

# Tax Structures are Key in Raising Tobacco Taxes & Revenues

## Introduction

Increases in tobacco taxes that result in significant increases in prices are highly effective in reducing tobacco use, particularly among youth and the poor.<sup>1-7</sup> They also reduce the health and economic devastation caused by tobacco. At the same time, raising tobacco taxes can bring in new revenues to finance health and development efforts.

But merely raising taxes is not a guarantee that prices will go up. The tax structure, which determines the type of the tax imposed on tobacco products and how it is collected, can make a significant difference in how a tax increase raises tobacco prices.

Tax structures matter because how tobacco taxes are structured has implications on how increased taxes lead to reduced tobacco use, higher revenues and improvements in public health.<sup>1</sup>

This policy brief examines key considerations policy makers face related to the effects of different tobacco tax structures on prices, tobacco consumption and tobacco tax revenues. It demonstrates that specific excise taxes are the best option for all countries, particularly for low- and middle-income countries where tobacco use tends to be high and taxes tend to be low.

## Overview of taxes on tobacco products

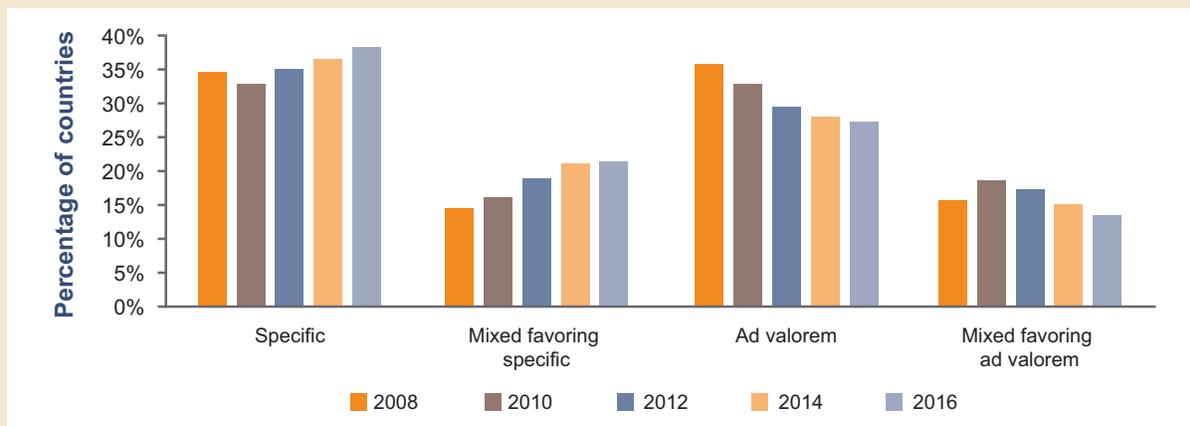
Taxes on tobacco products can be classified into two general categories: taxes that are applied only to tobacco products (i.e., excise taxes or other similar special consumption taxes), and taxes that affect tobacco products but are levied on other goods and services as well (e.g., value added taxes). Because the latter taxes are not assessed only on tobacco products, they are generally not considered a tobacco control policy tool.

Excise taxes are levied on goods consumed within a country, independent of whether they are produced domestically or imported. Excise taxes are either “specific,” or “*ad valorem*,” or various combinations of the two. A specific excise tax is a fixed monetary amount per quantity, volume, or weight of tobacco (or a combination of these), for example, \$1 on a pack of 20 cigarettes or a gram of chewing tobacco. An *ad valorem* excise tax is a percentage of some measure of the value of tobacco products. The base value for an *ad valorem* tax could be the price of the product at the retail, manufacturing, or wholesale level.

Specific taxes are significantly easier to administer than *ad valorem* taxes, since it is easier to count the physical quantity of product than it is to determine the value of the product.

**Figure 1**

**Types of Excise Taxation on Cigarettes, 2008-2016**



Source: WHO report on the global tobacco epidemic<sup>8-12</sup>

Additionally, the base on which the *ad valorem* tax is calculated can be manipulated. If the tax base is reduced, the tax per pack is also reduced, thereby reducing the impact of raising tobacco taxes on consumption. For example, this can be achieved by undervaluing a product either by lowering the value of a product as it leaves the factory (if the tax is based on the ex-factory price) or by lowering retail prices (if the tax is based on the retail price). Thus, even if the *ad valorem* tax goes up, the retail price may not change if the base is lowered by the manufacturer.

