

Tobacco use and tobacco taxation in El Salvador¹

El Salvador became a Party to the WHO Framework Convention on Tobacco Control on October 19, 2014.

Tobacco control legislation

On 23 June 2011, the Congress of El Salvador passed a national tobacco control law² that included 100% smoke-free policies. On 18 July, almost a month after the approval, President of the country (in 2009-2014) Mauricio Funes vetoed the law. As part of his arguments to support the veto the president repeated well-established tobacco industry claims in the media that *"individual freedom is diminished, (the law) also harms economic freedom of the stakeholders that participate in the market, negatively affecting not just the tobacco industry"*. Tobacco control advocates with support from international organizations successfully pressured the legislators to overturn the veto, which the Congress of El Salvador did on 23 July. However, the President refused to issue the regulations of the law and then introduced an amendment in Congress. Surprisingly, on November 17, the same legislators that had overridden the veto to keep the 100% smoke-free law, changed their position and approved the amendment³, a huge success for the tobacco industry [1].

Other examples of tobacco industry interference in tobacco control policies in Latin America are widely known [2]. For instance, in 1998, Philip Morris representatives presented model legislation to the president of the Congress of El Salvador and then worked with the minister of health to get approval. Another example is related to the pressure on the ministry of education regarding youth education program "I have courage". In 1999, the "Courtesy of Choice" program was pushed in several countries of Latin America including El Salvador [3].

In 2015, the Executive Decree No. 63 of May 29, 2015, was issued⁴ signed by the President Salvador Sanchez and the Minister of Health Elvia Menjivar. This Decree eventually established regulations of the Tobacco Control Law. The Decree has forbidden smoking or keeping lit tobacco products and their derivatives that emit smoke, gases or vapors, in any forms or devices, including electronic cigarette and pipe, in the following places:

- Workplaces, including access areas, transit zones, motor vehicles and parking;
- Areas where events, shows, activities of massive concentration of people take place, including political, sports, recreational, religious, cultural, scientific, commercial events;
- Areas or establishments where food is processed, prepared, tasted or sold;
- Shopping centers, casinos, nightclubs, bars, restaurants, and cafeterias;
- Bus terminals, bus stops, as well as any means of public transportation;

¹ Prepared by a World Bank Group Tobacco Control Program team under the overall coordination of Patricio V. Marquez, Lead Public Health Specialist, WBG. November 2018.

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http://apps.who.int/fctc/implementation/database/sites/implementation/files/documents/reports/salvador_2014_annex3_tobacco_control_act_2011.pdf

³ <https://www.tobaccocontrolaws.org/files/live/EI%20Salvador/EI%20Salvador%20-%20Decree%20No.%20914%20-%20national.pdf>

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<http://www.jurisprudencia.gob.sv/VisorMLX/Documento/Documento.aspx?data=EMBQcpWTU/OXeveNvi7y+ddU3LThVU/ztbSHaWHBLEQS1mHhLVL9HEjZWTyzE6kO3wBELGKuYc4Zia44xhUgSX8CE6GOJkIFqcFR3aQbbfZCKEXK1A4VOGUAUMs4n7hy9C1agwdMKUSXdjB7icEUBaf3YAqDnw/UL+BqKoi0qw+SqkjJeXPDqpv4wmuAOKNNQ==>

- Land, sea, and air transport vehicles with origin and destination in national territory;
- Governmental facilities, autonomous institutions, and non-governmental public service entities;
- Public and private educational centers of all levels.

Most kinds of tobacco advertising are forbidden, except point of sale, free distribution and internet sales.

There are 10 kinds of health warnings that cover 50% of both front and rear principal display areas [4].

In 2005, the Law on The Solidarity Fund for Health (FOSALUD) was adopted⁵. The Fund receives up to 35% of tax revenues from tobacco, alcoholic beverages, arms and ammunition to implement preventive campaigns to reduce the consumption of tobacco, alcohol, and to provide health care for the cessation of tobacco and alcohol⁶. Tobacco control education was reported in some medical schools [5]. In 2016, the Government's expenditures on tobacco control were 800,000 USD and the Fund had 44 staff workers [4]. As reported in February 2018⁷, FOSALUD has got a two-year grant from the Bloomberg Initiative to Reduce Tobacco Use. The strategic partnership aims to expedite reductions in tobacco use by developing a national tobacco control policy, strengthening tobacco control legislation, and promoting tobacco tax reform. In March 2018, the FOSALUD received the Bloomberg Philanthropies Award for Global Tobacco Control⁸. El Salvador passed comprehensive smoke-free legislation in 2015, made possible by FOSALUD's leadership. FOSALUD not only conducted evidence gathering (e.g., air quality monitoring, development of fact sheets, etc.) to support advocacy for the law in its initial phases but engaged the international community for help when tobacco industry interference became evident.

