

Excise Taxes in Emerging Economies: Progress on Cigarette Taxation in the Bloomberg Initiative, 2009-2025

by Rajeev Cherukupalli

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In this article, Cherukupalli examines tobacco tax reforms in 15 low- and middle-income countries from 2009 to 2025, highlighting significant progress and opportunities for countries to strengthen tobacco control policy.

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Discussion

The Bloomberg Initiative to Reduce Tobacco Use — launched in 2007, with a focus on 15 low- and middle-income countries representing two-thirds of the world's smokers in 2007 — has contributed to significant global advancements in public health. This report reviews progress in cigarette prices, taxes, and tax structures and compares country experiences with recommendations for simplifying and reforming tax policy prescribed in a 2010 Tax Notes special

report by Emil Sunley, former assistant director of the Fiscal Affairs Department at the International Monetary Fund.¹

Cigarette price levels, excise, and total tax shares have generally risen since the initiative began, although trends vary by country and year. In many instances, price increases fell short of income growth. While large-scale, “big bang” tax reforms have been rare — notably, the Philippines in 2013 — all 15 countries implemented some reform.

Many of the 15 countries followed Sunley’s recommendations to (1) reduce and eliminate complex tax tiers favoring lower-priced cigarettes; (2) introduce and increase specific taxes; (3) adopt retail prices as the base for ad valorem taxation; and (4) explicitly or implicitly index taxes to inflation. Key challenges for tax authorities include the continued favoring of tiered systems that sustain low-priced smoked tobacco products (Bangladesh, China, India, and Indonesia), relatively modest tax increases, and the need to adapt tax policy to emerging products.

Introduction

Tax practitioners and policymakers make underappreciated contributions to public health, particularly considering how critical higher tobacco taxes and prices are in global efforts to prevent over 7 million annual deaths from tobacco use.² In his 2010 report, Sunley provided a survey of tobacco tax policy in 2009 in 15 large low- and middle-income countries representing two-thirds of the world’s smokers, along with recommendations for reforming tax structures and raising tobacco tax rates.³ This article reviews progress in these countries as a group (the Bloomberg Initiative, or “BI-15” countries) and compares their tax systems in 2025 against those in

2009.⁴ The article follows by first examining trends in cigarette prices, tax levels, and tax structures, mostly relying on data from the World Health Organization’s Report on the Global Tobacco Epidemic (2025 and earlier years, corresponding to data collected every two years from 2008 to 2024).⁵ The article then compares key country-specific recommendations from Sunley’s 2010 report with countries’ subsequent experiences. Finally, lessons are drawn for the application of tax policy tools to advance tobacco control and public health. While this article prioritizes cigarettes (the leading tobacco product), several tobacco and nicotine products are also discussed.

Supplementary tables illustrating individual country tax changes over time are included in a technical supplement to this article (available online at https://s3.us-east-1.amazonaws.com/pdfs.taxnotes.com/2026/Cherukupalli_Supplemental_Tables.xlsx). These tables support Table 9 and the analysis of countries’ progress.

Prevalence and Consumption Trends

The global decline in adult tobacco use from 26.2 percent in 2010 to an estimated 19.2 percent in 2025 has been a major public health achievement of the last 15 years.⁶ This progress reflects the expansion and strengthening of evidence-based tobacco control policies.⁷ As Table 1 illustrates, this trend occurred in all 15 countries, with the exception of Egypt. Overall tobacco use includes smoking, of which cigarette use is a subset. While cigarettes are the most widely smoked tobacco product, other forms of tobacco consumption remain significant, including bidis in Bangladesh and India, shisha in Egypt, and chewing tobacco in India.

⁴When the Bloomberg Initiative was launched in 2007, the 15 countries (BI-15) covered in Sunley’s article were large low- and middle-income markets — Bangladesh, Brazil, China, Egypt, India, Indonesia, Mexico, Pakistan, the Philippines, Poland, Russia, Thailand, Turkey, Ukraine, and Vietnam. The World Bank moved Poland from upper-middle income to high-income status in 2009 and China from lower-middle income to upper-middle income status in 2010. Russia was classified as high-income from 2012 to 2014, upper-middle income from 2015 to 2022, and high-income since 2023. Bangladesh moved from low-income to lower-middle income in 2014. Brazil and Mexico have held upper-middle income status while the other countries remained in the lower-middle income category throughout the period.

⁵World Health Organization, “WHO Report on the Global Tobacco Epidemic, 2025: Warning About the Dangers of Tobacco” (2025).

⁶World Health Organization, “WHO Global Report on Trends in Prevalence of Tobacco Use 2000–2024 and Projections 2025–2030” (2025).

⁷See World Health Organization, *supra* note 5.

¹Emil Sunley, “Taxation of Cigarettes in Bloomberg Initiative Countries,” *Tax Notes Int’l*, Apr. 12, 2010, p. 161.

²Mauro Ahmed and Minouche Shafik, “The Case for Health Taxes,” 18 *Finance and Development*, International Monetary Fund (Mar. 2025).

³*Supra* note 1.

