

Tobacco taxation policy in Bulgaria in 2009-2010 - a great success which is perceived as a failure

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Introduction

In 2005, Bulgaria ratified the WHO Framework Convention on Tobacco Control (WHO FCTC) (1), and the country has committed itself to the implementation of the cross-sectoral measures outlined in the Convention to protect people from tobacco use.

The WHO FCTC includes Article 6 entitled “Price and tax measures to reduce the demand for tobacco”. The Parties to the Convention recognize that price and tax measures are an effective and important means of reducing tobacco consumption in various segments of the population, in particular in young people. Each Party should implement tax policies and price policies on tobacco products so as to contribute to the health objectives aimed at reducing tobacco consumption. In 2014, the Conference of Parties adopted Guidelines for implementation of Article 6 of the WHO FCTC (2).

Bulgaria signed the European Union Treaty of Accession on 25 April 2005 and became a full member of the European Union on 1 January 2007. Thus, Bulgaria had to meet all requirements of the relevant EU directives on tobacco taxation.

This publication aims to estimate the impact of tobacco taxation policy on tobacco consumption and tobacco excise revenues in Bulgaria between 2006 and 2018 with special emphasis on tobacco taxation reform implemented in 2009-2010.

Data sources

Data on tobacco excise rates were taken from the official parliament newsletter (3). Data on tobacco revenues and some other indices were taken from the European Commission database (4). Data on cigarette average prices and other indices were taken from the website of the National Statistical Institute (NSI) (5).

Results

Tobacco taxation changes in 2006–2018

Bulgaria has mixed excise tax that includes both a specific tax component and an ad valorem tax component. In 2006-2010, excise rates for cigarettes in Bulgaria were changed annually (Table 1). In 2011-2015, excise rates for cigarettes were not changed, while excise rate for smoking tobacco was increased by 52% in 2011-2012. In 2016-2018, excise rates for cigarettes were changed again.

The specific excise rate for cigarettes was decreased in 2007 and 2016, but in 2017 it is 6.7-fold higher than in 2006. In 2010, the minimum specific excise tax was introduced (Table 1), which is paid when the sum of specific plus ad valorem excise is lower than the minimum excise. It means that in 2010-2015 all cigarettes with prices below 4.1 BGN per pack of 20 cigarettes were taxed by the same excise of 2.96 BGN per pack. However, according to the NSI data, in 2011-2015 average price per pack of 20 cigarettes was 4.6-4.7 BGN, so the minimum excise tax did not apply to most cigarettes on the market. In 2018-2019 the minimum specific excise tax was increased to 3.54 BGN per pack of 20 cigarettes and it is applied to cigarettes with a price below 5.44 BGN per pack.

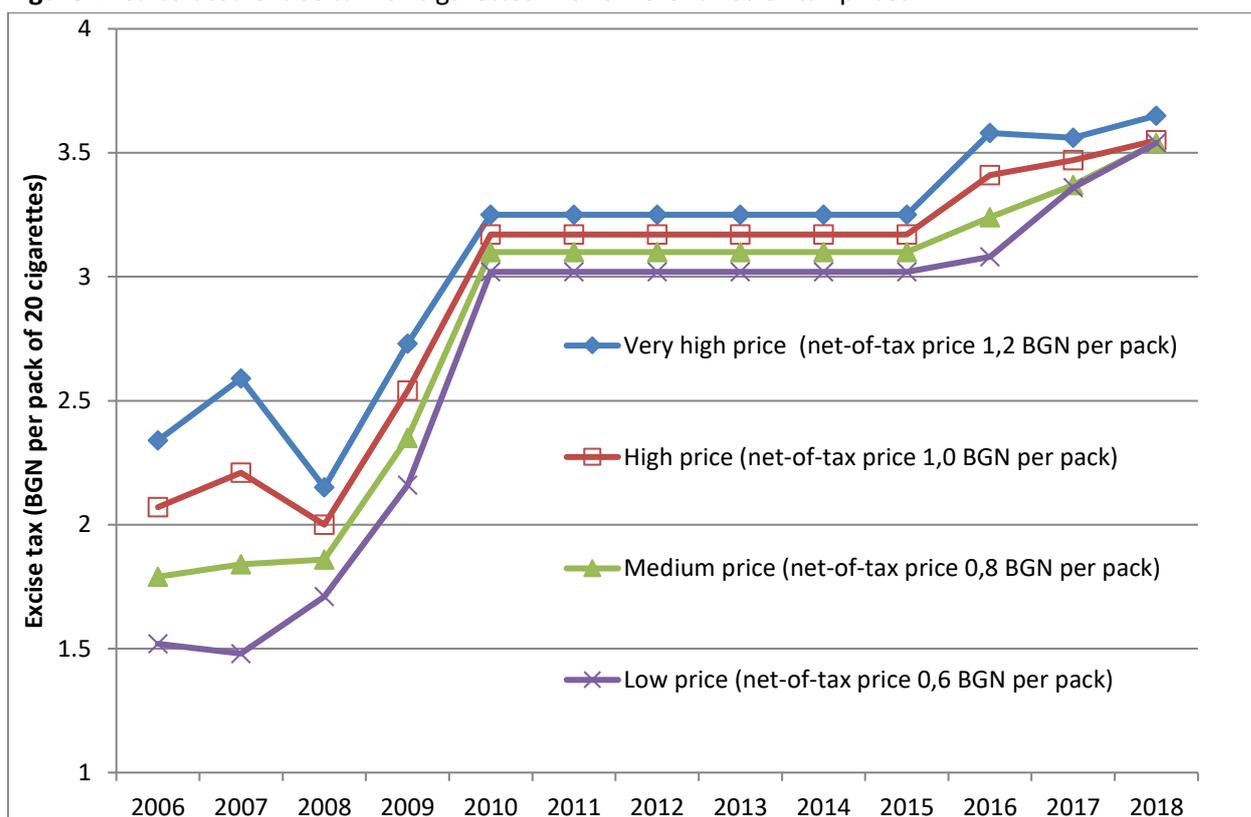
Table 1. Excise tax rates for tobacco products in Bulgaria.