In 2016, the WHO FCTC Secretariat conducted needs assessment mission to El Salvador [6]. In 2017, it was reported⁹ that the Government was going to develop a national tobacco control plan with assistance from specialists of the United Nations Development Program and the World Health Organization.

Tobacco consumption

The estimated prevalence of smoking, stratified by sex, for adults (> 15 years), in El Salvador in 1988 was 38.0% among men and 12.0% among women [7], while it was not clearly stated whether current or lifetime smoking had been referred to.

According to published international estimates [8], the age-standardized adult smoking prevalence in El Salvador decreased in 1980-2012 from 11.3% to 9.5% and in 2012 it was 18.1% among men and 2.5% among women.

⁵

http://apps.who.int/fctc/implementation/database/sites/implementation/files/documents/reports/el_salvador_2016_annex9_law_for_constitution_of_solidarity_fund_to_health_2005.pdf

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http://apps.who.int/fctc/implementation/database/sites/implementation/files/documents/reports/salvador_2014_report.pdf

⁷ <https://www.theunion.org/news-centre/news/el-salvador-launches-collaboration-with-the-union-to-step-up-implementation-of-the-who-framework-convention-on-tobacco-control>

⁸ <https://www.bloomberg.org/blog/2018-bloomberg-philanthropies-awards-global-tobacco-control-meet-winning-organizations/>

⁹ <http://www.who.int/fctc/mediacentre/press-release/fctc2030-el-salvador/en/> ;

<https://ph.invertalia.net/news/the-government-of-el-salvador-will-develop-a-national-plan-for-tobacco-control-10803>

According to the Household Survey, conducted in 2005¹⁰ among persons 12-71 years old, smoking prevalence was 21.5% among men and 3.5% among women.

WHO El Salvador country profiles on non-communicable diseases [9] and cancer [10] refer to the survey conducted in 2011 with the revealed prevalence of current smoking 24.2% among men and 3.2% among women.

National Alcohol and Tobacco Survey was conducted in 2014¹¹ among adult population (18 years old and older). It revealed that the prevalence of ever smoking was 35% (59% among men and 16% among women), while the prevalence of current (during the last 30 day) tobacco use was 8.8% (16.9% among men and 2.2% among women). However, 32% of current smokers used less than one cigarette a day and they can be considered occasional smokers. So the prevalence of daily smoking in 2014 can be recalculated as $8.8\% \times (1 - 0.32) = 6\%$. Among current smokers, 45.1% reported that they smoke 1-5 cigarettes a day; 16.5% 6-10 cigarettes a day and 5.5% 11-20 cigarettes a day. Smokers usually underestimate the number of smoked cigarettes, so we assume that those who reported smoking 1-5 cigarettes a day actually smoked 5 cigarettes a day and other two groups smoked 10 and 20 cigarettes a day respectively. The calculated average daily cigarette consumption per daily smoker equals 7.5 cigarettes. There were 4 million adult persons in El Salvador in 2014 and 6% of them or 0.24 million were daily smokers. The calculated annual consumption is $0.24 \times 7.5 \text{ cigarettes} \times 365 \text{ days} = 657 \text{ million cigarettes}$.

MICS [11] was conducted in El Salvador in 2014 among women aged 15-49. Along with other indicators, the survey measured the prevalence of lifetime use of any tobacco, including smoked and smokeless forms, which constituted 14.7% on average with higher prevalence among the urban women (18.6%) and lower among rural ones (7.7%) and significant difference between regions. Current tobacco use (measured as any use within the last month before the survey) was pertinent to 1.6% of women while urban women were current tobacco users four times more likely (2.2%) than rural ones (0.5%).

Tobacco use among youth

In a study conducted in 1994 [12], 25.5% of adolescents aged 12-19 years were reported to be ever tobacco smokers.

