



**CAMBODIA**

# Cigarette Tax and Price:

## Affordability and Impacts on Consumption and Revenue

**August 2011**

This policy paper is based on the research paper “Report on Cigarette Affordability and Impact of Tobacco Taxes” by Ms. Pen Sopakphea, Mr. Chea Samnang, and Mr. Chuor Se of the General Department of Taxation of the Ministry of Economy and Finance of the Kingdom of Cambodia with support from the World Health Organization in Cambodia.

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## FACT SHEET

### Growing smoking prevalence and tobacco-related mortality

The burden of tobacco use is growing and will lead to more tobacco-related diseases and deaths. Although the prevalence of tobacco smoking in adult males ages 18 and older decreased from 48% in 2006 to 42.5% in 2011, the number of adult tobacco users in the Kingdom of Cambodia has not decreased over the past 5 years. About 2 million Cambodian adults currently consume tobacco products, of whom 1.4 million (42.5% of adult men and 3.5% of adult women) smoke cigarettes, and more than half a million (0.8% of adult men and 13.8% of adult women) chew tobacco in the form of a betel quid.

### Much room to raise taxes

In Cambodia, a 10% excise tax rate is imposed on both local and imported tobacco, based on 65% of the industry invoice price. These are among the lowest tobacco tax rates in the ASEAN region and far below those recommended by the World Bank and WHO, 66-80% of retail price. Although the government revenue generated from excise taxes on tobacco has increased in recent years, the percentage of tobacco taxes to the total government tax revenue remains low (only 3.5% of the total taxes in 2009), and they are still much less than taxes generated from services and alcohol.

### Increasing affordability of cigarettes

The real price of cigarettes has dropped in the recent past years relative to the more rapidly increasing per capita GDP. Not only did the nominal price of expensive cigarette brands such as 555 drop by about 1,000 riel per pack in 2007 and remain relatively unchanged since then, but also the nominal price of the popular brand, ARA, increased by only 300 riel (to 1,300 riel per pack) since 2008. Thus, while popular brands remain very affordable, even expensive cigarettes are becoming more affordable among Cambodians.

### Positive fiscal and health impacts of increasing taxes

Based on simulated scenarios to increase excise tax from 11% to 20% of retail price, with a corresponding increase of the industry base price, the industry will have no profit loss, instead the profit will increase. Simultaneously the government gains through increased tobacco tax revenues, which could be dedicated to health promotion in the country. As a result, tobacco consumption and smoking prevalence would gradually drop, providing even further economic gains to the country through reduced health care costs and increased productivity of a healthier workforce.

### Policy recommendations

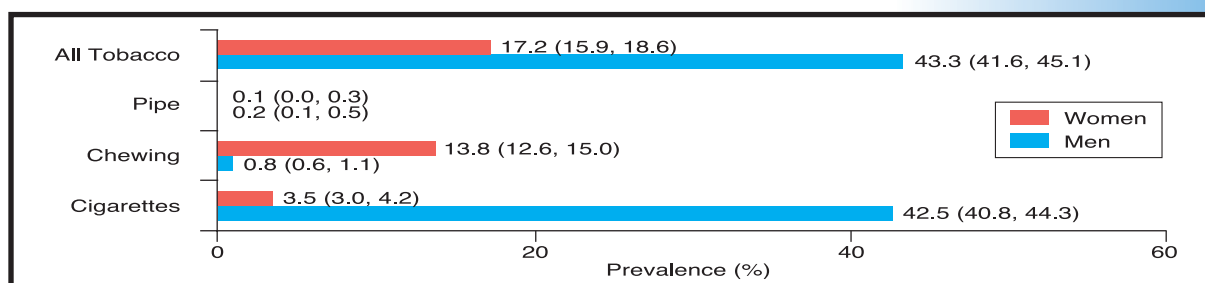
The government should increase its tobacco tax efforts, beginning with a doubling of the excise tax rate from 10% to 20%. The tax base for calculating the excise tax liability should also be increased from 65% to 75%, then to 85%, of the industry invoice price. In the medium and long term, the tobacco excise tax rate should be raised above 20% of the retail price (moving towards the internationally recommended 66-80% tax rate as percentage of retail price) in order for Cambodia to comply with the FCTC and to have excise tax rates comparable to other countries in the region. Given the high prevalence of smokeless tobacco consumption among women, the government should also consider taxing smokeless tobacco and making it less affordable.

