

Supplementary Materials to Policy Brief:

Raising and Simplifying the Cigarette Excise Tax in Indonesia: Simulated Revenue Gains and Public Health Benefits

1. Baseline and suggested excise tax tariff for 2025–2027

The following **Table 1.1** presents the baseline excise tax tariff per stick in Indonesia as of 2025, along with the proposed tariff levels for the subsequent two years under three suggested excise tax reform scenarios.

Table 1.1. Cigarette excise tax tariff 2025-2027 (IDR per stick)

Tier segment	2025 (baseline)	2026	2027
Scenario 1			
SPM 1	1.336	1.470	1.617
SKM 1	1.231	1.354	1.490
SPM 2	794	873	961
SKM 2	746	821	903
SKT/SPT 1A	483	580	696
SKT/SPT 1B	378	454	544
SKT/SPT 2	223	268	321
SKT/SPT 3	122	146	176
Scenario 2			
SPM 1	1.336	1.470	1.617
SKM 1	1.231	1.470	1.617
SPM 2	794	873	961
SKM 2	746	873	961
SKT/SPT 1A	483	580	696
SKT/SPT 1B	378	454	544
SKT/SPT 2	223	268	321
SKT/SPT 3	122	146	176
Scenario 3			
SPM 1	1.336	1.470	1.617
SKM 1	1.231	1.354	1.490
SPM 2	794	873	961
SKM 2	746	821	903
SKT/SPT 1A	483	580	696
SKT/SPT 1B	378	580	696
SKT/SPT 2	223	268	321
SKT/SPT 3	122	268	321

Abbreviation:

- SKM : *Sigaret Kretek Mesin* (machine-made clove cigarettes)
- SKT : *Sigaret Kretek Tangan* (hand-rolled clove cigarettes)
- SPM : *Sigaret Putih Mesin* (machine-made white cigarettes, without cloves)
- SPT : *Sigaret Putih Tangan* (hand-rolled white cigarettes, without cloves)

2. Simulation Results: Projected Price, Consumption, and Government Revenue

Tabel 2.1 presents a summary of simulation results showing the projected average cigarette price per stick, total quantity consumed, excise revenue, and total government revenue from cigarettes (Including Excise, Local Tax, and VAT) in Indonesia from 2025 to 2027 under three hypothetical policy scenarios combining excise tax increases and tier simplification as well as a no excise tax reform scenario.

Table 2.1 Price, Consumption, and Revenue Projections

	Average price per stick	Total Quantity Consumed (billion sticks)	Excise Revenue (IDR million)	Total Revenue (IDR million)
Scenario 1				
2025 (baseline)	Rp1.561	317,8	Rp195.357	Rp239.995
2026	Rp1.661 (↑6,4%)	308,1 (↓3,1%)	Rp210.685 (↑7,8%)	Rp256.777 (↑7,0%)
2027	Rp1.963 (↑18,2%)	279,9 (↓9,2%)	Rp245.750 (↑16,6%)	Rp292.955 (↑14,1%)
Scenario 2				
2025 (baseline)	Rp1.561	317,8	Rp195.357	Rp239.995
2026	Rp1.681 (↑7,7%)	305,9 (↓3,7%)	Rp213.083 (↑9,1%)	Rp259.402 (↑8,1%)
2027	Rp2.032 (↑20,9%)	273,1 (↓10,7%)	Rp249.623 (↑17,1%)	Rp296.640 (↑14,4%)
Skenario 3				
2025 (baseline)	Rp1.561	317,8	Rp195.357	Rp239.995
2026	Rp1.727 (↑10,6%)	295,9 (↓6,9%)	Rp219.489 (↑12,4%)	Rp265.513 (↑10,6%)
2027	Rp2.047 (↑18,5%)	266,7 (↓9,9%)	Rp255.797 (↑16,5%)	Rp302.953 (↑14,1%)
No excise tax reform scenario				
2025 (baseline)	Rp1.561	317,8	Rp195.357	Rp239.995
2026	Rp1.585 (↑1,6%)	319,9 (↓0,3%)	Rp195.358 (0,0%)	Rp235.119 (↓0,0%)
2027	Rp1.610 (↑1,6%)	315,9 (↓0,3%)	Rp195.314 (0,0%)	Rp234.970 (↓0,1%)

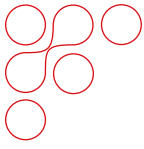
3. Model input and assumptions

3.1 Revenue projection

1. Consumption

Baseline cigarette consumption data were taken from the Ministry of Finance's 2024 figures on total cigarette production (in sticks) and subsequently disaggregated by type and tier based on their respective market shares.

Cigarette type	Quantity (in 000 sticks)	Market share
SPM 1	3.175.000	1,0%
SPM 2	6.350.000	2,0%
SKM 1	97.472.500	30,7%
SKM 2	70.167.500	22,1%
SKT/SPT 1A	18.732.500	5,9%
SKT/SPT 1B	40.640.000	12,8%



Cigarette type	Quantity (in 000 sticks)	Market share
SKT/SPT 2	14.605.000	4,6%
SKT/SPT 3	66.675.000	21,0%
Total	317.817.500	100%

2. Cigarette price

Baseline price data were obtained from Vital Strategies' 2023 cigarette price monitoring survey. Prices from 2023 were adjusted to 2024 levels using an 8.9% average market selling price increase (*Harga Transaksi Pasar*, HTP), based on the Survey of Selected Goods and Services from Statistic Indonesia (*Badan Pusat Statistik*, BPS), and subsequently adjusted to 2025 prices using the Consumer Price Index (CPI).

