

Technical note

Raising Tobacco Taxes in FY 2023-2024

A crucial step towards a tobacco-free Bangladesh by 2040

Raising tobacco taxes would:

Encourage nearly **1.4 million adults** not to smoke and deter about **a million youths** from smoking initiation

Save the lives of more than **490,000 current adults** and more than **492,000 youth** from premature deaths

Generate over **BDT 43 thousand crore** in tax revenue adding over **BDT 12 thousand crore** over the previous fiscal year



International Union Against
Tuberculosis and Lung Disease
Health solutions for the poor



Raising Tobacco Taxes in FY 2023-2024

A crucial step towards a tobacco-free Bangladesh by 2040

This brief technical note provides information on the methodology applied to build the tax simulation model used to develop the tax proposal fact sheet for the upcoming fiscal year (FY 2023-2024). It informs about the critical assumptions and technical parameters used in the model, with the motivation behind these assumptions.

Background

- Bangladesh is one of the largest tobacco consuming countries in the world.
- 35.5% of people 15 years and older in Bangladesh consume tobacco; out of which, 15.1% smoke cigarettes. This is the 9th highest prevalence of smoking out of 109 countries with available comparable prevalence data.

***Tobacco use in Bangladesh is deadly and costly.*^{i, ii}**

- In 2018, tobacco use killed almost 126,000 people.
- The total economic cost of tobacco use from lost productivity and direct healthcare costs of smoking related illnesses was estimated at BDT 305.6 billion in 2017-18, while tobacco tax revenues from the Supplementary Duty and VAT were BDT 228.1 billion in 2017-18.
- The adverse effects of tobacco cultivation on the environment and the livelihoods of farmers are enormous.

The current tobacco tax structure in Bangladesh is complexⁱⁱⁱ and is not adequate to discourage tobacco use^{iv}:

- It is a complex multi-tiered ad-valorem excise tax which includes large variations in tax rates depending on:
 - the type of tobacco product (cigarettes, *biris*, and smokeless tobacco);
 - the product characteristics (filter or without filter); and
 - the cigarette price band (low, medium, high and premium priced brands);
- The multi-tiered tax system for cigarettes has resulted in:
 - cigarettes remaining cheap and affordable;
 - smokers switching to cheaper cigarettes instead of quitting;
 - stable cigarette sales per adult in recent years;
 - a relatively constant cigarette smoking prevalence in recent years.
- Low taxes and prices on *biris* and smokeless tobacco keep these products highly affordable and their prevalence high.

Methodology

The tax simulation model--originally developed by WHO^v, in collaboration with ACS, CTFK, and UIC--has been improved to fit the current contexts of Bangladesh, and updated with current market and economic data. The data of current tax rates and previous sales by tiers are obtained directly from the National Board of Revenue (NBR), Bangladesh. Since any change in tax and price policy affects both demand and supply of tobacco, the model uses data from both sides. Tax, revenue, and sales data were obtained from the NBR and official Tax Law documents. A critical parameter for the model is the price elasticity of demand¹, since it determines how consumers respond to price and tax changes, and impacts tobacco demand. ^{vi} Estimates of the price elasticity of demand were obtained from Shimul & Hussain (2022) that used consumer-level survey data for Bangladesh. Other important parameters used in the model, especially macroeconomic data on income growth, income per capita, population by age, and inflation are collected from Bangladesh Bureau of Statistics (BBS), and the IMF. For detailed steps of the

¹ Price elasticity of demand indicates how responsive users are to the cigarette prices

simulation exercise, please see ‘The Practitioner Guide’^{vii}. Information on smoking prevalence was also obtained from the most recent survey, the Global Adult Tobacco Survey, Bangladesh, 2017^{viii}. The model also uses parameters needed to estimate the health impacts (especially the number of deaths caused by tobacco use), including the probability of dying from tobacco-related diseases, and the probability of surviving if a smoker quits smoking. Total deaths include both current smokers and future smokers. When estimating future smokers, the model accounts for the fact that the youth (less than 18 years old) are more responsive to tobacco prices^{ix} for several reasons including limited budgets and the fact that they are less addicted to tobacco.

Recommendations for upcoming FY

Raising taxes in Bangladesh would save lives while increasing government revenue.

- The most effective way to reduce tobacco use is to raise the prices of all tobacco products through tax increases that lower their affordability.
- Higher prices discourage youth from initiating tobacco use and encourage current users to quit.

Focusing on the following actions will likely have the most impact in decreasing tobacco use prevalence in Bangladesh:

- Shifting from an *ad valorem* to a specific tax system that would be regularly, preferably annually, adjusted for inflation and income growth to achieve health goals and predict revenue more effectively.
- Substantially increasing the tax and price of cigarettes in the lowest tier, which captures the bulk of the market with a market share sharply increasing from 25% in 2006-07, to 75% in 2020-21.
- Substantially increasing the tax and price of biris to reduce the gap with the cheapest cigarettes and to discourage switching between products.
- Improving the enforcement of tax policy on smokeless tobacco and exploring other non-tax measures that can amplify its impact, such as standardized packaging.