# I. Introduction and background

## High Smoking Prevalence

A 2011 nationwide survey conducted by the National Institute of Statistics, Ministry of Planning found that the prevalence of tobacco use among adults<sup>1</sup> is quite high: 42.5% of adult men and 3.5% of adult women smoke cigarettes, whereas 13.8% of women and 0.8% of men consume tobacco in the form of a betel quid (Figure 1).

**Figure 1. Nationwide adult (18 years and older) prevalence of tobacco use in Cambodia**



Source: National Adult Tobacco Survey Cambodia (NATSC) 2011

Although the prevalence of cigarette smoking in adult males aged 18 years and older decreased from 48% in 2006 to 42.5% in 2011, the number of adult tobacco users in Cambodia has not decreased. Compared to 2006, the number of tobacco users remains about 2 million; the number of cigarette smokers remains about 1.4 million; and the number of smokeless tobacco users (in the form of a betel quid) still exceeds half a million<sup>2</sup> (Table 1).

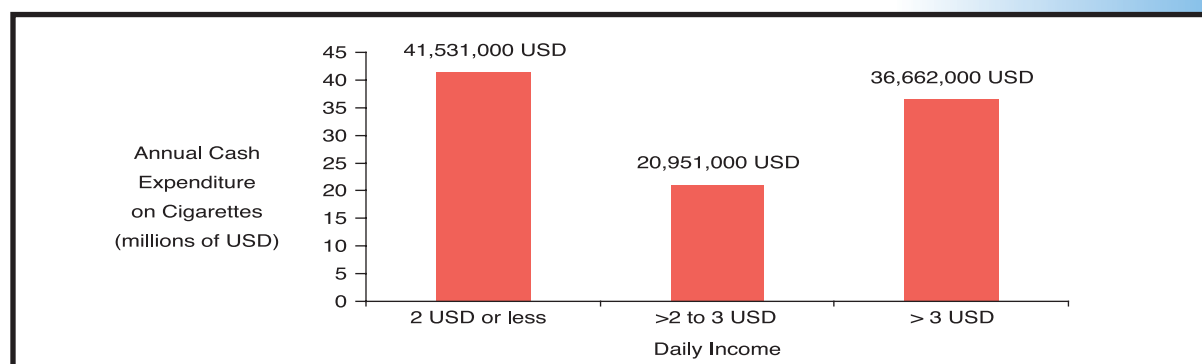
**Table 1. Estimated number of adults, aged 18 years and older, using tobacco (all forms, cigarettes, and smokeless) in 2006 and 2011**

	2006	2011
All tobacco users	1,924,000	1,993,000
Cigarette smokers (manufactured, hand-rolled)	1,342,000	1,448,000
Smokeless tobacco users	586,000	549,000

Source: Tobacco Control Leadership Training Survey 2006; NATSC 2011

The nationwide survey findings further show that adults earning 2 USD or less per day (representing 69% of the nation) spend more as a group on cigarettes than those earning greater than 2 USD per day (Figure 2), placing them at increased risk of developing smoking-related diseases, and implying that cigarettes are affordable enough for them to purchase.

**Figure 2. Annual cash expenditure on cigarettes by Cambodians based on daily wages**



Source: National Adult Tobacco Survey Cambodia (NATSC) 2011

## Cigarette Price Trends

Although there are more than 200 local and imported cigarette brands in the Cambodian market, only 14 local tobacco manufacturers are registered with the General Department of Taxation (GDT). British-American Tobacco (BAT) Cambodia, producer of the popular ARA brand is the largest market shareholder (40.3%) followed by Viniton (28.6%), and Altadis (18.8%). ARA is the most popular domestic cigarette brand (costs KHR 1,300 (USD 0.31)<sup>3</sup> per pack) whereas 555 is the most popular international brand (costs KHR 5,000 (USD 1.19) per pack). From 2008 to 2009, there was a minimal increase in nominal price of popular brand (ARA) of about 100 Riel, while in 2007 the price of expensive brands dropped dramatically by about 33 %.

