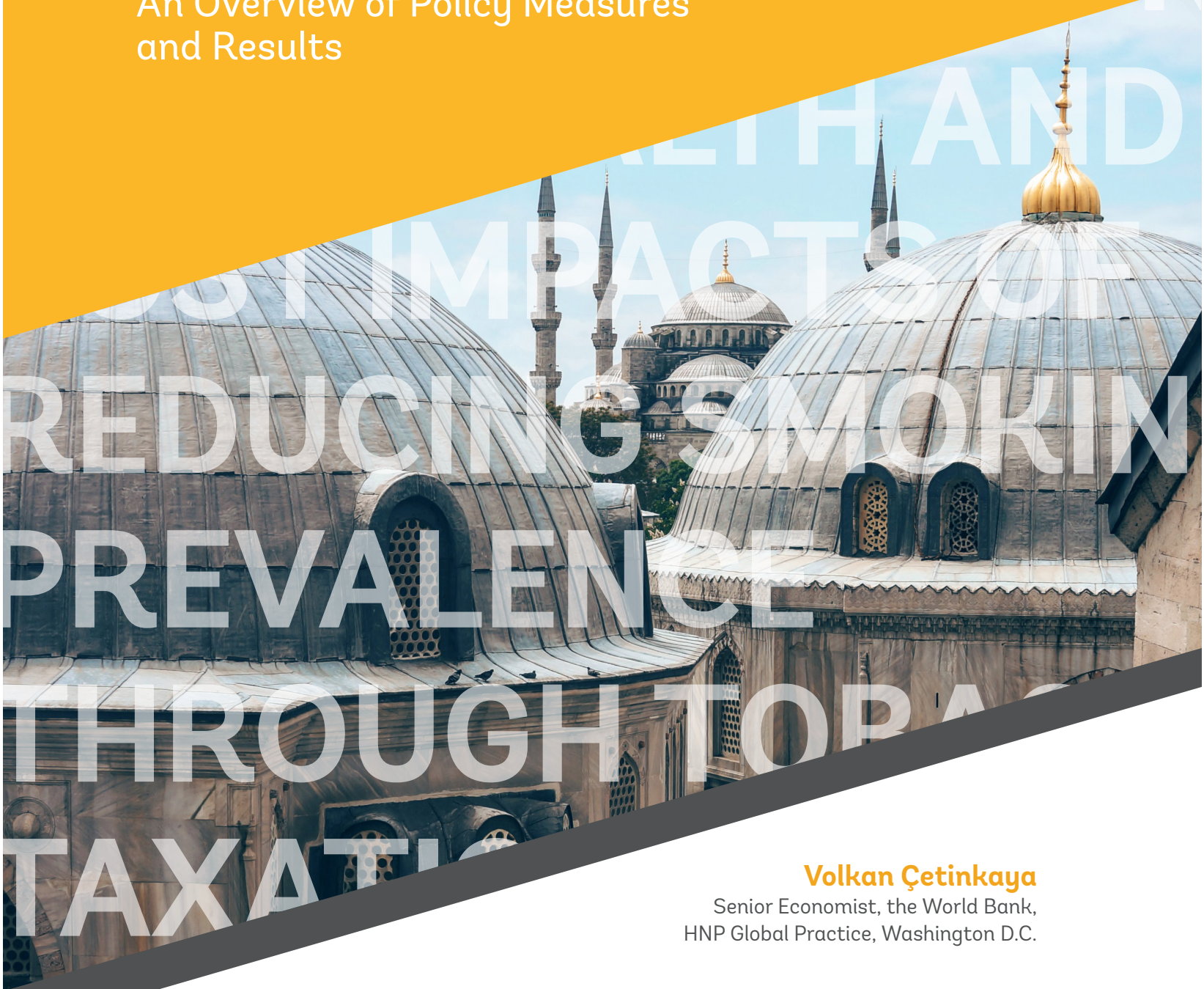


TOBACCO TAXATION IN TURKEY

An Overview of Policy Measures
and Results



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Discussion Brief



WORLD BANK GROUP

Abstract

Turkey's government increased tobacco tax revenue and lowered tobacco consumption by increasing tobacco tax rates significantly between 2003 and 2013. However, both per capita tobacco consumption and total cigarette sales in Turkey have begun to increase again in recent years. Although the recent rise in cigarette sales might be attributed to the influx of Syrian refugees into Turkey, our analysis reveals other factors. First, average cigarette price increased more slowly than inflation. Thus, cigarettes became relatively cheaper compared to other goods and services. Second, cigarette affordability has increased. Turkey's economy has grown steadily, and the demand for cigarettes has risen as the population has become wealthier over time. Turkey's experience in managing these challenges offers lessons for successful tobacco taxation. Turkey also provides a good example of the feasibility of increasing tobacco taxes, while combatting the illicit tobacco trade.

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The findings, interpretations, and conclusions in this paper are entirely those of the authors. They do not necessarily represent the views of the World Bank Group, its Executive Directors, or the countries they represent.

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01. Introduction

Turkey bears a high burden of tobacco consumption. A quarter of all deaths in the country, more than 100,000 deaths every year, can be attributed to tobacco-related diseases. About 21 million Turkish people, more than one-fourth of the country's population, currently smoke. Turkish smokers spend around 12 billion USD annually on tobacco products: four times the annual budget of the Ministry of Health (Kose 2016).

The burden of tobacco consumption and related health costs has been a powerful motivating factor for tobacco control in Turkey. Tobacco control measures led to decreases in consumption over the years until 2013. However, a recent rebound in consumption to an overall rate of 27 percent has raised fresh concerns. In 2010, among men ages 25-54, around half were smokers, while less than 20 percent of females in the same age group smoked. Of all men, 39 percent smoked in 2010. That rate fell to 35.9 percent in 2012, but then rose again to 41.8 percent in 2014. Similarly, 12.3 percent of all women smoked in 2010, with the rate dropping to 10.8 percent in 2012, before rebounding to 13.1 percent in 2014. Thus, between 2012 and 2014, smoking rates among males in Turkey rose by six percentage points and among females by 2.3 percentage points (Kose 2016).

Table 1. Smoking Rates in Turkey

AGE GROUPS	2010			2012			2014		
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
15-24	27.1	6.1	16.4	24.1	4.6	14.3	31.4	5.7	18.5
25-34	48.2	17.0	32.7	45.9	14.9	30.5	51.2	18.8	35.1
35-44	49.2	19.5	34.5	44.4	17.3	30.9	49.9	19.7	34.9
45-54	43.7	13.8	28.8	42.0	13.4	27.7	48.7	16.5	32.7
55-64	32.7	8.8	20.4	27.9	7.4	17.4	38.2	10.2	24.0
65-74	20.6	4.2	11.2	17.8	3.8	10.1	22.4	3.4	12.1
75+	15.1	0.9	7.3	12.6	0.8	5.6	8.9	2.4	5.0
TURKEY	39.0	12.3	25.4	35.9	10.8	23.2	41.8	13.1	27.3

The majority of current smokers began smoking as teenagers, with more than 75 percent starting before the age of 20. Persons aged 15-19 are the most vulnerable, accounting for 48 percent of smoking initiation. Of note, however, almost one in four Turkish smokers started between the ages of 10 and 14. Boys ages 10-14 are more vulnerable than girls ages 10-14, with data

SOURCE
Health Statistics
Yearbook 2016

indicating that more boys in this age range started smoking, as compared to female cohorts. After age 14, however, women had consistently higher rates of smoking initiation than men in each age category. For example, from ages 20-24 more women than men started smoking.

SOURCE
Health Statistics
Yearbook 2016

Table 2. Smoking Initiation Age in Turkey

SMOKING INITIATION AGE			
AGE	MEN	WOMEN	POPULATION
Less than 10	5.6%	1.5%	4.5%
10-14	26.3%	14.9%	23.1%
15-19	47.3%	48.9%	47.8%
20-24	15.5%	20.2%	16.8%
25-29	3.5%	6.7%	4.4%
30-34	0.7%	3.8%	1.5%
35+	1.1%	4.0%	1.9%
TOTAL	100%	100%	100%

Clearly, tobacco consumption has both direct and indirect costs for the population. When consumption increases, so do health care costs. Tobacco consumption rates in Turkey correspond to incidences of cancer, especially lung cancer, in the population. Cancer incidence trends in Turkey between 2002 and 2014 indicate that males have been consistently more prone to cancer than females. Rates of cancer incidence among males, females, and the overall population were lowest in 2002, then increased sharply until 2009, when a peak was reached at 270 per 100,000 population for males, 173 for females, and 221 for the population as a whole. Since 2012, cancer incidence rates for both men and women have been decreasing.