| Excise rates | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|--|------------|------------|-----------|-------------|------------|------------|------------|------|------|------|------------|------------|------------|
| Specific, BGN per 1,000 cigarettes | 15 | 6,5 | 37 | 41 | 101 | 101 | 101 | 101 | 101 | 101 | 70 | 101 | 109 |
| Minimum specific, BGN per 1,000 cigarettes | - | - | - | - | 148 | 148 | 148 | 148 | 148 | 148 | 147 | 168 | 177 |
| <i>Ad valorem for cigarettes, %</i> | 48 | 54 | 35 | 40,5 | 23 | 23 | 23 | 23 | 23 | 23 | 38 | 27 | 25 |
| Specific, BGN per 1 kg of smoking tobacco | 45 | 45 | 45 | 45 | 100 | 130 | 152 | 152 | 152 | 152 | 152 | 152 | 152 |
| <i>Ad valorem for smoking tobacco, %</i> | 10 | 10 | 10 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Specific, BGN per 1000 cigars or cigarillos | 270 | 270 | 270 | 270 | 270 | 270 | 270 | 270 | 270 | 270 | 270 | 270 | 270 |

Between 2006 and 2017, the ad valorem excise rate was increased in 2007, 2009 and 2016, but decreased in 2008, 2010 and 2017. In 2017, it is twice lower than in 2007 (Table 1).

The most dramatic changes in excise rates in Bulgaria were undertaken in 2009, when both specific and ad valorem excises were increased, and in 2010, when the specific rate for cigarettes was increased almost by 2.5 and minimum specific tax was introduced, while the ad valorem rate was cut by almost half from 40.5% to 23%. In two years, excise burden increased for all kinds of cigarettes: by 77% for cheap cigarettes and by 51% for premium cigarettes (Fig. 1).

Figure 1. Calculated excise tax for cigarettes with different net-of-tax prices.



Bulgaria met the EU requirements on minimum excise tax rates. In 2010, the excise for most popular cigarette category exceeded 64 euro per 1000 cigarettes. According to the EU Directive 2011/64, excise tax should exceed 90 euro per 1000 cigarettes in Bulgaria before December 31, 2017 and from 2018 minimum excise tax is 177 BGN (=90 euro) (Table 1).

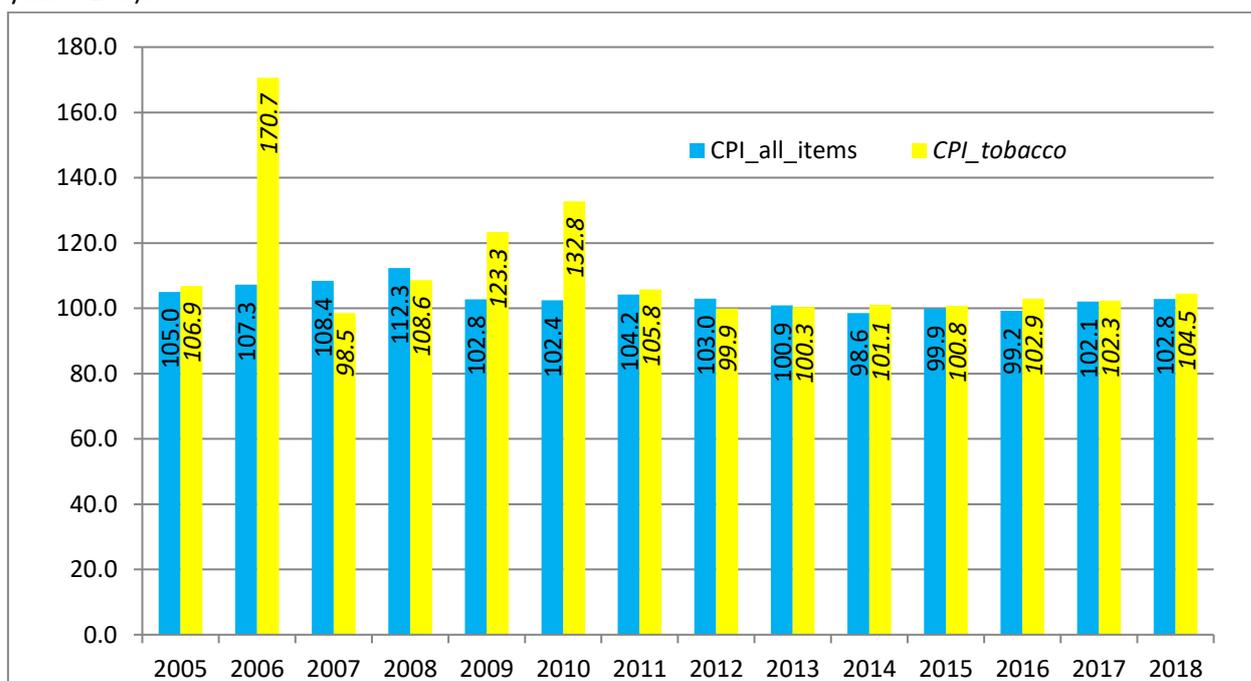
The value-added tax (VAT) rate in Bulgaria was 20% in all years under consideration.

Cigarette prices

Between 2006 and 2008, average price for a pack of 20 filter cigarettes (reported by the NSI) increased from 2.52 to 2.68 BGN or by 6%, then it increased to 4.33 BGN in 2010 (62% increase in two years) and later the increase was very slow: 9% in five years to 4.7 BGN in 2015.

Tobacco price growth was well above inflation in 2006, 2009 and 2010, below inflation in 2007 and 2008 and more or less in line with inflation in 2011-2018 (Fig. 2).

