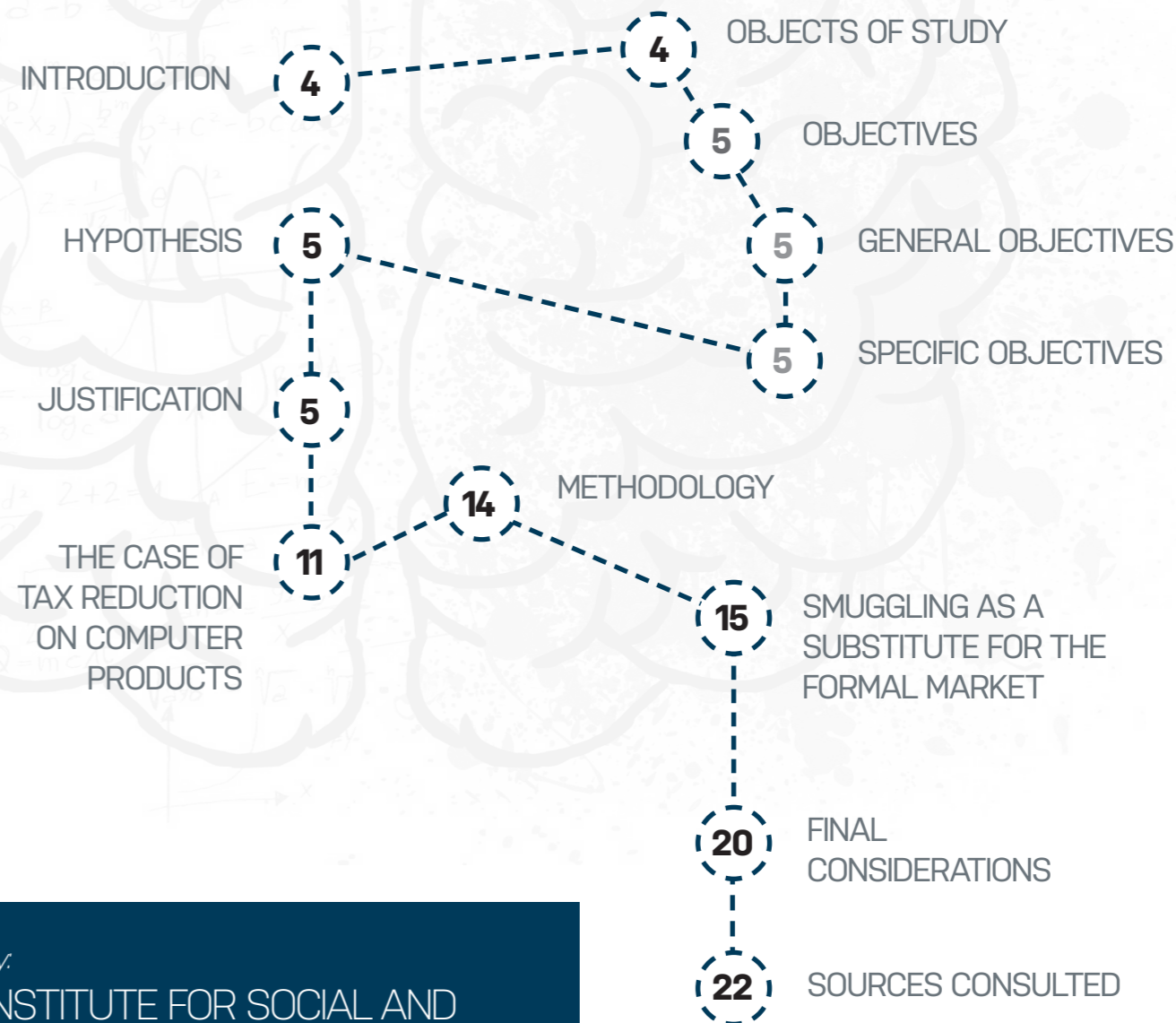
"THE ECONOMIC LOGIC OF SMUGGLING" provides us with some important reflections that may help our country face smuggling once and for all in an intelligent and effective way.

It is core to reevaluate the failed taxation model which currently works as a "tribute to smuggling" and then begin a new taxation model that is built through planning and efficiency. This will considerably increase tax collection by the country through the migration of consumption from smuggling goods to legal goods, and it may also serve as a way to change the socio-economic profile of bordering regions in Brazil.

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Economist and President of IDESF



THE ECONOMIC LOGIC OF SMUGGLING



by
INSTITUTE FOR SOCIAL AND
ECONOMIC DEVELOPMENT OF
THE BORDERS (IDESF)



INTRODUCTION

According to the study carried by the Organization for Economic Cooperation and Development (OECD), Brazil is the country that has the heaviest tax burden in Latin America. In 2015 the average tax burden in Brazil represented 32.66% of the national GDP, (Internal Revenue Service of Brazil). Notwithstanding the weight of the tax burden, the whole tax system is complex, unfair and onerous for the State as well as the companies, which have to be aware not to fall into the traps that exist in the tangle of taxes, fees and contributions in the country.

The heavy tax burden in Brazil does not always translate into greater tax collection by the State, just as much as the increase in taxes does not always increase tax collection and might as well create other costs for public funds, thus lowering people's quality of life and slowing the economic growth of the country.

An increase in taxes, on the other hand, while making the final price of goods go up also creates more opportunities for smuggling, which is a type of trade that harms the economy of the country as a whole, especially the Government's tax collection.

With the purpose of raising awareness about the aforementioned problem, and in the attempt to scientifically contribute to the application of tax policies in the country, we made mathematical simulations in order to measure the impact of the tax which has more largely varied (IPI) under cigarettes after the policy of minimum price began.

Also, IDESF developed a series of micro and macro-economic calculations in order to reach the balance of the market, for the legal industry to be able to absorb the portion of the market which is currently dominated by smuggling and also for the Government to increase its tax collection and reduce the costs and the damage caused by the consumption of smuggled goods, which

are also paid with the income from taxes.

Taxes are the great source of income for the Government. It is impossible to pay for education, health, security, housing and other needs if there is no tax collection by the Government. However, this has to be carefully balanced, because very low tax rates preclude the maintenance of the State and very high tax rates preclude the national industry. Therefore, it is extremely important to determine what the ideal tax rate is, according to each type of good, and it is key to understand the possible good and bad consequences of successively increasing rates.

Having the mathematical calculations that adjust the rates at hand, and understanding the fact that one of the main reasons that motivate smuggling in Brazil are the high tax rates on manufactured goods, we will present a proposal of tax rebalancing for the product which, due to its high taxation, strengthens the smuggling market, generating indirect costs and affecting the social and economic development of the country.

OBJECTS OF STUDY

Two objects of study were determined in order to clearly illustrate our point. One of them reduced smuggling due to tax incentives by the government and developed the national market; the other, on the contrary, is the most smuggled good and has one of the highest taxes among manufactured products:

1: Informatics: the sector that, after tax incentives by the government, succeeded in reducing the entry of smuggled goods and consequently heated the national market for computing goods and services, thus helping this market become more formal.

2: Tobacco: the sector which suffers the most due to the entry of smuggled goods and one of the sectors with the highest tax rates in the country.

GENERAL OBJECTIVE

The Study aims at presenting the economic logic that makes it possible for the market to be re-balanced, incorporating a significant part of cigarette smuggling into the legal market and consequently increasing the State tax collection, without contesting the guidelines established by the WHO (World Health Organization).

SPECIFIC OBJECTIVES

Prove that it is possible to increase collection in the tobacco market by working with lower rates in the lowest price segment;

- Calculate how much increase would the Government have in its tax collection if the lowest price segments incorporated the portion which is currently owned by the illegal market;
- Prove that the incorporation of smuggling by the formal market is the most effective tool for increasing tax collection;
- Demonstrate that the increase in tax rates does not help reduce tobacco consumption, but leads to the purchase of smuggled goods.

HYPOTHESIS

The increase in taxes stimulates smuggling;

- The existence of smuggling encumbers the State with the costs of combating it;
- The balance between a tax decrease and an increase in the national production makes the formal market more competitive and makes the illegal market less attractive;
- Smuggled goods are a threat to the health of consumers because they do not go through quality control like the goods that are produced in Brazil.

JUSTIFICATION

All the costs with manufacturing, fees, personnel and others, are inevitably incorporated into the final price of goods, what makes them more expensive. Consumers, who are in search for lower prices, end up being taken away by the attractiveness of smuggled goods, especially when they cannot find a substitute in the formal market. This action, which seems harmless at first, damages formal and legal activities as well as tax collection by the State. However, these are not the only disadvantages of excessively increasing taxes; if we consider all the other expenses that the Government has in order to combat crimes related to illegal commercial activities, we will be confronted with several variables which end up being paid by taxpayers, such as: costs with legal actions and police investigations related to smuggling.

According to the "Justice in Numbers" annual report by the National Council for Justice, the average cost per legal action in the year of 2015 was of R\$ 1,096.45. Up until the year of 2016 there were about 30,000 ongoing legal actions involving smuggling throughout Brazil. Thus, we can assume that currently the Government spends almost 33 million reais (R\$ 32,893,584.48) only on ongoing cases. Approximately 67% of this amount is related to the smuggling of cigarettes alone.

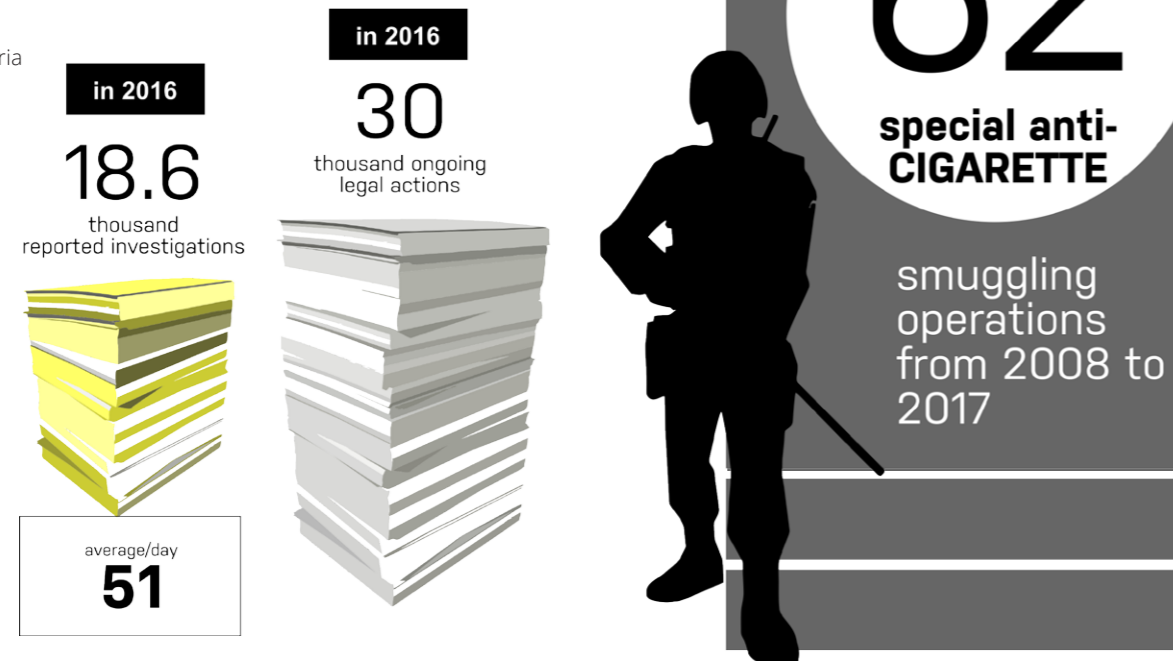
As reported by SINPEF-MG (Federal Policemen's Union of the State of Minas Gerais), the average cost of a police investigation process is R\$ 51,000.00.

