Tobacco taxes in WHO Member States

This report includes appendices containing information on the share of total and excise taxes in the price of the most widely sold brand of cigarettes, based on tax policy information collected from each country. This note contains information on the methodology used by WHO to estimate the share of total and tobacco excise taxes in the price of a pack of 20 cigarettes using country-reported data.

1. Data collection

Data were collected between July 2012 and January 2013 by WHO regional data collectors. The two main inputs into calculating the share of total and excise taxes were (1) prices and (2) tax rates and structure.

Prices were collected for the most widely sold brand of cigarettes, two other popular brands, the least-expensive brand and the brand Marlboro for July 2012.

Data on tax structure were collected through contacts with ministries of finance. The validity of this information was checked against other sources. These sources, including tax law documents, decrees and official schedules of tax rates and structures as well as trade information, when available, were either provided by data collectors or were downloaded from ministerial websites or from other United Nations databases such as Comtrade (http://comtrade.un.org/db). Other secondary data sources were also purchased for data validation.

The tax data collected focus on indirect taxes levied on tobacco products (e.g. excise taxes of various types, import duties, value added taxes), which usually have the most significant policy impact on the price of tobacco products. Within indirect taxes, excise taxes are the most important because they are applied exclusively to tobacco, and contribute the most to substantially increasing the price of tobacco products and subsequently reducing consumption. Thus, rates, amounts, and point of application of excise taxes are central components of the data collected.

Certain other taxes, in particular direct taxes such as corporate taxes, can potentially impact tobacco prices to the extent that producers pass them on to final consumers. However, because of the practical difficulty of obtaining information on these taxes and the complexity in estimating their potential impact on price in a consistent manner across countries, they are not considered.

The table below describes the types of tax information collected.

2. Data analysis

The price of the most popular brand of cigarettes was considered in the calculation of the tax as a share of the retail price reported in table 9.1 in Appendix IX. In the case of countries where different levels of taxes are applied on cigarettes based on length of cigarette, quantity produced or type (e.g. filter vs. non-filter), only the relevant rate that applied to the most sold brand was used in the calculation. In the case of Canada and the United States of America, national average estimates calculated for prices and taxes reflect the fact that different rates are applied by each state/province over and above the applicable federal tax. In the case of Brazil, which applies different VAT rates per states, an average VAT rate was applied. In India, which also has varying VAT rates per state, the VAT rate applicable in Delhi was used.

The import duty was only applied to the most popular brand of cigarettes imported into the country. Import duty is not applied on total tax calculation for countries reporting that the most popular brand, even if an international brand, was produced locally.

"Other taxes" are all other indirect taxes not reported as excise taxes or VAT. These taxes were, however, treated as excises if they had a special rate applied to tobacco products. For example, Thailand reported the tax earmarked from tobacco and alcohol for the ThaiHealth Promotion Foundation as "other tax". However, since this tax is applied only on tobacco and alcohol products, it acts like an excise tax and it was considered an excise in the calculations.

The next step of the exercise was to convert all tax rates into the same base, in our case, the tax-inclusive retail sale price (hereafter referred to as *P*). Standardizing bases is important in calculating tax share correctly, as the example in the table shows. Country B applies the same ad valorem tax rate as Country A, but ends up with higher tax rate and a higher final price because the tax is applied later in the distribution chain. Comparing reported ad valorem tax rates without taking into account the stage at which the tax is applied could therefore lead to biased results.