Figure 2. Consumer Price Index (CPI) for all items and tobacco products in Bulgaria in 2005-2016 (previous year = 100).



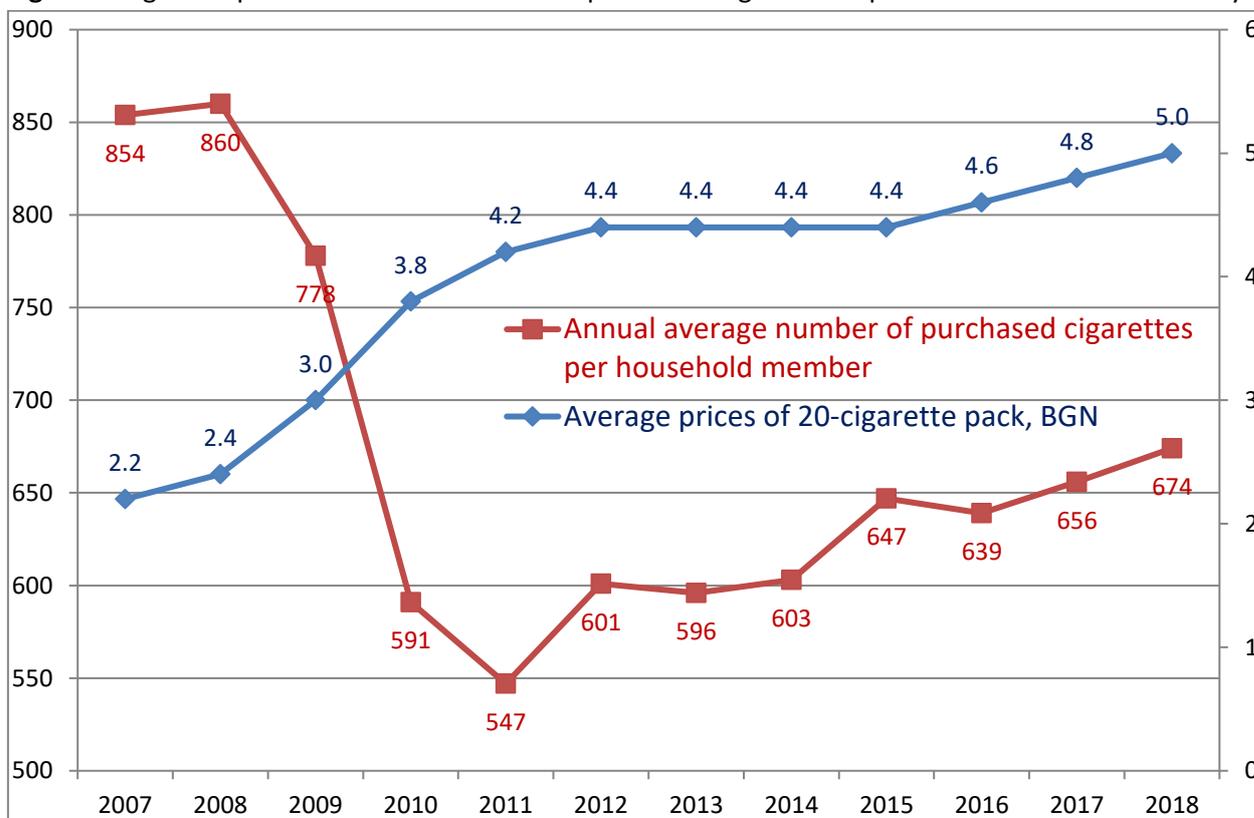
Data on cigarette brand prices were taken from the Ministry of Finance database (6). We calculated price components for two popular cigarettes brands in years of excise rates changes (Table 2). For both brands, net-of-tax part of the price in 2009-2010 was substantially higher, than in 2007-2008, while in later years this part was rather stable.

Table 2. Price components of cigarette brands in years of excise rates changes.

| | 2007 | 2008 | 2009 | 2010 | 2016 | 2017 |
|--|------------|-------------|------------|------------|------------|------------|
| Victory Blue, pack of 20 cigarettes | | | | | | |
| Price, including: | 2,3 | 2,75 | 3,6 | 4,6 | 4,9 | 5,0 |
| excise | 1,37 | 1,70 | 2,28 | 3,08 | 3,26 | 3,37 |
| VAT | 0,38 | 0,46 | 0,60 | 0,77 | 0,82 | 0,83 |
| net-of-tax price | 0,54 | 0,59 | 0,72 | 0,76 | 0,82 | 0,80 |
| <i>Tax (excise + VAT) share, %</i> | 76 | 79 | 80 | 84 | 83 | 84 |
| Marlboro (Silver, Gold), pack of 20 cigarettes | | | | | | |
| Price, including: | 3,2 | 3,4 | 4,2 | 5,0 | 5,2 | 5,3 |
| excise | 1,86 | 1,93 | 2,52 | 3,17 | 3,38 | 3,45 |
| VAT | 0,53 | 0,57 | 0,70 | 0,83 | 0,87 | 0,88 |
| net-of-tax price | 0,81 | 0,90 | 0,98 | 1,00 | 0,96 | 0,97 |
| <i>Tax (excise + VAT) share, %</i> | 75 | 73 | 77 | 80 | 82 | 82 |

Data on average cigarette prices were also collected through the annual household surveys, conducted by the NSI (7). In 2008-2011 mean price increased by 75% and the number of purchased cigarettes decreased by 37% in three years (Fig. 3).

Figure 3. Cigarette prices and annual number of purchased cigarettes reported in the household surveys.



In 2011-2019 prices increased by 19%, while the number of purchased cigarettes increased by 23% (Fig. 3). Tax (excise + VAT) share in cigarette price over those years exceeded 75% (see Table 2).

