



Still Too Cheap: Why Indonesia must reduce cigarette affordability to curb smoking

KEY FINDINGS

- ▶ **Cigarettes have remained consistently affordable in Indonesia.** Between 2010 and 2024, cigarette affordability remained largely unchanged, indicating that cigarettes continue to be affordable relative to income despite excise tax increases. The stagnation of affordability is driven by the increasing affordability of non-filtered kreteks, which are largely hand-rolled.
- ▶ **Affordability strongly influences demand.** A 10-percent reduction in cigarette affordability is associated with an almost 8-percent decrease in cigarette demand. The stronger response among lower-income households reflects their greater sensitivity to affordability, meaning that higher excise taxes, which reduce cigarette affordability, can generate larger gains for these groups. By making cigarettes less affordable, excise taxes encourage reduced spending on tobacco, enable households to redirect resources toward essential goods, ease financial pressure, and advance health equity.
- ▶ **Comprehensive excise reform is essential.** Reducing cigarette affordability requires comprehensive excise tax reforms, including increasing excise taxes across all cigarette types—particularly hand-rolled kreteks—simplifying the excise tax structure, and banning single-stick sales. Together, these measures are critical to curbing smoking and improving public health outcomes.

>> BACKGROUND

Smoking remains highly prevalent in Indonesia, posing significant public health and economic challenges. The 2023 Indonesian Health Survey (SKI) reported that 31.9 percent of adults 18 years and older, or approximately 70 million people, are active smokers. Notably, smoking prevalence shows a substantial gender disparity, with 60.7 percent of adult men smoking compared with only 1.3 percent of adult women¹. The widespread use of tobacco products contributes substantially to the country's burden of noncommunicable diseases, including cardiovascular diseases, respiratory illnesses, and cancers, which have been proven to impose high health care and productivity costs on society².

One of the main factors sustaining Indonesia's high smoking rates is the continued affordability of cigarettes relative to income. Existing evidence suggests that rising incomes, combined with a complex, multi-tiered tobacco excise tax system, have limited the effectiveness of excise tax hikes³. Nevertheless, much of this evidence is based on

limited data from prior to 2018, which may not fully capture recent economic and policy developments. Furthermore, although affordability is widely recognized as an important determinant of persistently high smoking rates in the country, its influence on smoking behavior has not been thoroughly examined⁴.

This policy brief draws on a 2026 Center for Indonesia's Strategic Development Initiatives (CISDI) study, which examines the affordability of cigarettes and its impact on smoking behavior in Indonesia. It presents new evidence on recent trends in cigarette affordability in Indonesia, analyzes their implications for consumption patterns, and assesses the adequacy of current fiscal measures in tobacco control. The findings offer evidence-based support for policy makers to accelerate tobacco excise tax increases and tier simplification in the excise tax structure to reduce smoking prevalence effectively.

¹ Badan Kebijakan Pembangunan Kesehatan, *Survei Kesehatan Indonesia (SKI) Dalam Angka* (Kementerian Kesehatan RI, 2023); Kementerian Kesehatan, *Perokok Aktif Di Indonesia Tembus 70 Juta Orang, Mayoritas Anak Muda*, May 29, 2024, <https://kemkes.go.id/eng/%20perokok-aktif-di-indonesia-tembus-70-juta-orang-mayoritas-anak-muda>.

² Yurdhina Meilissa et al., "The 2019 Economic Cost of Smoking-Attributable Diseases in Indonesia," *Tobacco Control* 31, no. Suppl 2 (2022): s133–39, <https://doi.org/10.1136/tobaccocontrol-2021-056890>; Soewarta Kosen et al., *Health and Economic Cost of Tobacco in Indonesia: Review of Evidence Series* (Lembaga Penerbit Badan Penelitian dan Pengembangan Kesehatan, 2018); Susi Ari Kristina et al., "Health Care Cost of Noncommunicable Diseases Related to Smoking in Indonesia, 2015," *Asia-Pacific Journal of Public Health* 30, no. 1 (2018): 29–35, <https://doi.org/10.1177/1010539517751311>.

³ Tobacconomics, *Cigarette Tax Scorecard: Spotlight on Indonesia* (2024), <https://www.economicsforhealth.org/files/research/946/indonesia-2022-final.pdf>; Center for Indonesia's Strategic Development Initiatives, *The Impacts of Cigarette Prices on Adult Smoking Cessation in Indonesia* (CISDI, 2024); Rong Zheng, "Cigarette Affordability in Indonesia : 2002 - 2017," *World Bank Organization*, ahead of print, May 2018, <http://hdl.handle.net/10986/30027>.

⁴ Zheng, "Cigarette Affordability in Indonesia : 2002 - 2017."