There is substantial variation among countries on the use of specific and *ad valorem* excise taxes, but recent global trends show that countries are trending toward the use of specific taxes on tobacco. Based on data from the World Health Organization (WHO), Figure 1 shows that, in each successive time period from 2008 to 2016, fewer countries are using only an *ad valorem* excise tax. Meanwhile, the number of countries that only levy a specific excise tax, or a mixed system of both specific and *ad valorem* excise taxes, is increasing. WHO data between 2008 and 2016 also shows that the percentage of countries with specific tax structures on tobacco

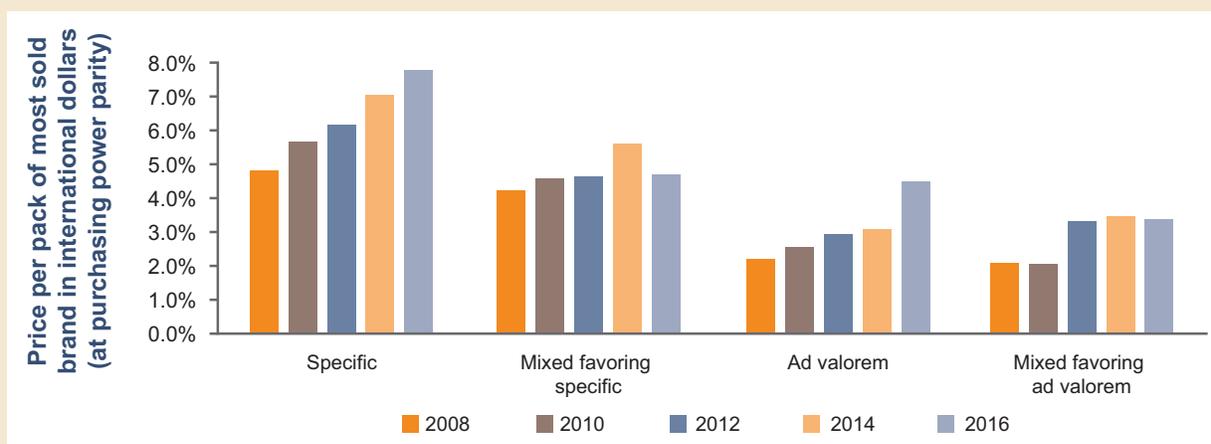
products increased from 34% to 38% and countries with a mixed structure favoring specific taxes increased from 14% to 21%.<sup>8</sup>

### Effect of Specific and *Ad valorem* Excise Taxes on Cigarette Prices

Global data show that specific and *ad valorem* taxes have different effects on the retail prices of cigarettes. Tax systems that rely more on specific excises tend to result in higher tobacco prices than systems that rely more on *ad valorem* taxes (Figure 2). *Ad valorem* structures create opportunities for the tobacco industry to manipulate prices at the manufacturing, wholesale or retail level. Thus, *ad valorem* taxes often result in lower average retail prices than specific taxes.

Global trend data based on the most-sold brands of cigarettes (Figure 2) show that:

- Countries which have a specific tax have higher prices for cigarettes than countries with mixed or *ad valorem* systems.
- In countries with mixed systems, those with a greater reliance on the specific component have higher prices than those with a greater reliance on the *ad valorem* component.

**Figure 2****Trends in impact of tax structure on price, 2008-2016**

Source: WHO reports on the global tobacco epidemic<sup>8-12</sup>

Note: Price per pack weighted by total population per country using World Bank World Development Indicators population in each year

## Uniform and differential excise systems and cigarette tax revenues

Some countries have tax systems that impose different rates for different brands of the same product (cigarettes) or different rates for different products (e.g., one rate for cigarettes and another for chewing tobacco). Such systems are known as tiered systems. Governments may have various justifications for imposing a tiered tax system. In 2014, 27 of 168 countries that levied an excise tax had a tiered system.<sup>7</sup> For example, Indonesia has a tiered specific tax system with 10 different tiers. Tiers are broken down, firstly, into product types (hand-rolled kreteks or clove cigarettes, machine-made kreteks and machine-made cigarettes), and then into sub-tiers based on retail price and production scale. The tax on the highest taxed tier is more than six times the tax on the lowest taxed tier. The justification is to protect smaller producers and labor-intensive production in hand-rolled kreteks. However, this results in large price variations with the highest priced (and highest taxed) tier being more than three times the price of the lowest priced (also the lowest taxed) tier. Another example is

Bangladesh which currently imposes an *ad valorem* tax on cigarettes, based on four tiers of retail price. The common argument put forth in support of the price tiers is to protect the local manufacturing industry and small producers. Such a structure, as stated earlier, creates large price differentials between high- and low-priced brands, where three-quarters of the market is held by lowest priced brands. Similarly, the tax liability on bidis is based on the Maximum Recommended Price determined by National Bureau of Statistics. The tax rate differentiates between unfiltered and filtered bidis.