The General Coordination of the Financial Police informed that in 2016 around 18,600 police investigations about smuggling were reported. This means an average of 51 investigations per day. If there were no smuggling, or if its incidence were lower, the amount of the costs with legal actions,

investigations and other procedures could be invested in benefits for the population and for the economic growth of the country.

Figure 1 – Smuggling-related actions and investigations in general and anti-cigarette smuggling operations.

Fonte:
CNJ
SINPEF-MG
Polícia Fazendária



From 2008 to January 2017, Brazil's Federal Police (PF) carried 62 major cigarette-smuggling operations. We do not have the information of the precise amount spent in each of them, but in 25 of them PF recovered 181 million reais in cash and assets. The negative balance is, nevertheless, significant.

Table 1 – Anti-cigarette smuggling operations

2008	2010	2012	2015	2016
• CAIPORA • TRÂNSITO LIVRE	• PISTA LIVRE • SETE DE OUROS • CORTINA DE FUMAÇA • CATENGA • ANA MARIA • ARQUIPÉLAGO	• FUMAÇA • TABACO PORTENHO • TOP DECK • TRAVESSIA • FUMAÇA	• BEMOL • PALERMO • MACAIA • TRAVESSIA 14 • GRIS • NOCIVOS • REGISTRO ESPECIAL • NUVEM NEGRA • RETOMADA • HUNO • CERBERO • TAGARELA • INTEGRAÇÃO • TRIÁDE	• CIGARRITO • SATURAÇÃO • COMBOIO - PFO/RS • AR LIVRE • COMBOIO • CONTROLE • PLEURA • RETALIAÇÃO • TABACCO • IXTAB
2009	2011	2013		2017
• CONTROLE REMOTO • ZERO GRAU • SOL NASCENTE • PENTATEUCO • BITUCA • PENTATEUCO II • FUMAÇA	• LOKI 2 • NICOT • EXAUSTOR • MARCO 334 • QUEIMA TOTAL • HERNANDÁRIAS • MOSAICO • RINCÃO	• ATER FUMUS • PETYMA • DUPLA FACE • CARRARA		• OPERAÇÃO TOLERÂNCIA ZERO
	2014			
	• TABACO • CORREDOR SUDOESTE • SIGARRELUM • PARENTELA • DELIVERY			

Anti-cigarette smuggling operations



CF 1988 (Federal Constitution) Protection of individual guarantees of consumer rights

Fundamental rights and guarantees Consumers and the rights to health and safety



65% of smuggled cigarette brands have high levels of toxic elements. Components such as Cr, Ni, Cd and Pb hit the mark of eleven times higher than what is permitted for legal cigarettes in Brazil.



81.2% of brands presented some sort of contamination by fungus, fragments of insects, grass or mite at a higher level than the one established by ANVISA (Brazilian Health Regulatory Agency) as good hygiene practice.



100% of the brands do not comply with any phytosanitary regulations.

See annex I: Microbiological quality reports on smuggled cigarettes

Smuggling violates human rights¹ in several ways. We also observe an increase in accidents on roads involving vehicles loaded with smuggled goods. These vehicles are, in the majority of cases, stolen and travel around the country at high speeds. Thus, we conclude that, definitely, the Government has several costs increased due to the development of smuggling.

Since 2012 the Internal Revenue Service in Foz do Iguaçu recovered 713 vehicles that had been

different countries.

The high concentration of these metals can be associated with the process of faking the product with the use of materials which are unsuitable for human consumption, just as we may see in the studies carried by Professor Dra. Nair Rodrigues Marcondes from UNIOESTE Campus Cascavel (State University of Western Paraná), as presented in Annex I. Macroscopic Examination Report and Microbiological Quality Examination Report, which found fragments of insects, plastic, tissue, among other harmful components in 20 brands of smuggled cigarettes, and this ends up violating fundamental consumer rights.

Figure 2- Contamination index of smuggled cigarettes.

1 - See annex II – Paper FUNDAMENTAL RIGHTS AND GUARANTEES: consumers and the rights to health and safety. Dr. Javert Ribeiro da Fonseca, 2017.

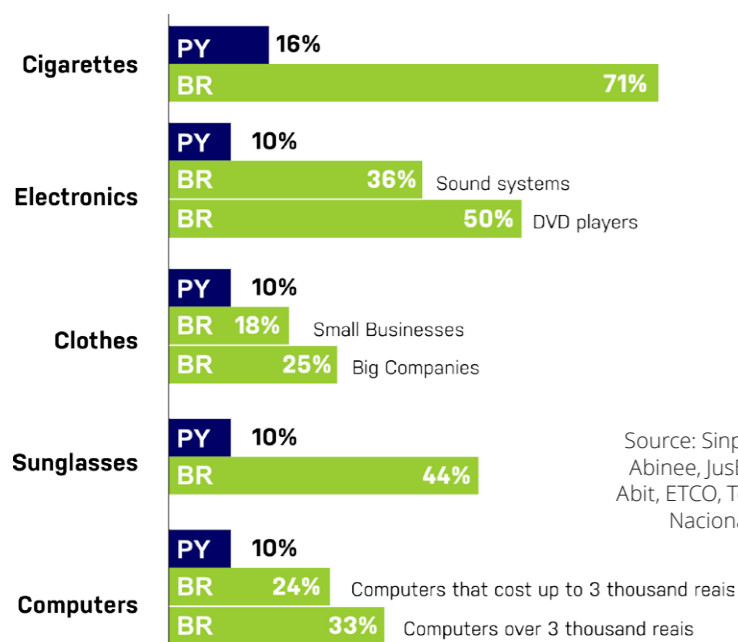
Table 2 – Vehicles seized with cigarettes in BR 277

The use of stolen or robbed vehicles for the illegal transportation of foreign goods happens because the logistics of smuggling, especially the smuggling of cigarettes, is the same as the one of drug, weapon and ammunition trafficking. And this is precisely why smuggling is essentially associated with other crimes, such as car robbery all around the country. It is very common for a car to be stolen in São Paulo, for example, and in less than 24 hours it is already in the bordering region being prepared for the transportation of smuggled goods. Internal Revenue Service - Communication Department - DRF/Foz do Iguaçu. Press-Release nº 071 - Jul/06/2017.

As previously discussed, tax collection is just the tip of the iceberg. These “invisible” costs are paid by us through the tax we pay which, due to being overly high, stimulate tax evasion and generate more damage than good, and so the vicious cycle goes on.

Such a tax asymmetry, which makes products cost more and stimulates smuggling, also affects the bankruptcy of factories or their migration to other countries where there are better tax policies.

Table 3 – Tax comparison between Brazil and Paraguay.



Source: Sinprofaz, Abinee, JusBrasil, Abit, ETCO, Tesouro Nacional

Seizure of vehicles with smuggled cigarettes in 2016

Source: Internal Revenue Service, 2017



In January 2017, Estrela, the greatest toy manufacturer in Brazil, opened a manufacturing unit in Paraguay, where taxes over manufactured products are lower and there are incentives and more flexible labor laws.

“The government should have the courage to reduce tax collection as part of the adjustment of economy”, says Tilkian, who claims for a new policy for the industrial development of Brazil. “The lower the tax burden, the more economic activity there will be and, consequently, there will be more tax collection.” (Carlos Tilkian, President of Estrela, Feb/15/2016).

In 2016, Souza Cruz closed its manufacturing unit in Rio Grande do Sul (more than 40% of the tobacco which is consumed in Brazil comes from smuggling).

“An excessive increase in taxes and smuggling have lead Souza Cruz to close its factory (...) The high taxation, which will hit 80% of the price per pack, directly impacts the final price of the products, and this makes consumers look for cheaper alternatives, especially in the black market that represents 31% of Brazil’s total market - this is a higher percentage than our second greatest formal competitor in the country. The situation is even worse in Southern Brazil - home of the greatest part of the production from our factory in Cachoeirinha - where the illegal market represents 43.3% in Rio Grande do Sul and 52.8% in Paraná.” (Excerpt from press release by Souza Cruz, Feb/04/2016).

Nowadays, more than 120 Brazilian companies are moving to Paraguay, stimulated by the tax policies of that country which help companies develop and continue operating and growing, while in Brazil the unemployment rates grew almost 12% in 2016. This makes the informal market grow and provides more and more space for smuggling and other informal and criminal activities.

The great part of the market which is currently

owned by smuggled goods also brings several other problems unrelated to tax collection and even more damaging than it: the social problems deriving from smuggling. We observe that the number of crimes², violence, unemployment, school drop out, among others, are terrifyingly higher in bordering regions if

compared to the rest of the country. This happens mainly because there is a great part³ of the population in these regions who works in the black market.

Table 4 – Bordering Cities with the highest homicide rates per inhabitant.