SOURCE
Health Statistics
Yearbook 2015

Figure 1. Cancer Incidence in Turkey

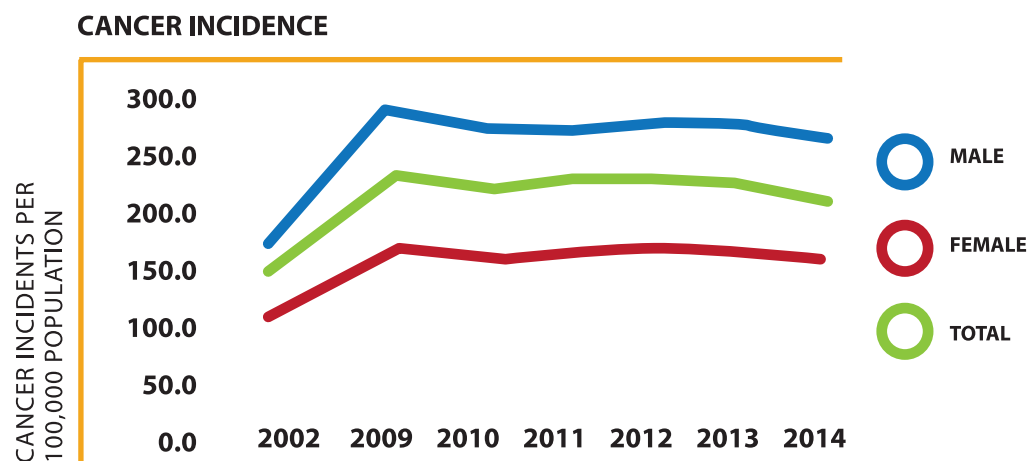
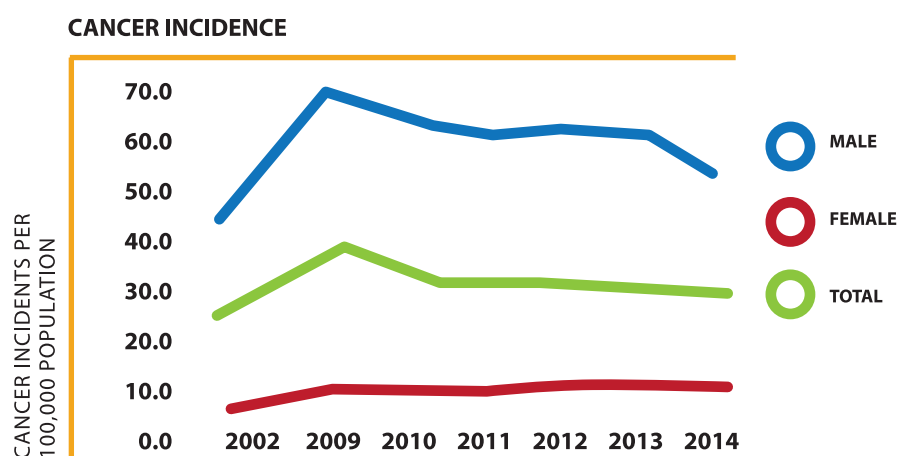


Figure 2. Lung Cancer Incidence in Turkey

SOURCE
Health Statistics
Yearbook 2015



Similarly, lung cancer incidence trends in Turkey between 2002 and 2014 indicate that males have been consistently more prone to lung cancer than females. Rates of lung cancer incidence were lowest in 2002, then increased until 2009, where a peak was reached at 66 per 100,000 population for males, 8.1 for females, and 37 for the total population. Lung cancer incidence for males fell between 2009 and 2010. Subsequently, male lung cancer incidence has again been decreasing since 2011. For females, incidence increased slightly in 2011, but has remained stable at around 10 since then (Kose 2016).

This study will first provide an analysis of the political economy of tobacco taxation in Turkey, then explore the economics of tobacco and tobacco control in the country in recent years. Our main aim is to determine how Turkey has achieved remarkable results since the introduction of the country's first tobacco law in 1996. In the economics of tobacco section, the focus will be on tobacco taxation, affordability, and illicit trade. The report will conclude by summarizing key takeaway messages that may provide guidance for other nations embarking on strict tobacco control measures.

02. Political Economy of Tobacco Taxation in Turkey

Due to the health and economic burden of tobacco use, Turkey's government has been strongly motivated to initiate policies and reforms to curtail tobacco consumption. The Ministry of Health, Ministry of Interior Affairs, Ministry of Customs and Trade, Ministry of Finance, universities, and NGOs have worked together using a multi-sectoral approach in the fight against tobacco.

Table 3. Timeline of Key Tobacco Control Initiatives in Turkey

YEAR	Non-Price Tobacco Control Initiatives in Turkey
1996	First tobacco control law, Law 4207 on Prevention of Harms of Tobacco Products, enacted
2004	WHO Framework Convention on Tobacco Control (FCTC) ratified
2008	Smoking ban implemented for public workplaces
2010	Text and graphic warnings on cigarette packages began
2010	Smoking cessation service launched including 171 Quit-line and free distribution of medications
2012	Total ban on advertisement and pictorial warning labels to cover at least 65% of the box implemented
2013	Highest implementation score for all of WHO's FCTC and MPOWER measures attained
2014	Protocol to Eliminate Illicit Trade in Tobacco Products signed
2015	New National Tobacco Control Program and Plan of Action began
2017	Green Detector, a digital measure against smoking, is integrated into 184 hotline to report smoking ban violations
2017	Plain package implementation is planned to be implemented

Despite Turkey's history of heavily regulating tobacco production, the country's first wide-ranging tobacco control law was only enacted in the late 1990s. In 1991, then-President Ozal had vetoed an earlier anti-tobacco bill, arguing that the advertising ban it included went against free trade (Bilir et al. 2009). When a revised tobacco control bill was submitted to Parliament in July 1992, members of the Justice Commission found the health evidence with regard to smoking inadequate, and therefore rejected the bill. Several years later, in 1996, the General National Assembly and the President finally approved the bill, and Law No. 4207 "Concerning the Prevention of Hazards of Tobacco Products" was enacted in November 1996.

In regards to tobacco control activities, Law No. 4207 was a crucial achievement and a milestone for Turkey. The law prohibited all tobacco advertisements and all sales of tobacco products to children under age 18. It also targeted key public spaces, banning smoking in all health and educational institutions and on public transport, such as buses and aircraft. The legislation also restricted smoking in other public buildings. In addition, it required broadcast media to transmit programs on the hazards of smoking for 90 minutes every month. Moreover, the law imposed warning labels on cigarette packages. Despite these many advances, Law No. 4207 was not all-encompassing. Under the legislation, smoking was prohibited in some public places, but restaurants, bars, and cafés remained vulnerable.

This made smoking a persistent public health issue in these spaces and posed workplace risks for persons in the hospitality industry.

The new law faced challenges. The tobacco industry made numerous attempts to overturn the advertising ban, since it posed a serious threat to companies' marketing strategies. Industry representatives rapidly developed plans to engage the government's Justice Commission in negotiations. Industry leaders proposed to sponsor a youth project for the Ministry of Education in return for rescinding the ban (Bilir et al. 2009). In a second attempt, a few months later, they tried to hold an open-air event to promote the tobacco industry in Ankara. The Governor of Ankara halted this event as a clear violation of the advertising ban. The industry pursued legal action, filing a suit claiming that the ban was unconstitutional. A lower court deemed this a serious claim, and the issue was referred to the Constitutional Court. In April 1999, the Constitutional Court ruled that the ban on advertisement did not violate the Turkish constitution, considering in particular the importance of the public's health (Bilir et al. 2012).

In April 2004, the Minister of Health signed the WHO Framework Convention on Tobacco Control (FCTC), and the Grand National Assembly approved it in November 2004. In 2006, a proposal for implementation of the FCTC was developed and presented to Parliament. After a lengthy parliamentary procedure, Law No. 5727 was finally accepted in January 2008. Law No. 5727 amended some relevant articles found in the earlier Law No. 4207, for example broadening provisions regarding penalties. The new law extended the range of public places where smoking was banned to include school premises and all hospitality workplaces. Sale of tobacco products within schools and on their premises was prohibited. Tobacco company sponsorships were banned, on top of the previous ban on advertising and promotion already found in Law No. 4207. Once again, the tobacco industry launched a lobbying campaign, arguing that these measures would have a detrimental effect on the hospitality industry, a key part of the Turkish economy.