One of the consequences of these tax structures is a wide price gap among brands or different tobacco products. For example, the price of a brand made by larger producer might increase because of higher taxes while a smaller producer's brand might be taxed at a lower rate and hence the price of that brand might increase only slightly. Tiered systems provide incentives for tax avoidance as manufacturers can alter their pricing or production decisions to avoid higher tax liabilities that can lead to revenue losses for governments.<sup>1</sup>

## Tobacco tax systems and price gaps

When facing tax or price increases, some smokers will quit smoking, others will reduce consumption (i.e., smoke fewer cigarettes), and others will trade down—that is, move from a higher priced brand to a lower priced brand. Although price increases that result from increased taxes reduce overall cigarette consumption, the degree to which consumption decreases depends, in part, on whether smokers have opportunities to trade down to a lesser priced brand.<sup>7</sup>

**Table 1**  
Impact of specific and *ad valorem* tax increases on prices

Specific Tax Scenario			
	Before	Tax increase	After
<b>Premium brand</b>	\$ 5	\$ 1	\$ 6
<b>Middle price brand</b>	\$ 3	\$ 1	\$ 4
<b>Inexpensive brand</b>	\$ 1	\$ 1	\$ 2

<i>Ad valorem</i> Tax Scenario			
	Before	Tax increase	After
<b>Premium brand</b>	\$ 5	50 %	\$ 7.5
<b>Middle price brand</b>	\$ 3	50 %	\$ 4.5
<b>Inexpensive brand</b>	\$ 1	50 %	\$ 1.5

Large price gaps between different tobacco brands create opportunities for smokers to switch to cheaper brands when taxes rise, undermining the public health benefit (i.e., fewer tobacco users) of a tax increase. Additionally, in the case of *ad valorem* taxes or tiered structures, large price gaps between high- and low-priced brands also produce large gaps in the taxes collected on these brands.<sup>1</sup>

Table 1 shows a hypothetical example of the impact of specific and *ad valorem* tax increases on three different brands, assuming that the tobacco industry passes on the exact amount of the tax increase to the consumer through higher prices.

It is important to note that the tobacco industry can manipulate the impact of taxes by changing marketing practices or by introducing newer and different brands of products to retain as many current smokers as they can and continue to attract new smokers. For example, in the Specific Tax Scenario in Table 1, the industry could arbitrarily raise the total price of the inexpensive brand from \$2.00 to \$2.50 after the increase in specific taxes goes into effect and simultaneously introduce a new, low-end product. This would increase the profit margin on the original inexpensive brand. It might also encourage those in the middle price brand to switch down to the inexpensive brand without having any effect on the amount of taxes collected by the government. At the same time, users of the inexpensive brand of cigarettes would have the option to switch to the new low-end product. This hypothetical example is the typical industry response to specific tax increases.<sup>13</sup>

Similarly, in the *Ad valorem* Tax Scenario in Table 1, the tobacco industry can manipulate the impact of that tax by changing its pricing/marketing strategy. Typically, the tobacco industry exercises the option of lowering the before-tax price when *ad valorem* taxes go up, thus reducing any price increases to the consumer and avoiding potential reductions in tobacco use. Tobacco companies could also increase the before-tax price, increasing profits, but this would also raise the amount of tax.

Tax increases can also affect industry and consumer behavior in other ways. A uniform increase in the specific tax increases the price of all cigarette brands, but the increase is proportionally more on the price of the cheaper brands. Table 1 shows that a uniform \$1 specific tax increase represents a 20% increase in the

price of the premium brand, a 33% increase in the middle price brand and a 100% increase in the inexpensive brand. For those who smoke the inexpensive brand, a doubling in the price may encourage serious attempts to quit smoking, but those in middle price range could switch to the inexpensive brands, instead of quitting.

The industry can also manipulate these effects through marketing and promotional strategies. For example, and in response to the UK tax increases in 2009 and 2010, the industry introduced a new ultra-low price (ULP) brand. This strategy allowed the industry to keep the real prices of these very cheap cigarettes constant, protecting them from the impact of the tax change by absorbing the tax increase (the industry over-shifted the tax increases on its most expensive brands while under-shifting the tax increases on the least expensive brands).<sup>13</sup> In other countries, the tobacco industry has exploited the fiscal structure, the price gap between brands and the loopholes in tobacco control legislation. For example in Argentina, after the 2016 tax increase, the tobacco industry implemented a set of strategies including 1) linking premium brands with second brands, 2) launching premium brands' limited or special editions at lower prices, 3) launching a new set of ULP brands and 4) implementing a marketing strategy to increased visibility of second and ULP brands.<sup>14</sup>

Another way to look at the impact of taxes is to examine the relative prices between different brands of tobacco products. In the example in Table 1, the premium brand is five times more expensive than the inexpensive brand before any increase in specific taxes. After the increase, the premium brand is only three times more expensive than the inexpensive brand. Such a change in relative prices reduces smokers' incentives to substitute downward from higher to lower priced cigarette brands; in fact, it might encourage consumers to substitute higher priced products for lower priced products as the price gap between them narrows.