TAX INCLUSIVE RETAIL SALES PRICE OF CIGARETTES	COUNTRY A (US$)	COUNTRY B (US$)
[A] Manufacturer's price (same in both countries)	2.00	2.00
[B] Country A: ad valorem tax on manufacturer's price (20%) = 20% x [A]	**0.40**	-
[C] Countries A and B: specific excise	2.00	2.00
[D] Retailer's and wholesaler's profit margin (same in both countries)	0.20	0.20
[E] Country B: ad valorem tax on retailer's price (20%) = 20% x [F]	-	**1.05**
[F] Final price = *P* = [A]+[B]+[C]+[D]+[E]	4.60	5.25

3. Calculation

Denote S_{ts} as the share of taxes on the price of a widely consumed brand of cigarettes (20-cigarette pack or equivalent). Then

$$S_{ts} = S_{as} + S_{av} + S_{id} + S_{VAT} \quad ①$$

Where:

S_{ts} = Total share of taxes on the price of a pack of cigarettes;

S_{as} = Share of amount-specific excise taxes (or equivalent) on the price of a pack of cigarettes;

S_{av} = Share of ad valorem excise taxes (or equivalent) on the price of a pack of cigarettes;

S_{id} = Share of import duties on the price of a pack of cigarettes (if the most popular brand is imported);

S_{VAT} = Share of the value added tax on the price of a pack of cigarettes.

Calculating S_{as} is fairly straightforward and involves dividing the specific tax amount for a 20-cigarette pack by the total price. Unlike S_{as}, the share of ad valorem taxes, S_{av} is much more difficult to calculate and involves making some assumptions described below. Import duties are sometimes amount-specific, sometimes value-based. S_{id} is therefore calculated the same way as S_{av} if it is amount-specific and the same way as S_{av} if it is value-based. VAT rates reported for countries are usually applied on the VAT-exclusive retail sale price but are also sometimes reported on VAT-inclusive prices. S_{VAT} is calculated to consistently reflect the share of the VAT in VAT-inclusive retail sale price.

The price of a pack of cigarettes can be expressed as the following:[1]

$$P = [(M + M{\times}ID) + (M + M{\times}ID) \times T_{av}\% + T_{as} + \pi] \times (1 + VAT\%)$$

$$P = [M \times (1{\times}ID) \times (1{+}T_{av}\%) + T_{as} + \pi] \times (1 + VAT\%) \quad ②$$

Where:

P = Price per pack of 20 cigarettes of the most popular brand consumed locally;

M = Manufacturer's/distributor's price, or import price if the brand is imported;

ID = Total import duties (where applicable) on a pack of 20 cigarettes[2];

T_{av} = Statutory rate of ad valorem tax;

T_{as} = Amount-specific excise tax on a pack of 20 cigarettes;

π = Retailer's, wholesaler's and importer's profit margins (sometimes expressed as a mark-up);

VAT = Statutory rate of value added tax.

Changes to this formula were made based on country-specific considerations such as the base for the ad valorem tax and excise tax, the existence or not of ad valorem and specific excise taxes, and whether the most popular brand was locally produced or imported. In many cases (particularly in low- and middle-income countries) the base for ad valorem excise tax was the manufacturer's/distributor's price.

Given knowledge of price (P) and amount-specific excise tax (T_{as}), the share S_{as} is easy to recover ($=T_{as}/P$). The case of ad valorem taxes (and, where