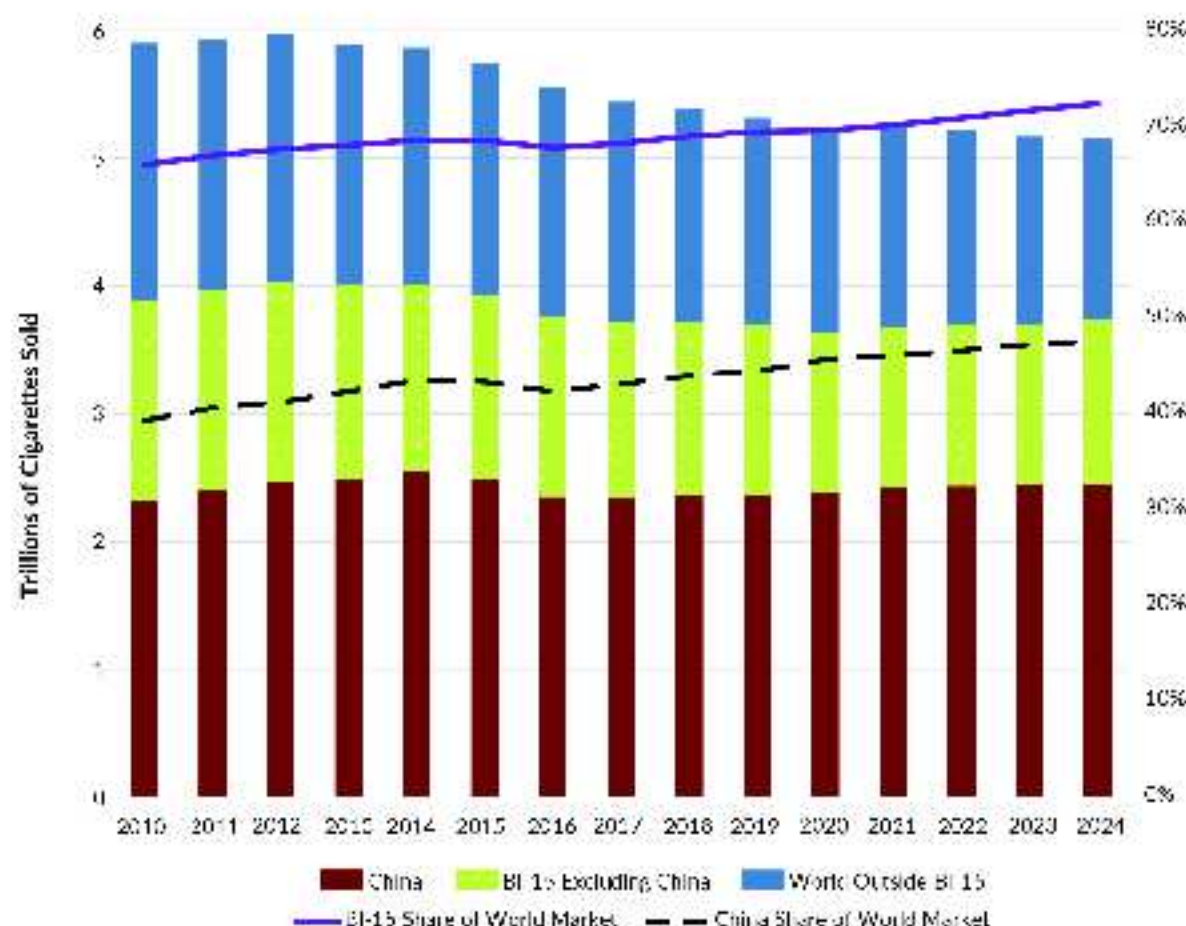
Table 1. Prevalence of Adult Cigarette, Smoking, and Tobacco Use in 15 Bloomberg Initiative Countries

Country	Current Cigarette Smoking Prevalence (Age-Adjusted)			Current Tobacco Smoking Prevalence (Age-Adjusted)			Current Tobacco Use Prevalence (Age-Adjusted)		
	2010	2025	Relative Reduction	2010	2025	Relative Reduction	2010	2025	Relative Reduction
Bangladesh	18.1 [14.8-21.4]	12.5 [9.8-15.2]	-31%	24	16.2	-33%	44.2	31.4	-29%
Brazil	15.7 [12.6-18.7]	9.9 [6.4-13.5]	-37%	17.5	11.5	-34%	17.5	11.5	-34%
China	24.9 [20.6-29.3]	22.6 [17.9-27.3]	-9%	25.1	22.7	-10%	25.1	22.7	-10%
Egypt	16.4 [13.2-19.5]	20.4 [13.0-27.7]	24%	21.5	25.4	18%	21.5	25.4	18%
Indonesia	31.2 [26.1-36.3]	30.2 [23.9-36.5]	-3%	31.2	30.2	-3%	32.7	31	-5%
India	9.7 [7.8-11.6]	3.8 [2.8-4.8]	-61%	14.5	8.9	-39%	38.5	21.9	-43%
Mexico	17.0 [14.2-19.8]	14.2 [11.6-16.9]	-16%	18.7	15.6	-17%	18.7	15.6	-17%
Pakistan	14.0 [11.0-17.0]	9.8 [7.2-12.5]	-30%	17.9	12.5	-30%	27.7	17.4	-37%
Philippines	25.5 [21.0-30.0]	17.1 [12.7-21.5]	-33%	27.6	19.5	-29%	27.6	19.5	-29%
Poland	28.9 [23.5-34.3]	19.7 [15.1-24.3]	-32%	30.8	21.2	-31%	30.8	21.2	-31%
Russia	29.9 [25.7-34.1]	24.2 [19.8-28.6]	-19%	30.2	24.5	-19%	33.5	26.5	-21%
Thailand	21.3 [18.2-24.5]	15.8 [12.1-19.4]	-26%	22.6	17.4	-23%	22.6	17.4	-23%
Turkey	30.0 [24.5-35.5]	29.4 [23.8-35.1]	-2%	31.8	31.1	-2%	31.8	31.1	-2%
Ukraine	29.4 [24.3-34.6]	21.3 [16.8-25.7]	-28%	31.2	22.5	-28%	33.1	23.2	-30%
Vietnam	19.0 [15.5-22.6]	15.3 [11.6-18.9]	-19%	24.6	20.3	-17%	26.5	20.8	-22%

Source: World Health Organization, "WHO Global Report on Trends in Prevalence of Tobacco Use 2000-2024 and Projections 2025-2030" (2025).