A study based on the results of Youth Risk Behavior Survey (YRBS) conducted in 1999 among people aged 14-17 years [13] reported that the prevalence of lifetime cigarette use constituted 20.8% among girls and 46.8% among boys and the prevalence of current cigarette use - 8.1% and 17.5% respectively. Similar and probably overlapping study [14] reported that the prevalence of lifetime cigarette use constituted 19.4% among girls and 45.1% among boys and the prevalence of current cigarette use 7.4% and 19.1% respectively.

According to the surveys conducted among adolescents aged 10-18 years in 2000 within PACARDO research project [15], 30% of study participants in El Salvador have used tobacco (probably at least once in their lifetime).

A survey of 290 adolescents and young adults in high-risk communities in the Greater San Salvador Metropolitan area conducted between June and November 2011 [16] measured lifetime cigarette use for adolescents and young adults as 83.5% and 76.5%, respectively.

¹⁰

http://apps.who.int/fctc/implementation/database/sites/implementation/files/documents/reports/salvador_2014_report.pdf

¹¹ <http://www.fosalud.gob.sv/download/encuesta-nacional-de-alcohol-y-tabaco-2014/#>

The Global Youth Tobacco Survey (GYTS) was conducted in El Salvador in 2003¹², 2009 [17] and 2015 [18].

Table 1. Prevalence of current tobacco use (at least once during the last 30 days) among adolescents aged 13-15 years in El Salvador, GYTS

	2003	2009	2015
Currently use any tobacco product	19,0	14,6	13,1
<i>boys</i>	24,4	18,2	15,3
<i>girls</i>	15,4	11,0	10,7
Currently smoke cigarettes	14,0	9,1	9,9
<i>boys</i>	18,4	11,2	11,4
<i>girls</i>	10,9	7,1	8,2

Tobacco use and cigarette smoking among young people substantially declined between 2003 and 2009, but almost did not change between 2009 and 2015.

Tobacco growing

According to the FAO database¹³, raw tobacco production in El Salvador reached maximum (more than 4,000 tons a year) in the early 1980s, then it declined to about 700 tons in early 1990s and later it increased. In 2012-2016, annual raw tobacco production was about 1,700 tons.

Tobacco turnover

Following the closure of BAT cigarette factory in 1997, El Salvador has been completely supplied by import¹⁴. According to the UN database¹⁵, cigarette export (actually re-export) is rather small and cigarette turnover (import minus export) is almost equal to import. In 2002-2009, annual cigarette turnover was about 1.5 billion cigarettes. Then it declined almost every year to about 0.7 billion cigarettes in 2016 (Fig. 1). El Salvador had the lowest per capita cigarette consumption in Central America in 2005 when it was estimated at 455 for the year¹⁶.

¹² <https://nccd.cdc.gov/GTSSDataSurveyResources/Ancillary/DownloadAttachment.aspx?ID=217>

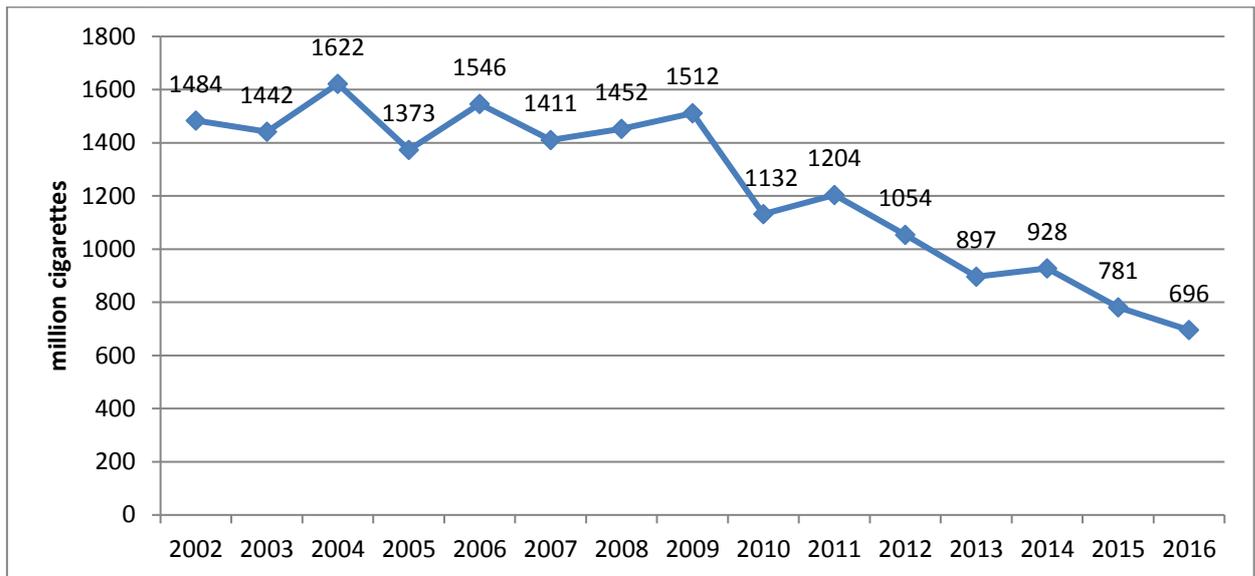
¹³ <http://www.fao.org/faostat/en/#data/QC>