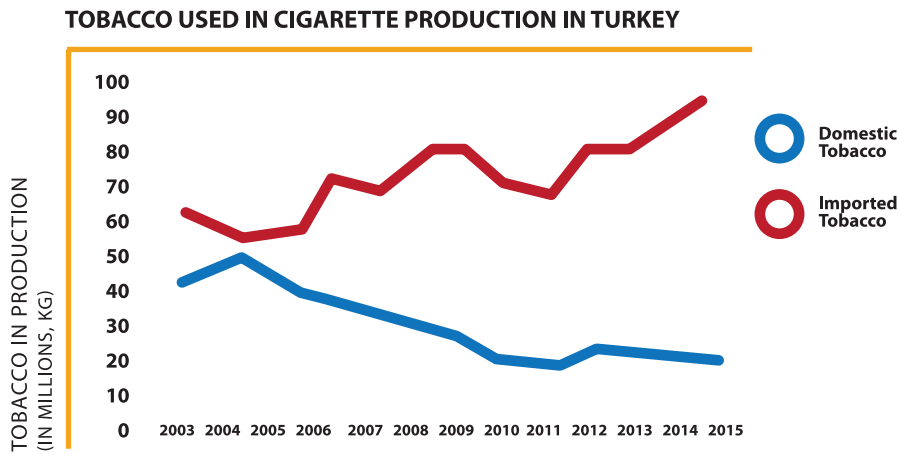
Subsequently, ministries, universities, and many NGOs collaborated to prepare the National Tobacco Control Program. The program incorporated a full array of elements to successfully decrease tobacco consumption. The program aimed to raise the proportion of people aged over 15 years who do not smoke to 80 percent, and to completely eliminate smoking in children under age 15. In December 2007, the Minister of Health publicly unveiled the National Tobacco Control Program for 2008–2012.

Comprehensive and efficient national tobacco control activities require political commitment. In this regard, the Government of Turkey has been determined and successful over the past years. In 2013, Turkey became the first country in the world to attain the highest implementation score for all of WHO's FCTC and MPOWER measures. Looking ahead, the Second National Tobacco Control Program, covering the period 2015-2018, has been prepared and published. The purpose of the program is to inform and educate the public on the health, economic, and social impacts of tobacco consumption. Under this updated program, smoking within five meters of the entrance of public spaces such as airports, bus terminals, shopping centers, movie theaters, and health care facilities has been forbidden. A symbol of Turkey's political dedication to tobacco cessation was the declaration of 2016 as the "Year of the Fight against Tobacco."

03. Economics of Tobacco and Tobacco Control in Turkey

Turkey is the world's 10th biggest tobacco producer, accounting for 1.2 percent of the global market. Despite the recent decrease in market share, Turkey still leads the cultivation of oriental tobacco with an annual production of approximately 60 thousand tons (Tobacco Report 2016). Law No. 4733, passed in 2002, defined the organization, structure, and duties of the Tobacco and Alcohol Market Regulatory Authority. This measure has resulted in a continuous reduction in tobacco production, in part because, under the legislation, tobacco farmers lost some of the price subsidies previously afforded to them. The privatization of the state-owned tobacco company, TEKEL, in 2008, exacerbated the decline in tobacco farming, since multinational tobacco companies, which began operating in Turkey in the 1980s, preferred imported tobacco to minimize their production costs. Multinational tobacco companies gradually increased their market share by aggressive advertising, promotion campaigns, and pricing strategies. These companies increased total cigarette production by 29 percent, from 120.9 billion sticks to 156.1 billion sticks between 2003 and 2015. However, the amount of domestic tobacco used in cigarette production declined from 46 thousand to 14 thousand tons, while tobacco imports significantly increased, from 63 thousand to 94 thousand tons.

Figure 3. Tobacco Used in Cigarette Production in Turkey

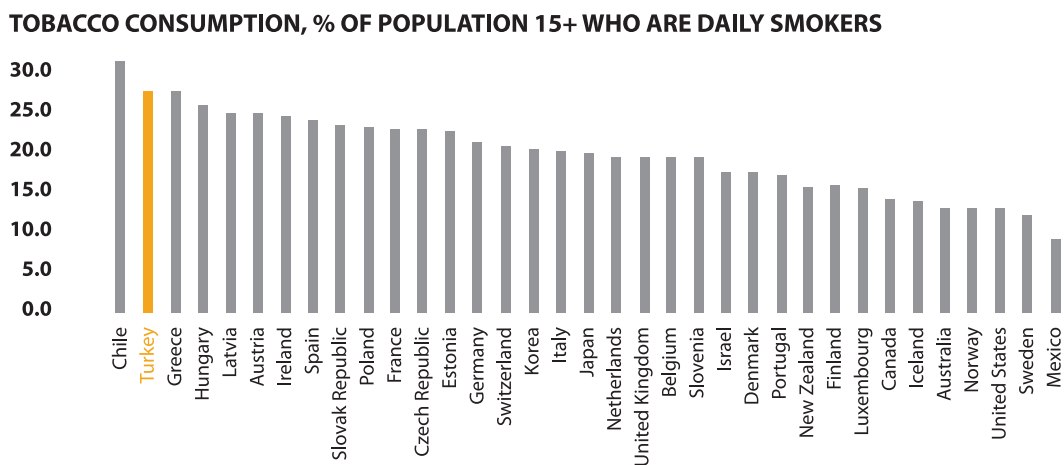


SOURCE
Tobacco and Alcohol Market
Regulatory Authority

Consequently, domestic tobacco production fell from 160 thousand tons of tobacco in 2002 to 62 thousand tons of tobacco in 2015. In addition, the number of tobacco farmers declined from 160 thousand in 2002 to 56 thousand in 2015, a decrease of 65 percent. In the past, tobacco played an important role in Turkey’s agricultural exports, but since 2012, Turkey has become a net importer of tobacco. In 2015, Turkey exported 54 thousand tons of tobacco netting 383 million USD, meanwhile it imported over 94 thousand tons of tobacco at a cost of 528 million USD.

Turkey is also one of the largest tobacco consumers. Among OECD countries, Greece and Turkey carry the second-highest smoking rates, with more than 27 percent of persons over fifteen years of age declaring themselves to be daily smokers.

Figure 4. Tobacco Consumption Among OECD Countries



SOURCE
OECD Health Statistics 2016

03.1. Tobacco Taxation

The most cost-effective method of fighting against tobacco is through taxation, since people are responsive to monetary incentives. Significant price increases on tobacco products, through higher tobacco taxes, encourage current tobacco users to quit or reduce their consumption, while preventing uptake of tobacco practices in potential future consumers (Chaloupka, Yurekli, and Fong 2012). Although tobacco taxation is regarded as the most cost-effective anti-tobacco intervention, many countries have failed to make much progress in increasing the price of tobacco products by raising taxes, compared to the advances in other tobacco control strategies under the FCTC (World Health Organization 2015).

Literature and research stemming from high-income countries generally indicate that a 10 percent increase in price reduces overall tobacco-product consumption by 2.5 to 5 percent. A recent consensus estimate confirms that a 10 percent price increase reduces consumption by 4 percent. The effect on tobacco consumption prevalence in low- and middle-income countries has been found to be even stronger (Kostova et al. 2014). The price elasticity of demand for cigarettes is estimated to be -0.41 in Turkey (Önder 2002). The same study shows that poor households in Turkey were more price sensitive (-0.47) compared to rich households (-0.16). Another study indicated that the total price elasticity was -0.67 in 2003, with poor households once again found to be more price sensitive than wealthier households (Önder and Yürekli 2014). The price elasticity of demand for cigarettes also varies based on the type of cigarette. While cigarettes in low- and medium-price segments are more sensitive to price changes, the demand for premium cigarettes is highly price inelastic in Turkey (Atuk and Özmen 2016).