Notes: Uncertainty intervals omitted for tobacco smoking and tobacco use prevalence. Figures are age-standardized for cross-country comparability and will differ from the raw (non-adjusted) prevalence. The number of smokers in a country is the raw prevalence times the population aged 15 and over.

Figure 1. Volume of Cigarettes Sold in the World and in 15 Bloomberg Initiative Countries, 2010-2024



Source: Euromonitor (2025) and Bloomberg Initiative

Figure 1 illustrates the importance of these 15 emerging economies to both the global tobacco industry and tobacco control efforts. The BI-15 represented 66 percent of the world's cigarette stick sales volumes in 2010. Global cigarette consumption peaked in 2012. While global consumption has trended downward (from 5.9 trillion to 5.2 trillion sticks sold), the volume share of the BI-15 has risen to 72 percent. China's global sales volume share rose from 39 percent to 48 percent. While the prevalence of adult smoking has declined in the BI-15, the countries have large, relatively young populations and have experienced income growth, which translates into tobacco market growth.

Supplementary Table S2 compiles estimates on the potential for mortality averted in the BI-15 compiled based on countries' tax policy white papers published between 2008 and 2014.⁵

⁵ White papers published by the International Union Against Tuberculosis and Lung Disease included Bangladesh (Abul Barkat et al., "The Economic of Tobacco and Tobacco Taxation in Bangladesh" (2012)), India (Rijo M. John et al., "The Economics of Tobacco and Tobacco Taxation in India" (2010)), Pakistan (Shahid Javed Bari et al., "The Economic of Tobacco and Tobacco Taxation in Pakistan" (2013)), Poland (Marzena A. Weresa et al., "The Economic of Tobacco and Tobacco Taxation in Poland" (2011)), and Vietnam (G. Emmanuel Guindon et al., "Tobacco Taxation in Vietnam" (2010)).

Prices, Affordability, and Tax Levels – Trends and Yardsticks

Prices Over Time

The policy objective for raising tobacco excise taxes is to ensure that prices rise relative to other products, reducing their demand. Significant tax increases on tobacco products discourage smoking, thereby raising revenue and preventing avoidable deaths. Economic modeling commissioned by the Task Force on Fiscal Policy for Health (2024) estimated that raising taxes worldwide by 20 percent over their 2023 levels would motivate 41 million smokers to quit while generating \$460 million in revenue within five years. Furthermore, increasing taxes to raise tobacco product prices by 50 percent over their 2023 levels would motivate over 100 million smokers to quit while generating \$940 million in revenue within five years.⁹

Figure 2 traces the evolution of real cigarette prices in the BI-15 from 2008 to 2024, expressed in international, or purchasing power parity adjusted, dollars for cross-country comparability.¹⁰ Prices exceeded eight international dollars in nine BI-15 countries in at least one year, with higher-income countries (Mexico, Poland, Russia, Turkey, and Ukraine) generally maintaining higher prices across multiple years. Bangladesh, Brazil, China, Pakistan, and Vietnam, however, have top-selling brands that sell at low prices. Annual real price declines are not uncommon (the Philippines and Ukraine are exceptions); in 2022, real prices fell in 11 of the BI-15 countries during a period of high global inflation.

Table 2 shows the trend change in real cigarette prices derived by computing the simple

least squares growth rate of the real (2024) price of the top-selling brand in local currency units. Even accounting for inflation, prices generally trended upwards, though at varying rates. Pakistan, the Philippines, and Ukraine — all of which started from a low base — had the greatest trend increases in real prices. A few countries saw negligible, or even negative, trend growth in their top-selling brand prices (Brazil, India, Thailand, and Vietnam). Real prices over the 16-year period more than doubled in six countries and rose over 50 percent in 10 of the BI-15 countries.

Notably, most price progress occurred between 2008 and 2016, the first half of the period, when real prices rose over 50 percent in all but four countries. By contrast, real prices flattened or dropped between 2016 and 2024.¹¹ Higher real cigarette prices between 2008 and 2024 — whether measured by the annual price trends or by overall price changes — were accompanied by reduced cigarette use prevalence (Figure 3).¹²

The Task Force on Fiscal Policy for Health (Bloomberg Philanthropies, 2019 and 2024) recommends that countries implement tax increases that raise tobacco prices (and other health-harming product prices) by at least 50 percent within one year to achieve broad public health gains through substantial reductions in consumption.¹³ Evidence from the Philippines and Ukraine suggests that similar real price increases are feasible within one or two years, particularly when starting from a low price base, common in low- and middle-income countries.

¹¹ Real prices were lower in 2024 than in 2016 in Brazil, India, Poland, Thailand, Turkey, and Vietnam. This happens automatically if average consumer price inflation exceeds cigarette price inflation, but lower real prices can also reflect industry pricing strategies. For instance, India's top-selling brand over the entire period from 2018 to 2024 was Gold Flake, priced at INR 95 for a 10-stick pack.