¹⁴ <https://view.joomag.com/reportsweb-cigarettes-in-el-salvador-2017/0080859001497643790>

¹⁵ http://data.un.org/Data.aspx?q=cigarettes&d=ComTrade&f=_11Code%3a25%3bcmdCode%3a240220

¹⁶ <http://www.tobaccointernational.com/1007/feature2.htm>

Figure 1. Cigarette turnover (import minus export) in El Salvador. Source: UN database.



Cigarette prices

According to the WHO Global Tobacco Control reports [19], the price of the most popular cigarette brand in El Salvador increased from 1.4 USD (20 cigarettes pack) in 2008 to 1.75 USD in 2010 and 1.95 USD in 2012 or by 39% in four years. In 2014 and 2016, the price was 2.0 USD.

In 2014 and 2016, the price of Marlboro was 2.75 USD per pack and it increased to 3.0 USD in 2018¹⁷.

Ramos et al [20] estimated the real cigarette price trends in El Salvador in 2000-2012 using nominal price data from the General Directorate of Statistics and Census (DIGESTYC) and deflated by the consumer price index (CPI). In 2000-2009, the index of real cigarette price was rather stable at the level of 90-95%, meaning that the increase in cigarette price was below the inflation. In 2010, the real price index reached 120% and it kept at such level in 2011-2012.

According to the official consumer price index bulletins¹⁸, cigarette prices were 24.2% higher in June 2011 than in December 2009, while the general CPI (inflation) was 7.3%. In 2012-2016, cigarette price growth in El Salvador exceeded both inflation and the GDP growth (Table 2).

¹⁷ https://www.numbeo.com/cost-of-living/country_result.jsp?country=El+Salvador

¹⁸ <http://www.digestyc.gob.sv/index.php/temas/ee/ipc/indice-de-precios-al-consumidor.html>

Table 2. Consumer price indices for tobacco and all items (official bulletins), average monthly household incomes (annual reports¹⁹) and GDP annual change (World Bank Data²⁰) in 2010-2016

	2010	2011	2012	2013	2014	2015	2016	Total increase in 2010-2016, %
CPI tobacco (December previous year = 100)	119*	108*	107*	104,0	106,7	104,4	106,8	70,6
CPI all items (December previous year = 100)	102,1	105,1	100,8	100,8	100,5	101,0	99,1	9,6
The average monthly income of households, USD	479	487	507	556	540	539	546	
Annual income change (previous year = 100)	96,2	101,7	104,1	109,7	97,1	99,8	101,3	9,6
GDP per capita growth (previous year = 100)	100,9	101,8	101,4	101,4	100,9	101,8	101,9	10,4

*estimated values, as real data is not available

In seven years (2010-2016), cigarette prices increased by 70.6%, while the inflation rate was 9.6%. Average household income increased by 9.6% and GDP per capita based on constant local currency increased by 10.4%. It means that cigarettes became much less affordable during this period.

Tobacco taxation

Before 1995, El Salvador used ad valorem excise rates: 52%, 50% and 42.5% for different types of cigarettes. According to the provisions of Decree 52 of May 22, 1995, the ad valorem rate was unified as 33% which is calculated based on the retail price excluding the Value Added Tax [21].