<sup>1</sup> National Adult Tobacco Survey of Cambodia 2011, National Institute of Statistics, Ministry of Planning

<sup>2</sup> Tobacco Control Leadership Training Survey 2006, National Institute of Statistics, Ministry of Planning,

<sup>3</sup> Exchange rate as of 31 May 2010: 1 USD = KHR 4,200

## Tobacco Tax Revenue Trends

From 2007 to 2008, the tobacco excise tax revenue increased dramatically (more than 60%) due to both high consumption of tobacco products and a change in the tax system, wherein the tax base was changed from the ex-factory price to the value of the invoice. Nonetheless, the revenues generated from tobacco excise taxes were still much less than those generated from excise taxes on services and alcohol.<sup>4</sup> From 2005 to 2009, the total annual amount of tobacco tax collections by the GDT increased from USD 5.1 million in 2005 to around USD 13.1 million in 2009, however, the percentage contributed by tobacco taxes to total taxes only averaged 3.5% during this period.<sup>5</sup> While Cambodia's tobacco tax rates remain among the lowest in the ASEAN region, given that the GDT saw a substantial fiscal benefit from the 83.7% increase in excise taxes between 2007 and 2009, it is believed that in further strengthening tobacco control tax and price policies and measures, the government will be able to generate even more tax revenues for Cambodia.

## Tobacco Taxation System

There are currently four taxes on tobacco products in Cambodia: (1) an excise tax of 10% levied on all types of cigarettes, (2) a VAT of 10% levied on domestic and imported cigarettes, (3) a public lighting tax (PLT), and (4) an import duty imposed on imported cigarettes. The public lighting tax is used to support public lighting in cities and provinces and is imposed on alcohol, soft drinks, and cigarettes; this amounts to 3% tax imposed on cigarette manufacturers (There is no lighting tax on imported cigarettes). Import duties vary: 7% for cigarettes, 15% for raw material such as tobacco leaves, and 35% for cigars. In addition, Cambodia also has three customs tariff categories, which include Customs Duty (four tariff bands), Special Tax (nine tariff bands), and VAT (one tariff band).

## Tobacco Tax Calculation

To calculate tobacco tax in Cambodia, a 10% excise tax rate is levied on both local and imported products, with some exemptions, including tobacco that is exported, cigarettes that are imported by international travelers for personal use that do not exceed 1 pack (equal to 20 sticks), and duty-free shops in airports. As of May 2007, the GDT has sanctioned a fixed rate of 65% of invoice price (instead of the previous base using ex-factory sales price) to calculate the excise tax on local products. This reform has contributed to a 45% increase in excise tax revenues from local tobacco products (only cigarettes).

## Tobacco Tax Enforcement Measures

The Royal Government of Cambodia (RGC) uses tax stamps to control all cigarette imports and domestic cigarette production. Under the guidance of the RGC, the Ministry of Economy and Finance holds the authority to print these tax stamps, while the General Department of Customs and Excise (GDCE) and the General Department of Taxation (GDT) manage and control their sale. All importers and local manufacturers are required to apply a tax stamp (banderole) on each cigarette pack at the time of manufacture.

## Health Care Costs of Tobacco Consumption

Although the direct health costs of tobacco use in Cambodia are still difficult to estimate due to inadequate data at present, the 2009 WHO Country Health Information Profile (CHIP) for Cambodia<sup>6</sup> already lists high blood pressure and heart disease, both known tobacco-related diseases, among the top causes of morbidity and mortality in the country, indicating a significant and growing burden of non-communicable diseases in Cambodia. Needless to say, tobacco-related diseases and their economic costs are a potentially significant drain on a developing country's resources and are hugely preventable.