Tobacco affordability

The Guidelines for implementation of Article 6 of the WHO FCTC (**Грешка! Източникът на препратката не е намерен.**) recommend: “When establishing or increasing their national levels of taxation Parties should take into account – among other things – ... changes in household income, to make tobacco products less affordable over time in order to reduce consumption and prevalence”. In the Guidelines, “affordability” means price relative to per capita income.

In the current analysis, a modified tobacco affordability index (TAI) (**Грешка! Източникът на препратката не е намерен.**) is used to estimate the changes in tobacco affordability in 2005–2015. TAI is calculated as the percentage annual change in disposable income per capita divided by the tobacco price increase: $TAI = (\text{income increase}/\text{consumer price index tobacco} - 1) * 100$. A negative TAI value means that tobacco became less affordable, and tobacco consumption is expected to decrease. Calculations of TAI in Bulgaria are presented in Table 3.

The NSI publishes annual Household Budgets reports¹. These reports include data on annual per capita cigarette consumption, which are presented in Table 3. In 2008-2011, per capita cigarette consumption

¹ <http://www.nsi.bg/sites/default/files/files/publications/Btdom2015.pdf>

decreased by 37% in three years. Changes in the household reported cigarette consumption in 2005-2015 are very similar to the trends in tobacco affordability (Table 3).

Table 3. Tobacco affordability and cigarette consumption in 2005-2015

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|--|-------------|--------------|-------------|------------|--------------|--------------|-------------|-------------|-------------|-------------|------------|-------------|------------|------------|
| Disposable income, average per capita, BGN | 2415 | 2659 | 3105 | 3502 | 3693 | 3648 | 3782 | 4327 | 4814 | 4813 | 4953 | 5167 | 5586 | 6013 |
| Income change (previous year =100) | 105,1 | 110,1 | 116,8 | 112,8 | 105,5 | 98,8 | 103,7 | 114,4 | 111,3 | 100,0 | 102,9 | 104,3 | 108,1 | 107,6 |
| CPI tobacco (previous year =100) | 106,9 | 170,7 | 98,5 | 108,6 | 123,3 | 132,8 | 105,8 | 99,9 | 100,3 | 101,1 | 101 | 102,9 | 102,3 | 104,5 |
| Tobacco Affordability Index | -1,7 | -35,5 | 18,5 | 3,8 | -14,5 | -25,6 | -2,0 | 14,5 | 10,9 | -1,1 | 2,1 | 1,4 | 5,7 | 3,0 |
| Household average per capita consumption, number of cigarettes | 926 | 726 | 854 | 860 | 778 | 591 | 547 | 601 | 596 | 603 | 647 | 639 | 656 | 674 |
| Annual change in cigarette consumption, % | -0,5 | -21,6 | 17,6 | 0,7 | -9,5 | -24,0 | -7,4 | 9,9 | -0,8 | 1,2 | 7,3 | -1,2 | 2,7 | 2,7 |

The first decline in cigarettes consumption was observed in 2006 when cigarette affordability was reduced by the sharp increase in tobacco prices and taxes. However, the substantial rise in incomes and controversial excise changes in 2007-2008 (see Fig. 1) made cigarettes more affordable and in 2007-2008 their consumption increased again. In 2009-2011, cigarette taxes and prices were substantially increased, but income growth slowed down in those years and in 2010 the per capita income even decreased (see Table 3). We can suggest that **the main factor of substantial cigarette consumption decline in 2008-2011 was the reduction of tobacco affordability in Bulgaria, caused by a combination of the substantial increase of cigarette price and small growth of incomes.**

According to the NSI reports, cigarette consumption is much higher among more affluent people (Table 4). After excise hikes of 2009-2011, the consumption declined in all income groups, while rates of decline were slightly greater in less affluent groups. Research has revealed that poorer people are much more responsive to price and tax increases in terms of reducing smoking prevalence and that the increase in tobacco excise tax is not regressive (9,10).

Table 4. Annual average per capita cigarette consumption by decile income groups (1 – less affluent, 10 – most affluent), the NSI data

| | Decile income groups | | | | | | | | | | Average |
|-------------------------|----------------------|-----|-----|-----|-----|-----|-----|------|------|------|------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 2008 | 522 | 515 | 596 | 635 | 702 | 738 | 985 | 1085 | 1279 | 1542 | 860 |
| 2011 | 305 | 328 | 330 | 374 | 465 | 512 | 596 | 675 | 751 | 1134 | 547 |
| 2015 | 390 | 374 | 388 | 414 | 604 | 532 | 790 | 890 | 930 | 1157 | 647 |
| changes in 2008-2011, % | -42 | -36 | -45 | -41 | -34 | -31 | -39 | -38 | -41 | -26 | -36 |
| changes in 2011-2015, % | 28 | 14 | 18 | 11 | 30 | 4 | 33 | 32 | 24 | 2 | 18 |

In 2011-2015, cigarettes became more affordable and the consumption increased in all income groups.

Tobacco sales and consumption

Data on tobacco revenues, cigarettes and fine-cut tobacco sales from the EC database are presented in Table 5. To calculate tobacco sales as cigarettes and fine-cut tobacco combined, the estimated average weight of one cigarette used in this analysis was 0.75 g [11].