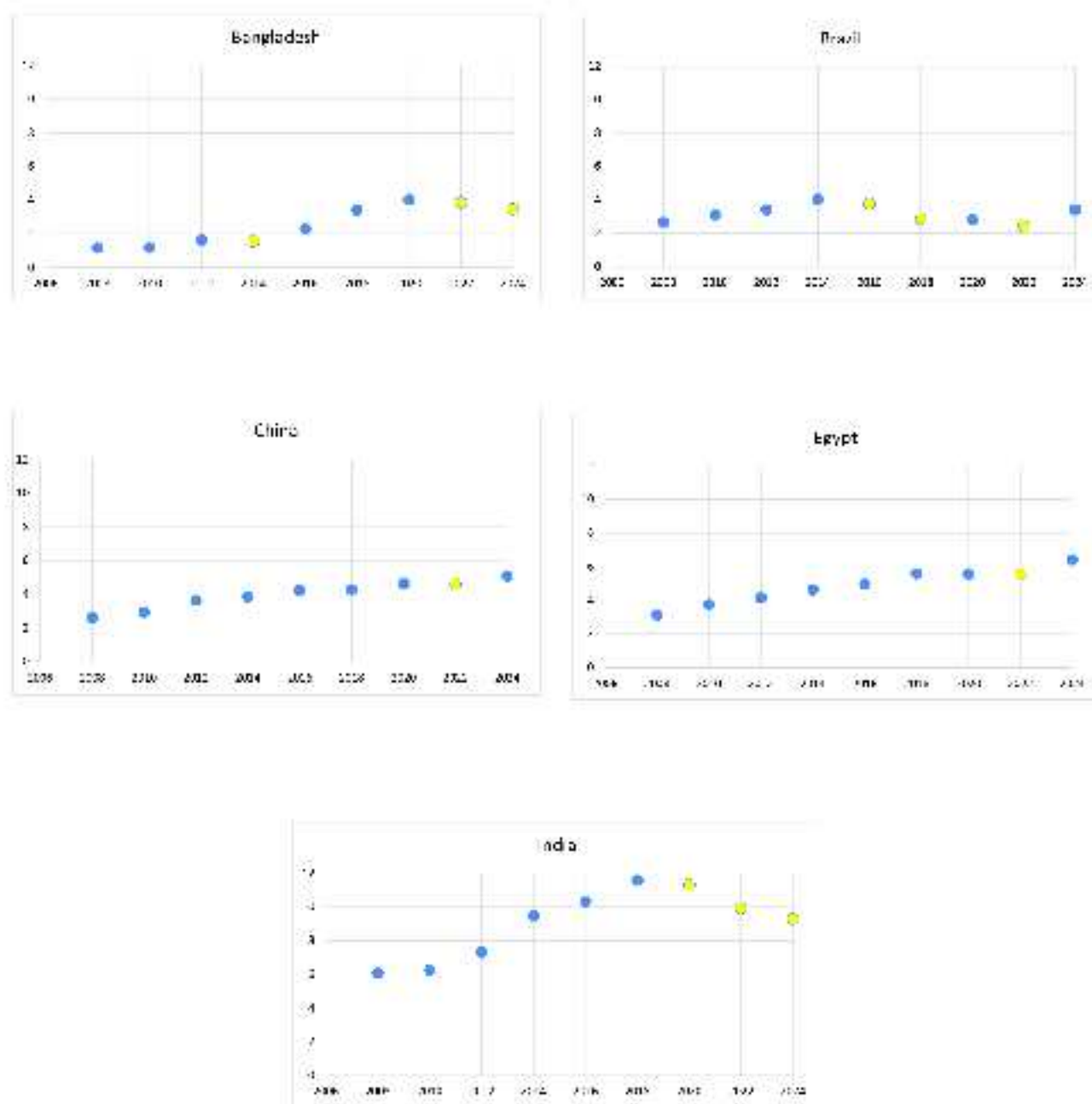
¹² Figure 3 plots prevalence changes against price changes. Without additional controls for income and other tobacco control measures, simple linear regressions suggest that a 10 percentage point increase in the growth rate of real prices is accompanied by a 1.16 percentage point decrease in prevalence, while a 10 percentage point change in 2024 versus 2008 real price is accompanied by a 1.18 percentage point reduction in prevalence; however, both graphs have poor statistical fits. For a more formal analysis of recent trends in cigarette sales and their responsiveness to price increases, see Fatma Romeh M. Ali et al., "Global Cigarette Market Trends in Sales, Pricing, and Estimates of Price Elasticity Across WHO Regions (2008-2022)," *Tobacco Control* (2025).

¹³ The Task Force on Fiscal Policy for Health, "Health Taxes to Save Lives: Employing Effective Excise Tax on Tobacco, Alcohol, and Sugary Beverages" (2019); and The Task Force on Fiscal Policy for Health, "Health Taxes: A Compelling Policy for the Crisis of Today" (2024).

⁹ Amit Summan et al., "Global Effects of Increased Taxation of Tobacco, Alcohol and Sugar-Sweetened Beverages on Tax Receipts: A Modelling Analysis," *10 BMJ Global Health* e017571 (2025).

¹⁰ International dollar conversions account for differences in purchasing power across countries, recognizing that market exchange rates between countries' local currencies and the U.S. dollar do not fully capture cross-country differences in price levels. For example, in 2024, one pack of Indonesia's top-selling cigarette retailed at IDR 40,000 (Indonesian rupiah), or approximately \$250, given the 2024 official exchange rate of IDR 15,855 to \$1. The official exchange rate underestimates the consumer basket that \$1 can purchase in Indonesia at local prices. IDR 40,000 was 8.5 international dollars in 2024, a figure that more accurately reflects cigarette prices in Indonesia relative to those in the United States after accounting for differences in purchasing power.