In December 2004, Decree No 539 was adopted²¹, which added specific excise tax (0.005USD per 1 cigarette or 0.1USD per pack) and increased ad valorem rate to 39%, which should be calculated based on the retail price excluding VAT and specific excise. Of the final retail price, ad valorem tax constituted about 25%.

Decree No 235 of 21 December 2009²² increased the specific excise to 0.0225 USD per 1 cigarette, or 0.45 USD per pack, while it did not change the ad valorem excise rate for cigarettes. For cigars and cigarillos, ad valorem rate is 100%.

All cigarettes in the country are imported; the import tariff (DAI) is 30%²³. VAT rate in El Salvador is 13%.

¹⁹ <http://www.digestyc.gob.sv/index.php/temas/des/ehpm/publicaciones-ehpm.html>

²⁰ <https://data.worldbank.org/indicator/NY.GDP.PCAP.KD.ZG>

²¹ http://www.mh.gob.sv/portal/page/portal/MH_IMPUESTOS/Mis%20img/lispt.htm

²²

http://www.transparenciafiscal.gob.sv/downloads/pdf/DC5821_Ley%20de%20impuesto%20sobre%20el%20tabaco.pdf

²³

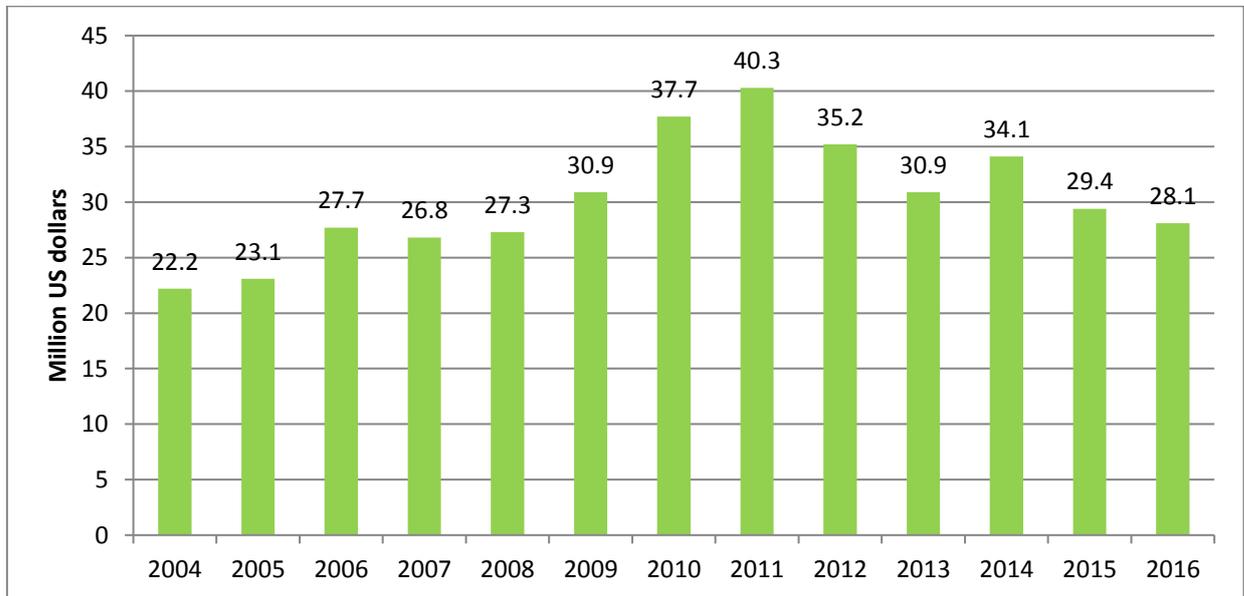
http://www.mh.gob.sv/portal/page/portal/PMHAntiguo/Temas/Operaciones_Aduaneras/Proceso_Despacho/Proceso_Aduanero/Impuestos%20a%20pagar

Tobacco excise revenue

Data on tobacco excise revenues is presented in reports of the Ministry of Finance^{24 25}.

After the excise increase in December 2004, the revenue increased from 22.2 million USD in 2004 to 27.7 million USD in 2006 (Figure 2), despite the decline in cigarette turnover, as average excise burden increased. After the excise increase in December 2009, the revenue increased from 27.3 million USD in 2008 to 40.3 million USD in 2011, but then it gradually decreased to 28.1 million in 2016.