Tax information table

1. Amount-specific excise taxes	An amount-specific excise tax is a tax on a selected good produced for sale within a country, or imported and sold in that country. In general, the tax is collected from the manufacturer/wholesaler or at the point of entry into the country by the importer, in addition to import duties. These taxes come in the form of an amount per stick, per pack, per 1000 sticks, or per kilogram. Example: US$ 1.50 per pack of 20 cigarettes.
2. Ad valorem excise taxes	An ad valorem excise tax is a tax on a selected good produced for sale within a country, or imported and sold in that country. In general, the tax is collected from the manufacturer/wholesaler or at the point of entry into the country by the importer, in addition to import duties. These taxes come in the form of a percentage of the value of a transaction between two independent entities at some point of the production/distribution chain; ad valorem taxes are generally applied to the value of the transactions between the manufacturer and the retailer/wholesaler. Example: 27% of the retail price.
3. Import duties	An import duty is a tax on a selected good imported into a country to be consumed in that country (i.e. the goods are not in transit to another country). In general, import duties are collected from the importer at the point of entry into the country. These taxes can be either amount-specific or ad valorem. Amount-specific import duties are applied in the same way as amount-specific excise taxes. Ad valorem import duties are generally applied to the CIF (cost, insurance, freight) value, i.e. the value of the unloaded consignment that includes the cost of the product itself, insurance and transport and unloading. Example: 50% import duty levied on CIF.
4. Value added taxes and sales taxes	The value added tax (VAT) is a "multi-stage" tax on all consumer goods and services applied proportionally to the price the consumer pays for a product. Although manufacturers and wholesalers also participate in the administration and payment of the tax all along the manufacturing/distribution chain, they are all reimbursed through a tax credit system, so that the only entity who pays in the end is the final consumer. Most countries that impose a VAT do so on a base that includes any excise tax and customs duty. Example: VAT representing 10% of the retail price. Some countries, however, impose sales taxes instead. Unlike VAT, sales taxes are levied at the point of retail sale on the total value of goods and services purchased. For the purposes of the report, care was taken to ensure the VAT and/or sales tax shares were computed in accordance with country-specific rules.
5. Other taxes	Information was also collected on any other tax that is not called an excise tax or VAT or sales tax, but that applies to either the quantity of tobacco or to the value of a transaction of tobacco product, with as much detail as possible regarding what is taxed (the tax base) and the purpose for which the tax is collected..

applicable, S_{id}) is more complicated because the base (M) needs to be recovered in order to calculate the amount of ad valorem tax. In most of the cases M was not known (unless specifically reported by the country), and therefore needed to be estimated.

Using equation (2), it is possible to recover M:

$$M = \frac{\dfrac{P}{1 + VAT\%} - \pi - T_{as}}{(1 + T_{av}\%) \times (1 + ID)} \quad ③$$

π, or wholesalers' and retailers' profit margins are rarely publicly disclosed and will vary from country to country. For domestically produced most-popular brands, we considered π to be nil (i.e. =0) in the calculation of M because the retailer's and wholesaler's margins are assumed to be small. Setting the margin to 0, however, would result in an overestimation of M and therefore of the base for the ad valorem tax. This will in turn result in an overestimation of the amount of ad valorem tax. Since the goal of this exercise is to measure how high the share of tobacco taxes is in the price of a typical pack of cigarettes, assuming that the retailer's/wholesaler's profit (π) is nil, therefore, does not penalize countries by underestimating their ad valorem taxes. In light of this it was decided that unless and until country-specific information was made available to WHO, the retailer's wholesalers' margin would be assumed to be nil for the domestically produced brands.

For those countries where the most popular brand is imported, assuming π to be nil would grossly overestimate the base for the ad valorem tax because the importer's profit needs to be taken into account. The import duty is applied on CIF values, and the consequent excise taxes are usually applied on import duty inclusive CIF values. The importer's profit or own price is added on tax inclusive CIF value. For domestically produced cigarettes, the producer's price includes its own profit so it is automatically included in M but this is not the case for imported products where the tax is imposed on the import duty inclusive of CIF value but excluding the importer's profit. So calculating M as in equation (3) would imply assuming importer's profit to be zero.

The importer's profit is assumed to be relatively significant and ignoring it would therefore substantially overestimate M. For this reason, M had to be estimated differently for imported products: M^* (or the CIF value) was calculated either based on information reported by countries or using secondary sources (data from the United Nations Comtrade database). M^* was normally calculated as the import price of cigarettes in a country (value of imports divided by the quantity of imports for the importing country). However, in exceptional cases where no such data were available (Angola, Guyana and Niue), the export price was considered instead (in that case, the CIF value was approximated as the export price plus an additional 10 US cents).[3] The ad valorem and other taxes were then calculated in the same way as for local cigarettes, using M^* rather than M as the base, where applicable.