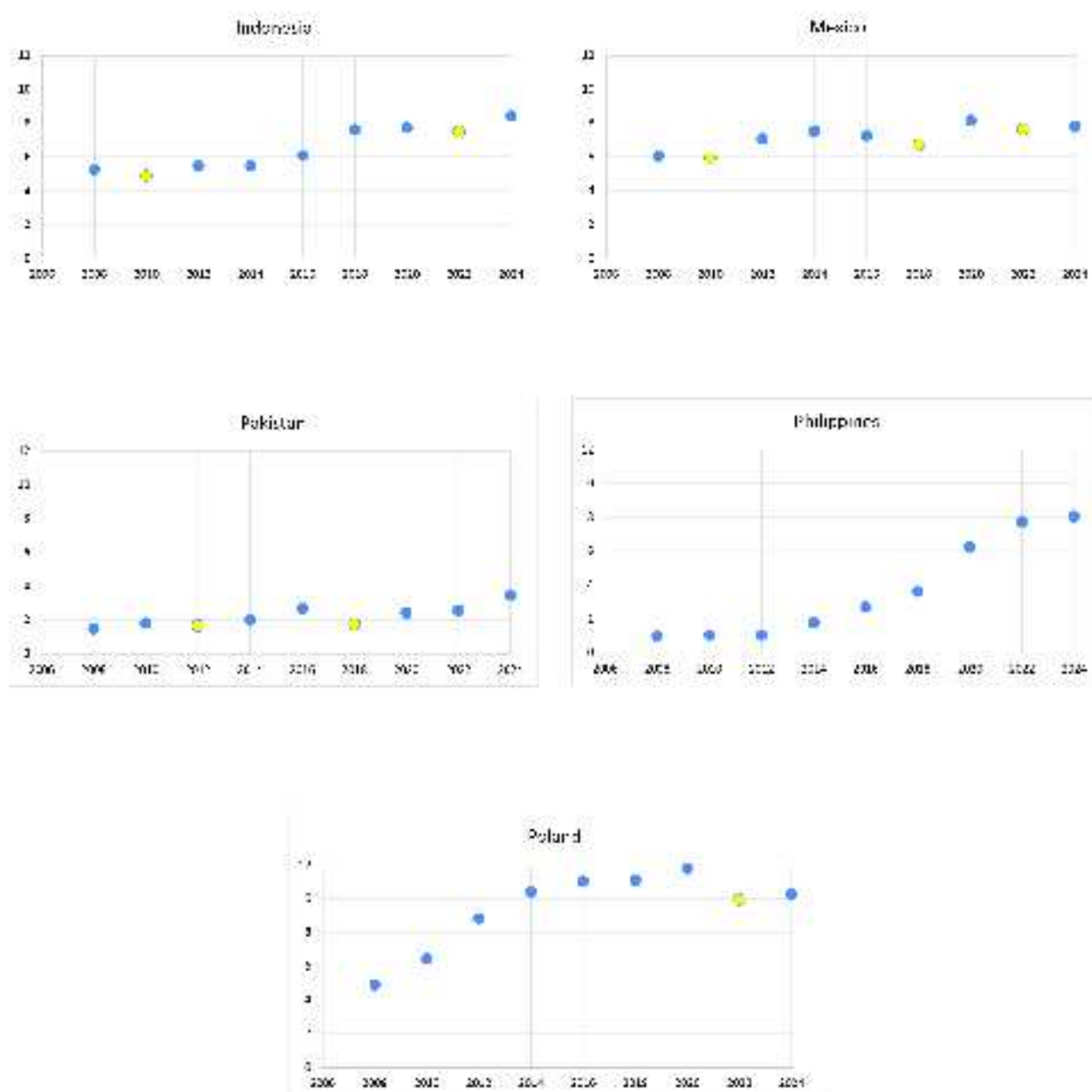
Figure 2. Behavior of Real (2024) International Dollar Prices of the Most Sold Cigarette Brands in 15 Bloomberg Initiative Countries, 2008-2024



Evidence from other BI-15 countries shows real prices rising by 50 percent and even doubling over longer periods (eight years). Health gains from reduced consumption are larger when the real price rises substantially ("big bang" tax

increases). Incremental tax increases are less effective and often help companies stabilize their customer base (for example, by retooling prices and product offerings) and protect their revenues instead of reducing consumer use.

Figure 2. Behavior of Real (2024) International Dollar Prices of the Most Sold Cigarette Brands in 15 Bloomberg Initiative Countries, 2008-2024 (Continued)

