

# Cigarette Tax and Price:

## Affordability and Impacts on Consumption and Revenue

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VIETNAM

This policy paper is based on the research paper “Report on Tobacco Affordability and Impact of Tobacco Taxes “ by the Department of Tax, Ministry of Finance, Vietnam.

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SEATCA

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## FACT SHEET

### Growing smoking prevalence and tobacco-related mortality

The growing prevalence of tobacco use is a large contributor to the increasing burden of non-communicable diseases (NCDs) in Vietnam. About 40,000 deaths were caused by tobacco-related diseases in 2008 and are projected to increase to more than 50,000 deaths annually by 2023. Smoking also imposes an enormous burden of health care cost and productivity losses to the country. The total cost of inpatient health care amounted to VND 1,161.8 billion for only three diseases related to tobacco use: chronic obstructive pulmonary disease (COPD), lung cancer and ischemic heart disease in 2007.

### Much room to raise taxes

Tobacco tax measures that raise cigarette prices through increases in excise tax are an effective intervention tool to reduce cigarette affordability and enhance fiscal and public health gains for the country.

Since 2008, the excise tax rate for cigarettes and cigars has been set at 65% of the pre-tax, ex-factory price. On average, total taxes on cigarettes in Vietnam account for almost 45% of the retail sale price. This falls far short of the optimal tax level recommended by the World Bank and World Health Organization (WHO) at 65% to 80% of the retail price.

As seen below, even if the excise tax rate is increased by as much as 50%, resulting in an average retail price increase of 30.4%, there would only be a marginal price increase from VND 5,250 to VND 6,846. Thus cigarette prices are still relatively low, suggesting that the excise tax rate should be regularly raised to a higher percentage in order to reduce cigarette affordability.

### Increasing nominal prices but declining real prices of cigarettes, thus raising affordability of cigarettes

Between 1998 and 2009, nominal cigarette prices increased for the most expensive brand, 555 (from VND 11,000 to 21,000), most popular brand, VINATABA (from VND 6,200 to 12,000) and cheapest brand, Thang Long (from VND 1,400 to VND 2,800). In the same period, there was a 4-fold growth in real per capita Gross Domestic Product (GDP), as well as an increase in personal incomes and purchasing power in Vietnam. Thus despite the two-fold nominal price increases for all brand categories, their real prices have generally remained unchanged with a downtrend over the same period, indicating the growing affordability of cigarettes.

### Positive fiscal and health impacts of increasing taxes

A modest excise tax increase would effectively increase tax revenues over the year. If excise tax is increased by 5% to 50%, it would lead to an immediate revenue increase by 5.2% (VND 10,134 billion) to 46.9% (VND 14,150 billion), respectively. A progressive increase in the excise tax would result in a significant increase of government's tobacco tax revenue over the years.

Impact of increasing tobacco excise tax by 50%	
Increase in total tax burden as % of retail price	From 44.9% to 57.7% of the retail price, which is far below the 66% to 80% tax level recommended by the World Bank and WHO
Cigarette price still low even after marginal increase	Average cigarette price increased from VND 5,250 to VND 6,840 * Exchange rate USD 1 = 18,478 VND (31 December 2009) and USD 1 = 16,190 VND (31 December 2008)
Increased total tobacco tax revenue	From VND 9,633 billion to VND 14,150 billion annually
Reduced total cigarette consumption	From 3,500 million packs to 3,066 million packs annually
Lives saved (decrease in smoking health care cost)	1,009,800 lives saved from premature tobacco-related deaths

### Policy recommendations

**Increase excise tax to an optimal level annually** to result in higher cigarette prices and thus reduce smoking prevalence and consumption in the country. Millions of lives can be saved while generating additional revenue gain to government.

**Increase excise tax to keep pace with inflation** to effectively minimize the gap between real income and cigarette prices as a way to reduce affordability of tobacco products over the years.

Reform the current tobacco tax structure by **introducing a mix of specific tax system** (adjusted automatically for inflation) in combination with an **ad-valorem tax system**.