Since 2002, Turkey has significantly increased tobacco taxes. The effective total tax rate as a percentage of retail price in Turkey has increased from 64.8 percent in 2002 to 83 percent in 2017. The current tobacco taxation system in Turkey includes both ad valorem and specific excise taxes. However, the latter is not significant, and none of the tax is earmarked. Before 2002, only the Value Added Tax (VAT) was imposed on tobacco products. Turkey introduced a 49.5 percent ad valorem tax rate on cigarettes in 2002 and increased the ad valorem tax rate to 55.3 percent the following year. In 2004, Turkey introduced the specific excise tax, which varied based on the proportion of oriental tobacco used in order to protect domestic oriental tobacco farmers. The ad valorem tax was lowered to 28 percent (Yürekli et al. 2010).

The specific excise tax on cigarettes made with 0–24 percent oriental tobacco was set at 1.00 TL. Cigarettes containing 25–49 percent oriental tobacco were taxed 0.60 TL, those including 50–74 percent oriental tobacco 0.45 TL, and cigarettes containing 75–100 percent oriental tobacco were taxed 0.35 TL. To avoid high taxes and maintain affordability of their products, the tobacco companies increased the proportion of oriental tobacco in their cigarette production. Due to the perceived possible negative impact on tax revenue, the government increased the ad valorem tax to 58 percent, introduced a minimum tax floor, and eliminated the specific excise in 2005. Until 2009, the ad valorem rate was constant at 58 percent, but the minimum tax floor was gradually raised. Turkey increased the ad valorem tax rate to 63 percent and 65 percent in 2010 and 2011, respectively.

Table 4. Tobacco Tax Burden in Turkey

EXCISE TOBACCO TAXES

YEAR	AD VALOREM	SPECIFIC EXCISE	MINIMUM EXCISE TAX	VAT ¹	TOTAL TAX BURDEN ²
2002	49.50%	-	-	15.25%	64.75%
2003	55.30%	-	-	15.25%	70.55%
2004	28.00%	0.35 TL– 1.00 TL	-	15.25%	71.60%
2005	58.00%	-	1.20 TL	15.25%	73.25%
2006	58.00%	-	1.20 TL	15.25%	73.25%
2007	58.00%	-	1.55 TL	15.25%	73.25%
2008	58.00%	-	1.50 TL	15.25%	73.25%
2009	58.00%	-	2.05 TL	15.25%	73.25%
2010	63.00%	-	2.65 TL	15.25%	78.25%
2011	65.00%	-	2.90 TL	15.25%	80.25%
2012	65.00%	-	2.90 TL	15.25%	80.25%
2013	65.25%	0.0922 TL	3.23 TL	15.25%	81.52%
2014	65.25%	0.1300 TL	3.75 TL	15.25%	81.94%
2015	65.25%	0.1866 TL	3.94 TL	15.25%	82.37%
2016	65.25%	0.2468 TL	4.42 TL	15.25%	82.74%
2017	65.25%	0.3246 TL	4.56 TL	15.25%	83.00%

1. The actual VAT rate is 18 percent; here it is expressed as a percentage of the retail price the consumer pays.

2. Beginning 2013, the total tax burden is calculated for the best-selling brand.

3. The total tax burden is calculated for the best-selling brand.

SOURCE

Authors calculations based on data from the Ministry of Finance

In 2013, Turkey reintroduced a specific excise, while increasing the ad valorem rate to 65.25 percent; however, the specific excise was not significant, only 0.092 TL (~ 0.05 USD). In 2017, the current specific excise tax is set at 0.325 TL (~0.085 USD), and the ad valorem rate remains at 65.25 percent, with the minimum 4.56 TL (1.215 USD) tax floor.

03.2 Relative Prices and Tobacco Consumption

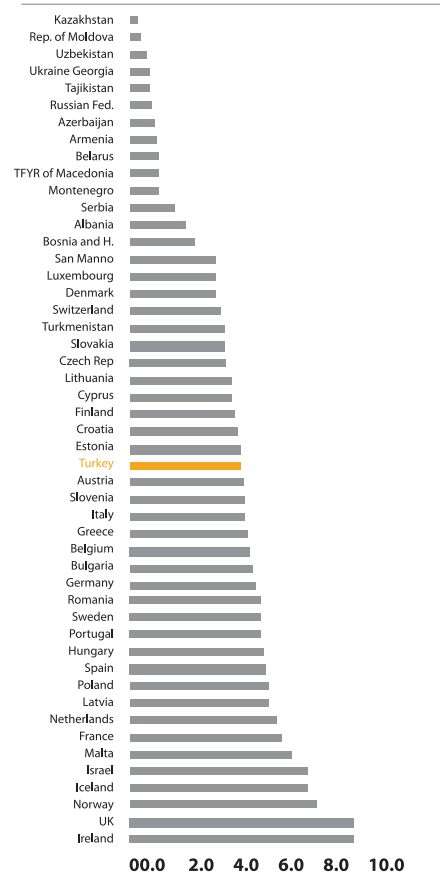
The prices of cigarettes in Turkey remain relatively lower than those in other countries of the WHO European Region, even after adjusting for PPP. The cheapest brands in the United Kingdom and Ireland, for example, cost more than twice as much as the cheapest brands in Turkey. Turkey’s best-selling brand is comparable in price to the highest-selling brands in Austria and Estonia, while in the United Kingdom and Ireland, the price of the highest-selling brand remains more than twice that of the most-sold brand in Turkey.

SOURCE

World Health Organization. “WHO Report on the Global Tobacco Epidemic, 2015: Raising Taxes on Tobacco.” Geneva: WHO, 2015.

Figures 5 and 6. Prices of the Cheapest and the Best-Selling Cigarette Brands in WHO EURO Countries

PRICE OF A 20-CIGARETTE PACK OF THE CHEAPEST BRAND (INTERNATIONAL DOLLAR AT PPP)



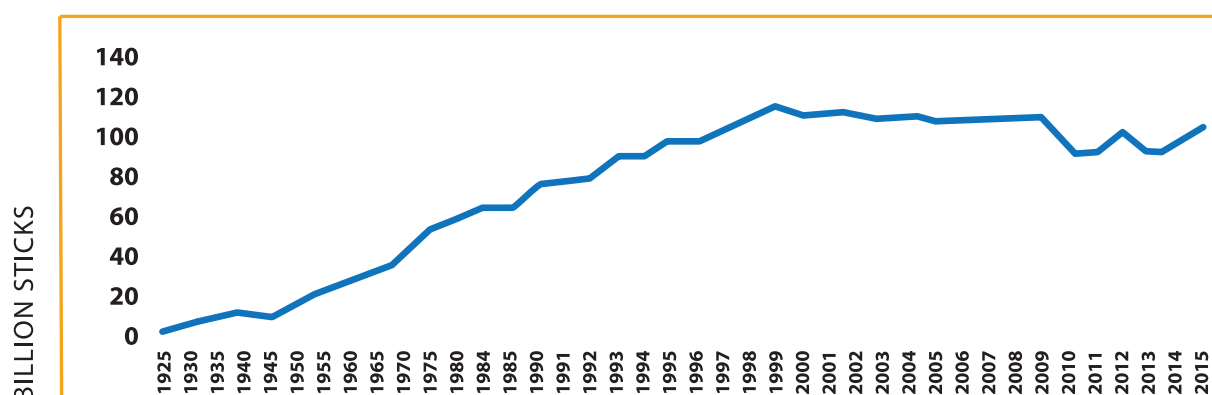
PRICE OF A 20-CIGARETTE PACK OF THE MOST SOLD BRAND (INTERNATIONAL DOLLAR AT PPP)



Higher tobacco taxes are only effective in reducing tobacco consumption if they result in higher tobacco prices. Historically, there was a steady increase in cigarette sales between 1925 and 1998 in Turkey. Possibly as an effect of the tobacco law enacted in 1996, tobacco sales remained almost constant until 2008. Between 2008 and 2013, there was a significant decline in cigarette sales in Turkey; however, sales began increasing again after 2013. In 2014 alone, 94.7 billion cigarette sticks were sold in Turkey, and sales reached 103 billion sticks in 2015. According to the Ministry of Health Statistical Year Book, the percentage of smokers in the population increased from 23.2 percent in 2012 to 27.3 percent in 2014, in contrast to the decline observed in previous years.

Figure 7. Cigarette Sales in Turkey

CIGARETTE SALES IN TURKEY



One plausible explanation for the increase in cigarette sales is that cigarettes might be relatively more affordable, even if nominal price of cigarettes have been increasing. If the average price of cigarettes increases less than inflation, cigarettes become relatively cheaper; consequently, the demand for cigarette rises. As illustrated in Figure 8 below, the price index for cigarettes in Turkey increased more slowly than the consumer price index between January 2013 and June 2016. During that period, the relative price of cigarettes decreased compared to other goods and services. Therefore, the demand for cigarettes increased. Turkey’s per capita cigarette consumption rate had declined significantly, by 26 percent, between 2003 and 2013. However, the rate increased by 10 percent between 2013 and 2016, as the relative price of cigarettes fell.