Table 5. Tobacco sales and tobacco revenues in 2005-2015

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Cigarette sales, billion sticks | 20,6 | 14,8 | 19,8 | 21,9 | 17,4 | 11,7 | 10,9 | 11,6 | 11,5 | 11,3 | 13,2 | 13,8 | 13,7 | 13,9 |
| Fine-cut tobacco sales, tones | 2 | 8 | 13 | 26 | 51 | 283 | 179 | 135 | 164 | 164 | 220 | 267 | 319 | 373 |
| Tobacco sales, billion cigarettes equivalents | 20,6 | 14,8 | 19,8 | 21,9 | 17,5 | 12,1 | 11,1 | 11,7 | 11,7 | 11,6 | 13,5 | 14,2 | 14,1 | 14,4 |
| Tobacco revenue, million BGN | 730 | 996 | 1347 | 1715 | 1768 | 1520 | 1694 | 1810 | 1804 | 1787 | 2082 | 2304 | 2369 | 2536 |
| Average excise per 1000 cigarette equivalents, BGN (calculated as tobacco revenue/tobacco sales) | 35 | 67 | 68 | 78 | 101 | 125 | 152 | 154 | 154 | 155 | 155 | 162 | 168 | 176 |

Annual tobacco sales had large fluctuations over years, partly caused by forestalling. The Guidelines for the implementation of Article 6 of the WHO FCTC (2) state: *In anticipation of tax increases, manufacturers or importers may attempt to take advantage of the current or lower tax and increase production or stock of products (known as forestalling)*. The increase in cigarette sales in 2007 and 2008 was apparently caused by forestalling. However, the opposite is also true: in anticipation of tax reduction, manufacturers can stock cigarettes to release them for sale (and taxation) just after excise reduction. It was the case in 2006 in Bulgaria, when excise burden for low-price cigarettes was reduced from January 2007 (see Table 1 and Fig. 1).

The KPMG studies (projects Star and Sun (12)), commissioned by Philip Morris International and other tobacco corporations, estimated the legal cigarette sales (Table 6), taking into account forestalling effect. The resulting changes in annual sales are not as sharp as in the EC sales data (Table 5).

Table 6. Estimates of licit and illicit cigarettes sales, KPMG estimates, billion cigarettes

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 ² |
|----------------------------|------|------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------------|
| Legal domestic sales | 20,5 | 17,1 | 18,1 | 18,8 | 16,8 | 10,9 | 10,8 | 11,6 | 11,5 | 11,3 | 13,2 | 13,8 | 13,7 | 14,3 |
| Outflow | | | 0,67 | 0,49 | 0,47 | 0,27 | 0,29 | 0,38 | 0,36 | 0,41 | 0,61 | 0,64 | 0,79 | 0,93 |
| Non-domestic legal | | | 0,14 | 0,22 | 0,23 | 0,15 | 0,15 | 0,15 | 0,15 | 0,07 | 0,06 | 0,18 | 0,19 | 0,23 |
| Counterfeit and contraband | | | 2,19 | 2,76 | 3,26 | 4,78 | 2,69 | 2,08 | 2,51 | 2,50 | 1,66 | 0,98 | 0,82 | 0,52 |
| Total consumption | | | 19,7 | 21,3 | 19,8 | 15,6 | 13,4 | 13,4 | 13,8 | 13,5 | 14,3 | 14,4 | 13,9 | 14,2 |

The KPMG also estimated the volumes of illicit cigarette sales: both the outflow (cigarettes sold and taxed in Bulgaria, but smoked in other countries) and non-domestic consumption or inflow (including contraband, counterfeit into the country and cigarettes brought from abroad within legal limits).

According to the KPMG estimates, total annual cigarette consumption (including inflow and excluding outflow) was about 20.5 billion cigarettes in 2007-2008 and it decreased in 2011-2012 to 13.4 billion cigarettes: by 7.1 billion cigarettes or by 35%. Euromonitor International report (13) estimated that total cigarette consumption in Bulgaria decreased from 19.2 billion cigarettes in 2009 to 12.1 billion cigarettes

² KPMG Project Stella report. Bulgaria. <https://marketing.kpmg.co.uk/stella/Bulgaria.pdf>

in 2012: by 7.1 billion cigarettes or by 37%. The household surveys provided similar estimates of cigarette consumption decline: 36-37% in 2008-2011 (see Tables 3, 4 and Fig.2).

Average annual official cigarette sales (see Table 5) constituted 18.8 billion cigarettes in 2006-2008, and KPMG gives the same estimate of cigarette sales in 2008 (Table 4). In 2010-2012, average annual official sales decreased to 11.4 billion cigarettes according to the official data or to 11.1 billion cigarettes according to the KPMG estimates. The sales reduction in 2008-2011 can be estimated as about 7.5 billion cigarettes. Most of this reduction constituted the decline in cigarette consumption over three years (7.1 billion cigarettes). The rest the taxable cigarette sales reduction consists of (1) the decline of cigarette outflow by about 0.2 billion cigarettes (see Table 6) and (2) the increase of fine-cut tobacco sales by about 0.3 billion cigarette equivalents in 2010 (Table 5).

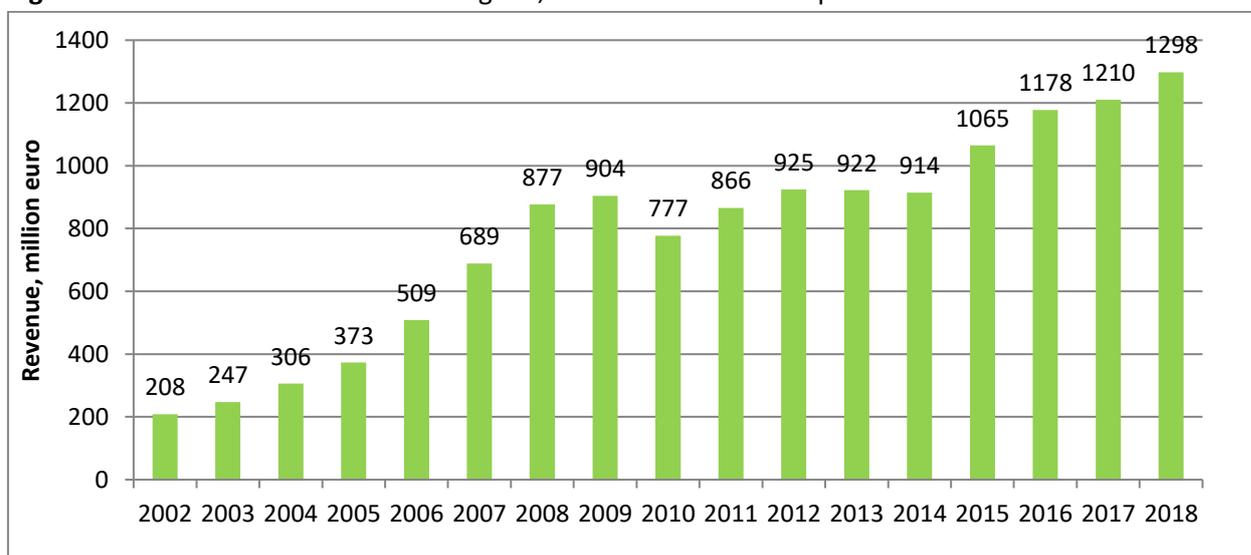
According to the KPMG estimates, average annual inflow was 2.65 billion cigarettes in 2007-2008 and 2.54 billion cigarettes in 2011-2012. So, even by the tobacco-industry funded report estimates, **it was no increase in the volumes of illicit cigarette sales after excise tax hikes implemented in 2009-2010**. KPMG reports about some increase of illicit sales in 2009 and 2010 (Table 4), but in 2011-2012 reported volumes of cigarette smuggling into Bulgaria suddenly declined more than 2-fold just in two years while excise rates in 2012 were the same as in 2010. Probably KPMG overestimated volumes of cigarettes contraband in 2009-2010, as it already did in other countries (14).