Bordering Cities with the highest homicide rates per inhabitant

Source: Routes of the Crime - the Crossings of Smuggling, IDESF, 2016

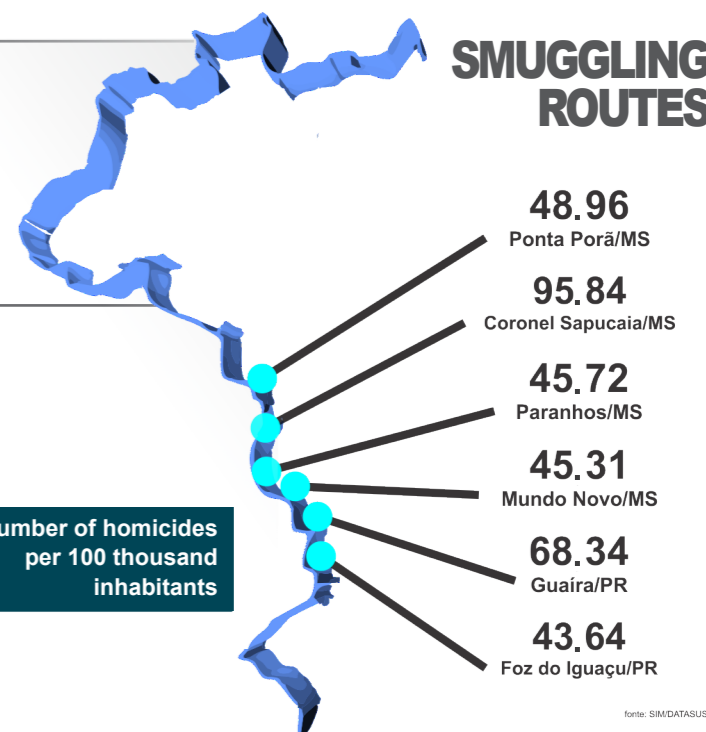
The economic and social devastation caused by smuggling is easily noticed in other regions of the country, when we are confronted with the reality in which more than 70%⁴ of the cars that are seized by the police with smuggled goods are stolen cars. These vehicles have been objects of crimes prior to smuggling and in places which are far from the bordering regions. This helps this vicious cycle spread throughout the Brazilian territory.

“The conventional means of repression, evil for evil, are expensive and have a doubtful efficacy. By prioritizing the security and the development of the bordering communities, it is possible to have a powerful ally in the fight against crime.” Dr. Matheus Gaspar. Federal Judge, Foz do Iguaçu, 2017.

An army of people (including kids and adolescents) is recruited to work in the transportation, storing, protecting and selling of smuggled goods before they get to their final destination and to the hands of their consumers who probably do not know their origin or how harmful they are to their health, how this overburdens the Brazilian public health system (SUS) and how it all ends up being paid with public money.

Figure 3 - School drop out in bordering regions

	Drop out rates (%)	
	Elementary	Secondary
Coronel Sapucaia/MS	3,8	6
Foz do Iguaçu/PR	1,7	8
Guaíra/PR	1,1	6,2
Mundo Novo/MS	1,2	2,8
Paranhos/MS	4,6	6
Ponta Porã/MS	2,3	7,8
Curitiba/PR	1,2	4,8
Rio de Janeiro/RJ	1,5	6,3
São Paulo/SP	1,3	5,1



In this sense, the present study makes us reflect upon how much the increase in taxes effectively helps the development of the country, whereas the same increase generates tax evasion, violence, school drop out, informal economic activities, the shrinking of the national production of goods, unemployment, the closing of factories and, consequently, less tax collection.

2 - Characteristics of Bordering Societies, IDESF, 2015.

3 - Approximately 15,000 people directly work with smuggling in the city of Foz do Iguaçu alone. The Smuggling Cost, IDESF, 2015.

4 - Information related to the seizures by the Customs Repression Team - ERA of the Brazilian Internal Revenue Service Office in Foz do Iguaçu, 2014.

It is known that the increase in taxes, especially in the case of cigarettes, serves as a tool for the reduction of its consumption, but this is a measure that requires a lot of caution, particularly in countries where there is such a high incidence of smuggling. Even the WHO advocates the use of black market control measures in its Framework Convention on Tobacco Control in 2003.

Article 15 about the illegal trade of tobacco goods indicates that each part must take actions to control and regulate the production and distribution of tobacco goods in order to prevent illegal trade.

Therefore, we must understand that, even if the intention is to meet the population's basic needs and also improve their quality of life and development, the Government must act with caution. Many times the increase in taxes is seen as an immediate resource by the Government while it does not analyze the fact that the same increase may harm the country's industry and market, thus stimulating the black market.

If taxation is high, the final price of products is automatically high and due to this a niche market is created and it can only be occupied by smuggling.

Through the illegal sale of products, with no taxes and no quality guarantees, the informal market is able to have the best prices in comparison to the formal market, which cannot compete such an unfair competition.

The current economic situation of the country indicates that measures to strengthen the national industry need to be taken immediately. One of them undoubtedly has to involve combating smuggling. Even in the midst of this discouraging scenario, there are mid and long-term actions that can generate great results for the economy and the development of the country.

In 2015, IDESF presented a study called "The impact of Security Operations in Bordering Areas", where it showed that during the operation called "Ágata" there was an increase of 3.7% in IPI (tax on manufactured products) and in II (tax on importation), which in monetary terms is equivalent to R\$ 3 Billions/year. This means that if security operations were a constant theme, tax collection would be much higher than their costs, and there would be many more benefits such as more security, less school drop out, more formal jobs, industrial growth, more quality of life for the population, among others.

The fact is that combating smuggling is not enough, because what makes it so attractive is obviously its high profit rates and, what makes these rates so high is the high prices applied in Brazil for the same goods.

In the study "The Smuggling Cost", carried by IDESF in 2015, the profit rates of the 10 most smuggled products in Brazil were identified, according to the Internal Revenue Service Office, as follows:

Profit rates of smuggled goods

Type of Good	Average Price in Paraguay	Average Price in São Paulo	Smuggling Cost %	Minimum Profit %	Maximum Profit %
Cigarettes	R\$ 0.70	R\$ 2.40	22.24%	179.68%	231.15%
Electronics	R\$ 990.36	R\$ 1.223.50	21.24%	1.90%	19.66%
Computers	R\$ 556.04	R\$ 650.63	22.24%	-4.28%	13.34%
Clothes	R\$ 12.08	R\$ 21.50	19.24%	49.23%	72.36%
Perfumes	R\$ 94.88	R\$ 197.00	21.24%	71.26%	101.12%
Watches	R\$ 10.80	R\$ 22.50	19.24%	74.72%	101.80%
Toys	R\$ 15.34	R\$ 67.00	19.24%	266.39%	323.17%
Glasses	R\$ 40.50	R\$ 144.83	19.24%	199.90%	246.38%
Drugs	R\$ 19.09	R\$ 197.44	24.24%	732.51%	901.85%
Beverages	R\$ 32.59	R\$ 61.39	20.24%	56.67%	82.46%

Source: The Smuggling Cost, IDESF, 2015

By analyzing the figure about the 10 most smuggled goods, we can see that the profit rates are very high, even if there is a high cost⁵ of logistics, distribution and losses in the process. And the final price of these smuggled goods remains expressively lower in the informal market than the price of legal products due to the taxes charged in Brazil, which may vary from product to product and can represent more than 70% of the final price.

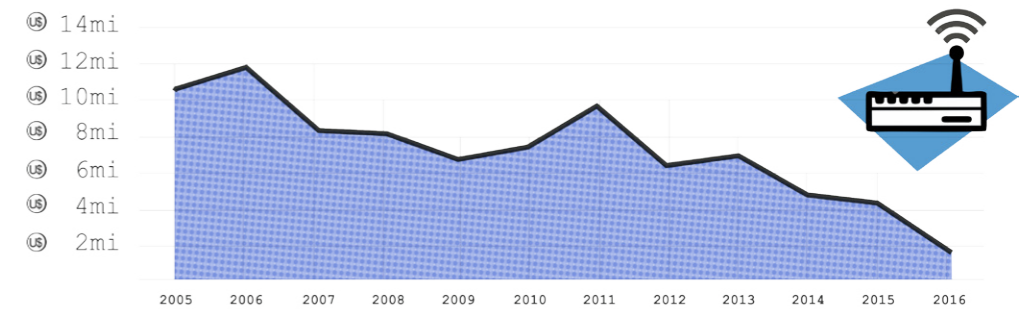
The increase in taxes can falsely give us the impression of more tax collection. Such taxes are the main source of income for the government and are also the main reason why there is such a difference between Brazilian-made and smuggled goods. Let us look at the case of computers, for example, an area in which the Government adopted a strategy of tax reduction which consequently resulted in a heated market.

THE CASE OF TAX REDUCTION ON COMPUTER PRODUCTS

We can take this as a positive example: With the goal of getting investments for innovation from the private sector, the Government tried to bring companies together with universities and research institutes, making the results in research and development (P&D) stronger, encouraged by the tax breaks conferred on companies. Such benefits at first resulted mainly on the reduction of taxes, which almost equated the prices of Brazilian products and the products that illegally came into the country. This action by the government ended up damaging the smuggling business, making this criminal activity impracticable, because smuggled goods stopped being so attractive to customers when national products were cheaper, as we can see in the figure below.

Table 5 - Reduction in the seizures of computer-related goods.

Seizures of computer-related goods (2001 - 2016)

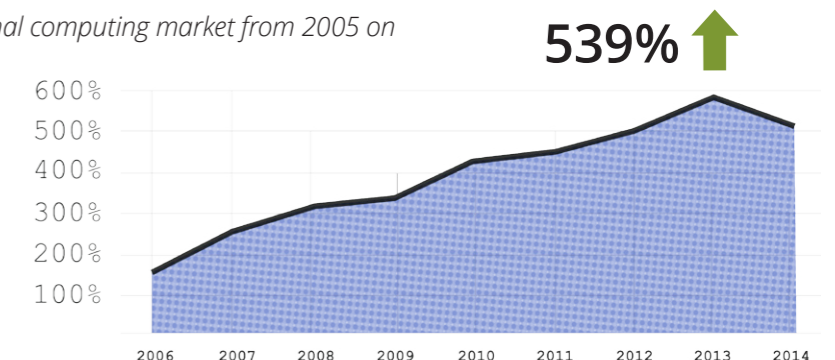


In the 90's and the beginning of the year 2000, computers were either the first or the second most smuggled products in Brazil

Law # 11.196/2005 (Lei do Bem), which ensures computer-related and telecommunication products must have a zero PIS/Cofins tax (Social Integration Program and Contribution to Social Security Financing), has helped the national market and heated the economy of the sector, with growth rates of up to 539% in the last 8 years. (2005 to 2013 - Last Official data by IBGE).

Table 6 - Annual evolution of the formal computing market from 2005 on

Annual evolution of the formal computing market from 2005 on



5 - Losses are mainly related to the seizure of truckloads and/or bribes paid to agents.