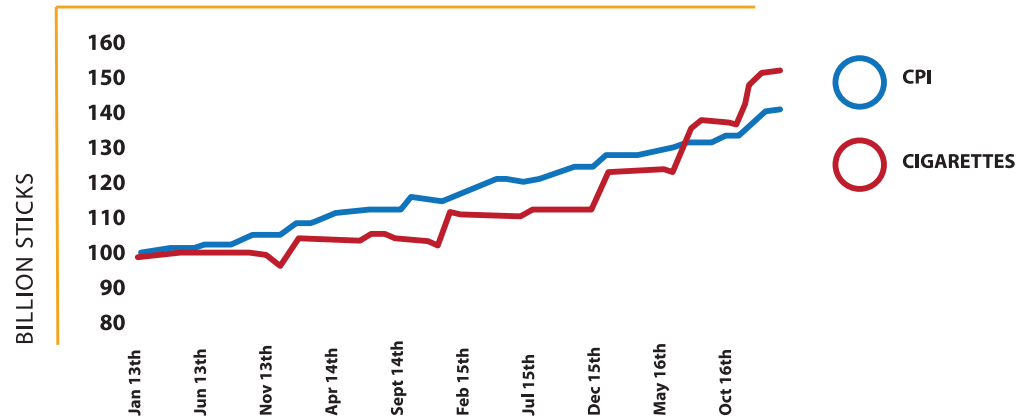
SOURCE
Tobacco and Alcohol Market
Regulatory Authority

This has enabled the recent increase in consumption and sales. Turkey's experience provides a key piece of evidence that tobacco taxes are ineffective if they do not lead to higher relative prices.

Figure 8. Change in Average Cigarette Price Index vs. CPI

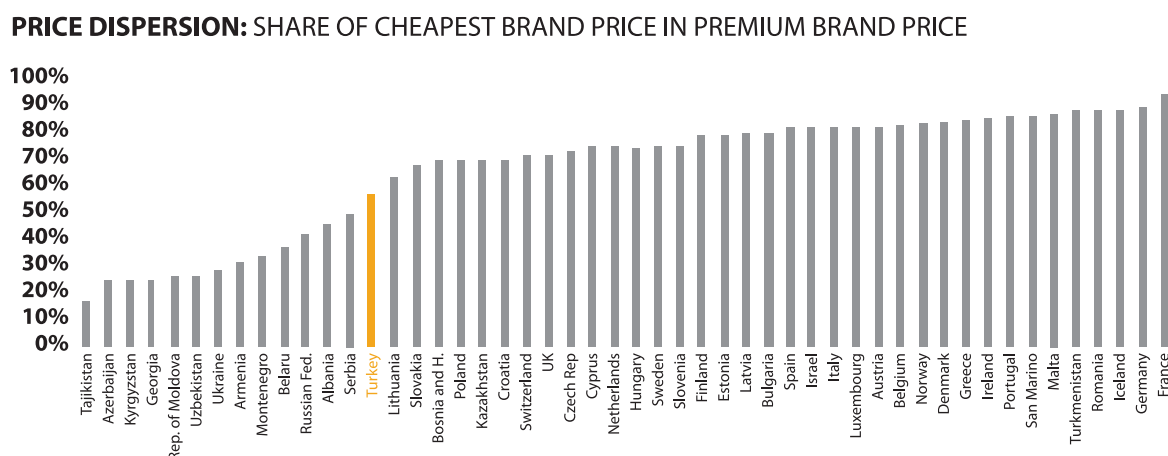
AVERAGE CIGARETTE PRICES VS. CPI

SOURCE
 Authors' calculations based on data from the Turkish Statistical Institute.



Price-discrimination strategies give tobacco companies the ability to minimize the effect of higher tobacco taxes on their sales. The tobacco companies provide price promotions such as volume-based discounts, multipack offers, and coupons, in addition to setting up different price tiers to reach price-sensitive consumers such as youth and low-income individuals (Brock, Schillo, and Moilanen 2015; Chaloupka et al. 2002; Feighery et al. 2004). Price dispersion measures the gap between the cheapest and the premium-brand prices by analyzing the share of cheapest-brand price in premium-brand price. Basically, the larger the share of the cheapest-brand price in the premium-brand price, the smaller the gap, meaning fewer opportunities for substitution to cheaper brands. In 2014, the share of the cheapest-brand price in the premium-brand price in Turkey stood at a relatively low 55 percent, compared to 73 percent in other countries in the European Region. In practice, this means that in Turkey there is a relatively higher price difference between the cheapest brand cigarettes and the premium brand cigarettes for price-sensitive smokers. Availability of cheaper brands in the market undermines the fight against tobacco as it facilitates switching down by smokers to lower-price cigarettes.

Figure 9. Cigarette Price Dispersion in WHO EURO Countries



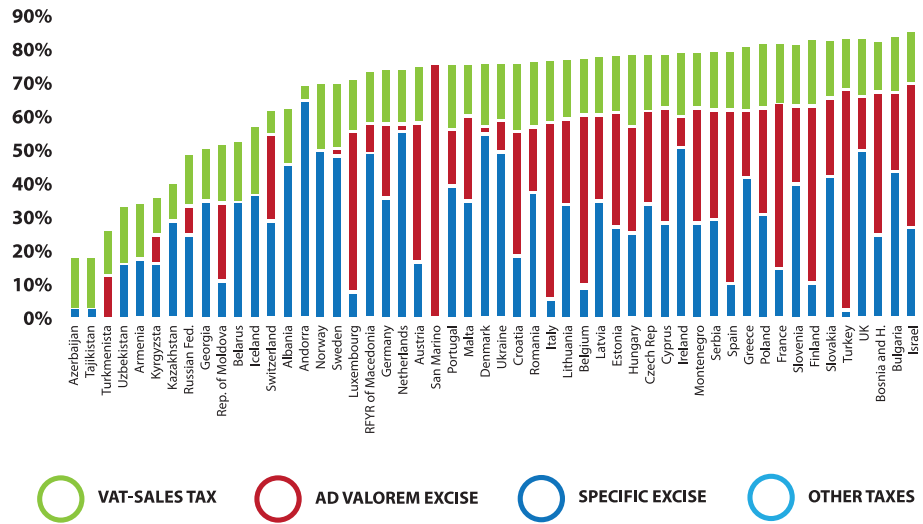
The tobacco taxation structure is a key policy issue in the fight against tobacco, considering that there is evidence that complicated tax structures weaken the impact of taxes in reducing tobacco consumption in low- and middle-income countries (U.S. National Cancer Institute and World Health Organization 2016). The tobacco industry’s pricing policy is based on undermining the effectiveness of tobacco taxes in order to increase the affordability of tobacco products, especially for youth, and to maximize the industry’s future sales. As described above, the tobacco tax scheme in Turkey includes an ad valorem tax (65.25 percent), VAT (15.25 percent), and a small specific excise tax (0.08 USD). Even though Turkey has one of the highest total tobacco tax burdens among WHO EURO countries, the specific excise tax rate is the third-lowest after Turkmenistan and San Marino, which do not have specific excise tobacco taxes. This type of tax scheme incentivizes firms to be flexible with prices, while also giving consumers the option to react to increased tobacco taxes by switching to lower-priced cigarettes. Firms’ and consumers’ response to tobacco tax policy can undermine the effectiveness of tobacco taxation in decreasing tobacco consumption. Therefore, an appropriate tax scheme requires a balance of ad valorem and specific tax rates to limit these effects (Atuk and Özmen 2016).