In the case of VAT, in most of the cases the base was P excluding the VAT (or, similarly, the manufacturer's/distributor's price plus all excise taxes). In other words:

$$S_{VAT} = VAT\% \times (P - S_{VAT}), \text{ equivalent to} \quad ④$$
$$S_{VAT} = VAT\% \div (1 + VAT\%)$$

So in sum, the tax rates are calculated this way:

$$S_{ts} = S_{id} + S_{as} + S_{av} + S_{VAT} \quad ⑤$$

$$S_{as} = T_{as} \div P$$

$$S_{av} = (T_{av}\% \times M) \div P$$
$$\text{or}$$
$$(T_{av}\% \times M^* \times (1 + S_{id})) \div P$$
$$\textit{if the most popular brand was imported}$$

$$S_{id} = (T_{ID}\% \times M^*) \div P$$
$$\textit{(if the import duty is value-based)}$$
$$\text{or}$$
$$ID \div P$$
$$\textit{(if it is specific)}$$

$$S_{VAT} = VAT\% \div (1 + VAT\%)$$

4. Prices

Primary collection of price data in this and previous reports involved surveying retail outlets. Two aspects that emerged in the 2010 round of field data collection informed the current round of data collection:

- Different brands were sometimes reported between 2008 and 2010 making price comparability difficult across time.

- Lower prices were sometimes reported in 2010 compared to 2008 (despite no change in taxes or other major economic events). The concern in such instances was that prices in the two years were being collected from different retail shops in countries where prices vary by type of retail outlet.

To improve comparability of 2008 and 2010 data, the data cleaning process necessitated particular assumptions (further details can be found in Technical note III of the *WHO Report on the Global Tobacco Epidemic, 2011*).

For the 2012 round of data collection, a more comprehensive approach was used to actively reduce primary data collection errors and improve the ability to validate price data:

- In addition to the most sold brand reported in previous years, prices of two additional popular brands were requested.[4]

- For each brand, prices were required from three different types of retail outlets.

Questionnaires sent to data collectors were pre-populated with the names of the three highest selling brands in each country. The three popular brands were identified using data bought from Euromonitor[5] and the Tobacco Merchants Association (TMA),[6] which provide brand market shares for more than 80 countries. For 10 additional countries, information was collected by WHO through its close collaboration with ministries of finance. For the countries where such data were not available, the questionnaire was pre-filled with the brand reported in previous years as the most sold brand and data collectors were asked to provide the price of two other popular brands.

Where brand market shares were available, calculations of average prices and taxes were also done (details in Section 6 below).

The information collected from the additional prices helped address the problem of price consistency over time in two ways:

- The brand market share information collected helped confirm for at least 90 countries that the most sold brand reported actually did represent the highest share of cigarettes sold on the market. In the few cases where we discovered that the brand reported in 2008 and 2010 was not the most sold brand, the brand was changed for all years and price and corresponding tax information was corrected (e.g. for Mongolia and Nepal).

- Collection of one brand from three different types of shops helped identify countries where prices tend to vary by retail location. This helped data analysts identify from where the price was collected in previous years. Generally, prices were chosen from the type 2 retail shop as defined below.

The three types of retail shops were defined as follows:

1. Supermarket/hypermarket: chain or independent retail outlets with a selling space of over 2500 square metres and a primary focus on selling food/beverages/tobacco and other groceries. Hypermarkets also sell a range of non-grocery merchandise.

2. Kiosk/newsagent/tobacconist/independent food store: small convenience stores, retail outlets selling predominantly food, beverages and tobacco or a combination of these (e.g. kiosk, newsagent or tobacconist) or a wide range of predominantly grocery products (independent food stores or independent small grocers).

3. Street vendors: sell goods in small amounts to consumers but not from a fixed location (not applicable to all countries).