**Introduce a dedicated tax on tobacco for health promotion and tobacco control programmes.** A long-term and sustainable funding can be generated to effectively support short- and long-term tobacco control and health promotion programmes.

**Strengthen anti-smuggling measures through maintaining the tax stamp policy** that requires tax stamps to be placed on all domestically manufactured cigarettes to prevent tax evasion and other measures that control the tobacco supply chain.

**Introduce retail licensing** for better control of the tobacco supply chain to contain any potential smuggling activities in the country.

**Strengthen tax administration** through harmonization of the regional tax system in ASEAN and **enforcement coordination** to effectively control illicit trade among neighboring countries.

## I. Introduction and background

The current estimates according to the Global Adult Tobacco Survey (GATS) in 2010<sup>1</sup> show that about 23.8% (15.3 million adult Vietnamese) currently smoke tobacco, with prevalence of smoking in adult men and women at 47.4% and 1.4%, respectively. Secondhand smoke (SHS) exposure at indoor workplaces was reported by 49% of 5 million non-smoking workers and passive smoking at home was acknowledged by 67.6% of 33 million non-smokers.

Tobacco use imposes an enormous burden of health care cost and productivity losses to countries. In Vietnam, the total estimated cost of inpatient health care was about VND 1,161.8 billion for only three diseases related to tobacco use (chronic obstructive pulmonary disease (COPD), lung cancer and ischemic heart disease) in 2007.<sup>2</sup> A simulation model on impact of tobacco control policy also projected almost 40,000 deaths attributed to smoking in 2008 and the death toll is likely to increase to more than 50,000 deaths annually by 2023.<sup>3</sup> Another study on health care costs of smoking revealed that smoking caused about 66,000 to 76,000 deaths yearly, accounting for 9.7% to 11% of total deaths in 2005.<sup>4</sup>

Tobacco tax and price measures are acknowledged by Parties to the WHO Framework Convention on Tobacco Control (FCTC Article 6) as an important and effective intervention tool to reduce tobacco consumption through reducing affordability and thereby enhancing both fiscal and public health gains for the country. Vietnam uses an ad valorem excise tax system for tobacco products, with the current special consumption (excise) tax rate at 65% of factory price. On average, this contributes to a total tax burden on cigarettes in Vietnam of almost 45% of the retail price, far below the optimal tax level recommended by the World Bank and World Health Organization at 66% to 80% of the retail price.

## 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 Vietnam, and what is the affordability trend over time, using the measure of Relative Income Price (RIP)<sup>5</sup>?
2. How would cigarette tax and price increases affect affordability, government tax revenue, industry revenue, cigarette consumption, and smoking prevalence?

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 (RIP) developed by Blecher and van Walbeek in their cigarette affordability model<sup>6</sup> and the “percentage of daily wage” measure for analysis based on secondary data sources on cigarette prices, per capita gross domestic product (GDP), and the monthly minimum wage in Vietnam in the past 10 years. The simulation model introduced by van Walbeek<sup>7</sup> was used to study the fiscal and public health impact of tobacco taxes.

<sup>1</sup> Ministry of Health. (2010). *Global Adult Tobacco Survey Vietnam 2010*. Hanoi: Ministry of Health, October 2010.

<sup>2</sup> Ross, H, Trung, DV, Phu, VX. (2007). *The costs of smoking in Vietnam: the case of inpatient care*. *Tobacco Control*; 16:405–409.

<sup>3</sup> Levy, D.T., Bales, S., Nguyen, T.L., Nikolayev, L. (2006). *The role of public policies in reducing smoking and deaths caused by smoking in Vietnam: Results from the Vietnam tobacco policy simulation model*. *Social Sciences and Medicine* Apr; 62(7):1819-30.

<sup>4</sup> Norman, R., Higashi, H., Vos, T. Barendregt, L., Linh, B.N. (2010). *The burden of disease attributable to tobacco smoking in Vietnam in 2006 (in manuscript)*.