Figure 2. Tobacco excise revenue in El Salvador.



We calculated average excise per pack of 20 cigarettes using the MOF data on revenue and UN database data on import and export (Table 3). The specific rate was increased in 2009 by 0.35 USD per pack, while the average rate increased by 0.29 USD in 2008-2010. It was apparently caused by the decrease of the average net-of-tax part of the price, which is used to calculate the ad valorem excise. Probably, some smokers switched to cheaper brands after the tax increase.

Table 3. Tobacco excise revenue and cigarette turnover.

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Tobacco excise revenue, million USD	22,2	23,1	27,7	26,8	27,3	30,9	37,7	40,3	35,2	30,9	34,1	29,4	28,1
Turnover, million cigarettes	1622	1373	1546	1411	1452	1512	1132	1204	1054	897	928	781	696
Calculated average excise, USD per 20 cigarettes pack	0,27	0,34	0,36	0,38	0,38	0,41	0,67	0,67	0,67	0,69	0,73	0,75	0,81

In 2012-2016, the calculated average excise increased, while the excise rates were not changed. It was caused by the increase of net-of-tax cigarette price in those years. Our calculations (Table 4) revealed that average net-of-tax cigarette price (importer price + retail margin) should increase by about 50% to ensure the increase of the average excise burden from 0.69 USD to 0.81 USD per pack.

²⁴

http://www.transparenciafiscal.gob.sv/downloads/pdf/DC4672_1_Estadisticas_Tributarias_19_de_enero_2010.pdf

²⁵

http://www.transparenciafiscal.gob.sv/downloads/pdf/DPEF02000022_Estadisticas_tributarias_2010_a_2016_20_Junio_2017_b_003.pdf

Table 4. Calculations of taxes for three brands of cigarettes, USD per pack of 20 cigarettes

Price and its components		Formula	Brand 1	Brand 2	Premium brand
Importer price	A		0,21	0,34	0,90
Import duty	B	$A*0.3$	0,063	0,105	0,27
Retail margin	C		0,10	0,12	0,17
Specific excise	D		0,45	0,45	0,45
Ad valorem excise	E	$0.39*(H-D-G)$	0,24	0,36	0,86
Total excise	F	$D+E$	0,69	0,81	1,31
VAT	G	$H*13/113$	0,14	0,18	0,35
Retail price	H	$A+B+C+F+G$	1,20	1,55	3,00

Our calculations also revealed that for a premium brand, which has the final retail price 1.45 USD higher than the price of average excise brand, the total excise rate is just 0.5 USD higher, while the net-of-tax is higher by 0.61 USD.

Cigarette smuggling

In March 2017, the organization called “Crime Stoppers” presented²⁶ the results of CID Gallup study, commissioned by the North American Costarican Chamber of Commerce (Amcham). The study entitled *"From ant contraband to an elephant in the market"* claimed: *Each year El Salvador consumes up to \$940 million in cigarettes. 31 percent of those cigarettes are illegal and the numbers are growing. Legal tobacco companies are already losing more than \$291 million due to this illicit trade. Besides this loss, the country's treasury loses another \$15 million because of it.*

The study reported that the most popular illicit cigarette brands in the informal market were Modern, Pine and Esse. The study described rather complicated routes of the smuggled cigarettes: they arrive in Panama from China and from there they move, by sea, to Belize. Then cigarettes are moved via Guatemala to El Salvador²⁷. However, such complicated route with the illicit crossing of 4 borders made transportation (which includes bribes to some officials) rather expensive and such business can hardly be very profitable.

The CID Gallup manager for Latin America, Esteban Álvarez stated that poor customs control in the region is one of the factors favoring the smuggling of cigarettes, while other factors include the *increase in prices in the region due to anti-smoking laws that established taxes on cigarettes*²⁸.

The rhetoric of the CID Gallup report shows that this study was supported by the tobacco industry and its main aim is not the reduction in illicit cigarette sales, but prevention of further cigarette excise increases in the Central American countries. The study methods are not disclosed and there are strong reasons to suspect that the volumes of smuggled cigarettes have been much overestimated.