Cigarette type	Market price in 2025 (<i>Harga Transaksi Pasar</i> , HTP)
SPM 1	Rp2.199
SPM 2	Rp1.591
SKM 1	Rp2.175
SKM 2	Rp1.370
SKT/SPT 1A	Rp1.837
SKT/SPT 1B	RP1.444
SKT/SPT 2	Rp1.187
SKT/SPT 3	Rp898

3. Excise tax per stick

The excise tax per stick was derived from the Minister of Finance Regulation of the Republic of Indonesia Number 97 of 2024, with an additional local cigarette tax equivalent to 10% of the total excise tax rate, and a value-added tax (VAT) on tobacco products of 9.9% per stick.

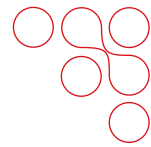
4. Price and cross-price elasticities

The own-price and cross-price elasticity estimates were drawn from a 2023 CISDI study⁴, which provides values at the product-type level (i.e., kretek and white cigarettes). As these estimates do not capture tier-level variation due to data limitations, they were assumed and calibrated using market share data from the Ministry of Finance, incorporating relevant economic assumptions to derive tier-specific elasticity estimates.

For cross-price elasticity, while the ideal approach would involve constructing a full substitution matrix across all cigarette types, data limitations restricted the analysis to substitutions between adjacent tiers only—for example, SKM 1 with SKM 2, SKM 2 with SKM 3, and so forth.

Cigarette type	Own-price elasticity	Cross-price elasticity
SPM 1	-0,13	0,05
SPM 2	-0,13	0,05
SKM 1	-0,65	0,05
SKM 2	-0,50	0,40
SKT/SPT 1A	-0,53	0,80
SKT/SPT 1B	-0,57	0,85
SKT/SPT 2	-0,63	0,90
SKT/SPT 3	-0,70	

⁴ Adrianna Bella et al., "Macroeconomic Impact of Tobacco Taxation in Indonesia," *Tobacco Control*, February 1, 2023, tc-2022-057735. <https://doi.org/10.1136/tc-2022-057735>.



5. Income elasticity

Several studies in Indonesia find that cigarette income elasticity is positive, indicating that cigarettes are a normal good, with consumption rising as income increases⁵. However, since these estimates are only available for the overall cigarettes, they cannot be directly applied across different product tiers. The income elasticity was therefore assumed and calibrated for each tier using market share data and relevant economic assumptions .

The elasticity remains generally positive and its magnitude varies substantially across tiers: premium products (SPM 1, SKM 1, and SPM 2) exhibit higher income elasticity, reflecting stronger consumption growth as incomes rise, whereas lower-priced products and hand-rolled cigarettes (SKT/SPT) show low or negative income elasticity, suggesting a tendency toward inferior good behavior, with consumers shifting away from these products as purchasing power increases.

Market segment	Income elasticity
SPM 1	0,30
SPM 2	0,27
SKM 1	0,25
SKM 2	0,20
SKT/SPT 1A	0,15
SKT/SPT 1B	0,10
SKT/SPT 2	0,00
SKT/SPT 3	-0,20

3.2 Public health benefits

1. Population

Adult population data (aged 15+) for the period 2025–2027 were sourced from the Indonesian Population Projection 2020–2050 published by BPS.

2. Adult smoking prevalence

The adult smoking prevalence was calculated from the 2023 Indonesian Health Survey (*Survei Kesehatan Indonesia, SKI*).

3. Prevalence elasticity

The absence of individual-level data limits the ability to obtain a precise estimate of smoking prevalence elasticity in Indonesia. In the absence of such data, prevalence elasticity is commonly assumed to be half of the total demand elasticity — yielding an estimate of 0.38 ($\frac{1}{2} \times 0.77$, where 0.77 is the total demand elasticity estimated using household level data⁶) — following the approach suggested in the toolkit⁷. However, this estimate is likely to be an overestimation in the Indonesian context, given the relatively high affordability of cigarettes, particularly hand-rolled kretek, which dampens the responsiveness of smoking participation to price changes. Consequently, a prevalence elasticity in the range of 0.1 – 0.2 appears to be a more realistic assumption for Indonesia, with a central point estimate of 0.15 adopted in this simulation.

4. Assumptions on averted death and risk reduction from cessation

The assumed rates of averted deaths and risk reduction from smoking cessation are 40% and 70%, respectively, based on the toolkit, which draws on extensive literature reviews⁷.

⁵ Triasih Djutaharta et al., Aggregate Analysis of the Impact of Cigarette Tax Rate Increases on Tobacco Consumption and Government Revenue : The Case of Indonesia (World Bank, Washington, DC, 2005), <https://doi.org/10.1596/13758>; Arief Tirtana and I. Gede Agus Ariutama, "The Effect of Cigarette Prices and Income on Cigarettes Consumption and State Revenue: Case Study of 33 Provinces in Indonesia," *Jurnal Ekonomi Dan Bisnis* 25, no. 1 (2022): 137–52, <https://doi.org/10.24914/jeb.v25i1.4037>.

⁶ Center for Indonesia's Strategic Development Initiatives, *Cigarette Affordability in Indonesia: Recent Trends and Elasticity* (Jakarta: CISDI, 2026).

⁷ J. Tesche et al., Modeling the Impacts of Tobacco Taxes. A Tobaccconomics Toolkit (Tobaccconomics, Institute for Health Research and Policy, University of Illinois Chicago, n.d.), <https://www.economicsforhealth.org/>.