<sup>5</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.

<sup>6</sup> Blecher EH and van Walbeek CP. Cigarette affordability trends: an update and some methodological comments. *Tob Control* 2009; 18 (3), 167–175.

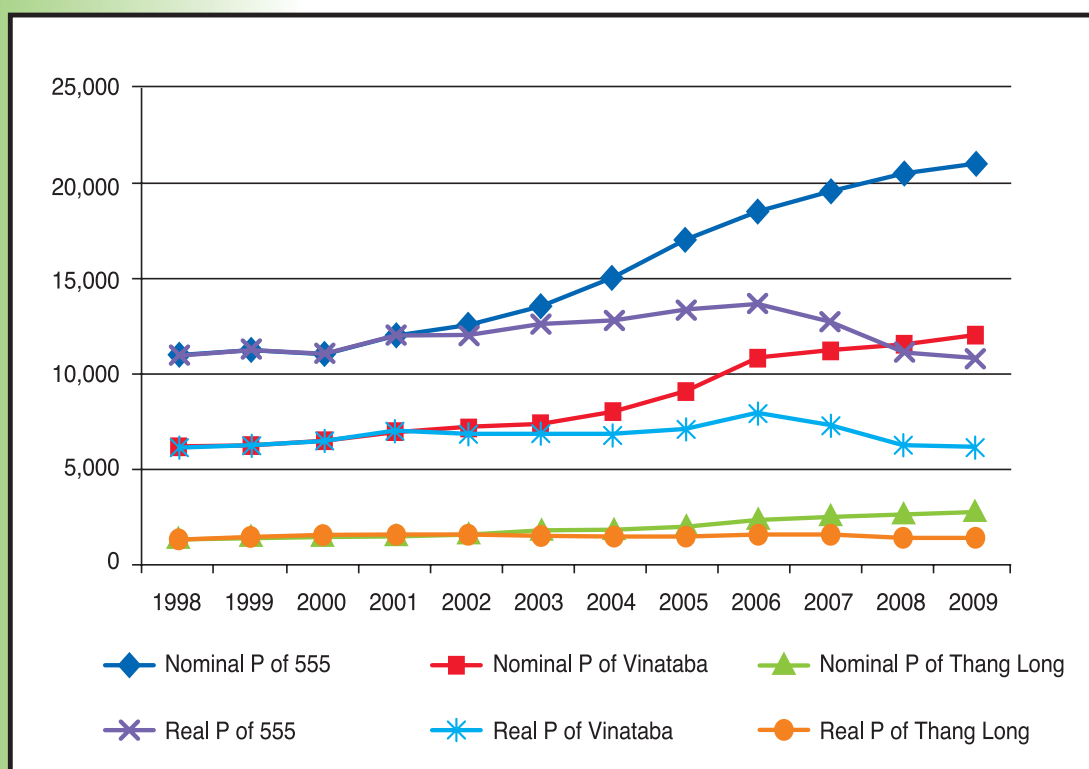
<sup>7</sup> Van Walbeek C. A simulation model to predict the fiscal and public health impact of a change in cigarette excise taxes. *Tob Control* 2010; 19 (1), 31–36.

### III. Research results and analysis

#### A. Cigarettes are becoming more affordable

The nominal prices of cigarettes have increased from 1998 to 2009 for three selected representative cigarette brands: most expensive brand, 555 (from VND 11,000 in 1998 to 21,000 in 2009), most popular brand, VINATABA (from VND 6,200 to 12,000) and cheapest brand, Thang Long (from VND 1,400 to VND 2,800). Despite these increases in the nominal prices of all three types of cigarettes, their real prices (adjusted for inflation and compared to the base year of 1998) have not increased correspondingly, remaining generally unchanged with a downtrend over the same period, indicating the growing affordability of tobacco (Figure 1).