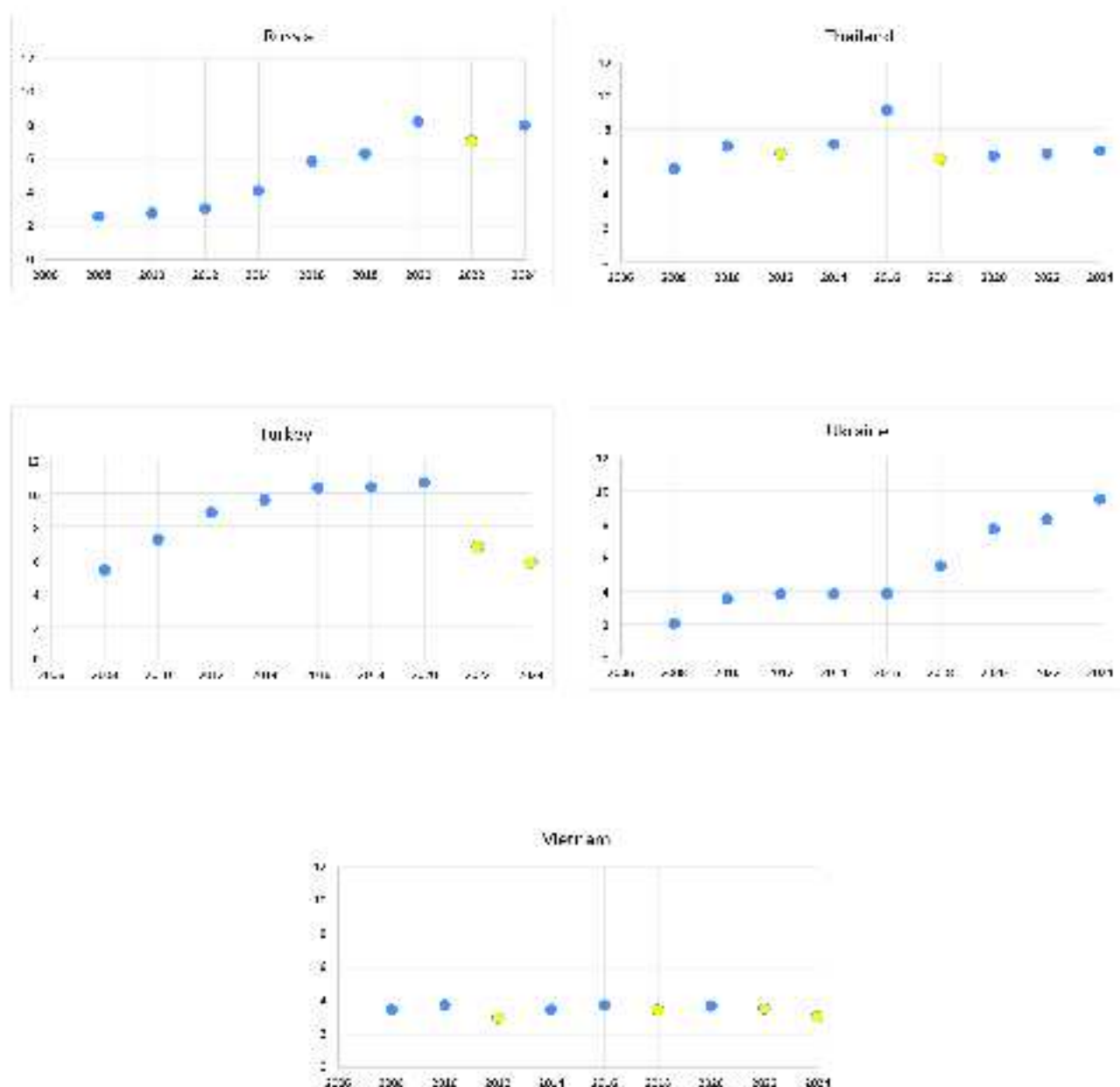


Affordability Changes

Sunley noted that excise tax increases must account for greater purchasing power as incomes rise. Since 2017, the World Health Organization has adopted a standard measure of cigarette

affordability for 195 countries — the percentage of per capita GDP required to purchase 2,000 cigarettes (100 packs) of a given country's top-selling brand — and has reported whether cigarettes became more affordable over the preceding 10 years in each country.

Figure 2. Behavior of Real (2024) International Dollar Prices of the Most Sold Cigarette Brands in 15 Bloomberg Initiative Countries, 2008-2024 (Continued)



Source: World Health Organization, "WHO Report on the Global Tobacco Epidemic, 2009: Ending the Tobacco Pandemic" (2009).
Note: The light blue dots represent the real price of cigarettes in 2008, and the yellow dots represent the real price of cigarettes in 2024.

Table 3 presents affordability changes in top-selling cigarette brands from 2014 to 2024. Within the BI-15, in any given year, cigarettes were typically more affordable in Brazil, China, and Russia. Notably, in the Philippines and Ukraine cigarettes became less affordable when

accounting for income growth. In the other countries, price increases typically fell short of income increases or did not demonstrate statistically significant trends. Beyond the BI-15, many countries have successfully raised taxes and prices and thereby reduced cigarette

Table 2. Annual Change in Real Price of the Most Sold Brand in 15 Bloomberg Initiative Countries (2008-2024)

Country	2007 WHO Region	Trend Growth Rate		% Price Change		
		Annual Rate of Growth	Uncertainty Interval	Full Period 2024 vs. 2008	First Half 2016 vs. 2008	Second Half 2024 vs. 2016
Philippines	WPRO	14.82%**	(13.6%, 16.0%)	638%	162%	182%
Ukraine	EURO	11.35%**	(10.4%, 12.3%)	659%	126%	236%
Pakistan	EMRO	8.25%**	(7.2%, 9.3%)	138%	75%	36%
Russia	EURO	7.51%**	(6.7%, 8.3%)	200%	117%	38%
Bangladesh	SEARO	7.30%**	(6.0%, 8.6%)	138%	90%	29%
China	WPRO	4.08%**	(3.5%, 4.6%)	106%	66%	24%
Poland	EURO	3.68%**	(2.3%, 5.0%)	94%	123%	-13%
Indonesia	SEARO	3.64%**	(3.2%, 4.0%)	68%	15%	46%
Egypt	EMRO	3.31%**	(2.6%, 4.0%)	91%	61%	18%
Turkey	EURO	2.67%*	(1.6%, 3.8%)	59%	84%	-13%
Mexico	AMRO	2.28%**	(1.8%, 2.7%)	41%	26%	12%
Thailand	SEARO	1.92%	(0.9%, 3.0%)	24%	69%	-27%
India	SEARO	0.47%	(-0.5%, 1.4%)	21%	49%	-19%
Brazil	AMRO	0.06%	(-1.2%, 1.4%)	44%	57%	-8%
Vietnam	WPRO	-0.55%	(-1.0%, -0.1%)	-13%	5%	-17%

Source: World Health Organization, "WHO Report on the Global Tobacco Epidemic, 2025: Warning About the Dangers of Tobacco" (2025); and author's calculations.