## II. About this research

Because economic growth coupled with low cigarette prices contribute directly to rising cigarette consumption, there is a need to examine the level of cigarette affordability in terms of percentage of income used to purchase a pack of cigarettes, the trend of affordability over time, and the fiscal and public health impacts of tax increases.

This research therefore answers two important questions:

1. How affordable are cigarettes in Cambodia, and what is the affordability trend over time, using the measure of Relative Income Price (RIP)?<sup>7</sup>
2. How would cigarette tax and price increases affect affordability, government tax revenue, industry revenue, cigarette consumption, and smoking prevalence?

<sup>4</sup> Data from General Department of Taxation, Ministry of Economy and Finance 2008

<sup>5</sup> Data from General Department of Taxation, Ministry of Economy and Finance 2009

<sup>6</sup> World Health Organization. (2009). *Country Health Information Profile for Cambodia, 2009 revision*.

<sup>7</sup> The Relative Income Price (RIP) is a broad measure of affordability that calculates the percentage of per capita GDP required to purchase 100 packs of cigarettes.

Such findings would indicate an appropriate level of cigarette excise burden to make cigarettes less affordable particularly among the low- and middle-income groups.

In particular, this research uses measures such as Relative Income Price developed by Blecher and van Walbeek in their cigarette affordability model<sup>8</sup> and the “percentage of daily wage” measure for analysis based on secondary data sources on cigarette price and income in the past 10 years.

The simulation model introduced by van Walbeek<sup>9</sup> was used to study the fiscal and public health impact of tobacco taxes. The following inputs were required for fiscal impact analysis: average excise tax amount as a percentage of the average cigarette retail price, value-added tax, an estimate of the price elasticity of demand, the percentage increase in the excise tax, and the percentage increase in the net-of-tax price.

### III. Research results and analysis

#### A. Cigarettes are becoming more affordable

Expensive brand 555 became aggressively more affordable due to tobacco industry price policy. **Just between 2002 and 2010 the price of 555 cigarettes dropped more than 3 times, while the price of the cheap and common brands, Cambo and ARA, also dropped slightly compared to the price of rice (Figure 3) and other food items, such as eggs and pork, which almost doubled during this period.**

Figure 3. Prices of a cigarette pack (expensive, most common, and cheapest brand) relative to 1kg rice, 2002-2010