It was reported [6] that in 2014 and 2015, the General Directorate of Customs in coordination with the General Prosecutor's Office and the National Civil Police conducted destruction of 40 metric tons of cigarettes (about 40 million cigarettes) confiscated in various processes. The destruction was supported by state entities and “companies that legally import and market tobacco products”.

²⁶ <https://csiworld.org/news/illicit-trade-undermining-public-health-in-el-salvador>

²⁷ <http://elmundo.sv/el-contrabando-de-cigarros-financia-pandillas-en-el-pais/>

²⁸ <http://www.elsalvador.com/noticias/negocios/314034/cid-gallup-cigarrillos-ilicitos-financian-actividades-de-las-pandillas-de-el-salvador/>

While some illicit cigarettes are seized by Salvadorian authorities²⁹ cigarette smuggling from the neighboring countries can hardly be high as the differences in cigarette prices between countries are rather small.

Comparison of cigarette prices and taxes in El Salvador and neighboring countries

The WHO Global Tobacco Report, 2017, contains information on cigarette prices and taxes in El Salvador and other countries of the WHO Americas Region (AMRO) in 2016 [19] (Table 5).

Table 5. Cigarette prices and taxes in El Salvador and some neighboring countries in 2016, WHO report data [19]

Country	Price of a 20-cigarette pack of the most sold brand			Taxes as a % of the price of the most sold brand						% of GDP per capita required to purchase 2000 cigarettes of the most popular brand
	In reported currency	Currency reported	In US\$ at official exchange rates	Specific excise	Ad valorem excise	Total excise	Value added tax/sales tax	Total tax	Total tax, US\$	
Belize	5.00	BZD	2.50	26.0%	0.0%	26.0%	11.1%	37.1%	0.93	5.4%
Canada	10.29	CAD	7.89	57.2%	0.0%	57.2%	9.0%	66.2%	5.22	1.8%
Costa Rica	1 700	CRC	3.09	26.6%	31.2%	57.9%	11.5%	69.4%	2.14	2.7%
El Salvador	2.00	USD	2.00	22.5%	18.5%	41.0%	11.5%	52.5%	1.05	4.6%
Guatemala	16.50	GTQ	2.18	0.0%	38.3%	38.3%	10.7%	49.0%	1.07	5.2%
Honduras	44.00	HNL	1.92	19.1%	0.0%	19.1%	15.3%	34.3%	0.66	7.3%
Mexico	47.39	MXN	2.51	14.8%	38.7%	53.5%	13.8%	67.3%	1.69	3.0%
Nicaragua	50.00	NIO	1.74	22.1%	0.0%	22.1%	13.0%	35.1%	0.61	8.2%
Panama	4.25	PAB	4.25	0.0%	43.5%	43.5%	13.0%	56.5%	2.40	3.1%
United States of America	6.43	USD	6.43	37.8%	0.0%	37.8%	5.2%	43.0%	2.77	1.1%

Cigarette prices and taxes (in monetary terms) in El Salvador are lower than in all countries of the region except Honduras and Nicaragua. In terms of affordability, cigarettes are more affordable in El Salvador than in Belize, Honduras, Guatemala, and Nicaragua.

Discussion

Tobacco consumption in El Salvador has been declining since 2009: annual cigarette turnover decreased from 1.5 billion cigarettes in 2002-2009 to 0.75 billion cigarettes in 2015-2016. Calculations based on the data of the National Alcohol and Tobacco Survey conducted in 2014 also demonstrate that of the annual cigarette consumption in the country constituted about 0.7 billion cigarettes.

Smoking prevalence surveys show that smoking prevalence among adults declined in 2005-2014 as well as smoking prevalence among teenagers in 2003-2015.

National household survey reports³⁰ contain data on tobacco products expenditures only in 2007³¹ and 2016³². Over these 9 years, nominal monthly tobacco expenditures per household increased from

²⁹ <http://elmundo.sv/encuentran-nueve-mil-cajetillas-de-cigarros-dentro-de-camioneta-en-metapan/>

³⁰ <http://www.digestyc.gob.sv/index.php/temas/des/ehpm/publicaciones-ehpm.html>

³¹ <http://www.digestyc.gob.sv/index.php/temas/des/ehpm/publicaciones-ehpm.html?download=8%3Aehpm-2007>

³² <http://www.digestyc.gob.sv/index.php/temas/des/ehpm/publicaciones-ehpm.html?download=616%3Apublicacion-ehpm-2016>

10.3USD to 13.67 USD, or by 33%, but nominal cigarette prices increased in those years by at least 70% (see Table 2), so the number of consumed cigarettes should have decreased.