Table 7 - Number of manufactured/sold computers

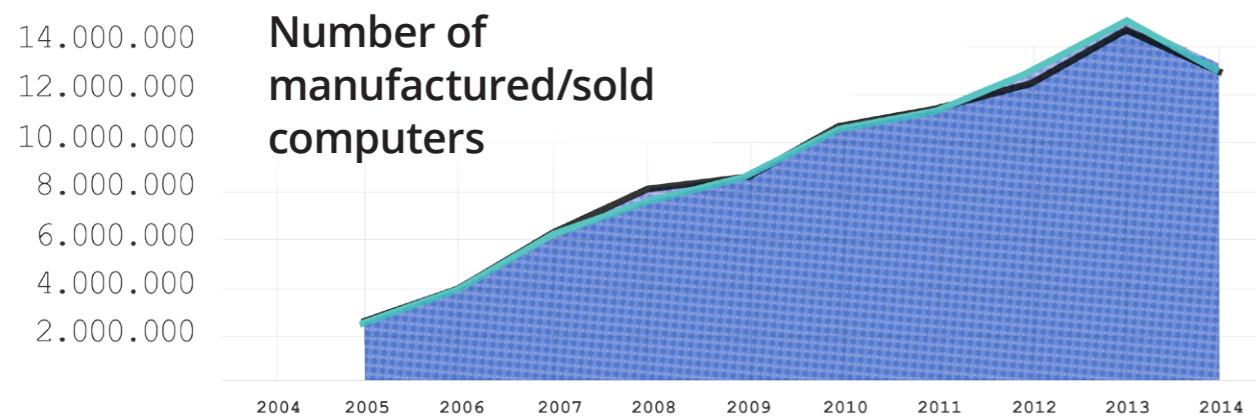
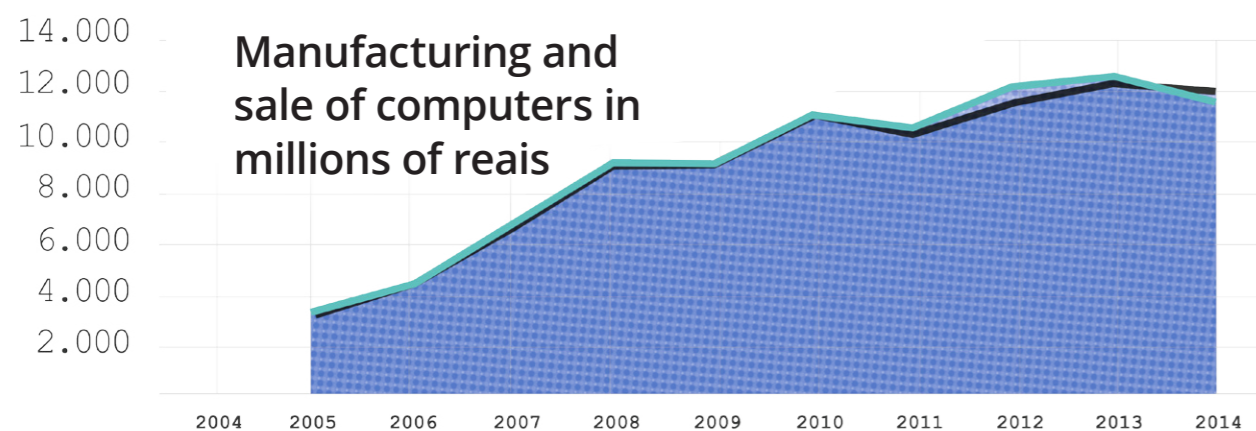


Table 8 - Number of houses where there is a computer



The results from the implementation of Law # 11.196/2005 was about more than tax breaks for the industry and the economic heating of the sector. This law made it easy for a great part of the population to have access to computers which, in turn, helped spread information, culture and education, improving the quality of life of poor communities, increasing their level of knowledge and even their intellectual capacity.

The conveniences and innovation provided by the computing sector that improve the quality of life and education in schools could probably not be substituted by other types of tools other than digital inclusion. Therefore, the aforementioned law can be considered a social inclusion tool.

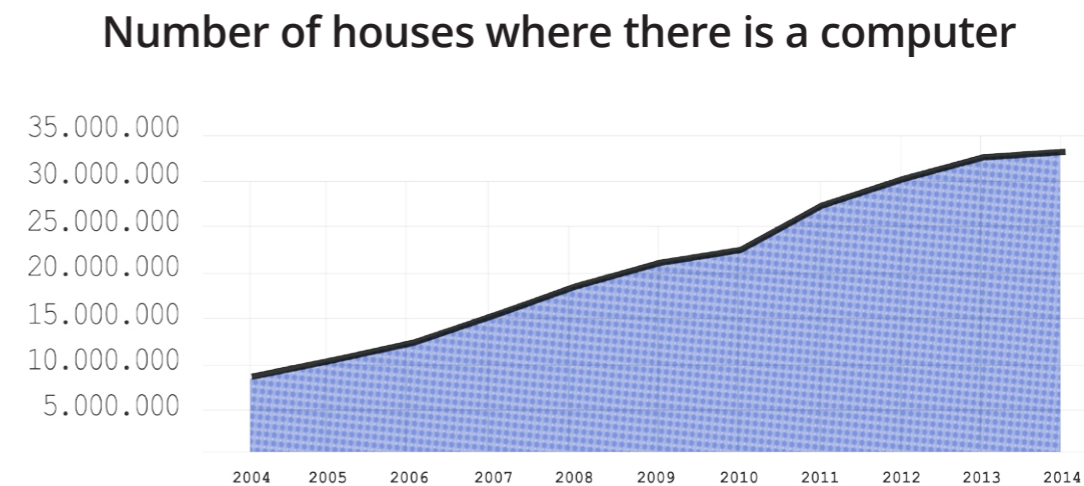
There is a connection between digital inclusion and social inclusion. Silva (2012) defends that, in order to fully become an empowered citizen nowadays, it is necessary to have access and know how to use digital tools, thus diminishing social inequalities. Lopes (2010) reinforces this argument when he says that digital outsiders are or will be

social outsiders.

Digital inclusion is a form of social inclusion. When access to computing permeates all layers of society, the level of information and knowledge of the population increases, thus influencing the empowerment of individuals who begin to use the same tools in all social classes and to have access to the same level of information and communication. Also, when the forms of relation between different classes in society happen digitally, all economic and social differences are excluded.

“A goal which should be understood as an ideal is inbuilt in the expression Digital Inclusion, because we aim at associating terms such as citizenship, justice and dignity to its meaning. In the last couple of years, there has been a great development due to Information and Communication Technologies (ICTs) which are key for the growth in competitiveness, development and social inclusion.” (BUZATO, 2012).

Table 9 - Number of houses where there is a computer



Definitely, “Lei do Bem” is an initiative from the Government which directly or indirectly created benefits that are greater than tax revenue itself. The reduction in prices helped a greater part of families gain access to computers, which in turn strengthened the national market and made it more competitive, resulting in the drastic reduction of smuggling. In this regard, the governmental initiatives play a crucial role, because by reducing taxes, they create conditions for the national industry to grow stronger and more competitive. This creates a vicious cycle that heats the market, creates work opportunities, makes products more accessible to poorer populations, provides more investments in the areas of research and, then we are able to notice a complete improvement from production chains to the final product in the consumers’ hands, which brings more knowledge and economic and social growth for the country.

In the end of 2015 the government implemented the Provisional Measure # 690, which abrogated “Lei do Bem”, and so the prices for computing products went up again, resulting once more in an increase in smuggling. The computer sector, due to its comprehension about the improvements that Law # 11.196 brought, filed a preliminary order for the re-implementation of this law. They claimed that a tax break granted until the 31st of December 2018 could not be abrogated in advance.

“ABINEE (Brazilian Electrical and Electronics Industry Association) declared that the preliminary order by the Federal Court is important because it reestablishes the incentives of the Program for Digital Inclusion of Law # 11.196 (Lei do Bem), which contribute to the access to technology, mainly by the low-income population, as well as to the creation of formal jobs in the country and to the fight against the black market of computer products”.

(Revista Exame.com, April 28th 2016).

Law # 11.196 is a clear example that the increase in taxes is not always the best solution to increase tax collection. On the contrary, when lower taxes are applied, we all win; there is an increase in the consumption of the product, an increase in sales of the formal market, an increase in job offers and, as a consequence, an increase in tax collection. This reduces the incidence of smuggling and, consequently, it reduces violence, car accidents, the demand for SUS, among other several aspects which directly reflect on public costs and on the quality of life of the population.

We defend a reduction in taxes in order to reduce smuggling and improve the quality of life of the population, who will then have access to products that have been legally and safely manufactured. This will stimulate internal consumption and make the Government collect more so that it can finally be able to comply with its duties improving what already exists (hospitals, schools, housing, among others) and giving the population conditions to live with dignity, with more security, health assistance, education, housing and more formal jobs.

The same way it happened to the computer sector, where tax reduction drastically reduced smuggling and heated the national industry, this factor can be reproduced regarding other products which are affected by smuggling.

Based on the list of the 10 most smuggled products where cigarettes are the first in illegal sales in Brazil, we intended to develop this study so that we could get to a market balance for such a product. We followed a methodology which permits us to scientifically analyze the effects of tax enforcement in Brazil and, on the other hand, develop a simple calculation that may help balance the market and maybe even reduce cigarette smuggling.

METHODOLOGY

1. Collection of historical data about the computing sector.
2. Collection of data about the historical series of the IPI tax rate evolution on cigarettes from 2012 to 2016, so that we can understand its impact on the national industry.
3. Collection of data about the national production and the seizure of smuggled products in similar periods.
4. Field research to know the average sale price of smuggled cigarettes in the national market. This research was done in Foz do Iguaçu, Curitiba, Porto Alegre, São Paulo, Campo Grande, Rio de Janeiro, Belo Horizonte and Pernambuco, from December 2016 to March 2017.
5. Also, IDESF developed some basis of calculation by using micro and macroeconomic concepts to reach market balance in the tobacco sector which is currently the most affected by smuggling. This part will be exemplified at the end of this paper, with the projections of tax increase and shrinking of the informal market.

In order to develop this research, we considered that the excessive increase in the price of cigarettes creates two possible consequences in the market:

- 1 - The reduction in consumption and/or;
- 2 - The substitution of the product.

Because the frequent consumption of any good might be directly related to other factors which go beyond price, when the price of the product is increased, consumers may tend to consume less of this product or search for a substitute which is similar and costs less in order to meet their need.