Notes:

* Significant at the 95% level.

** Significant at the 99% level.

Rates of growth computed for each country as coefficients of the regression of the natural log of real price in year 2024 local currency units on a time trend. **Bold text** in cells in the latter column corresponds to whichever half had a larger point-to-point price increase.

affordability.¹⁴ Future cigarette tax increases within the BI-15 will have to match or exceed income growth to make cigarettes less affordable.

Total and Excise Tax Shares Over Time

In 1999, the World Bank recommended that countries raise tobacco prices to at least two-thirds to four-fifths of the retail tobacco product

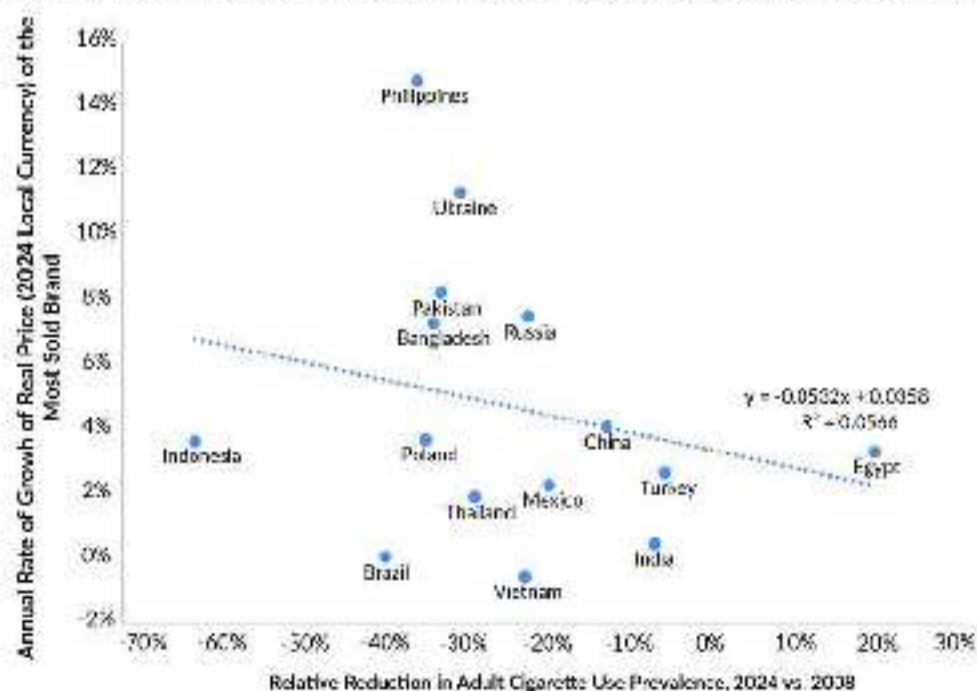
prices.¹⁵ Excise taxes are the primary vehicle for raising total tax shares and prices. They are targeted and, when designed well, are passed through to higher prices. Additionally, nearly all countries impose some sort of value-added or sales tax on consumer goods and transactions.

¹⁴ Over the 10-year period 2014-2024, cigarettes became less affordable in 46 countries and did not see a trend change in 92 countries out of 180. See World Health Organization (2025), *supra* note 5.

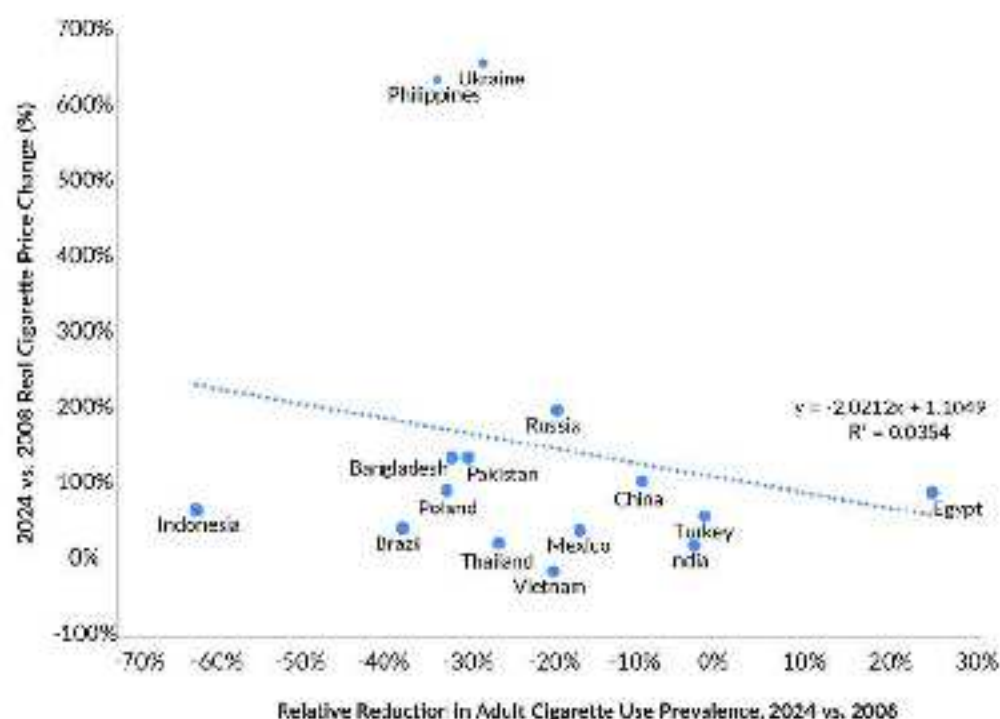
¹⁵ Frank Chaloupka and Prabhat Jha, *Curbing the Epidemic: Governments and the Economics of Tobacco Control* (2000).