The main factor of the observed tobacco consumption decline was the reduction of tobacco affordability, while tobacco control policies, adopted in 2011 and implemented in 2015 also contributed to the reduction in consumption.

In 2010-2016, nominal tobacco prices increased by 70.6%, while inflation was 9.6% and household average income increased by 9.6% (see Table 3). Ramos et al [20] estimated long-term cigarette price elasticity in El Salvador as -0.9287 and income price elasticity as 0.9978. With such high elasticities, tobacco consumption could have really declined by 50% in 2010-2016.

The main factors of the cigarette affordability reduction in 2010-2016 were the following:

- 1) Economic recession: in 2009 and 2010 even nominal household income declined and in 2010-2016 there was no increase in real (inflation-adjusted) incomes in El Salvador.
- 2) Hike of specific tobacco excise rate in December 2009 increased average excise burden by about 80%, but in 18 months after the excise increase, average cigarette price increased only by 24.3%.
- 3) Then in 2012-2016 annual cigarette price growth substantially exceeded both inflation rate and income increase. As cigarette excise rates were not changed over those years, the observed price growth was only caused by pricing policy of the tobacco corporations. The recent monograph from the United States National Cancer Institute and WHO reveals that this phenomenon is also observed in other countries. It states [22]: *“Ironically, the industry engineered a greater decrease in cigarette consumption in the short term by raising prices than the government was able to achieve by increasing the excise tax alone.”*

Tobacco corporations increased their part of the price to keep profits on the declining tobacco market. However, as tobacco consumption reduction was caused not by increased tax rates, but by the increase of the industry prices, the government excise revenue declined, while the industry apparently kept its profits.

To hide the impact of their pricing policy on tobacco market, the tobacco industry used their traditional claims that tobacco sales decreased due to an alleged increase in smuggling which was inspired by “too high” excise rates. The recent CID Gallup report on tobacco smuggling is a clear example of such tobacco industry deceptive tactics. In El Salvador, the tobacco excise rates were not changed for the last eight years and they could not “inspire” smuggling over recent years. While measures against cigarette smuggling should be strengthened, concerns about smuggling should not postpone the increase of tobacco excise rates which are able both to reduce the tobacco consumption and increase the governmental revenues.

Conclusions

1. In December 2009, El Salvador substantially increased specific cigarette excise rate and this caused a 25% decrease in tobacco consumption and 30% increase in tobacco excise revenue in 2010-2011.
2. In 2012-2016, tobacco excise rates were not changed, while tobacco industry annually increased the net-of-tax cigarette price well above the inflation rate and above the population income growth. Such price policy reduced tobacco affordability and cigarette consumption continued to decline. The impact of affordability reduction was reinforced by smoke-free and other effective tobacco control policies.

3. The decline in tobacco consumption under constant tobacco excise rates caused a reduction in the governmental tobacco excise revenues.
4. There were no factors which could substantially increase cigarette smuggling into El Salvador in recent years and the observed decline in cigarette sales is caused by the reduction of cigarette consumption in the country.

Recommendations

- Specific excise rate for cigarettes should be annually increased to ensure the reduction in tobacco affordability and the increase in the excise revenues.
- When increasing specific excise rates, effective ad valorem excise rates should not be reduced. It is worth considering the issue of calculating ad valorem excise as percentage of final retail price without reducing it by VAT and the specific excise, as it is done at present. This measure can enhance the excise revenues.
- Tobacco use surveillance and monitoring should be further developed in El Salvador, including a regular collection of information on cigarette sales, prices and other economic indicators. Smoking prevalence surveys need to clearly distinguish daily, current and ever smokers and are recommended including questions on cigarette packs, which a smoker can show at the time of the interview. Such questions were used in the GATS in Ukraine and Poland and subsequently in many other countries and they helped to make a more robust estimate of cigarette smuggling into the country.
- Effective policies to counteract tobacco smuggling and other kinds of illicit tobacco sales should be implemented in line with the provisions of the FCTC Protocol to Eliminate Illicit Trade in Tobacco Products, which is recommended to be ratified by the country.

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