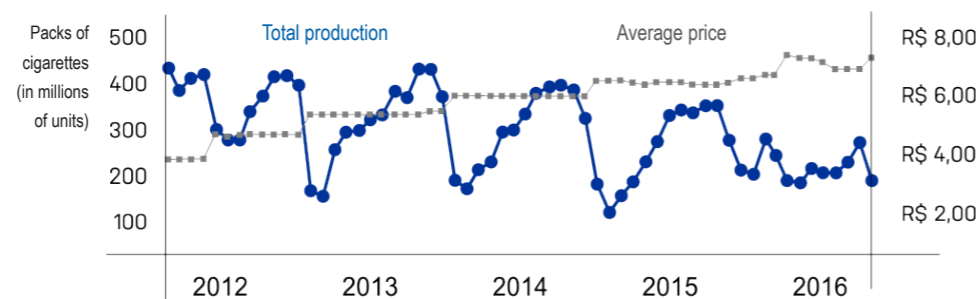
In the case of cigarettes, we have to consider the pleasure caused by their consumption. This pleasure leads consumers to buy a cheaper brand which can be easily found in the informal market instead of reducing their cigarette consumption.

For the policies for reducing tobacco consumption to work, it is necessary for the Government to deeply understand the different market offers and coherently define which the ideal tax rate for each product is, because the excessive increase in taxes contributes to the weakening of the industry, the reduction in the purchasing power of consumers and, consequently, the increase in the consumption of smuggled goods.

Article 7 of the Decree # 8.656, indicates that: between May and December 2012, the minimum price of cigarettes was of R\$ 3,00; from January to December 2013, it went up to R\$ 3,50; from January to December 2014 it was R\$ 4,00; from January 2015 to April 2016 it was R\$ 4,50, and from May 2016 on it went up to R\$ 5,00. We found, as can be seen in Table 9, that the average national cigarette production rate was reduced in 40.29% between 2012 and 2016, while the estimated nominal price increased in 148.0% during the same period.

Table 10 – Monthly production and price average of national cigarettes from January 2012 to December 2016.

Monthly production and price average of national cigarettes from January 2012 to December 2016



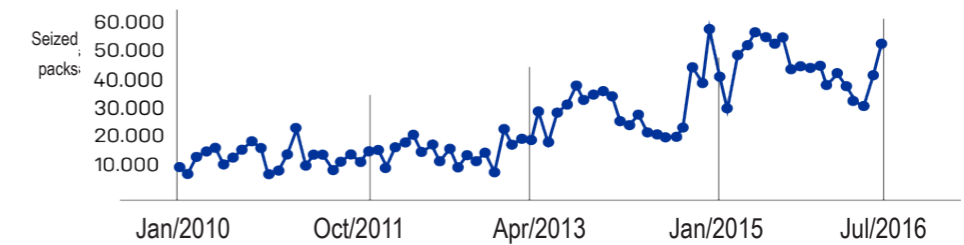
Source: Internal Revenue Service/IDESF

On the other hand, the average annual seizure rate of illegal cigarettes in the country increased 232.35% between 2012 and 2015, contrasting with the national manufacturing rate which decreased 40.29%.

In Table 9, we observe that even though seizures greatly varied in the analyzed period of time, the total amount of seizures in 2012 corresponded to 3.78% of the national production, while in 2015 these seizures corresponded to 17.70% of the national production. This means that the consumption of smuggled cigarettes increased at the same rate as the national production decreased, given that Security Departments and the Internal Revenue Service of Brazil can seize only 5 to 10% of all smuggled goods sold in the country.

Table 11 – Number of monthly cigarette seizures in Brazil from January 2010 to July 2016

Number of monthly cigarette seizures in Brazil from January 2010 to July 2016



Source: Internal Revenue Service of Brazil/IDESF

Such results demonstrate how illegal cigarettes work as substitutes for legal cigarettes, because when the price of legal cigarettes went up so did the number of seizures of illegal cigarettes. It means smuggled cigarettes are meeting the demands for cheaper cigarettes. We also found that the minimum price strategy by the National Policy for Tobacco Control is not achieving its goal of reducing tobacco consumption. Instead, this strategy is stimulating the trade of illegal cigarettes in the country, after all this strategy eliminates chances for the national industry to compete with the illegal market.

For the elaboration of this study, we did a price survey for smuggled cigarettes in the main capitals of Brazil and we verified that the price for these cigarettes can range from R\$ 1,80 to R\$ 2,00 / R\$ 2,50 and it can go up to R\$ 3,75 / R\$ 4,00 per pack.

When we analyze cigarette consumption from an economic point of view, we note that it is an inelastic product, in other words, it cannot be easily substituted by another product, even when its price is high. However, in this specific case, due to the easy access to smuggled products, national cigarettes are easily substituted by smuggled cigarettes even though they meet all quality standards defined by the WHO and controlled by the Government whereas smuggled cigarettes do not go through any type of quality control. Clearly, smokers seeking to meet their needs do not reduce their cigarette consumption, as it would be expected, due to these measures of control by the Government. Instead, they find in smuggling an economically accessible substitute that does not harm their budget while meeting their needs.

SMUGGLING AS A SUBSTITUTE FOR THE INFORMAL MARKET

In order to reduce the impacts caused by the consumption of smuggled cigarettes onto the economy of the country, we must deal with it from an economic perspective as well. This is to say that we must consider them as products that generate tax revenue, because when consumers face budgetary difficulties, they turn to the illegal market to meet their needs. Hence, what happens is not the reduction in the consumption of cigarettes, but the reduction in the consumption of the national product, and consequently the reduction in tax collection by the Government and an increase in the consumption of smuggled cigarettes.

In this sense, IDESF developed a series of macro and microeconomic calculations which resulted in the possibility of adjusting tax rates with the aim of increasing tax collection, strengthening the national industry and drastically reducing smuggling, which currently controls around 40% the total cigarette consumption in Brazil. This percentage corresponds to about 1.8 billion packs which are freely sold without generating any tax revenue but causing great damage to the national economy.

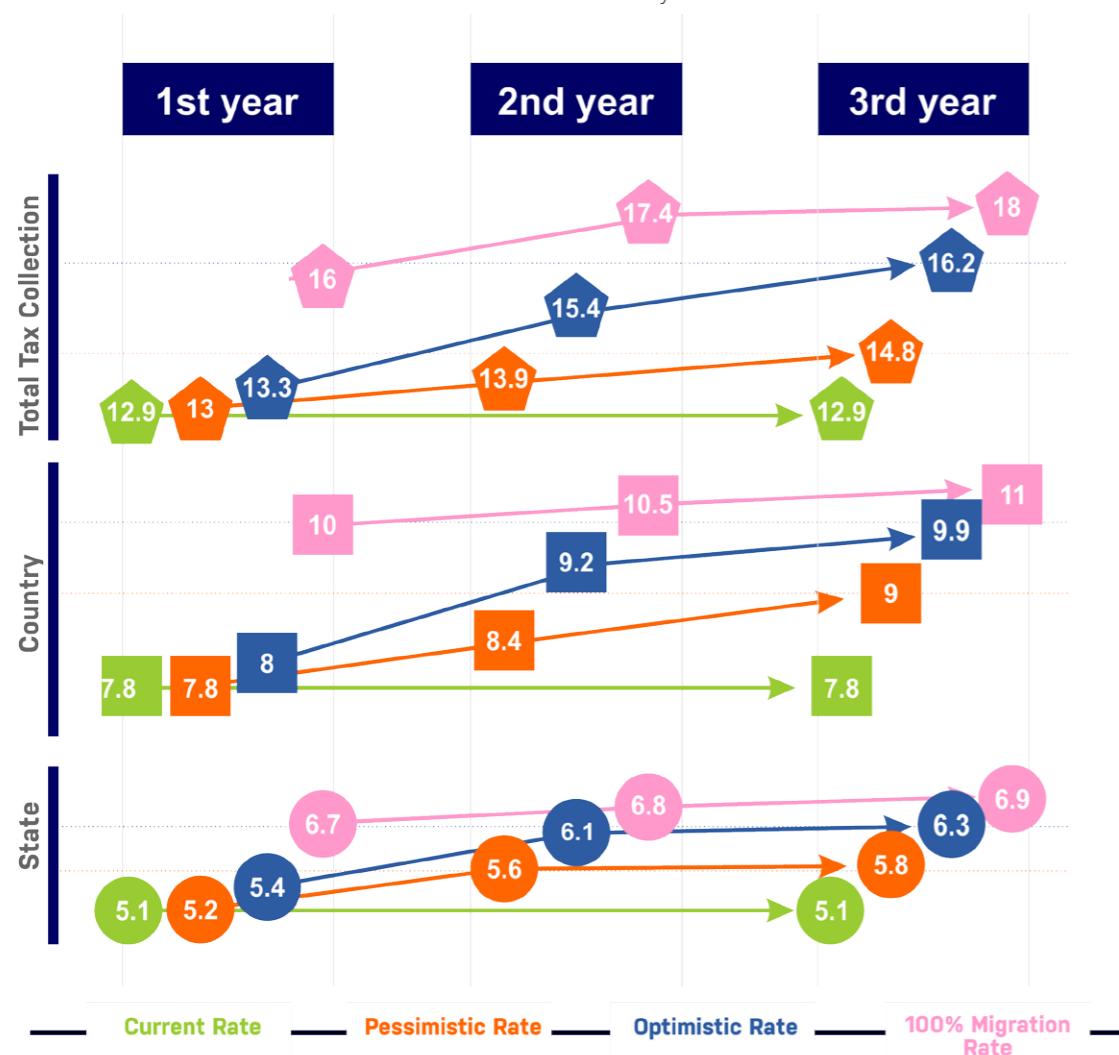
In the field research that was done for the purpose of the present study, and according to the seizures by the security forces, smuggled cigarettes serve as a direct substitute for the most economic brands manufactured in Brazil and classified as the cheapest, with prices that range from R\$ 5,00 to R\$ 7,50. The price average of smuggled cigarettes in the country varies from R\$ 1,80 to R\$ 4,00. In other words, smuggled cigarettes cost up to R\$ 5,70 less than national cigarettes, what makes them the only option for an average unprivileged individual and what justifies the fact that 40% of the total market is represented by such products.

If this percentage (40%) were absorbed by the national industry and the same tax rate of legal cigarettes were applied to it, the Government would increase its tax collection in around 5 billion reais without the need to increase taxes, considering a sales price between R\$ 3,75 and R\$ 4,00.

In Table 11, we can see the representation of the formal and informal consumption, as well as the current tax collection rate and the estimated collection rate with the absorption of the smuggling market. This table represents the increase in tax collection the country would have while using a minimum price strategy that is much lower than the one used nowadays, in a way in which there would actually be a fair competition between legal and smuggled cigarettes.

Table 11 – Actual collection rate and simulated collection rate corresponding to the hypothesis of the smuggling portion of the market being absorbed by the formal market.