While volumes of illicit cigarette sales did not increase in absolute numbers, such volumes (2.54 billion) constituted 19% of the total (13.4 billion) cigarette consumption in 2011-2012. In 2007-2008, approximately the same number of illicit cigarettes (2.65 billion) constituted only 13% of total (20.5 billion) cigarette consumption. Such percentages can be presented as smuggling increase from 13% to 19% or by 50%. It is a popular misleading math trick used by the tobacco industry to exaggerate the scope of the illicit cigarette trade problem showing illicit cigarette market share rather than the absolute number of illicit cigarettes (15).

Tobacco excise revenue

According to the EC database, tobacco excise revenue in Bulgaria increased from 208 million euro in 2002 to 904 million euro in 2009 or almost 4.5-fold in 7 years (Fig. 4). Over the same period of time, cigarettes sales decreased from 22.6 billion in 2002 to 17.4 billion in 2009, so the revenue growth was caused by the excise rates increases.

Figure 4. Tobacco excise revenue in Bulgaria, million euro. The European Commission data.



The most dramatic moment in tobacco revenue history of Bulgaria was in 2010: the tobacco excise was increased to meet the requirements of the EU tobacco taxation directive, but the revenue in 2010 decreased by 127 million euro or by 14% comparing with 2009.

The most common (and well inspired by the tobacco industry) explanation of this revenue decline is a sharp increase in illicit tobacco consumption in Bulgaria. However, even by the KPMG estimates, the sales of contraband and counterfeit cigarettes in 2010 increased only by 1.5 billion cigarettes compared with 2009 (see Table 6), while the legal cigarette sales decreased by 5.9 billion cigarettes.

The Guidelines for the implementation of Article 6 of the WHO FCTC (2) state: *Increasing tobacco taxes generally further increases government revenues, as the increase in tax normally outweighs the decline in consumption of tobacco products.* If the decrease of revenue does happen, it means that the decline in taxable sales outweighed the tax rate increase.

There were several reasons why the decline in taxable cigarette sales in 2010 was greater than expected:

- A. The disposable income in Bulgaria declined by 1.2% in 2010. This happened after sharp increases in 2006-2008 (see Table 2). The tobacco affordability declined to a much greater extent than it could be if the economic growth continued.
- B. The structure of cigarette excise had been substantially changed: the specific excise rate increased almost 2.5-fold while the ad valorem rate decreased almost 2-fold (see Table 1). This resulted in making cheap cigarette brands relatively more expensive (see Fig. 1) and discouraged both tobacco consumption within the country and cigarette outflows from Bulgaria, since the price of cheaper cigarettes increased disproportionately to that of more expensive brands, and thus the volumes of taxable cigarettes declined.
- C. As the ad valorem excise rate was substantially reduced, the tobacco industry could get more profits when increasing the industry's part of the price (net-of-tax price or profit margin). In 2009-2010, the industry's profit margin in the retail price increased by 20-50% in comparison with 2007-2008 (see Table 2). The larger increase in final retail prices also resulted in reduced cigarette consumption and smaller numbers of taxable cigarettes. Thus, the industry kept its profits when sales declined and governmental revenues decreased. 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 (16).
- D. Some increase in illicit cigarette sales was observed in 2010, according to the KPMG estimates, as the above-mentioned changes in the excise tax structure actually encouraged cigarette contraband into Bulgaria. But the illicit sales increase could explain not more than 25% of the legal sales reduction.
- E. Smoking tobacco sales increased in 2010 (see Table 5), since excise rates on fine-cut tobacco were much lower than those on cigarettes (Table 1). The increase in excise rates for smoking tobacco in 2011 and 2012 made excise burden for cigarettes and smoking tobacco almost equal and sales of smoking tobacco in 2012 decreased more than 2-fold.
- F. New taxes were introduced in January 2010, but the grace period for cigarettes with old excise labels expired on April 1³. In 2010, the Minister of Finance Simeon Djankov said that the reduced sales are triggered by the fact that consumers stockpiled cigarettes as the tax and prices went up⁴. The tobacco industry also used forestalling: in 2010, they released for sale large volumes of cigarettes, which were taxed in 2009, but stayed in stocks. This point is well illustrated by the fact that cigarettes sales

³ <http://www.novinite.com/articles/117240/Bulgaria+FinMin%3A+Cigarette+Tax+Hike+Here+to+Stay>

⁴ <http://www.novinite.com/articles/113446/Bulgaria+Finance+Minister%3A+Less+Smoking+Is+Good+for+Economy>

decreased by 7% in 2011, while the tobacco excise revenue increased in 2011 by 11% compared with 2010 (see Table 5). This happened in spite of the excise rates being the same over both years (see Table 1).