Another change made for this year's exercise was the price used for the 27 countries of the European Union (EU). In the past, price and tax information was taken entirely from the EU's Taxation and Customs Union website.[7] The price used by the EU in the past to calculate tax rates was the most popular price category (MPPC), which was assumed to be similar to the most sold brand price category collected in this report. However, since 2011, the EU calculates and reports tax rates based on the Weighted Average Price (WAP) and therefore information on the MPPC was no longer readily available for a number of EU countries. Consequently, in order to be consistent with past years' estimates and to ensure comparability with other countries, WHO decided to collect first-hand prices of the most sold brand (based on brand market shares reported from secondary sources) to calculate the 2012 rates. Excise and VAT rates are still collected from the EU published tables. This means, however, that tax shares as computed and reported here will not necessarily be similar to the rates published by the EU. This is mainly due to the calculation of the specific excise tax rates as a percentage of the retail price, which will vary depending on the price used.

See details of the difference in price and tax share for the EU countries in the table on the left.

Comparisons of prices and total tax shares are computed from WHO's most sold brand (MSB) survey and EU weighted average price (WAP).

Country	Total tax share (% of retail price)		Retail price (20 cigarettes)		
	WHO Estimates	EU Reported rates	WHO reported MSB	EU reported WAP	Currency
Austria	74.23%	76.40%	4.50	3.95	EUR
Belgium	76.08%	76.86%	5.26	4.67	EUR
Bulgaria	83.58%	86.65%	4.60	4.30	BGN
Cyprus	75.86%	75.47%	3.75	3.82	EUR
Czech Republic	78.43%	77.69%	68.00	67.84	CZK
Denmark	79.33%	80.61%	40.00	39.14	DKK
Estonia	76.88%	84.38%	3.10	2.43	EUR
Finland	79.88%	80.70%	4.90	4.50	EUR
France	79.86%	80.60%	6.20	5.70	EUR
Germany	73.03%	75.91%	5.26	4.86	EUR
Greece	82.16%	83.70%	3.70	3.25	EUR
Hungary	83.66%	85.39%	757.89	718.48	HUF
Ireland	78.97%	82.78%	9.10	8.47	EUR
Italy	75.18%	75.88%	5.00	4.28	EUR
Latvia	79.14%	81.28%	1.80	1.67	LVL
Lithuania	75.30%	78.39%	8.50	7.77	LTL
Luxembourg	70.59%	70.12%	4.60	3.84	EUR
Malta	76.92%	77.49%	4.20	4.14	EUR
Netherlands	72.18%	78.45%	5.68	5.03	EUR
Poland	79.59%	84.28%	11.60	10.01	PLN
Portugal	76.02%	80.72%	4.20	3.73	EUR
Romania	73.25%	80.24%	13.50	11.19	RON
Slovakia	83.89%	82.52%	2.63	2.72	EUR
Slovenia	80.12%	79.60%	2.80	2.86	EUR
Spain	79.30%	80.35%	4.20	3.76	EUR
Sweden	73.83%	80.83%	53.00	46.80	SEK
UK	80.12%	84.82%	6.60	6.00	GBP

Note: WHO estimates pertain to most sold brand prices collected in July 2012. EU reported rates and weighted average prices pertain to data collected by the EU, also reported for July 2012.

5. Considerations in interpreting tax share changes

It is important to note that the change in the tax as a share of the price is not only dependent on tax changes but also on changes in the price. Therefore, despite an increase in tax, the tax share could remain the same or go down; similarly, sometimes a tax share can increase even if there is no change or even an increase in the tax.

In the current database, there are cases where taxes increased between 2010 and 2012 but the share of tax as a percentage of the price went down. This is mainly due to the fact that, in absolute terms, the price increase was larger than the tax increase (particularly in the case of specific excise tax increases). For example, in Nepal, the specific excise tax increased from 445 NPR per 1000 cigarettes in 2010 to 533 NPR per 1000 cigarettes in 2012 (a 20% increase) while the price of the most sold brand increased from 35 to 45 NPR per pack (a 29% increase). In terms of tax share, however, the excise represented 25.4% of the price in 2010 while it represented 23.7% of the price in 2012. This is because prices rose more than taxes.