Source: Elaborated by us based on data from the Internal Revenue Service



Actual collection rate and simulated collection rate corresponding to the hypothesis of the smuggling portion of the market being absorbed by the formal market.

The Government must work with a specific tax rate for the category which is the most affected by smuggling in order to get to a balance in the market, increase tax collection and help the formal industry absorb the portion of the market which is currently occupied by smuggling.

The formal tobacco market can be divided into 4 price categories: High Price; Average Price; Low Price and the Lowest Price. The Lowest Price category is the most affected by smuggling because it is the most accessible to all social classes.

Table 12 – Distribution of the tobacco market per category

	Price Average 2016	Formal Market	Total Market
High Price	R\$ 8.24	37.89%	22.72%
Average Price	R\$ 7.15	15.53%	9.31%
Low Price	R\$ 6.83	26.37%	15.81%
Lowest Price	R\$ 4.95	20.21%	12.12%
Official Total	-	100.00%	59.96%
Smuggling	R\$ 3.10	-	40.04%
Market Total	-	-	100,00%

Distribution of the tobacco market per category

Source: IDESF, 2016

Smuggling, which has an average price of R\$ 3,10 and represents 40.04% of the total market, is a direct competition to the Lowest Price category that has a fixed price of R\$ 4,95 and represents 12.12% of the total market. This is to say that, if smuggling were a category within the total market, it would be the category with the largest market share.

We noticed there is a migration within the categories, mainly towards the cheapest categories. This migration matches the periods of economic crisis.

Usually when consumers of the most expensive categories need to adjust their budget, they adjust their needs to cheaper products, because they count on these cheap categories as a temporary solution to meet their needs without having to turn to smuggled products. And as soon as they have their financial situation stabilized, they go back to buying the more expensive categories.

On the other hand, consumers of the Low Price and the Lowest Price categories tend to migrate straight up to smuggled products. And these are the consumers who suffer the most with the impacts of economic crisis, what explains why the consumption of smuggled goods has grown so much in the last years. In 2016, smuggling owned more than 40% of the total tobacco market and a growth that can reach up to 45% is expected for 2017.

The Internal Revenue Service of Brazil has been receiving a 20% lower tax revenue than expected, and this shows once more how much this tax policy has to be revised.

“...the smuggling of this product to Brazil has been becoming more and more important in the last years, because the more the country increases its taxes on cigarettes, the more profit smugglers make. As a consequence, we see an increase in the number of smuggled cigarettes that enter Brazil, which is currently an even more favorable place due to the economic crisis the country has been experiencing”. Moisés Dionísio da Silva. THE SMUGGLING OF CIGARETTES IN THE BORDER BETWEEN BRAZIL AND PARAGUAY. Final Paper - Essay presented in the Department for Strategic Intelligence of the Higher School of War, Rio de Janeiro, 2016.

A tax policy revision is necessary in order for Brazil to experience the rebalancing of the market and consequently a greater tax collection and the decrease of smuggling. In this regard, this study proposes the creation of a new product or a “combat product” that would have lower taxes applied to it and would then make the national tobacco industry more competitive.

The proposal is to maintain the current taxes onto the High Price, Average Price and Low Price categories whilst the Lowest Price or new category would have a fixed price of R\$ 3,75 to R\$ 4,00 per pack, and would have a specific IPI taxation that would vary from R\$ 0,70 to R\$ 1,00. This would improve the tax context as a whole and it could help the Government get, by the end of the third year, an income of R\$ 5 billion as shown in the figure below.

Revenue projection from the Lowest Price Category

The idea is that the consumers of smuggled cigarettes might go back to consuming the national product if they can find a similar price with better sanitary quality. This would stimulate the national industry, the creation of jobs, the increase of tax collection by the State and the protection of consumer rights.

There are two possible modalities in which migration can happen and contribute to the development of the appropriate environment for the rebalancing of the market:

1st - Gradual or Pessimistic Migration: it is a slow migration, of about 25% of the smuggling market a year plus the migration between the national categories identified in the historical series shown in figure 5.

2nd - Progressive or Optimistic Migration: it is a 25%-75% migration by the end of the third year, leading to the full migration from the smuggling market to the formal market in the following years.

Let us see in the figure below the simulation of how these migrations would happen and how much the tax revenue would increase for the Government if this new product were inserted in the market.

Table 13 - Revenue projection from the Lowest Price Category

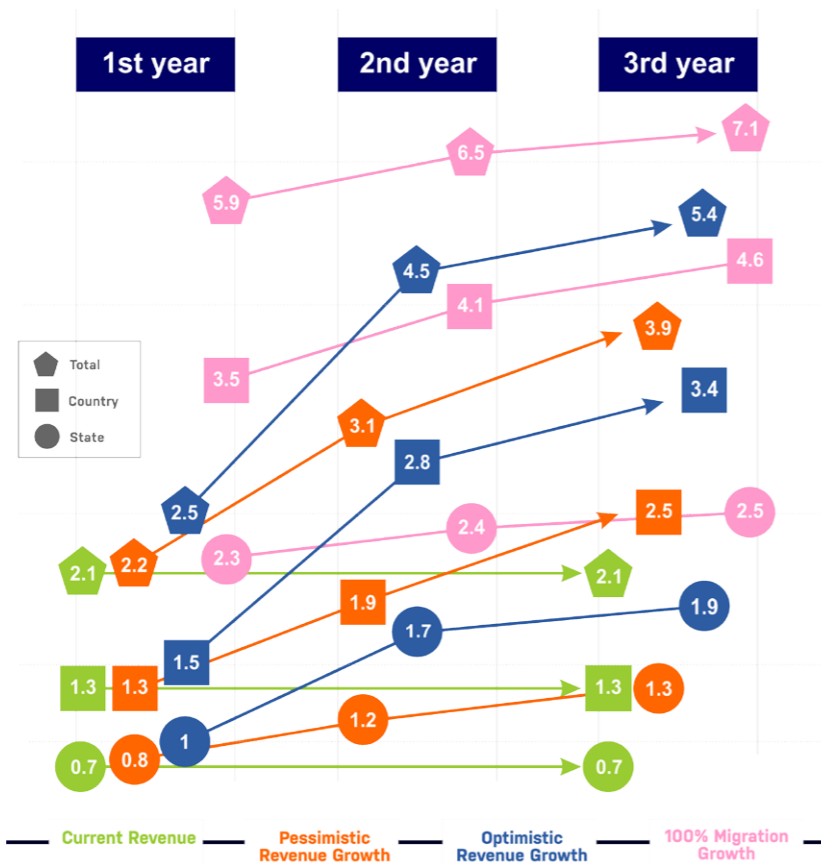
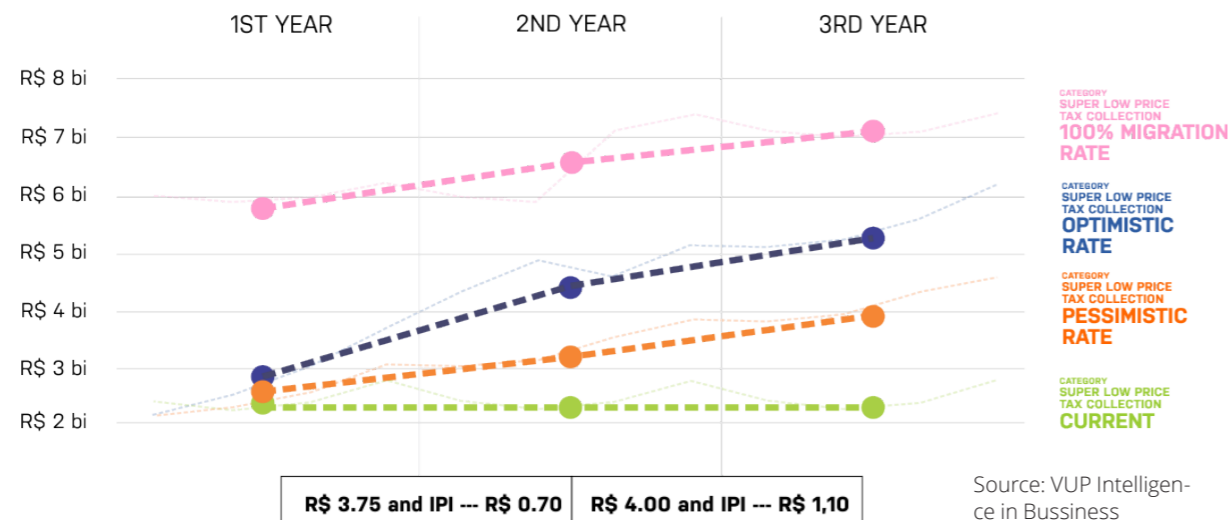