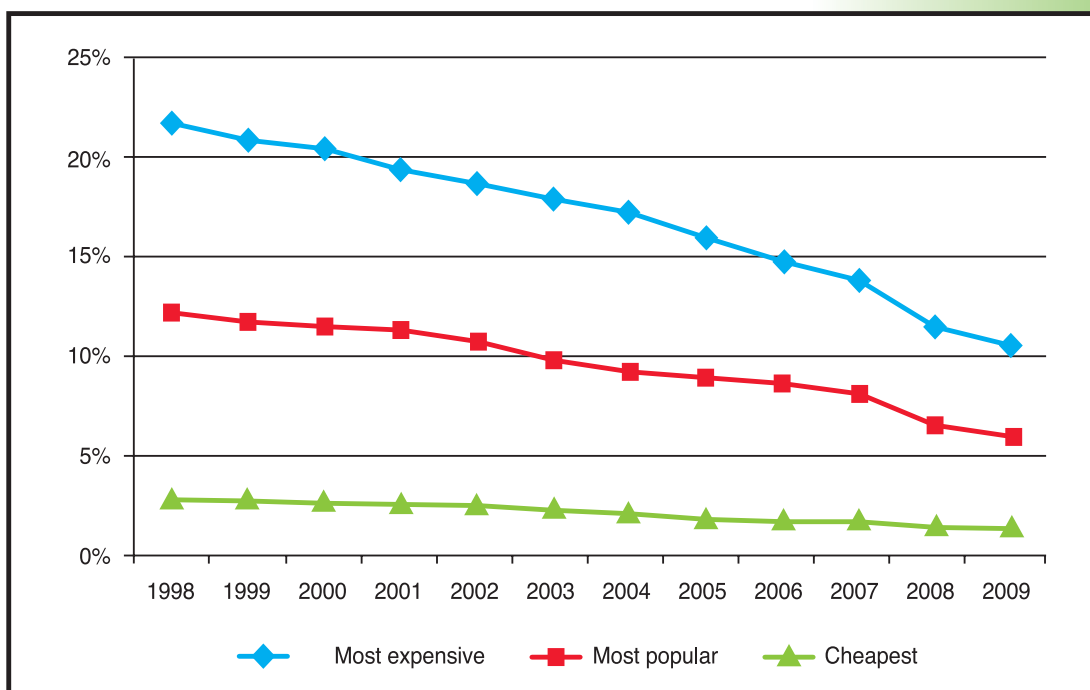
Figure 1. The nominal and real prices of three cigarette brands (1998-2009)



#### Increasing Affordability Trends

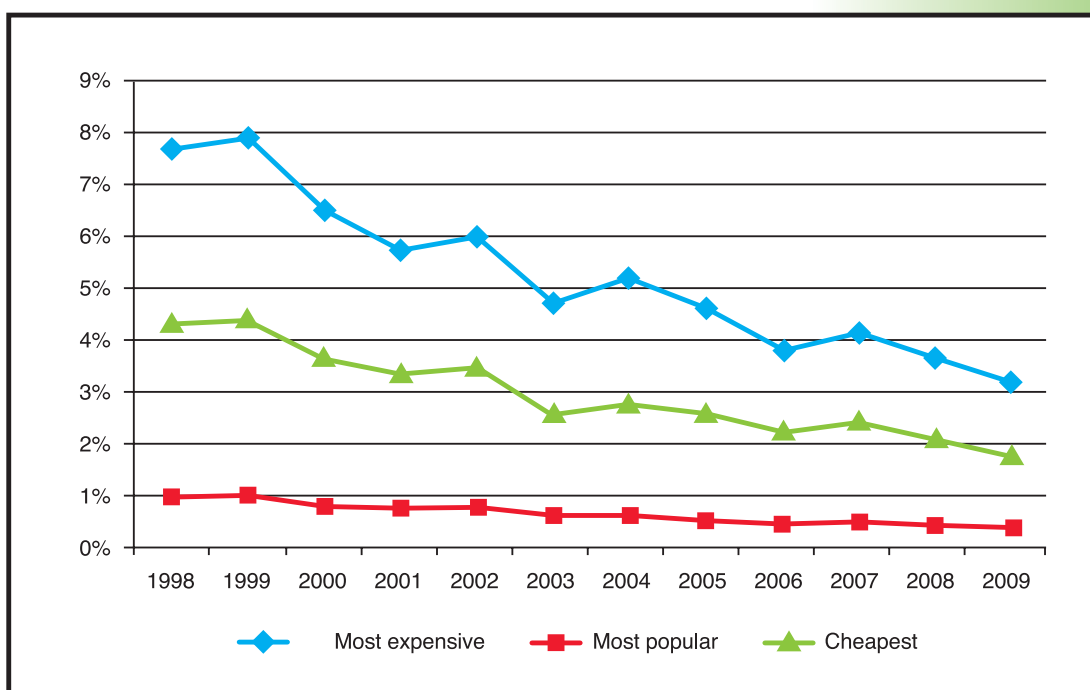
A declining trend in estimates of Relative Income Price (RIP) between 1998 and 2009 also indicate that cigarettes have become steadily more affordable to smokers over the past decade, where an increasingly lower percentage of per capita GDP was used to purchase 100 packs of all three cigarette brands: most expensive brand, 555 (from 21.6% to 10.5%), most popular brand, VINATABA (from 12.2% to 5.9%) and the cheapest brand, Thang Long (from 2.8% to 1.3%) (Figure 2). This was attributed to the progressive growth in real per capita GDP in Vietnam by four-fold between 1998 and 2009, while the nominal price for all the three brands increased only two-fold.