Recommendations for cigarette tax system²

Recommendation for 2023-2024: Introduce a tiered specific excise with uniform tax burden (excise share of 65% of final retail price) across all cigarette brands (Table 1).

CURRENT Tax Structure 2022-2023		CURRENT Indicators			PROPOSED Tax Structure 2023-2024			PROJECTED Indicators	
Tier	Retail Price (BDT)	SD (Ad Valorem-% of Retail Price)	SD Share in Retail Price	SD Amount (BDT)	Tier	Retail Price (BDT)	SD (Specific - BDT)	SD Share in Retail Price	SD Amount (BDT)
Low	40+	57%	57%	22.80	Low	55+	35.75	65%	35.75
Medium	65+	65%	65%	42.25	Medium	70+	45.50	65%	45.50
High	111+	65%	65%	72.15	High	120+	78.00	65%	78.00
Premium	142+	65%	65%	92.30	Premium	150+	97.50	65%	97.50

Note: i) SD stands for Supplementary Duty. 15% VAT and 1% Health Development Surcharge (already included in the price) are applied to the final retail price of cigarettes in addition to the SD resulting the total tax rate of 81%

² See Shimul, S. N., Hussain, A. G., & Nargis, N. (2022). The Bangladesh Cigarette Tax Simulation Model (BDTaXSIM): A practitioner’s guide for detailed explanation of the process available at <https://tobaccoeconomics.org/files/research/813/bangladesh-taxsim-model-technical-note.pdf>

Rationale of the proposed tax

The economic rationale of the proposed tax

In FY 2018-19 when MRP of the lowest brands was increased and the gap between price of low and medium brands was reduced, there was a movement of supply from low to medium segment cigarettes and a normal process of smoking cessation in the low segment. This was perceived by tax officials as undermining the effectiveness of the policy of increasing prices in the lowest segment. As the difference between the prices of medium and low segment cigarettes was about BDT 1.5 per stick (BDT 3.5 for low segment and BDT 5 for medium segment brands, on average per stick), quantities in the low segment dropped from 57 billion in FY 2017-18 to 30 billion sticks in FY 2018-19, and increased in the medium segment, from 12 to 29 billion sticks. This market substitution was partly due to some low-segment brands exiting the market, while others merged with medium priced cigarettes.

Despite these movements between low and medium brands in 2017-18 and 2018-19, NBR's overall cigarette tax revenue increased by 15%. Nevertheless, policy observers misconstrued it as the failure of tax and price policy in the low segment while in fact the reduction of the gap between the prices of low and medium tiers had a positive effect on revenue. It also had a positive impact on future tax policy as reducing the gap between tiers increased the strength of the tax system by reducing opportunities for tax avoidance.

The proposed reform of the cigarette tax and price system for FY 2023-24 would further reinforce those positive trends in cigarette tax policy and administration, while helping to recover the losses endured during the pandemic. Indeed, this proposal would increase the NBR's tax revenues, reinforce the tax system by further reducing tax avoidance opportunities and thus contribute to recovering the potential losses in the tax revenue due to the recent inflation and economic slowdown.

First, by increasing the MRP of lowest segment brands above BDT 50 (i.e., 55 which is about 38% increase) and slightly increasing the MRP of medium brands to BDT 70 (mostly to adjust for inflation), it would close the gap between these two segments, implying a difference in MPR per stick of about BDT 1 and leading to a strategic movement by suppliers and consumers towards the medium segment.

Second, the proposed reform would merely recover, in real values (inflation adjusted values), the cigarettes price levels of 2018/19, even though the price increase in the low segment brands may appear relatively high to some policy observers. Indeed, if the price level of 2018/19 were adjusted to account for inflation and GDP per capita growth between that fiscal year and FY 2023/24, the resulting price of cigarettes would be slightly higher than the current proposed. Therefore, our proposal is in fact less ambitious than a proposal that would fully recover FY 2018/19 prices in real terms, hence it is unlikely that people will switch to bidi or other cheaper options as affordability will remain at the level of that year.

Nevertheless, we expect that this reform will contribute to increase SD revenues, help NBR recover the losses in revenue due to the recent economic downturn and inflationary pressures and strengthen the cigarette tax system overall by reducing tax avoidance opportunities.

Recommendation for the medium to long term

Recommendation for 2024-25 to 2027-28: Reduce price tiers from four to two in the medium term, which will help reduce the gaps in final prices and specific tax rates between cigarette price bands.