SOURCE
 World Health Organization.
 “WHO Report on the Global
 Tobacco Epidemic, 2015:
 Raising Taxes on Tobacco.”
 Geneva: WHO, 2015

SOURCE

Authors calculations based on data from the Turkish Statistical Institute and the Tobacco and Alcohol Market Regulatory Authority

Figure 10. Type of Tobacco Taxes Used in WHO EURO Countries



03.3 Income and Tobacco Consumption

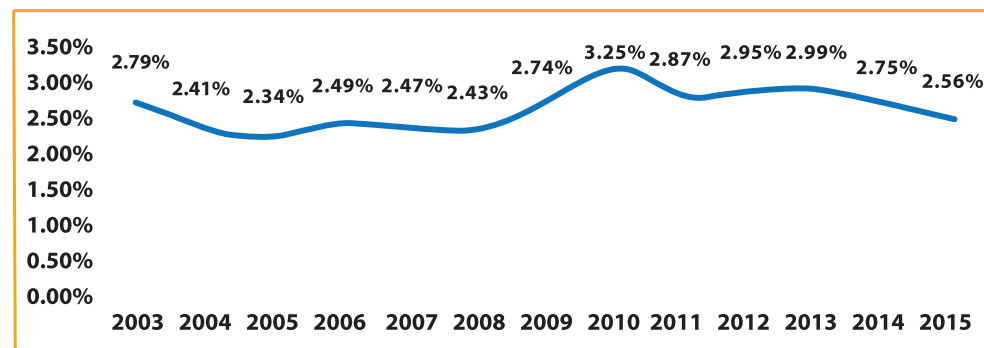
Besides relative prices, another important factor that would affect the demand for cigarettes is income. Turkey's economy has been growing steadily since 2002. As a result of this rapid economic growth, per capita income increased by 66 percent in real terms between 2002 and 2015. One downside of economic growth is that the demand for cigarettes increases as the population becomes richer over time and has more resources to spend on cigarettes.

One way to measure the change in affordability is to look at the percentage of per capita income needed to purchase 100 packs of cigarettes. Among upper and lower middle-income countries, the percentage of national income required to purchase 100 packs of cigarettes ranged from 0.5 to 31.8 percent (U.S. National Cancer Institute and WHO 2016). Among all middle-income countries, Turkey has one of the highest levels of cigarette affordability. Between 2000 and 2013, cigarettes became more affordable in 8 out of 25 high-income countries and 15 out of 24 middle-income countries including Turkey. This change in affordability led to an increase in cigarette consumption for middle-income countries and a decrease for high-income countries. Figure 11 shows that a pack of cigarettes became significantly less affordable in Turkey between 2008 and 2010, mostly due to the global financial crisis. Affordability also declined slightly during the periods 2005-2006 and 2011-2013. However, there has been a major increase in affordability since 2013.

Thus, 2.99 percent of per capita national income was needed to purchase 100 packs of cigarette in 2013; however, 2.56 percent of per capita national income sufficed to purchase 100 packs of cigarettes in 2015.

Figure 11. Share of Per Capita Income Required to Buy 100 Packs Of Cigarettes in Turkey

SHARE OF PER CAPITA INCOME REQUIRED FOR 100 PACKS OF CIGARETTES



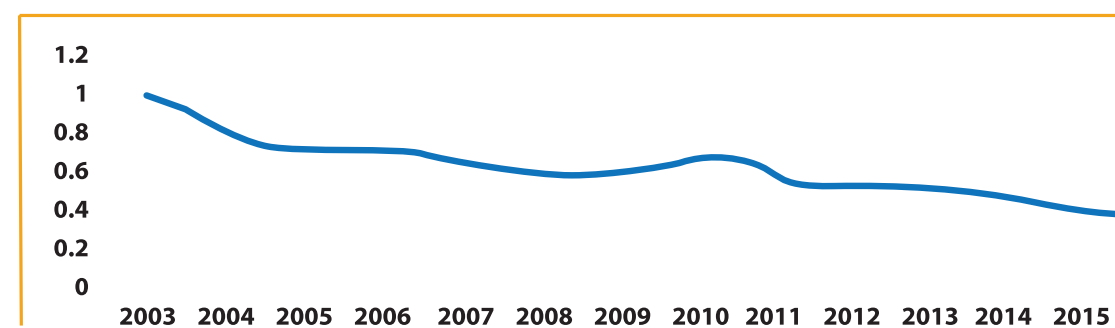
Another way to measure affordability is to develop an affordability index by dividing the average real prices of cigarettes by the real GDP per capita. The affordability index is set at 1 in the base year. If the affordability index is greater than 1 in following years, cigarettes have become less affordable compared to the base year. However, an affordability index less than 1 indicates higher affordability.

SOURCE

Authors' calculations based on data from the Turkish Statistical Institute and the Tobacco and Alcohol Market Regulatory Authority.

Figure 12. Affordability Index

AFFORDABILITY INDEX



SOURCE

Authors' calculations based on data from the Turkish Statistical Institute and the Tobacco and Alcohol Market Regulatory Authority.

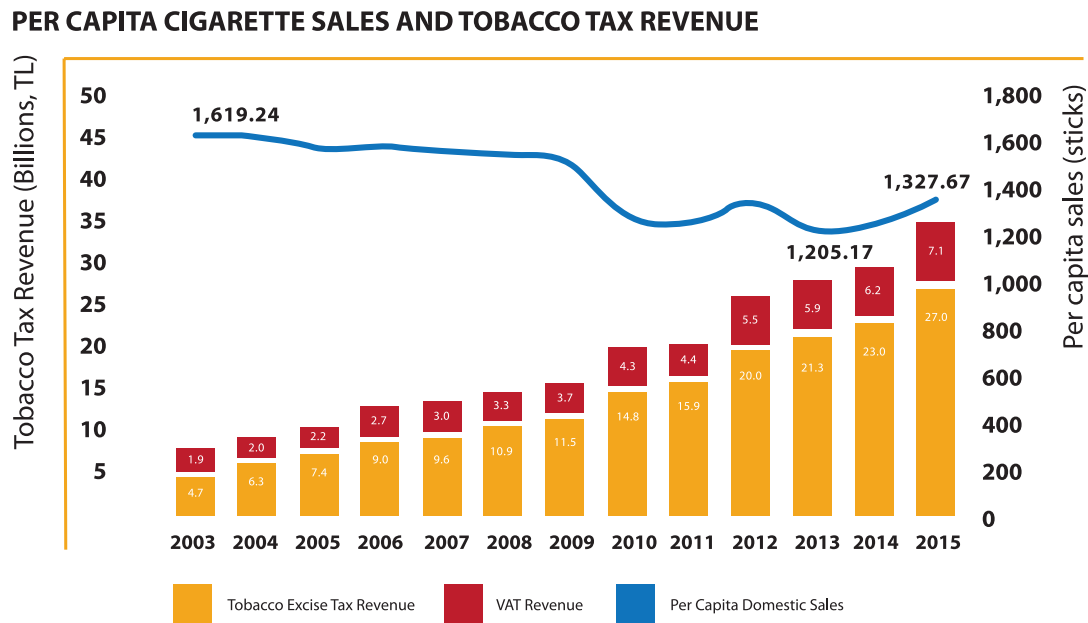
Despite rising prices, cigarettes have become more affordable since 2003 as a result of Turkey's fast-growing economy. Like the preceding affordability analysis, the affordability index reveals that cigarette affordability declined only in 2009, when Turkey's economy contracted due to the global financial crisis. The increase in affordability of tobacco products helps explain the increase in cigarette sales in Turkey starting in 2013. Even though the price of cigarettes increased, higher per capita income weakened tobacco control efforts by increasing demand for cigarettes.

Another factor that may have contributed to the recent increase in cigarette sales is the influx of Syrian refugees into Turkey, particularly since 2013. Tobacco use in Syria was extremely high before the crisis that began in 2011. An estimated 60 percent of Syrian men and 17 percent of women consumed cigarettes, and most of these were daily smokers. Around 20 percent of men were also intermittent users of water pipes (Ward 2006). In addition, tobacco usage is high among Syrian adolescents. Nearly 30 percent of Syrian boys and over 15 percent of girls between the ages of 13 and 15 were found to use tobacco products (Maziak et al. 2015). Currently, Turkey hosts more than 3 million Syrian refugees, equivalent to roughly 15 percent of Syria's pre-conflict population. In addition, the war in Syria has made the smuggling of cheaper cigarettes into Turkey relatively easier as a consequence of weak border control between Syria and Turkey.

03.4 Government Revenue from Tobacco Taxes

In 2015, Turkey collected 12.5 billion USD in tobacco tax revenues, accounting for 8.4 percent of all tax revenues. Between 2003 and 2015, per capita cigarette consumption decreased by 18 percent, while tobacco tax revenue increased by 476 percent. Compared to the 2003 tobacco excise tax revenue of 4.7 billion TL (3.1 billion USD), the 2015 tobacco excise tax revenue increased substantially to 27.0 billion TL (9.9 billion USD). The Turkish Government collected an additional 7.1 billion TL (2.6 billion USD) as VAT from cigarette sales.