Figure 2. Relative income price of three types of cigarettes from 1998 to 2009



A similar decreasing trend of cigarette prices paid as percentage of minimum wage for the three selected brands was observed between 1998 and 2009 (Figure 3). There was a decline in percentage of minimum wage spent on cigarettes across the three types: most expensive brand, 555 (from 7.7% to 3.2%), most popular brand, VINATABA (from 4.5% to 1.5%) and the cheapest brand, Thang Long (from 1% to 0.5%). This could be explained by the increasing economic growth in per capita GDP and overall real income as well as purchasing power between 1998 and 2009, thus making cigarettes increasingly affordable over the years.

Figure 3. Cigarette prices as percentage of minimum wage 1998 to 2009



## B. Impact of raising taxes

Using six scenarios of increases in tobacco excise tax (additional 5%, 10%, 20%, 30%, 40%, and 50% of the current 65% excise tax rate), the model projects the quantitative impact of progressive increases in tobacco excise tax on retail price of cigarettes, cigarette consumption, smoking prevalence, tobacco excise tax revenue, and industry revenue (Table 1). The increases in excise tax are projected to increase retail price and tax revenue and to decrease the smoking prevalence and cigarette consumption leading to more lives saved from smoking.

**Table 1. Results of a simulation model of tax incidence**

	Scenarios of Excise Tax Change (%)						
Percentage (%) increase in excise tax rate	0	5	10	20	30	40	50
Excise tax rate (% of factory price)	65	70	75	85	95	105	115
Total tax burden (% of retail price)	44.9	46.5	48.1	50.9	53.4	55.6	57.7
Percentage (%) change in :							
Retail price		3.1	6.1	12.1	18.2	24.3	30.4
Cigarette consumption		-1.5	-2.9	-5.6	-8.0	-10.3	-12.4
Smoking prevalence	23.8	-0.8	-1.5	-2.9	-4.2	-5.4	-6.6
Excise tax revenue		6.2	12.5	23.5	34.6	45.0	55.2
Total tax revenue		5.2	10.3	20.0	29.3	38.2	46.9
Industry revenue		-1.5	-2.9	-5.6	-8.0	-10.3	-12.4

From a fiscal perspective, a gradual increase of up to 50% in excise tax rates will raise the current total tax burden of 44.9% to only 57.7% of retail price, still far below the 66% to 80% tax level recommended by the World Bank and WHO, and produce only a marginal average retail price increase of 30.4% from VND 5,250 to VND 6,846. Cigarette prices are thus still low and suggest that the excise tax rate should be raised even higher to reduce cigarette affordability.