With *ad valorem* taxes, the relative prices between different brands remains the same (5 to 1), but the price gap between brands changes from \$2 to \$3. This clearly increases the incentives for premium brand consumers to migrate to middle price brands, and those from middle price brands to the inexpensive brands. In this scenario, the industry can lower the pre-tax price of the inexpensive brands to avoid a price increase for that brand as a result of a hike in *ad valorem* taxes. By lowering the price, the industry also lowers the tax paid on that brand, which also reduces government revenue. Smokers of that inexpensive brand do not feel the tax increase through higher prices and thus they do not have an incentive to quit smoking. Meanwhile, it creates an option for the middle price brand smokers to substitute down to the inexpensive brand. All this shifting in brand preferences does not have any effect on the total number of smokers and therefore does not generate any public health benefit.

Regardless of all these effects of taxes on prices and tobacco use behavior, it is clear that *ad valorem* excise tax revenue depends on the industry's pricing strategy. If *ad valorem* taxes go up, the industry can lower the base price and reduce the revenue collected by the government. In contrast, specific excise tax revenues per pack are relatively independent of changes in industry price. ***A tax system that is independent of the manufacturers' pricing strategy increases the stability of tax revenue.*** This also results in specific tax system revenues being more predictable. Since specific duties are independent of changes in price, they generally produce a more stable stream of revenue.

Revenue from *ad valorem* excises is dependent on prices, and may vary over time depending on the consumer behavior and manufacturer strategies. ***If ad valorem taxes go up, the industry can lower the base price and reduce the revenue collected by the government.*** This also will generate changes in consumer consumption as a result of new prices. This makes revenue forecasting less predictable.

As a result, specific taxes are also much easier to administer from a budget point of view because they only require determining and verifying the number of tobacco products sold or produced, depending on the country, or simply counting the number of tax stamps. In the case of *ad valorem* taxes, governments need to have a clear understanding of quantities and prices because revenue collection is linked to the value, and determining value can be particularly difficult when the industry has the capacity, for example, to manipulate manufacturing prices.

### Tobacco tax systems, inflation and affordability

The effect of inflation on tobacco taxes differs based on tax structures. *Ad valorem* systems provide a natural hedge to inflation by allowing the value of the tax collected per unit to increase proportionally to an increase in the tax base. For example, if the ex-factory price or retail price increased with inflation, the tax collected would increase proportionally even without an increase in the tax rate. However, under a specific tax system, the real value of the specific tax would automatically decline, and thus be eroded by inflation. Thus, ***under specific tax systems, the specific tax would need to be increased on a regular basis to maintain its real value.*** While many countries do this manually, some countries have automatic adjustments to specific taxes to maintain their real value. For example, Chile automatically adjusts the specific tobacco taxes for changes in overall inflation.

However, the effectiveness of both *ad valorem* and specific taxes is reduced by increases in affordability. Increases in consumer incomes that are not offset by increases in tobacco prices will result in increased affordability. Increases in the affordability of many products is considered positive. Increases in the affordability of products that have serious health consequences, like cigarettes, increase their use, and are viewed

as negative. This is true for all countries, but it is especially relevant in many low- and middle-income countries, where incomes are increasing rapidly. As a result, a growing number of countries are indexing excise taxes to wage growth (e.g., Australia indexes excise taxes to nominal wages as a proxy for affordability), rather than just inflation.

### Conclusions

A well-designed excise tax policy should be transparent and easily definable, thereby increasing the efficiency by reducing administrative costs. A good candidate for a well-designed tobacco tax system is a simple excise tax system with all tobacco products taxed at the same level<sup>1</sup>. Raising those taxes regularly to reduce the affordability of cigarettes is the best option for reducing tobacco use while generating higher tax revenues. ***Most countries have ample room to increase taxes and continue to generate higher revenues even with declining tobacco consumption.***<sup>15</sup> A tax system that is independent of the tobacco industry's pricing strategy increases the stability of tax revenue.

Most developing and even developed countries have complex and *ad valorem* tax structures, but the global trend is for governments to simplify their excise tax systems toward specific excise taxes. Additionally, an increasing number of countries have reduced or eliminated their tiered tax system and imposed a uniform tax rate on all brands, or they have reformed excises in a way that reduces the price gap among brands.

Recognizing their political and economic realities, countries that have tiered tobacco excise systems can simplify their tax systems in the short term and move towards a unified specific system in the long term.

In conclusion, countries that implement a uniform/simple specific excise tax system and increase those taxes at regular intervals can not

only reduce overall tobacco consumption, but they can also:

- reduce price gaps and incentives for substitution among different cigarette brands;
- reduce substitution to other tobacco products;
- reduce non-compliance in tax payment;
- eliminate incentives for manufacturers' price strategies to reduce their tax liability; and
- generate more revenues.

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