>> APPROACH

To analyze trends in cigarette affordability, this study uses the relative income price (RIP) indicator to measure the proportion of gross domestic product (GDP) per capita required to purchase 100 packs of cigarettes⁵. Data on cigarette prices were obtained from the National Consumer Price of Selected Goods and Services Survey conducted by Statistics Indonesia (*Badan Pusat Statistik*, BPS), along with GDP per capita measures for the period 2010–2024.

To assess how affordability affects smoking behavior, the study estimates the affordability elasticity using data from the Indonesian Socio-Economic Survey (*Survei Sosioekonomi Nasional*, Susenas) from 2017 to 2024, applying a two-part statistical estimation model⁶ to examine both the likelihood of smoking and the estimated amount spent on cigarettes among smokers.

>> RESULTS

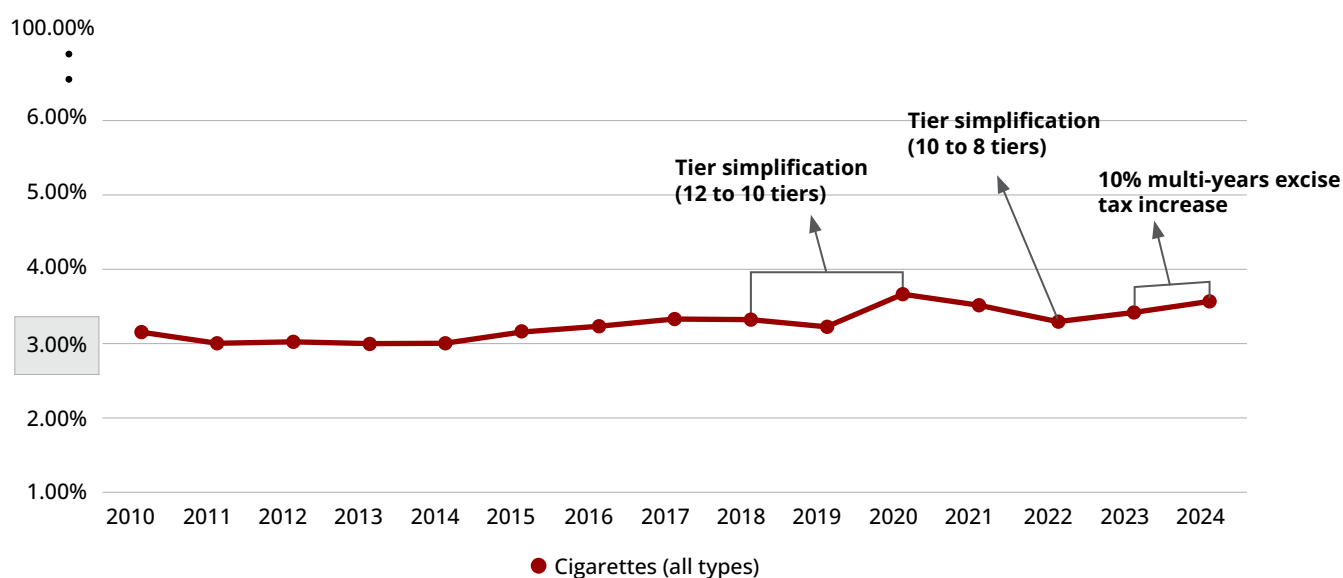
Cigarettes remain highly affordable in Indonesia

Between 2010 and 2024, cigarette affordability in Indonesia only marginally declined, with the RIP remaining around three percent. This means that, on average, Indonesians needed to spend around three percent of their annual income to purchase 100 packs of cigarettes, indicating high affordability by international standards. Global analyses show that in countries that have successfully reduced smoking prevalence, the RIP has risen substantially over time—driven by rapid tax hikes, more uniform tax structures, and strong tobacco control policies—often reaching high single-digit levels or higher in countries where it was initially low⁷. In contrast, Indonesia’s persistently low RIP suggests that cigarettes

remain highly affordable, which helps explain why periodic tax increases have not been sufficiently effective in reducing smoking prevalence.

Digging deeper into recent trends in Indonesia, despite the economic downturn during the COVID-19 pandemic in 2020, the excise tax reform—which included a higher 23-percent tax hike and simplification of tiers from 12 to 10—led to a slight, temporary rise in the RIP (Figure 1). During the post-pandemic recovery in 2021–2022, the RIP declined as incomes rebounded. It increased, albeit only slightly, in 2023–2024 following consecutive average annual excise tax increases of 10 percent and further simplification of the excise structure from 10 to 8 tiers, implemented from 2022.

Figure 1. Relative income price trend in Indonesia, 2010–2024



Source: Authors’ calculations based on Indonesia Statistics data

The comparison of relative income prices (RIPs) across different cigarette types indicates that non-filtered kreteks—typically hand-rolled cigarettes—have become progressively more affordable over time. In contrast, filtered kreteks and white cigarettes have become less affordable (meaning, their prices have increased relative to income) (Figure 2).