Figure 13. Per Capita Cigarette Sales and Tobacco Tax Revenue



Turkey doubled its total tax revenue in real terms after adjusting for inflation, by increasing the excise tax rate. Tobacco taxes are a significant source of revenue for Turkey.

SOURCE

Authors' calculations based on data from the Ministry of Finance and the Tobacco and Alcohol Market Regulatory Authority.

Table 5. Tobacco Tax Burden, Revenue, and Sales

TOBACCO TAX BURDEN, REVENUE, AND SALES

YEAR	TOTAL TAX BURDEN	TOBACCO TAX REVENUE (BILLION TL)	TOTAL SALES (BILLION STICKS)	PER CAPITA CONSUMPTION
2003	70.55%	6.58	108.16	1,619
2004	43.25%	8.36	108.87	1,611
2005	73.25%	9.62	106.72	1,559
2006	73.25%	11.71	107.91	1,557
2007	73.25%	12.65	107.45	1,532
2008	73.25%	14.19	107.86	1,518
2009	73.25%	15.22	107.55	1,493
2010	78.25%	19.11	93.35	1,276
2011	80.25%	20.28	91.22	1,229
2012	80.25%	25.48	99.26	1,320
2013	81.52%	27.20	91.66	1,205
2014	81.94%	29.26	94.68	1,231
2015	82.37%	34.11	103.21	1,328

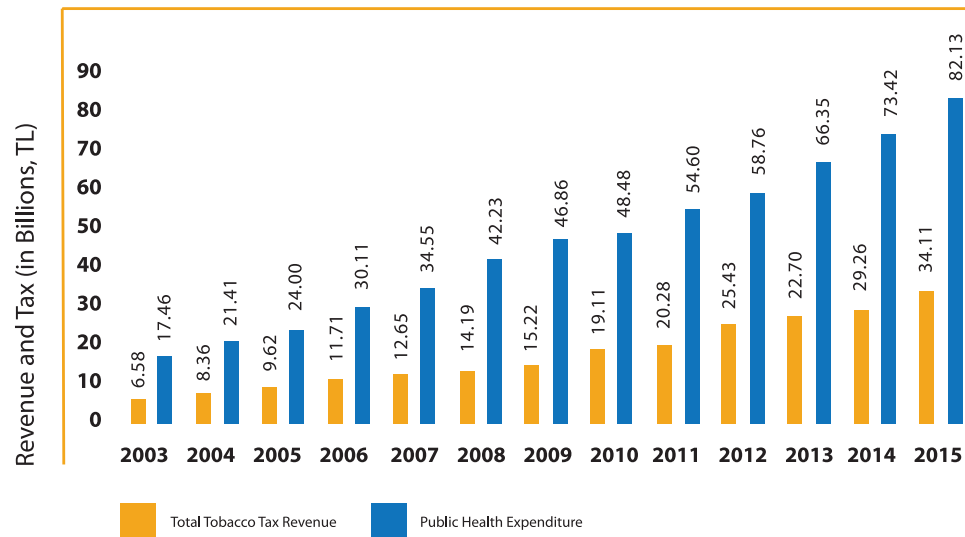
SOURCE

Authors' calculations based on data from the Ministry of Finance and the Turkish Statistical Institute.

Since the beginning of the country’s Health Transformation Program in 2003, Turkey has successfully increased public health spending and collected more tobacco tax revenue. According to the latest available figures, in 2015, tobacco tax revenue was equivalent to 42 percent of the country’s public health expenditure and 1.5 percent of GDP.

Figure 14. Tobacco Tax Revenue and Public Health Expenditure in Turkey

TOBACCO TAXES AND PUBLIC HEALTH EXPENDITURE



03.5 Illicit Tobacco Trade

Fear of illicit tobacco trade has become an impediment to raising tobacco taxes worldwide, including in Turkey. The tobacco industry has seized this as an opportunity and attempts to convince policymakers that any tobacco tax increase will spark uncontrollable smuggling and ultimately result in lower government revenues. However, recent experiences in Canada and Sweden have disproven the industry’s claim that, if tobacco taxes are lowered, then tax revenues will increase. In the 1990s, under pressure from the tobacco industry, the Canadian and Swedish governments lowered tobacco taxes in an attempt to recover revenue losses caused by smuggling (U.S. National Cancer Institute 2016). However, one year after the introduction of these measures, tax revenues had fallen significantly, and cigarette consumption had increased. In Canada, it has now been shown conclusively that the tobacco industry itself was actively involved in facilitating much of the smuggling (Blecher and Walbeek 2004; Shafey 2009).

Illicit tobacco trade has many facets and is a multiplayer process, varying greatly in the commercial products involved and methods used. It negatively impacts countries in both economic and social terms. Smuggling crimes are committed either directly through border violations, or by irregularities or forgery during customs transactions. Some of the causes of the illicit tobacco trade include a lack of effective international cooperation, abuse of duty-free sales, and cross-border price differentials. Other contributing factors include lax law enforcement and insufficient penalties, transit system weaknesses, and information distribution networks. Finally, another major contributor is the lack of adequate resources to combat illicit practices. Although higher taxes give more incentives for illicit tobacco trade, maintaining stable taxes at a lower level due to fear of illicit trade does not solve the problem.

Turkey is a good example of the feasibility of combatting the illicit tobacco trade, while successfully increasing tobacco taxes. Smuggled cigarettes, particularly brought in via Turkey's eastern and southeastern borders, are distributed within Turkey and appear in trailer trucks with a fake seal and hidden in or under numerous kinds of goods. Since smuggled cigarettes is an important illicit trade activity, Turkey has expanded its control efforts against illicit tobacco trade. Adopting modern tools for tracking commercial products is part of the government's strategy to more effectively tackle financial flows resulting from this illicit trade activity that benefit criminal enterprises.

Table 6. Key Illicit Tobacco Trade Control Initiatives in Turkey

Stamp-Applied Tracking System for Tobacco Products and Alcoholic Beverages initiated, July 2007

Tobacco product and alcoholic beverage sales without stamp banned, November 2007

2-Year action plan prepared to combat smuggling of tobacco and tobacco products, 2010

Enhanced border enforcement and spot checks, 2010

Increasing penalties to disrupt illicit trade, 2010

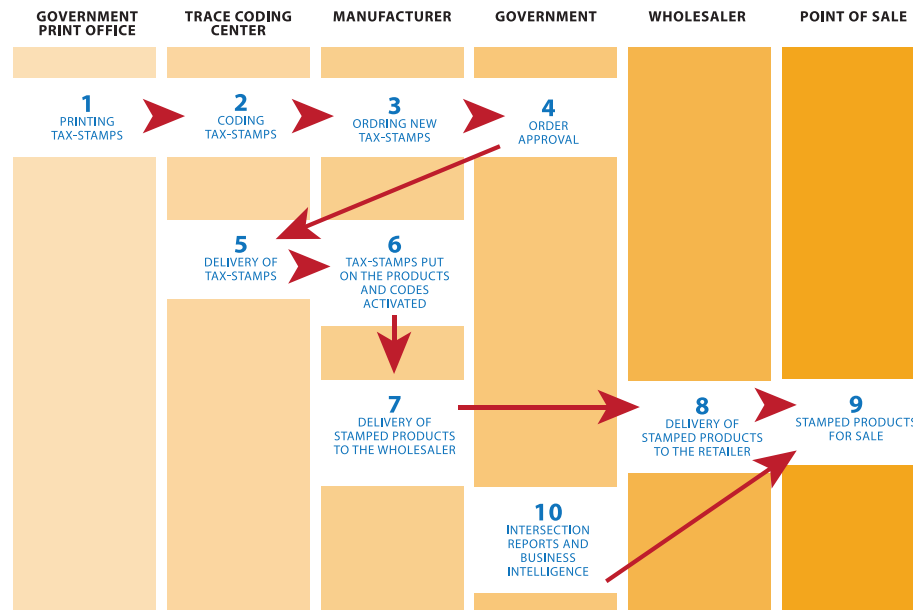
Protocol to Eliminate Illicit Trade in Tobacco Products signed by the Council of Ministers, 2014

The Ministry of Health, Ministry of Interior Affairs, Ministry of Customs and Trade, and Ministry of Finance have worked together to combat the illicit tobacco trade (Ministry of Interior and KOM 2016). In 2007, Turkey implemented a digital tax-stamp system using invisible ink and featuring a unique, covert code with product data for each cigarette pack. While the standard tax stamp provides only product security, the digital tax stamp helps with tax revenue planning, improves accounting control, and contributes to

tobacco control policy, as well. The Ministry of Customs and Trade launched the online “Monitoring/Tracking System for Products with Tax Stamps” in 2007. This prevented products without tax stamps from remaining on the market.