Table 14 - Progressive anual migration from smuggling to the formal market

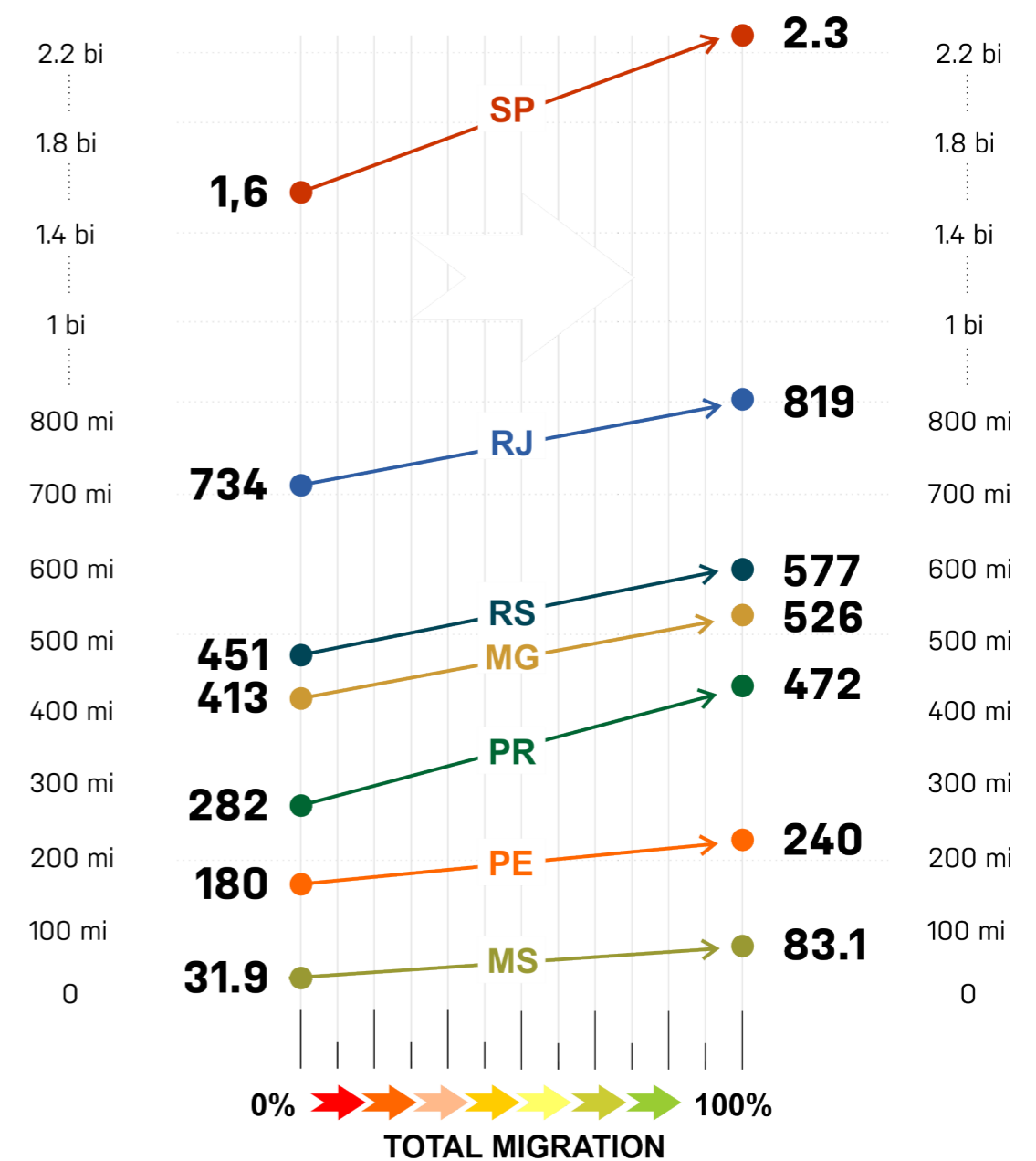


Source: VUP Intelligen-
ce in Bussiness

If we analyze the revenue generated by the States alone, we can see that the increase is even more significant, as we can verify in the figure below where we present the numbers simulated for the states that have the highest illegal cigarette trade rates in Brazil, only considering the average 29.5% ICMS and the final price of R\$ 4,00 for the combat product.

Figure 7 - Revenue increase projection per State

The increase of smuggling into the Cigarette ICMS Tax Collection (R\$)



5.1 bi → BRAZIL → 7 billion

Source: Elaborated by us with the projection calculus based on the current collection amounts and the smuggling rates in each of the states.

FINAL CONSIDERATIONS

It is observed that the great challenge of the Government nowadays is not only to reduce tobacco consumption in general, being indifferent to the consumption which is not shown in official numbers, but to reduce the consumption of illegal cigarettes as well. Given that consumers are willing to smoke, they will continue trying to fulfill their needs with smuggled cigarettes, not really caring about the effects this on their health, because it is not only a matter of health, but it is a matter of individual consciousness.

The measures which would possibly bring better results to the Government in this regard would be the ones related to tax reforms that are grounded in the Brazilian market, the ones that take into consideration the terrible impacts caused by the consumption of the illegal products, both on health and on the economy of the country. Also the Government should take actions which would make these smuggled goods less attractive, like adopting measures for the national industry to be able to compete with the illegal market.

When the Government tries to fight against tobacco consumption by increasing the price of cigarettes, it has to be very cautious and consider the serious damage that can be done to the national economy. Government policies must be balanced so that the reduction in consumption is a conscious thing, founded on planned measures which do not affect the national industry, which is responsible for creating jobs and keeping the economy going. Also, the Government must provide support for those who consciously decide to reduce or stop tobacco consumption.

Usually, when the price of a product increases a lot and consumers' income remains the same or decreases, there is a natural tendency to substitute that product for another one within these conditions. In the case of cigarettes, the National Policy of Minimum Price does not allow the legal market to have a similar product with a lower price. But as we saw throughout this study, the current policy is indirectly contributing to the economic lack of balance in the country and stimulating illegal activities.

These economic and social problems created by the smuggling of cigarettes affect the lower classes and consequently those who depend more on the services that are financed by the State. This ends up creating more unemployment, violence and underdevelopment.

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ANNEX I

FUNDAMENTAL RIGHTS AND GUARANTEES: consumers and the rights to health and security.

The Federal Constitution of 1988, which sanctioned the Brazilian democracy, established consumer protection once and for all, because it included it in several important segments for the support of sovereignty. Consumer protection became then present in the constitution as an individual guarantee and as a fundamental principal of the economic order.

Thus, article 5 of the federal constitution states that “Everyone is equal before the law, with no distinction whatsoever, guaranteeing to Brazilians and foreigners resident in the country the inviolability of the rights to life, liberty, equality, security and property”. Among these standards of the Democratic Rule of Law, also known as fundamental guarantees, the Federal Constitution of 1988 expressly stated in its section XXXII that “the State will provide, in accordance with the law, consumer protection”.

As if ‘consumer protection’ being considered part of the most important rights (fundamental guarantees) according to our Constitution were not enough, the lawmakers insisted on including this duty of protection in the part of the Constitution which rules the economic and financial order (GENERAL PRINCIPLES OF THE ECONOMIC ACTIVITY - Art. 170. The economic order, founded on the appreciation of the value of human work and on free enterprise, is intended to ensure everyone a life with dignity, in accordance with the dictates of social justice, with due regard for the following principles: V - consumer protection).

In this sense, it is possible to infer that consumer protection is a Constitutional commandment that is very important to the establishment of the Democratic Rule of Law. Thus, it is a matter which both the Government and society must pay full attention to.

Due to this, there was the creation of the Consumer Protection Code (CDC, Law # 8.078/90), which states in its first article that it is a law of public order and social interest and this is its importance. This is to say, that

is a non-derogable law of a collective social character.

Therefrom, health is a responsibility of the State that is supported by the Constitution, because health is a fundamental social right deriving from the principle of dignity of the human person. This right, contrary to what we might think, is not limited to the functioning of an efficient hospital system. Its effects reach those protected by the Consumer Protection Code.

The sixth article of the CDC, which lists the “basic consumer rights”, states in section I: “the protection of the consumer’s life, health, and safety against any risks arising from any practices when buying supplied products and services considered harmful or dangerous”.

Article 8 of the CDC states that “Products and services made available in the consumer market will not bring risks to consumers’ health or safety, except those considered normal and predictable as a result of the very nature of the product or service. Suppliers are obliged, under all circumstances, to provide the adequate necessary information about such products and services.”

The obligation to provide information is stated in Article 9 of the CDC: “Those supplying products and services that present potential health or safety risks or danger must clearly and extensively inform this risk or danger, as well as any other measures that may be necessary, on a case-by-case basis”.

And this is what originates the need for the State to intervene, through ANVISA (which is a special independent body within the scope of the Ministry of Health that has the goal of coordinating and developing policies for Sanitary Regulations in the country, which are then defined by the Ministry and ratified by the National Health Council). The institutional guideline of ANVISA is “to promote the health of the population, through the sanitary control of production and the commercialization of products and services that are subject to the agency, including the control over facilities, procedures, inputs and technologies related to such products and services, as well as the control over ports, airports and ground crossings”.

In short, ANVISA aims at promoting social welfare while protecting the health of the

population and ensuring the sanitary safety of products and services.

Indeed, if we want to achieve the so called welfare state, we urgently need to stop the illegal trade of smuggled cigarettes in Brazil.

Four in ten cigarettes that are consumed by the Brazilian population comes from smuggling, and these products are not examined by ANVISA because they do not go through any control procedures, what certainly increases the risks for consumers' health.

In a research presented in the State University of Ponta Grossa (a Master's Degree Thesis on Applied Chemistry - Area of Concentration: Chemistry), by Cleber Pinto Silva (advised by Prof. Dr. Sandro Xavier de Campos), there were determinations by Flame Atomic Absorption Spectrometry (FAAS) of copper (Cu), manganese (Mn), zinc (Zn), cobalt (Co), chrome (Cr), cadmium (Cd), lead (Pb), iron (Fe) and nickel (Ni), Graphite Furnace Atomic Absorption Spectrometry (GFAAS) for arsenic (As) in thirty of the most smuggled cigarette brands in Brazil. More than that: these elements were analyzed in organs of two hybrid varieties of tobacco, along with the soil and fertilizers, so that we could see the differences in the absorption of these elements during the cultivation period of 90 days.

This research also involved a complementary study that was intended to rank these thirty smuggled cigarette brands by gravimetric determinations of dirtiness, pH of the tobacco and pH of the lateral smoke. The results showed that 65% of the smuggled cigarette brands have high concentrations of toxic elements, with numbers that go up to eleven times higher than the concentrations of Cr, Ni, Cd and Pb in legal cigarettes in Brazil. 46.6% of these brands present an average concentration of As that is twice higher than the concentration that is reported in literature for legal cigarettes in Brazil. As far as quality

tests, 50% of the brands presented high humidity levels, 96% presented high ash levels and 90% of them presented alkaline pH smoke. Concerning the dirtiness tests, 81.2% of the brands presented some sort of contaminants such as fungus, fragments of insects, grass or mite at a higher level than the one established by ANVISA. These characteristics reveal there is toxic contamination deriving from inadequate hygiene practices, which can contribute to the contamination of tobacco through chemical and biological agents.

In short, the consumption of this type of cigarette which is not inspected by ANVISA can potentially harm consumers' health.

The systematic increase in the search for the Health Units of the States in the country is a reflex of the consumption of smuggled cigarettes, which are not only harmful, but also due to their bad quality and lack of inspection by the competent bodies that must protect consumers' health and safety.

It is not news that the economic crisis through which the Brazilian public health system (SUS) goes through (which is a structural crisis, with lack of medicines, equipment, good management and qualified personnel) is something constant and growing.

It has already been mentioned that public health is considered a fundamental right according to the Federal Constitution of Brazil - CF88, articles 196 to 200. This principle shows how SUS is (or should be) a crucial instrument for the enforcement of our constitution regarding the protection of the individual rights and guarantees to health, which is connected to the right to life: an immutable clause and the most valuable legal interest of human beings.

In this sense, the World Bank released data (published by the Estado de São Paulo newspaper and available online) indicating that Brazil reduced its investments on SUS in

approximately 10 billion reais in the last 10 years.

Contrary to its constitutional duty of protecting the health of the population, it is clear that government authorities are neglecting the protection of this fundamental guarantee.