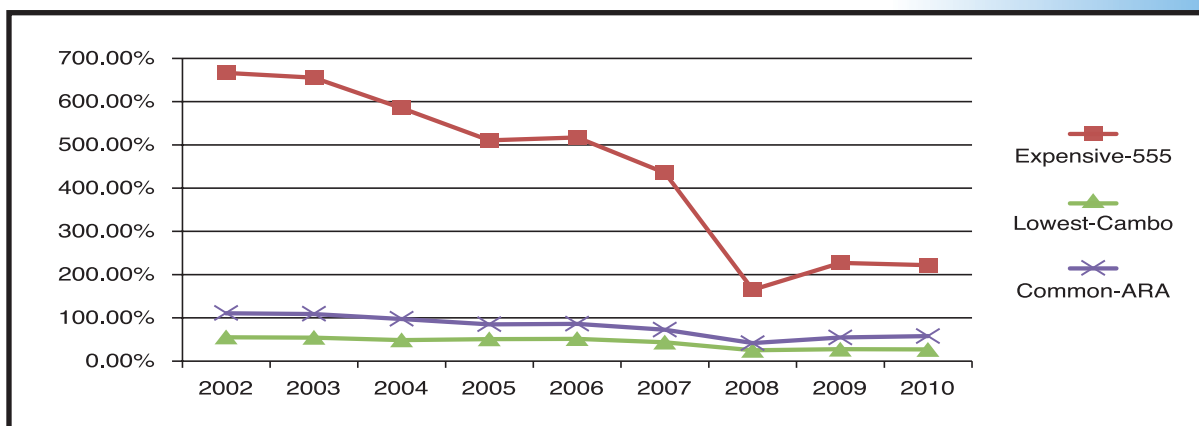
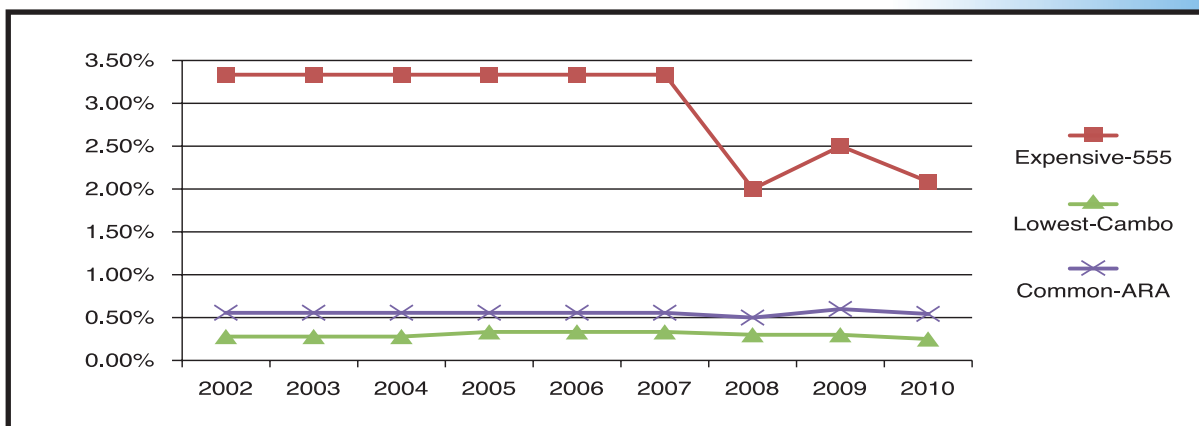


Figure 4 shows that Cambodian adult smokers need to spend about 0.25% of their monthly wages on a pack of the cheapest cigarettes and around 3.50% of their monthly wages on a pack of expensive cigarettes. If a minimum-wage earner smokes one pack of cheap cigarettes a day, his monthly tobacco expenditures would represent 7.5% of his monthly wages. If he smokes one pack of 555 a day, this expenditure would be equivalent to 105% of his wages in 2002, but only 60% of his wages in 2010. Thus, **relative to wages, cheap cigarette brands have remained affordable, while the more expensive cigarette brands have become more affordable in Cambodia over the past years.**

Figure 4. Price of a cigarette pack relative to minimum wages per month, 2002-2010



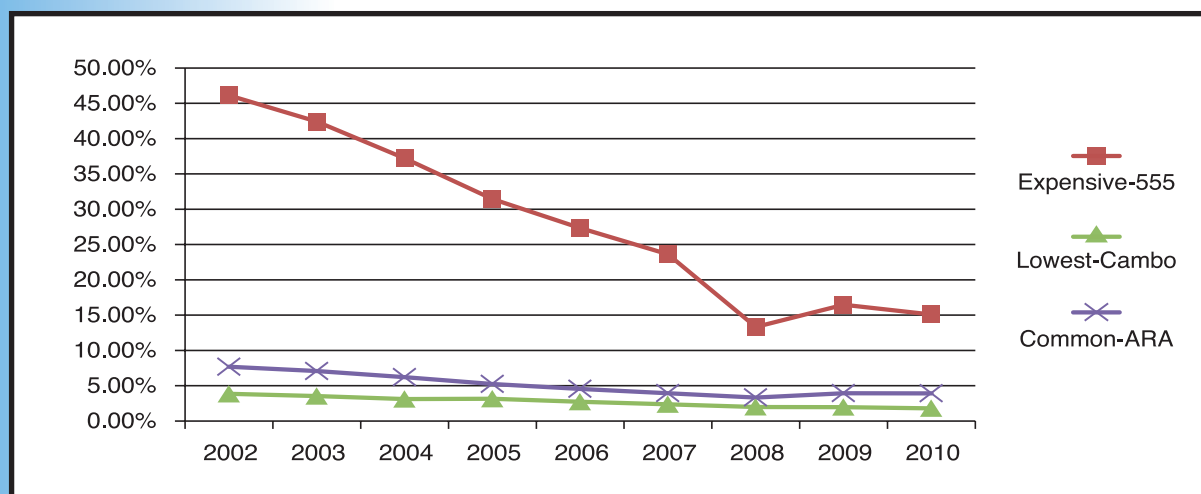
<sup>8</sup> Blecher EH and van Walbeek CP. Cigarette affordability trends: an update and some methodological comments. *Tobacco Control* 2009; 18 (3), 167–175.