The combination of all the above-mentioned factors made the excise rate increase smaller than the decline of cigarette sales and the tobacco excise revenue did decline in 2010.

In 2012-2013, the tobacco sales and tobacco excise revenues were rather stable, but in 2015, the revenue increased (see Table 5 and Fig. 4), while excise rates were not changed. The revenue growth in 2015 was caused by the increase in tobacco consumption (see Table 2 and Fig. 2).

Smoking prevalence

Bulgaria FCTC reports⁵ indicated that smoking prevalence rates decreased in 2008-2013 (Table 7).

Table 7. Smoking prevalence rates in Bulgaria in different age groups in 2008 and 2013, %

| | Current smoking in age groups | | | | All age groups | |
|--|-------------------------------|--------------|--------------|--------------|----------------|--------------------|
| | 15-24 | 25-44 | 45-64 | 65+ | Daily smokers | Occasional smokers |
| Males | | | | | | |
| 2008 | 27,7 | 54,8 | 46,3 | 12,0 | 40,5 | 9,8 |
| 2013 | 25,4 | 49,7 | 39,8 | 10,1 | 36,8 | 7,5 |
| Decline of prevalence in 2008-2013, % | -8,3 | -9,3 | -14,0 | -15,8 | -9,1 | -23,5 |
| Females | | | | | | |
| 2008 | 17,9 | 32,7 | 17,7 | 2,2 | 18,9 | 9,3 |
| 2013 | 15,0 | 27,9 | 15,8 | 1,9 | 17,1 | 8,3 |
| Decline of prevalence in 2008-2013, % | -16,2 | -14,7 | -10,7 | -13,6 | -9,5 | -10,8 |

According to the Ministry of Health' report (17), there were almost no changes in smoking prevalence rates in Bulgaria in 2010-2013, so we can assume that the observed declines in smoking prevalence rates (Table 7) took place in 2009-2010 due to tax hikes and rapid decline of tobacco affordability.

The decline of tobacco consumption in Bulgaria is much steeper than the decline of smoking prevalence. The consumption decreases due to the tobacco affordability reduction through two main mechanisms: (1) some people decrease the number of cigarette smoked daily (decrease of individual consumption); (2) some smokers quit due to price increase or fewer non-smokers initiate smoking and they replace those smokers who die to the lesser extent (decrease of prevalence). However, there are considerable differences across countries in terms of estimated price elasticities. Some studies indicate that price has limited impact on the prevalence of tobacco use, while significantly reducing tobacco consumption among users. Others find price to have large effects on the prevalence but more limited impact on the amount used, and still others discover that both prevalence and intensity of tobacco use are reduced when tobacco prices become higher (11).

Discussion

The WHO publication entitled 'Raising tax on tobacco: what you need to know' states the following:

In addition to reducing tobacco use and the associated health burden, tax increases generate substantial additional revenues to governments. Tax increases are a win-win situation because they are good for both public health and government revenues (18).

⁵ Bulgaria FCTC reports <http://apps.who.int/fctc/implementation/database/parties/Bulgaria#>

Many similar statements have been made in other publications on tobacco taxation. However, in Bulgaria over recent years usually only one of two sides was winning, not both at the same time.

1. In 2005-2008, average annual sales were about 20 billion cigarettes (Table 5) and the decline of cigarette consumption was rather small (Fig. 3). Average excise burden annually increased as well as the revenues did (Fig. 4). Thus, there was almost no win for public health, but large win for revenues.
2. In 2009-2010, cigarette sales and tobacco consumption sharply declined. While average excise burden increased, the rate of consumption decline was higher and revenue decreased. It was a period of great public health win and small revenue lose, but revenue reduction was much more visible, while public health win remained almost unnoticed.
3. In 2011-2014, the cigarette excise rates were not changed and the sales were rather stable. Small decline in sales and revenue in 2012-2014 (see Table 5) was probably caused by smoke-free legislation which came into effect on 1 June 2012⁶. Neither side had large wins in those years.
4. In 2015, revenues increased without excise rate growth (Fig. 4). It is only possible with the increase of tobacco sales and consumption, so fiscal side got some benefits, while health side was losing.

After having experience of these win-lose periods Bulgaria needs to develop a comprehensive tobacco taxation policy to ensure the win-win results.

The main challenge for the development of tobacco taxation policy in Bulgaria is to overcome the misperception of tobacco taxation reform of 2009-2010.

Such misperceptions are well illustrated by statements of Bulgarian politicians. In 2010, Interior Minister Tsvetan Tsvetanov hinted that *after the tax hike from the beginning of the year, cigarette smuggling increased and the flow of revenues from excise duties to the budget marked a sharp fall so a decrease in excise duties for Bulgaria-made cigarettes may be on the agenda of the cabinet*⁷. In 2011, Minister of Finance Simeon Djankov admitted that the government raised the excise tax to make Bulgarians smoke less, but he added that *such measures were taken in years of economic decline and in the coming years the taxes on cigarettes will not be raised*⁸. In 2015, Minister of Finance Vladislav Goranov stated⁹ that *the main task of the Government was to avoid the situation of early 2010 when the honoring of Bulgaria commitments to the EU and increasing the excise duty the pressure on tobacco products consumption directed great part of the consumption to contraband goods*. He clarified that the only goal was "to make the increase of tobacco products affordable for lower income groups while those that can and are less sensitive to the price change to continue smoking whatever cigarettes they wish".

Search of Bulgarian press reports, conducted by Skafida et al (19), indicated that tobacco industry arguments regarding taxation and smuggling were rarely questioned.

The current analysis revealed that the taxation reform of 2009-2010 was actually very successful:

1. In 2008-2011, cigarette consumption in Bulgaria decreased by 35%. Over recent years, no other country in Eastern Europe witnessed such a great reduction in tobacco consumption in such a short time span.