The high affordability of these non-filtered cigarettes exerts a downward pull on the overall RIP, contributing to a largely stagnant trend in aggregate cigarette affordability.

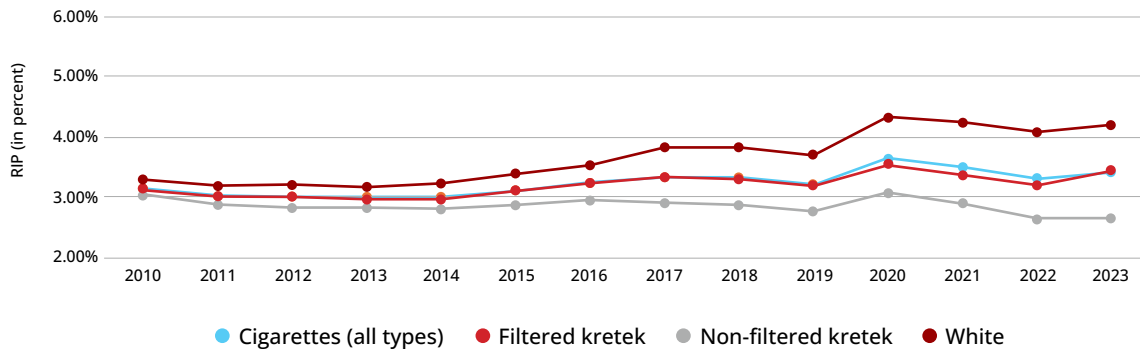
⁵ Note: Additional calculations of RIP using average wage and disposable income as alternatives to GDP per capita can be found in the full research report.

⁶ M Čizmović et al., *Cigarette Affordability in Montenegro* (Economics for Health Working Paper No. 24/12/2) (ISEA, 2024), <https://www.economicsforhealth.org/research/cigarette-affordability-in-montenegro-working-paper-series/>.

⁷ E H Blecher and C P Van Walbeek, “An International Analysis of Cigarette Affordability,” *Tobacco Control* 13, no. 4 (2004): 339–46, <https://doi.org/10.1136/tc.2003.006726>; World Health Organization, *WHO Report on the Global Tobacco Epidemic 2021: Addressing New and Emerging Products* (2021), <https://www.who.int/publications/i/item/9789240032095>; *Tobacco Economics, Tax Structures Are Key in Raising Tobacco Taxes & Revenues* (2018), https://www.economicsforhealth.org/files/research/469/Tobacco-Tax-Structures-Policy-Brief_FINAL-Web-Version.pdf.



Figure 2. The relative income price trend by cigarette types



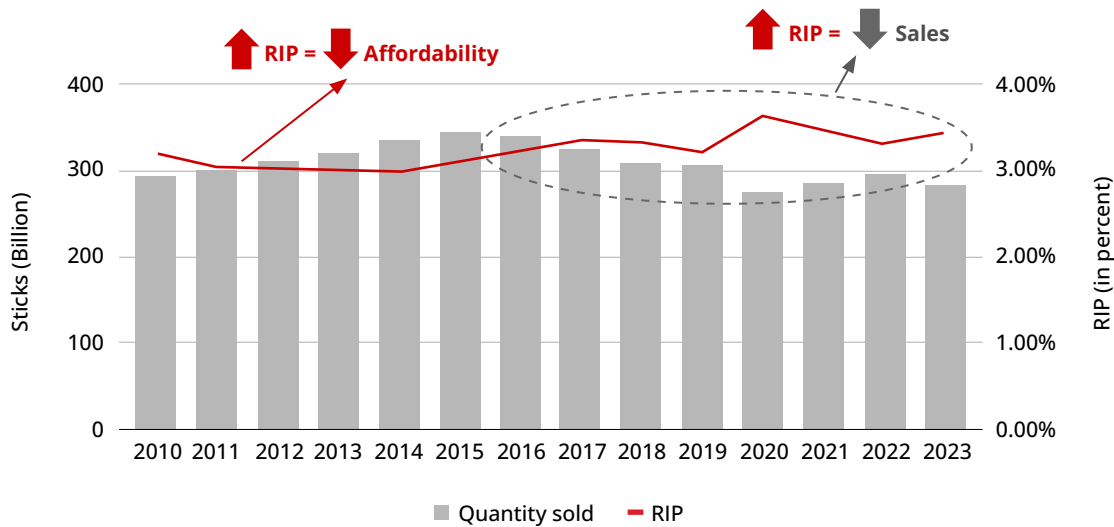
Source: Authors' calculations based on Indonesia Statistics data

Affordability strongly influences cigarette demand, especially among the lower-income group

Cigarette affordability remains a powerful driver of smoking behavior in Indonesia. Our analysis finds that when cigarettes become slightly less affordable, consumption drops noticeably (Figure 3). Between 2015 and 2020, as affordability declined modestly (measured by RIP rising from 3.20 percent to 3.64 percent), national cigarette sales fell from 306 to 276 billion sticks per year. Our statistical estimates based on

Susenas data confirm this pattern: the affordability elasticity of -0.77 indicates that a 10 percent decrease in affordability is associated with a 7.7 percent reduction in cigarette demand on average (Table 1). The impact is more substantial among lower-income households (-1.21), who are more sensitive to price and income compared to middle-income households (-0.59). This shows that tax policies which reduce affordability can be particularly effective and equitable, helping to lower smoking rates while reducing health inequalities.