If the Government of Bangladesh reforms the current cigarette tax system following the recommendations in FY 2023-2024, it would achieve the following:

- Reduce the prevalence of cigarette smoking from 15.1% to 13.92%;
- Encourage nearly 1.4 million adults to refrain from smoking and deter almost 1 million youth from smoking initiation;

- Save the lives of more than 490,000 current adults and more than 492,000 current youth from premature deaths due to tobacco use in the long term;
- Generate nearly BDT 43.1 thousand crore in tax revenue adding more than BDT 12 thousand crore in *additional* tax revenues (compared to the previous fiscal year, from the Supplementary Duty, Health Development Surcharge and VAT on top of the expected collection for FY 2022-2023) which is an increase by 23% of current tax revenue from cigarettes in the first year.
- Increasing cigarette prices of the LOW segment more than other segments will help relatively lower income smokers quit (who are more likely to smoke low segment brands) while at the same time reduce the incentives for smokers to substitute consumption towards cheaper brands when prices increase in higher cigarette price segments.
- Reforming the tax system by introducing a specific tax, as recommended by the WHO (and as employed in the majority of countries worldwide), would further reinforce the strength and effectiveness of the cigarette tax system.

Way forward

The tax recommendations highlighted below, once implemented, would greatly advance the cause of economic development, and align tobacco tax policy in Bangladesh with global best practices:

- Shifting from an *ad valorem* tax system to a specific tax system that would be regularly, preferably annually, adjusted for inflation and income growth.
- Substantially increasing the tax and price of cigarettes in the lowest tier.
- Substantially increasing the tax and price of biris to reduce the gap with the cheapest cigarettes.
- Substantially increasing the tax and price of smokeless tobacco products with improvement in the enforcement of tax policy on smokeless tobacco.
- Supporting non-tax measures including standardized packaging for all tobacco products.

Bangladesh has committed to achieve tobacco-related targets under the Global Action Plan for the Prevention and Control of NCDs and the Sustainable Development Goals (SDGs)^{x viii}. Raising taxes on tobacco is a cost-effective way to help reach those targets. It is also a major step towards achieving the vision of a tobacco-free Bangladesh by 2040.

The proposed cigarette tax reform will not only contribute to a healthier population but also generate significant additional revenue to help finance Bangladesh health and development priorities and improve the sustainability of the tax system. This is a clear ‘win-win’ for the Government and people of Bangladesh.

ⁱ Nargis N, Faruque GM, Ahmed M, Huq I, Parven R, Wadood SN, Hussain AG, Drope J. A comprehensive economic assessment of the health effects of tobacco use and implications for tobacco control in Bangladesh. *Tobacco Control*. Published Online First: 02 March 2021. doi: 10.1136/tobaccocontrol-2020-056175.

ⁱⁱ Hussain AKM Ghulam, Rouf ASS, Shimul SN, Nargis N, Kessaram TM, Huq SM, Kaur J, Sheikh MKA, Drope J. The economic cost of tobacco farming in Bangladesh. *International Journal of Environmental Research and Public Health*. 2020, 17, 9447; doi:10.3390/ijerph17249447.

ⁱⁱⁱ Budget documents of Government of Bangladesh 2011-2021.

^{iv} Nargis N, Hussain AKMG, Goodchild M, Quah ACK, Fong GT. A decade of cigarette taxation in Bangladesh: lessons learnt for tobacco control. *Bulletin of the World Health Organization*. Available online at: https://www.who.int/bulletin/online_first/18-216135.pdf?ua=1.

^v World Health Organization. (2018). The WHO tobacco tax simulation model: WHO TaXiM user guide. World Health Organization. <https://apps.who.int/iris/handle/10665/260177>. License: CC BY-NC-SA 3.0 IGO

^{vi} Shimul, S. & Hussain, A. K. M. (2022). Estimating own- and cross-price elasticity of cigarette consumption by price tiers in Bangladesh [Working Paper]. IHE. <https://www.tobacconomics.org/research/estimating-own-and-cross-price-elasticity-of-cigarette-consumption-by-price-tiers-in-bangladesh/>

^{vii} Shimul, S. N., Hussain, A. K. M., & Nargis, N. (2022). The Bangladesh Cigarette Tax Simulation Model (BDTaXiM): A Practitioner’s Guide. IHE. <https://tobacconomics.org/research/the-bangladesh-cigarette-tax-simulation-model-bdtaxsim-a-practitioners-guide>

^{viii} World Health Organization. (2017). Global adult tobacco survey-Bangladesh.

^{ix} Nargis, N., Ruthbah, U. H., Hussain, A. G., Fong, G. T., Huq, I., & Ashiquzzaman, S. M. (2014). The price sensitivity of cigarette consumption in Bangladesh: evidence from the International Tobacco Control (ITC) Bangladesh Wave 1 (2009) and Wave 2 (2010) Surveys. *Tobacco control*, 23(suppl 1), i39-i47.

^x United Nations. Transforming Our World: the 2030 Agenda for Sustainable Development. New York, United National General Assembly; 2015.

^{viii} World Health Organization. Health in 2015: From MDGs, Millennium Development Goals to SDGs, Sustainable Development Goals. Geneva, World Health Organization; 2015.

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