The well-known Magazine called APM, in its edition # 649, page 8, of October 2013, published that SUS is fragile both in its basic services (primary health care units) and in its high complexity services (oncology, hematology, hospital treatment).

The Ministry of Health created the IDSUS (a report on the performance of SUS) in 2012 to evaluate the access to and the quality of the health services provided in the country and this report has to be released every three years. Between the years of 2008 and 2010, the general score of the system was 5.47, considering 24 indicators of which 14 were related to the access and 10 had to do with the effectiveness of the services. However, 20% of the Brazilian municipalities (27% of users) did not achieve grade 5, on a scale of 0 to 10. And the worst part: only 2% of Brazilians live in municipalities where the grade is around 7. This should be the minimum grade SUS should get, considering the quality of life of the population, as stated by a member of the government's technical team to the reporter of Folha de São Paulo at the time of the release of the report.

In short:

The illegal and uncontrolled cigarette smuggling system directly affects its final consumers (besides stimulating organized crime and its terrible consequences to society; harming the government's tax revenue; and hurting free competition of national manufacturers).

Consequently, the health of consumers is harmed, because these smuggled products certainly do not go through any sort of proper quality control and are not inspected by

national authorities, so they are not licensed and do not comply with the guidelines established by ANVISA. As a result, we see the violation of the public order and social interest law (CDC, article 1) and this is a major crime against consumer relations and against public health, not to mention the economic and smuggling crimes themselves.

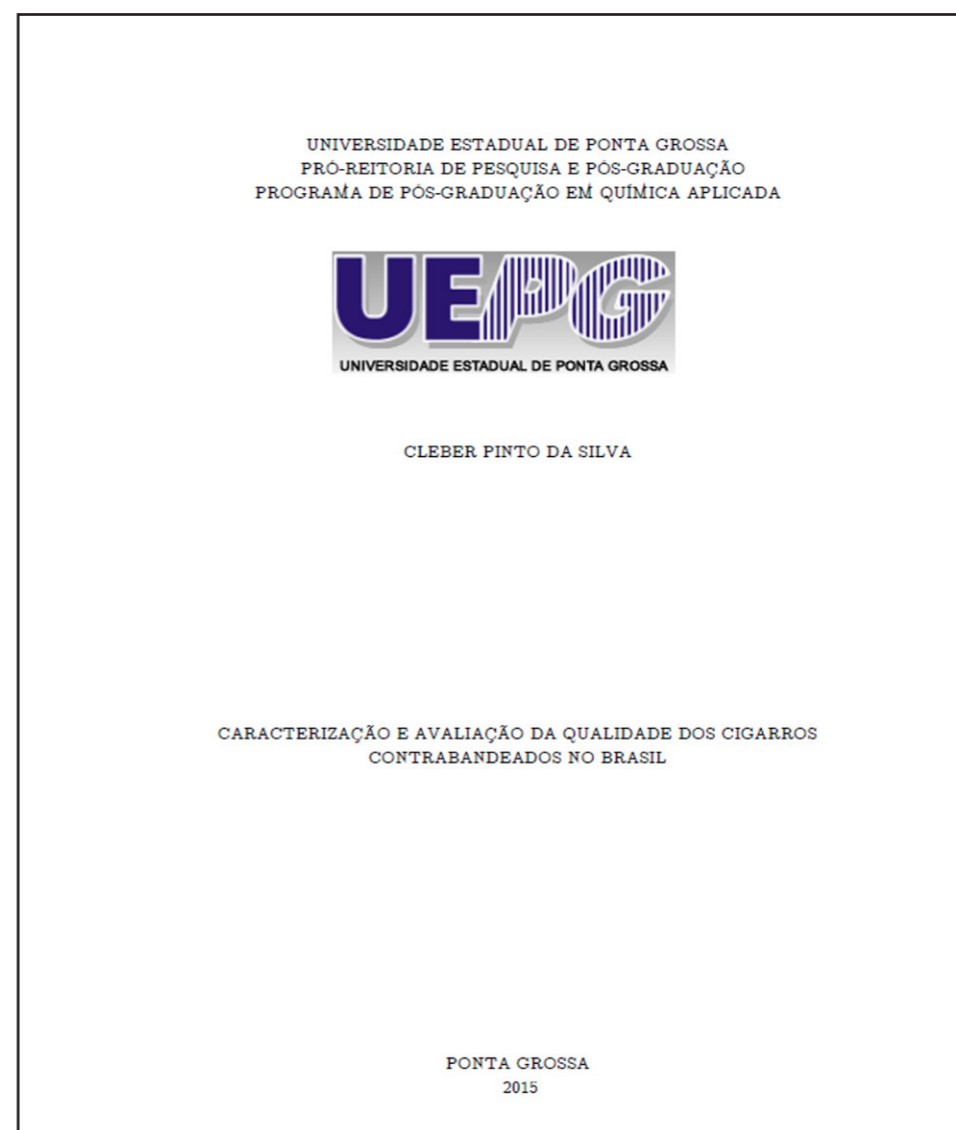
But it is not enough: besides the damages to the national taxation system, to free competition, to consumers' health, there is the damage to the health system of the country which gets more and more crowded with sick people who consume such low quality products.

All these consequences together result in the stimulation of the national economic crisis and many billions that could be invested

in health, public security and others are lost every year by society and the national economy.

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ANNEX II



LAUDO DE EXAME DE QUALIDADE MICROBIOLÓGICA

Foram analisadas 20 (vinte) amostras de cigarros encaminhadas no mês de novembro/2009 ao Laboratório de Bacteriologia e Micologia Clínica da Universidade Estadual do Oeste do Paraná, localizado na sala 05 do bloco de laboratórios no campus de Cascavel. As amostras encaminhadas constavam de 02 (duas) unidades de maços de cigarros de cada marca fantasia devidamente fechados sem qualquer adulteração no laque.

Foi realizada pesquisa de: Contagem de bactérias mesófilas e Contagem de bolores e leveduras. Os resultados demonstrados na tabela abaixo são expressos em UFC/g de produto.

Amostra	Marca fantasia	Contagem de mesófilos (UFC/g)	Contagem de bolores e leveduras (UFC/g)
01	Classic suave	6,5 x 10 ⁷	7,0 x 10 ⁴
02	Bill lights	6,5 x 10 ⁷	9,0 x 10 ⁴
03	Bill filter king size	6,8 x 10 ⁷	1,4 x 10 ⁵
04	Rodeo king size	7,1 x 10 ⁷	9,0 x 10 ⁴
05	Hills	8,2 x 10 ⁷	2,3 x 10 ⁵
06	Plaza suave	2,9 x 10 ⁸	2,0 x 10 ⁴
07	Polo Club suave	3,3 x 10 ⁷	8,0 x 10 ⁴
08	Euro Star suave	3,1 x 10 ⁷	1,0 x 10 ⁴
09	51 suave	2,3 x 10 ⁸	8,0 x 10 ⁷
10	Brodway 100's suave	3,8 x 10 ⁶	1,0 x 10 ⁴
11	Colvert light 100	4,6 x 10 ⁶	2,0 x 10 ⁴
12	Palermo	1,6 x 10 ⁸	2,4 x 10 ⁴
13	Blitz Mild	1,3 x 10 ⁷	1,0 x 10 ⁴
14	Fox light	2,6 x 10 ⁷	1,0 x 10 ³
15	Mill milds king size	3,8 x 10 ⁷	1,0 x 10 ⁴
16	Te American Blend	3,0 x 10 ⁷	1,0 x 10 ³
17	Eight king size	1,1 x 10 ⁸	1,0 x 10 ³
18	Paladium	5,3 x 10 ⁷	1,0 x 10 ³
19	Gudang Garan filter clove cigarettes	1,0 x 10 ⁵	1,0 x 10 ³
20	Euro Mild king size	6,2 x 10 ⁷	1,0 x 10 ³

Cascavel, 15 de junho de 2010

Nadir Rodrigues Marcondes
Profª Dra Nadir Rodrigues Marcondes

LAUDO DE EXAME MACROSCÓPICO

Foram analisadas 05 (cinco) amostras de cigarros encaminhadas no mês de novembro de 2009 ao Laboratório de Bacteriologia e Micologia Clínica da Universidade Estadual do Oeste do Paraná, localizado na sala 05 do bloco de laboratórios no campus de Cascavel. As amostras encaminhadas constavam de 02 (duas) unidades de maços de cigarros de cada marca fantasia devidamente fechados sem qualquer adulteração no laque.

Foi realizada análise macroscópica de amostras contendo 10,0 (dez) gramas de cigarros de cada marca. Os resultados demonstrados na tabela abaixo são expressos em unidades/10,0g de produto.

Amostra	Marca fantasia	Unidades/ 10g do produto
01	Classic suave	35 (trinta e cinco) filamentos de plástico 05 (cinco) fragmentos metálicos 05 (cinco) fragmentos de insetos
02	Bill lights	15 (quinze) fragmentos metálicos 10 (dez) filamentos de algodão 03 (três) filamentos de plástico 05 (cinco) fragmentos de tecido vegetal diferentes da folha do tabaco
03	Bill filter king size	15 (quinze) filamentos de plástico
05	Hills	06 (seis) fragmentos metálicos 10 (dez) fragmentos de insetos
08	Euro Star suave	15 (quinze) filamentos de plástico 04 (cinco) fragmentos de tecido vegetal diferentes da folha do tabaco

Cascavel, 13 de agosto de 2010

Nadir Rodrigues Marcondes
Profª Dra Nadir Rodrigues Marcondes

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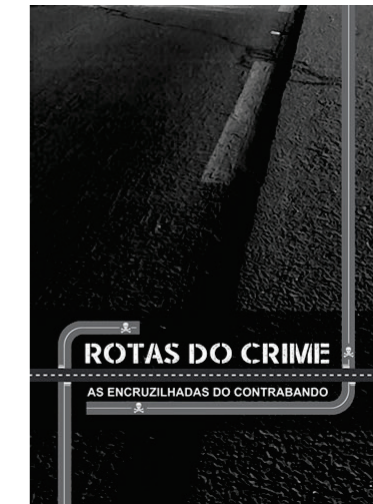
The Smuggling Cost



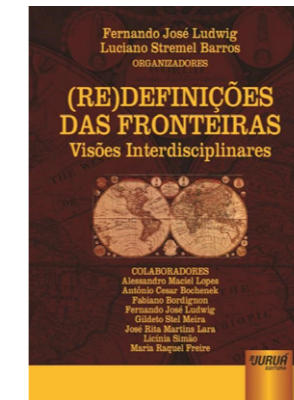
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