<sup>9</sup> Van Walbeek C. A simulation model to predict the fiscal and public health impact of a change in cigarette excise taxes. *Tob Control* 2010; 19 (1), 31–36.



In recent years, the nominal cigarette prices declined for the expensive 555 brand, and remained low and practically unchanged for common and cheap brands. Compared to per capita GDP, which grew at a faster rate, the expensive 555 brand became more and more affordable, as its relative price dropped from 45% in 2002 to 15% in 2010 (Figure 5). In addition, the common and cheap cigarette brands (ARA and Cambo) became twice as affordable during this period, their relative prices dropping from 8% to 4% for common brands and from 4% to 2% for cheap brands. This shows how increasingly affordable it is to buy cigarettes in Cambodia.

Figure 5. Relative Income Price (RIP)\*, 2002-2010



\*RIP = percentage of per capita GDP required to purchase 100 packs of cigarettes

## B. Impact of raising taxes

In the first of three scenarios, if excise tax is increased by 10% (i.e. excise tax becomes 11% of retail price) while the industry does not increase its price (i.e. it absorbs the incremental tax increase), the result would be a negligible reduction in industry revenue (-0.36%), and a barely perceptible increase in the retail price of cigarettes (0.61%) and government's tobacco tax revenue (3.23%). In the second scenario, if excise tax is increased by 100% (i.e. excise tax becomes 20% of retail price) and industry price remains unchanged, this will result in a still minimal decrease in tobacco industry revenue (-3.49%), and a correspondingly minimal increase in retail price (6%) and government tax revenue (31%) Neither of these scenarios has any significant impact on tobacco consumption (-0.36% and -3.5%, respectively) and smoking prevalence (-0.15% and -1.42%, respectively) (Table 2).

Table 2. Impact of excise tax increase on revenues and consumption (without any increase in industry invoice price)

Percent (%) change in:										
Excise tax rate	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Retail price	0.61%	1.22%	1.83%	2.44%	3.05%	3.66%	4.27%	4.88%	5.49%	6.10%
Excise tax revenue	9.60%	19.13%	28.59%	37.99%	47.32%	56.58%	65.79%	74.92%	84.00%	93.02%
Public lighting tax revenue	0.24%	0.49%	0.73%	0.97%	1.21%	1.45%	1.69%	1.93%	2.16%	2.40%
VAT / sales tax revenue	0.24%	0.49%	0.73%	0.97%	1.21%	1.45%	1.69%	1.93%	2.16%	2.40%
Total tax revenue	3.23%	6.44%	9.63%	12.80%	15.94%	19.06%	22.17%	25.25%	28.31%	31.35%
Industry revenue	-0.36%	-0.73%	-1.08%	-1.44%	-1.79%	-2.13%	-2.48%	-2.82%	-3.16%	-3.49%
Cigarettes per smoker	-0.22%	-0.44%	-0.65%	-0.86%	-1.07%	-1.28%	-1.49%	-1.69%	-1.90%	-2.10%
Smoking prevalence	-0.15%	-0.29%	-0.44%	-0.58%	-0.72%	-0.86%	-1.00%	-1.14%	-1.28%	-1.42%
Cigarette consumption	-0.36%	-0.73%	-1.08%	-1.44%	-1.79%	-2.13%	-2.48%	-2.82%	-3.16%	-3.49%