Figure 3. Cigarette sales and affordability (RIP), 2010-2023



Source: Authors' calculations based on Statistics Indonesia data, Indonesia Socio-Economic Survey, and Euromonitor International data

Table 1. Affordability elasticity

	Average (all households)	Low-income households	Middle-income households
Affordability elasticity	-0.77	-1.21	-0.59

Source: Authors' calculations based on Indonesia socio-economic survey (Susenas)

Note: Estimates for high-income households are not reported due to data limitations and insufficient statistical precision. Please refer to the full research report for a detailed discussion.





The cigarette affordability indicator (RIP) in Indonesia remains low, suggesting that tobacco excise tax policies during 2010–2024 have not been effective in reducing affordability and smoking prevalence. To achieve continuous declines in smoking prevalence and strengthen public health outcomes, a comprehensive and evidence-based tobacco excise tax policy is imperative.

1. Implement higher and more regular excise tax increases, aligning with economic trends.

Excise adjustments should be regularly reviewed and adjusted to consistently outpace both inflation and real income growth to ensure continuous reductions in cigarette affordability across all cigarette and kretek products. In particular, non-filtered kreteks—typically hand-rolled cigarettes—require larger excise tax increases to reduce their affordability. Our findings suggest that a 10 percent decline in affordability could lower cigarette demand by nearly 8 percent, underscoring the potential impact of stronger tax measures. The increase in tax should also be complemented by enhanced enforcement to reduce illicit trade and improve compliance among actors in the supply chain, including producers, importers, wholesalers, distributors and retailers⁸.

3. Enforce the single-stick sales ban.

The enforcement of the single-stick sales ban must be strengthened. Selling cigarettes by the stick further increases affordability and accessibility. This case particularly applies to youth and low-income groups, which sustains smoking initiation and prevalence¹⁰. Stronger monitoring and stricter penalties for violations are needed to ensure full compliance with this regulation.

2. Continue simplifying the tobacco excise tax structure.

Accelerating the reduction of excise tax tiers would help narrow price gaps across products and prevent smokers from down-trading to cheaper brands. The World Health Organization (WHO) suggests a single tax tier for each hand-rolled and machine-made cigarette⁹. Eventually, tax rates across tiers should be uniform (single-tier). In the Indonesian context, a clear and well-designed roadmap is needed to guide the gradual simplification of the current tier structure so that it ultimately aligns with this recommendation.

4. Promote health equity through comprehensive policies.

Multicountry evidence has shown that lower-income smokers tend to be more responsive to price and affordability, which means that higher tobacco taxes can yield greater health impact for these groups¹¹. Measures complementary to taxation that are effective for socioeconomically disadvantaged populations, such as tailored and accessible cessation support and group and/or context-specific public awareness campaigns, have been shown to greatly enhance these equity effects.

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⁸ *Illicit Trade in Tobacco Products Need Not Hinder Tobacco Tax Policy Reforms and Increases*, Tobacconomics White Paper. (Tobacconomics, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago, 2019), <http://www.tobacconomics.org/>; Center for Indonesia's Strategic Development Initiatives, *Illicit Cigarettes Consumption: Empty Packs Survey in Six Indonesian Cities* (CISDI, 2025).

⁹ World Health Organization, "Raise Tobacco Taxes and Prices for a Healthy and Prosperous Indonesia," 2020.

¹⁰ André Salem Szklo et al., "Single Cigarette Sales Contravene Tobacco Control Policies, Brazil," *Bulletin of the World Health Organization* 102, no. 11 (2024): 834–36, <https://doi.org/10.2471/BLT.24.291807>; Gea Melinda et al., "Loose Cigarette Purchase and Adolescent Smoking in Indonesia: A Mixed-Methods Study," *BMJ Open* 15, no. 1 (2025): e087786, <https://doi.org/10.1136/bmjopen-2024-087786>.

¹¹ Frank J Chaloupka et al., "Tobacco Taxes as a Tobacco Control Strategy," *Tobacco Control* 21, no. 2 (2012): 172–80, <https://doi.org/10.1136/tobaccocontrol-2011-050417>.