⁶ <http://www.reuters.com/article/us-bulgaria-smoking-ban-idUSBRE84GOQI20120517>

⁷ <http://www.novinite.com/articles/117240/Bulgaria+FinMin%3A+Cigarette+Tax+Hike+Here+to+Stay>

⁸ <http://bnr.bg/en/post/100122907/counteracting-cigarette-contraband-in-the-balkans>

⁹ <https://www.minfin.bg/en/pubs/1/9168>

2. No increase of illicit cigarette trade volumes (numbers of cigarettes) was seen in years after the reform (2011-2012) comparing with years before the reform (2007-2008).
3. Annual average tobacco excise revenues in 2012-2014 were about 1.8 billion BGN with annual average cigarette sales at the level of 11.5 billion sticks, after annual average tobacco excise revenues were about 1.5 billion BGN and annual average cigarette sales were about 21 billion sticks in 2007-2008.

The key factor of cigarette consumption reduction was the decrease in tobacco affordability caused by combined impact of tax hikes and economic recession. The changes in cigarette excise structure introduced in 2010 reinforced the reduction of sales and consumption. However, such large decline of tobacco consumption also caused some decline of tobacco excise revenues in 2010.

Such countries as Ukraine (10), Slovenia (20) and Baltic countries (8) also experienced large decline of tobacco consumption when tobacco tax hikes were implemented in years of economic recession. But in Ukraine tax rate increase was implemented in several steps and eventually the excise rate increased six-fold in two years and revenue increased despite sales reduction (21), while in Baltic countries some decline of tobacco excise revenue was observed, as the excise increase was large enough to compensate for the decline in smoking during the recession (8).

Freezing tobacco excise rates in Bulgaria in 2011-2015 made cigarettes more affordable, as incomes increased, and cigarette consumption started to grow again. Such situation contradicts Bulgaria's FCTC commitments to undertake effective price and tax measures to reduce tobacco consumption in various segments of the population. Such measures are effective only in those cases, when they make tobacco products less affordable for every population group.

Bulgaria has the sovereign right (within meeting EU obligations) to determine and establish its taxation policies, including the level of tax rates to apply, and the structure and system of tobacco taxes, taking into account national circumstances to achieve public health, fiscal and other objectives.

In 2019, Bulgaria had the lowest excise taxes and cigarette prices in the European Union (4). In 2019, the weighted average price (WAP) for a pack of 20 cigarettes was 2.57 euro in Bulgaria, 3.40 euro in Romania and 4.18 euro in Greece, and respective excise yields were 1.76 euro, 2.08 euro and 2.74 euro.

Bulgaria already increased excise rate for cigarettes in 2016, 2017 and 2018 (see Table 1). However, the excise rate in 2018-2019 is only 20% higher than in 2015. The cigarette price hardly exceeded inflation (Fig. 2) and tobacco affordability and tobacco consumption increased those years (see Table 3).

The most successful change of excise rates in Bulgaria was in 2009 when both specific and ad valorem excise rates were increased (see Table 1). It was a "win-win" taxation policy as both cigarette consumption and sales decreased and the revenue increased in 2009 (see Table 5). So it is recommended to increase both specific and ad valorem rate in the coming years or at least not to decrease ad valorem excise rate, when increasing specific rate.

In 2009, Minister of Finance Simeon Djankov said that the cigarette tax hike was not aimed at boosting revenues: "*This is mainly a health measure. Bulgaria needs to abruptly cut smoking*"¹⁰. Later he claimed that less smoking is good for economics¹¹. In 2013, Djankov authored an article in the Wall Street Journal, where he stated that since the beginning of the transition to democracy, life expectancy in Bulgaria has

¹⁰ <http://uk.reuters.com/article/us-bulgaria-smoking-taxes-idUKTRE5903ET20091001>

¹¹ <http://www.novinite.com/articles/113446/Bulgaria+Finance+Minister%3A+Less+Smoking+Is+Good+for+Economy>

increased by seven years due to a doubling of the health-care budget and a rapid decline in smoking¹². Tobacco taxation policy which reduces smoking in Bulgaria over next years will contribute to a further increase of life expectancy in the country.

Conclusions

Tobacco taxation policy in Bulgaria in 2009–2010 was very successful from a public health perspective as it contributed to the health objectives aimed at reducing tobacco consumption, in line with the FCTC obligations. In 2008-2011, the estimated tobacco consumption within the country declined by 35%.

Despite high excise increase, no increase in illicit cigarette trade volumes (numbers of cigarettes) was seen in years after the reform comparing with years before the reform.

Annual average tobacco excise revenues in 2012-2014 were greater than in 2007-2008 despite the substantial decrease in annual average cigarette sales. Only in 2010, tobacco revenue declined due to combined action of several factors.

In 2010, Bulgaria changed its structure of the cigarette excise tax, greatly increasing the specific excise rate, but decreasing the ad valorem excise rate. The reform was very beneficial for public health as it increased the price of the cheapest cigarettes disproportionately and thus decreased both tobacco consumption within the country, and limited switching down to cheaper cigarettes and cigarette outflow out of the country. However, the ad valorem excise decrease seems to be exorbitant, and it was one of the causes of the revenue decline in 2010.

In 2011-2015, cigarette excise rates were not changed in Bulgaria and some increase of tobacco consumption was observed. Some excise changes were implemented in 2016-2018, but the resulting cigarette price increase was small. As population income grew those years, cigarette became more affordable and tobacco consumption increased.

In 2019 Bulgaria had the lowest cigarette taxes and prices in the European Union. It is time to develop and implement tobacco excise policy, which will be beneficial for both public health and governmental revenue.

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¹² http://www.novinite.com/articles/152418/*Ex+FinMin+Comments+on+Bulgaria%27s+%27Endless%27+Protests+for+WSJ

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