Based on the simulation model, increasing the excise tax rate by 5%, 10%, 20%, 30%, 40% and 50% would immediately increase total tax revenue by 5.2% (VND 10,134 billion), 10.3% (VND 10,625 billion), 20% (VND 11,559 billion), 29.3% (VND 12,455 billion), 38.2% (VND 13,312 billion) and 46.9% (VND 14,150 billion), respectively. Notably, the additional revenues from any excise tax increase are much more than the revenues collected in 2009 alone (VND 9,633 billion).

The simulated tax scenarios further suggest that a 5% to 50% increase in excise tax rate has the potential to reduce overall cigarette consumption (3,500 million packs in 2009) by 1.5% (52.5 million packs) to 12.4% (434 million packs), respectively. At the same time, an increase of 50% in excise tax has the potential to reduce smoking prevalence from 23.8% to 17.2%, a significant decline of 6.6% or 1,009,800 lives saved from premature tobacco-related deaths. In comparison, a 5% increase in excise tax rate would reduce smoking prevalence by only 0.8%. Thus, tobacco excise tax rates must be raised and maintained significantly high to reduce cigarette affordability and effectively reduce tobacco consumption. Only then will such tax measures achieve both fiscal and public health gains for the country.

This confirms tobacco taxation as one of the most cost-effective tools to reduce smoking prevalence and cigarette consumption. Higher taxes can lead to substantial reduction in cigarette demand, discouraging the youth and poor from starting to smoke, while encouraging current smokers to reduce their consumption and quit smoking.



## IV. Policy recommendations

To reduce the demand for tobacco, the government should make cigarettes less affordable by **increasing excise tax annually to an optimal level** that would result in higher cigarette prices and thus reduce smoking prevalence and consumption in the country. Increasing the current 65% excise tax rate by 50% would lead to a 12.4% reduction in cigarette consumption, 6.6% reduction in smoking prevalence, and saving approximately 1,009,800 lives from premature tobacco-related deaths, while contributing significant additional 46.9% revenue (VND 14,150 billion) to the government.

To effectively minimize the gap between real income and cigarette prices, government needs to **increase excise tax to keep pace with inflation** to reduce affordability of tobacco products considering the progressive growth in per capita Gross Domestic Product (GDP) and minimum wages over the years. The simulation model indicates that even if a 50% increase in excise tax rate is implemented, this would only be equivalent to a total tax burden of 57.7% of the retail price, which is still much lower than the optimal tax level of 66% to 80% of the retail price as recommended by World Bank and WHO.

Because of its flexibility and simplicity in implementation, government should **apply a specific excise tax in combination with the ad-valorem tax system, which should be indexed to inflation** as both mechanisms are complementary in raising the total excise tax burden.

To ensure long-term revenue and funding for improving health, government should **progressively increase tobacco excise tax and introduce a dedicated tax on tobacco for health promotion and tobacco control programmes**. A sustainable funding can be generated to effectively support short- and long-term tobacco control and health promotion programmes. In turn, such funding would significantly reduce tobacco use and improve the well-being of population in the country.

**Effective and consistent enforcement of anti-smuggling measures** should go hand in hand with tax increases to reduce the potential of smuggling to diminish the fiscal and public health benefits of tax increases. This includes maintaining the **tax stamp policy** that requires tax stamps to be placed on all domestically manufactured cigarettes to prevent tax evasion and other measures to control the tobacco supply chain.

To effectively control illicit trade, government should **strengthen tax administration** in accordance with harmonization of the regional tax system in ASEAN **and improve enforcement coordination** among neighbouring countries.

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**Vision:**  
**Towards a healthy,  
tobacco-free ASEAN**

**Mission:**  
**Working together  
to save lives  
by accelerating  
effective implementation  
of the FCTC  
in ASEAN countries**

**Southeast Asia Tobacco Control Alliance**

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