On the other hand, there are cases where increases (decreases) in the tax as a share of the price occurred despite no change in the tax. In the current database, this was attributable to one of the following reasons:

- In some instances, price increased independently of tax change (leading to a decrease in the tax share).
- In the case of imported products; the CIF value had to be estimated using secondary data, as explained above. The CIF values were provided in US$ and converted to local currency, an exercise which introduced other external factors that also had an impact on the calculations of taxes as a percentage of the retail price (for either of the following reasons or a combination of the two).

- CIF value in US$ decreased (increased) between 2010 and 2012, making the base for the application of the tax lower (higher), therefore leading to a lower (higher) tax percentage despite no change in the tax rate.
- The exchange rate decreased (increased) between 2010 and 2012, leading to a lower (higher) CIF value in the local currency, leading also to a smaller (larger) base for the application of the tax and also leading to a lower (higher) tax percentage.

Finally, when new, improved information was provided in terms of taxation and prices for some countries, corrections were made in the calculations of tax rates for 2008 and 2010 estimates, as needed.

6. New estimates: average price and tax estimates (see table 9.2 in Appendix IX)

Data on the most sold brand prices tend to be more readily available across countries; this underlies the decision to use the most sold brand in successive editions of the GTCR. However, an estimation of tax share that best reflects the tax burden within a market would ideally be based on the average price and taxes levied on all brands sold in that market.

This year, in addition to collecting and reporting most sold brand prices and tax shares, WHO attempted to get at country-level average estimates of the tax share based on an estimate of the average price of a pack of cigarettes. Average calculations were made for a total of 101 countries. This exercise was more complex due to the additional data required:

- Three popular brands were used for the average estimate of the price.
- For each of the three brands identified, a price was collected from three different types of outlet stores (see definition of the types of outlets in Section 4 above).

Data sources:

1. As stated earlier, the three popular brands were identified, and wherever possible, questionnaires were pre-populated using secondary sources. The main source was Euromonitor but this was supplemented by data from TMA and WHO's internal data.
2. The prices of the three brands from the three different types of retail outlets were collected by WHO through regional and country data collectors (nine prices in total for each country).
3. Brand market share weights used to calculate the average were taken from the same sources as noted in point 1.
4. Euromonitor provides information on the distribution of cigarettes in 26 different types of outlets. We selected 10 of these types, and consolidated them into three groups as defined in Section 4 above. In the few countries where brand market shares were available but the shares of cigarette sales by type of distribution outlet were not available, an approximation was made using the retail distribution of a country with similar attributes (e.g. region, types of products consumed, belonging to the same economic bloc, etc.).

Calculation:

1. Average price:

   First, averages were calculated for each brand weighted by the outlet distribution. In many cases, the outlet share data collected and categorized in the three broad groups did not add up to 100%, reflecting the fact that there are other retail outlet types. So, based on their proportional weight, they were first re-normalized to total 100%. When prices were the same across different stores for any brand in any particular country, equal weights (33.33%) were assigned to all three types of stores. The retail outlet distribution weights were then used to calculate the average price for each brand.