SOURCE
Ministry of Finance

Figure-15 Tobacco tracking and tracing system in Turkey



In addition, the Ministry of Interior Affairs increased its efforts and capacity for enforcement. These efforts, along with enhanced coordination among Ministries, have resulted in success in the fight against the illicit tobacco trade, even as the government has raised tax rates and collected significantly more tobacco tax revenue. Thus, in 2009, 10.1 million packs of cigarette were seized in 2,700 cases as part of the fight against tobacco trafficking. However, by 2015, the numbers had risen to 143.4 million packs of smuggled cigarettes confiscated in 14,889 cases. The estimated tax loss resulting from seized smuggled cigarettes would have been approximately 800 million Turkish Lira, or 265 million USD; this is equivalent to 2.8 percent of tobacco tax revenues (Ministry of Interior and KOM 2016). Between 2005 and 2011, Turkey increased cigarette tax revenues by 124 percent, while the illicit tobacco market share ranged between 14.3 percent and 17.5 percent (U.S. National Cancer Institute and World Health Organization 2016).

Between 2003 and 2009, the total tobacco tax burden in Turkey increased by 3.5 percentage points, from 70.6 percent to 74.1 percent, and the number of packs of cigarettes confiscated by the security forces increased by 6.5 million. Between 2010 and 2015, the total tax burden increased by a

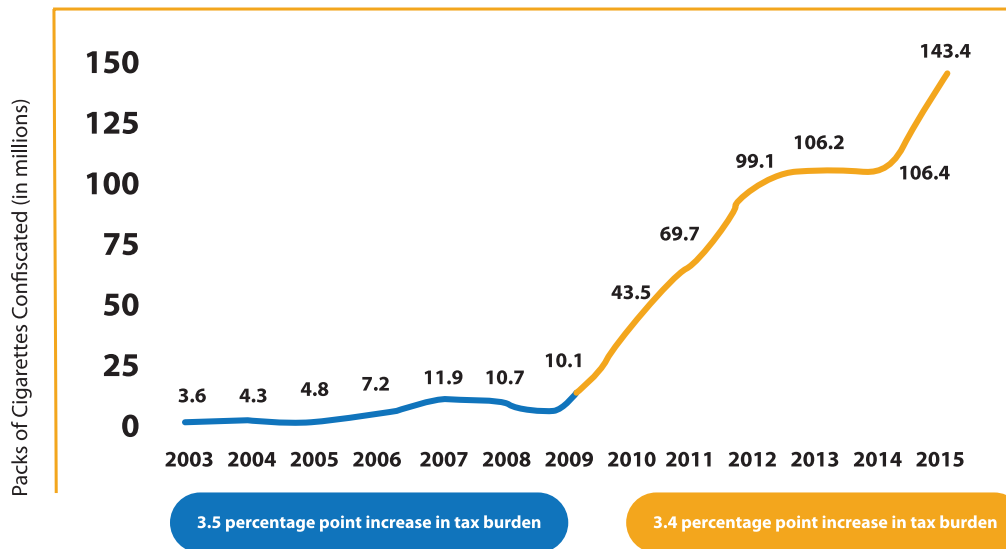
similar increment, 3.4 percentage points, from 78.7 percent to 82.1 percent. However, during this period, the number of packs of cigarettes confiscated by security forces surged by almost 100 million, from 43.5 million to 143.1 million packs, due to increased efforts against illicit trade (Figure 16).

The experience of Turkey's shows that besides higher taxes on tobacco products, strengthened tax administration improvement efforts are required to realize the tobacco use reduction objective of this policy measure over the short and medium terms. From a health perspective, increased availability and affordability of untaxed and inexpensive cigarettes puts more people at risk of being harmed because of increased smoking, addiction to a deadly product, and the resulting ill health, premature mortality and disability associated with tobacco-related diseases. From a fiscal perspective, illicit tobacco trade only benefits a few (often criminal enterprises) at the cost of forgone tax revenues for the government, which results from taxes not being paid on tobacco products.

Figure-16 Packs of cigarettes confiscated and total tax burden in Turkey

SOURCE
Ministry of Interior and KOM. "2015 Turkish Report of Anti-Smuggling and Organized Crime." Ankara, 2016.

PACKS OF CIGARETTES CONFISCATED



04. Lessons Learned

Tobacco taxation is the most cost-effective way to fight against tobacco. It is possible to lower tobacco consumption and increase tobacco tax revenue by increasing tobacco taxes. Turkey's government has increased tobacco taxes significantly since 2002. The total tax burden as a percentage of the retail price in Turkey reached 83 percent in 2017. As a result of the higher taxes, Turkey managed to double total tobacco tax revenue in real terms. In 2015, Turkey's tobacco tax revenues were 82.13 billion TL (30.27 billion USD), and the share of tobacco tax revenues in total tax revenue was 8.4 percent. In addition, the percentage of the population who smoked in Turkey dropped from 31.2 percent in 2008 to 23.2 percent in 2012.

The demand for tobacco products is sensitive to price changes. If tobacco taxes do not lead to higher tobacco prices, the impact of tobacco taxes on tobacco consumption is significantly diminished. Significant price increases through higher tobacco taxes discourage current tobacco users from continuing usage, prevent uptake of tobacco practices among potential consumers, and reduce consumption among current users. After a decline in total cigarette sales and per capita tobacco consumption between 2008 and 2013, both per capita tobacco consumption and total cigarette sales have begun to increase in Turkey. Average cigarette prices rose more slowly than the consumer price index between January 2013 and June 2016. Therefore, the demand for cigarettes increased. Turkey's per capita cigarette consumption rate increased by 10 percent between 2013 and 2016.

The demand for tobacco products is also sensitive to changes in income. The recent increase in cigarette sales can also be attributed to the increase in affordability of cigarettes in Turkey. Turkey's economy has been growing steadily since 2002. As a result of rapid economic expansion, the demand for cigarettes increased, as the population became wealthier over time. In 2013, 2.99 percent of per capita national income was needed to purchase 100 packs of cigarettes. By 2015, however, 100 packs of cigarettes could be bought for only 2.56 percent of per capita national income. Higher tobacco taxes are only effective in reducing tobacco consumption if they result in lower affordability.

While high tobacco taxes may create incentives for illicit tobacco trade, illegal trade activities can be controlled by strengthening the capacity of tax administration systems, focusing on both on legal means (e.g., use of prominent tax stamps, serial numbers, special package markings, health warning labels in local languages, adoption of uniform tax rates nationwide

that facilitate successful collection at the points of manufacture and import), and (ii) increased law enforcement (e.g., improving corporate auditing, better trace and tracking systems, and good governance). Turkey is a good example of the feasibility of combatting the illicit tobacco trade while successfully increasing tobacco taxes. Between 2005 and 2011, tobacco tax revenues increased by 124 percent, while the illicit tobacco market share ranged between 14.3 percent and 17.5 percent. Turkey stepped up its efforts against illicit trade by adopting digital tax stamps, which have effectively forced products without tax stamps out of the market. In addition, Turkey strengthened its efforts and capacity for enforcement. Enhanced coordination enabled major gains in the fight against the illicit tobacco trade, while still raising tax rates and tobacco tax revenue. In 2015 alone, 143.4 million packs of smuggled cigarettes were confiscated. The estimated tax loss resulting from seized smuggled cigarettes would have been approximately 800 million Turkish Lira or 265 million USD.

Comprehensive, efficient national tobacco control activities require political commitment. In this regard, the Government of Turkey has been determined and successful in implementing tobacco control activities and fighting against the illicit tobacco trade over the past years.

Ratification of the Protocol to Eliminate Illicit Trade in Tobacco Products, which is a supplementary treaty to the WHO Framework Convention on Tobacco Control (FCTC), is a critical first step for countries to confront this global health, economic and social scourge. The Protocol is now open for ratification, acceptance, approval, formal confirmation or accession by all Parties to the WHO FCTC to make this Protocol an international law.

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