In the third scenario, if at the same time as the government's increase of the excise tax by 100%, the tobacco industry was to increase its base price, the result would be a marginal (0.27%) increase in industry profit (i.e. no losses) and retail cigarette prices (16.71%, or in real terms only 217 riel). The total tobacco tax revenue, however, would increase from 31.35% to 36.5%, or an additional 4.9% total revenue compared to the earlier scenario. In addition, tobacco consumption would drop by 8.85% (a further 5% reduction compared to the first scenario) and the smoking prevalence would drop by 3.7% (Table 3).

Table 3. Impact of excise tax increase on revenues and consumption (when the industry increases its price by 10%)

Percent (%) change in:										
Excise tax rate	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Retail price	1.62%	3.25%	4.89%	6.54%	8.20%	9.88%	11.57%	13.27%	14.99%	16.71%
Excise tax revenue	10.04%	20.08%	30.12%	40.17%	50.22%	60.28%	70.34%	80.40%	90.47%	100.54%
Public lighting tax revenue	0.64%	1.29%	1.93%	2.57%	3.21%	3.84%	4.48%	5.12%	5.75%	6.39%
VAT / sales tax revenue	0.64%	1.29%	1.93%	2.57%	3.21%	3.84%	4.48%	5.12%	5.75%	6.39%
Total tax revenue	3.64%	7.29%	10.93%	14.58%	18.23%	21.88%	25.52%	29.17%	32.82%	36.47%
Industry revenue	0.03%	0.06%	0.09%	0.12%	0.15%	0.18%	0.20%	0.22%	0.25%	0.27%
Cigarettes per smoker	-0.57%	-1.14%	-1.70%	-2.24%	-2.78%	-3.31%	-3.83%	-4.34%	-4.85%	-5.34%
Smoking prevalence	-0.38%	-0.77%	-1.14%	-1.52%	-1.89%	-2.26%	-2.63%	-2.99%	-3.35%	-3.70%
Cigarette consumption	-0.96%	-1.90%	-2.82%	-3.73%	-4.62%	-5.49%	-6.35%	-7.20%	-8.03%	-8.85%

## IV. Policy recommendations

Although the amount of revenue generated from tobacco excise taxes by the General Department of Taxation (GDT) increased significantly from 2004 to 2008, it is evident that revenues generated from tobacco excise taxes are much less than those generated from excise taxes on services and alcohol. Notably, the current tobacco excise tax rate is lower than the excise rate for alcohol.

Given that the GDT saw a substantial fiscal benefit from the 83.7% increase in excise taxes between 2007 and 2009 and that Cambodia's tobacco excise tax rates remain among the lowest in the ASEAN region, it is strongly recommended that, in the short term, **the government should double the excise tax rate from 10% to 20% of the retail price.** This tax increase would have a negligible impact on tobacco company revenues, but would lead to a significant increase in tobacco tax revenues and a modest reduction in tobacco consumption and its health risks.

In the medium and long term, with the twin goals of saving lives and raising revenues, **the tobacco excise tax rate should be raised above the 20% of the retail price rate in order for Cambodia to comply with the FCTC and international best practice and to have excise tax rates comparable to other countries in the region.**

In addition to the increase in excise tax rate, **the government should also gradually increase the tax base for calculating the excise tax liability from 65% to 75% to 85%.**

Given the serious implications of the alarmingly high consumption of smokeless tobacco, particularly among women, **high excise taxes should also be imposed on smokeless tobacco products** to make them less affordable.

Furthermore, in order to maximize these gains, the following improvements in tax administration are also recommended:

- require an official license for all cigarette importers, manufacturers, wholesalers, and distributors,
- improve the quality and price of the tax stamp to increase additional revenues and cigarette prices; and
- increase education of and take serious enforcement measures for all companies and individuals to comply with the tax law.

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**Vision:  
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