Or:

$$SSj = \frac{ss_j}{\sum_{j=1}^{3} ss_j} * 100\% \qquad ⑥$$

$$APi = \sum_{j=1}^{3} Pij * SSj \qquad ⑦$$

Where,

SSj = Estimated outlet share of store type (j) for brand (i) where $\forall j = 1,2,3$

ssj = Reported or estimated outlet share of store type (j) for brand (i) where $\forall = 1,2,3$

Pij = Reported price of brand (i) in store type (j)

APi = Estimated average price of brand (i) where $\forall i = 1,2,3$

Once the average prices are obtained for each brand, they are multiplied by the brand-specific market share to get the overall average price of cigarettes in the country. It is understood that in most countries more than three brands are consumed, but because of difficulty in collecting prices for all brands, the three most sold brands were identified to calculate the average price. In some countries two to three brands can capture more than 90% of the market consumption, but in countries such as China, the three most popular brands represent less than 20% of the market share. However, the three brands covered more than 50% of the total market in 63 of the 101 countries covered. In all cases, the brand market shares of the three most popular brands were re-normalized to add up to 100% based on their proportional weight.

$$BSi = \frac{bs_i}{\sum_{j=1}^{3} bs_i} * 100\% \qquad ⑧$$

$$AP = \sum_{i=1}^{3} APi * BSi \qquad ⑨$$

Where,

BSi = Estimated market share of brand (i)

bs$_i$ = Reported or estimated market share of brand (i) where $\forall i=1,2,3$

AP = Estimated average price of a cigarette pack in the country

2. Average tax share

   The average tax share was calculated in two steps. First, the tax share of each brand was calculated separately. This helps account for specificities of each brand (e.g. if a different tax rate applies to different brands or if the brand is imported or not). The price used for each brand was the price weighted by the retail outlet distribution. The method used to calculate the tax share of each brand was the same as for the most sold brand. Then, the overall tax share in any country was obtained by taking the average of the three brands' tax shares. The average tax share was weighted by each brand's market share.

$$etax_{i,n} = \phi (tax_{i,n}, APi) \qquad ⑩$$

$$ATi = \sum_{n=1}^{5} etax_{i,n} \qquad ⑪$$

$$AT = \sum_{i=1}^{3} Ati * BSi \qquad ⑫$$

Where,

tax$_{i,n}$ = Reported tax data by type of tax (n) for brand (i), where $\forall n = 1, ..., 5$ and $\forall i = 1,2,3$ The 5 types of tax (n=1,..., 5) are: specific excise, ad valorem excise, import duty, value added or sales tax, and other taxes.

etax$_{i,n}$ = Estimated total rate of type n for brand (i); a function of average price APi

ATi = Estimated average total share of brand (i)

AT = Overall average tax share estimated for any particular country.

APi and BSi defined in formulas (7) and (8) above.

Differences in tax share levels between average prices and most sold brand prices did not vary greatly, ranging between 0% and 10% for the vast majority of the countries covered.

[1] This formula applies when the ad valorem tax is applied on the manufacturer's/distributor's price, the import duty is applied on the manufacturer's/distributor's price or the CIF value and the VAT is applied on the VAT-exclusive retail price. Other scenarios exist (e.g. ad valorem rate applies on the retail price) but they are not described here because they are usually more straightforward to calculate.

[2] Import duties may vary depending on the country of origin in cases of preferential trade agreements. WHO tried to determine the origin of the pack and relevance of using such rates where possible.

[3] In previous years, when CIF value was not available through secondary sources, the export price (plus 10 US cents) was used instead. This is the first year that data were collected directly from countries to estimate the CIF value. Data were reported for many countries in Africa and the values reported have shown that in many instances (particularly in West Africa) the CIF value was much lower than the export price, which in theory does not make sense (usually the CIF is equal to the export price plus insurance and transport costs). This could be due to tax evasion where importers report a lower value at port of entry to reduce their tax liability. The estimated CIF values were therefore corrected for 2010 and 2008 to concur with the lower values reported in 2012, therefore reducing the tax share for some countries in Africa, sometimes substantially.

[4] The brands are used for internal purposes for data validation and are not published in the report.

[5] Euromonitor International's Passport, 2012.

[6] The Tobacco Merchants Association (TMA), 2012.

[7] See http://ec.europa.eu/taxation_customs/taxation/excise_duties/tobacco_products/rates/index_en.htm.