Figure 3. Changes in Real Price and Changes in Prevalence in 15 Bloomberg Initiative Countries, 2008-2024

Panel A: Trend Growth Rate in Real Cigarette Prices and Prevalence Change Between 2008 and 2024



Panel B: 2024 vs. 2008 (Period-to-Period) Change in Real Cigarette Prices and Prevalence Change



Source: Computed from World Health Organization, "WHO Report on the Global Tobacco Epidemic, 2025: Warning About the Dangers of Tobacco" (2025).
Notes: Simple scatter plots and linear regressions with no additional controls for income or other tobacco control measures.

These taxes, because of their *ad valorem* nature, provide a reliable stream of revenue when prices rise.

In 2008 the top-selling cigarette brands in only one of the 15 countries (Poland) had a total tax share exceeding 75 percent (Table 4). By 2024 five countries (Brazil, Indonesia, Poland, Thailand, and Turkey) had tax shares exceeding 75 percent.

Brazil, China, India, and Vietnam had the lowest excise shares in 2024 (Table 5) for various reasons. Brazil loads its cigarette taxes on the VAT-type components, resulting in a relatively high total tax share but a low excise tax share. While in principle, high specific taxes discourage cheap cigarettes by forcing producers to raise prices, India's specific excise tax varies considerably by cigarette length, and the top-selling brand is priced to take advantage of the lower tax tier. China also levies varying taxes, though, in this case, by price category: Lower rates on lower-priced cigarettes translate into lower tax shares. Finally, Vietnam has relied on a purely *ad valorem* system with a tax based as a percentage of ex-factory price. With little change in the tax rate or ex-factory price, the total tax share in Vietnam has effectively remained flat.

Indonesia, the Philippines, and Ukraine experienced the largest increases in excise and total tax shares compared with 2008, whereas China and Vietnam maintained the lowest excise and total tax shares throughout the period.

The variability of tax shares over time reveals challenges in tax policy design. Effective tax shares can fall substantially in some years, particularly when statutory specific taxes are not raised but producers nonetheless raise prices. Tax authorities might still achieve stable or growing revenues in those years, since revenue depends on both the excise collected per stick and total sales, but declining tax shares suggest that BI-15 revenues did not reach their full potential.

Tax Structure Best Practices

The tax reform process involves prescribing improvements to an existing tax system to advance policy objectives — typically revenue generation but increasingly public health. Prescriptive tax policy toolkits and countries' experiences suggest that tax regime choices and best practices may be as important as, if not more

than, tax rate targets.¹⁶ Table 6 captures the performance of the BI-15 countries in 2024.

Tax Regime Types

Specific excise taxes on tobacco make a greater public health impact because they directly tax the harmful attribute — the quantity of cigarettes or tobacco consumed — rather than the product's market price. Conversely, tax authorities often prefer *ad valorem* taxes because they generate more revenue from higher-priced cigarettes and automatically rise with inflation, thereby keeping the tax share constant and reducing the administrative effort of changing tax rates frequently. Countries increasingly rely on both tax types. Four of the BI-15 abandoned exclusively specific (Brazil and Egypt) or *ad valorem* (Mexico and Turkey) taxes and adopted mixed tax systems (see also Supplementary Table S2).

Reliance on Tiers

Seven of the 15 BI countries levied nonuniform taxes in 2024. This is significant because tiered tax systems remain relatively uncommon globally; in 2024, only 31 countries had tiered tax systems, wherein cigarette tax rates vary based on certain characteristics. In the BI-15, these characteristics include length (India), retail price slabs (Bangladesh, Egypt, Pakistan, and Thailand), ex-factory price (China) and a combination of production capacity, cigarette type, and price level (Indonesia). In short, these systems encourage the economy segment that favors lower-income smokers.¹⁷

¹⁶ See World Health Organization, "WHO Technical Manual on Tobacco Tax and Administration" (2021), for an updated manual on best practice tobacco policy; and Patricio V. Marquez and Blanca Moreno-Dodson, "Tobacco Tax Reform at the Crossroads of Health and Development: A Multisectoral Perspective" (2017), for a compilation of country studies and issues.

¹⁷ Sunley (2010), *supra* note 1. "A lower excise burden per stick on cheaper brands cannot be justified by health concerns... an *ad valorem* excise has a multiplier effect, which leads to larger price differentials between high- and low-priced cigarettes, which in turn encourages brand switching to cheaper brands whenever the *ad valorem* rate is increased."

Table 3. Affordability of Cigarettes in 15 Bloomberg Initiative Countries (2014-2024)

Country	% of GDP Per Capita Required to Purchase 2,000 Cigarettes of the Most Sold Brand ⁺						Trend Growth Rate and Statistical Significance ⁺⁺	Cigarettes Less Affordable Since 2014 ⁺⁺	Cigarettes Less Affordable (or the Same) in 2024 Than in 2022
	2014	2016	2018	2020	2022	2024			
Bangladesh	2.88%	3.81%	4.89%	4.93%	4.24%	3.57%	2.02%	No change	No
Brazil	2.00%	2.03%	1.47%	1.44%	1.15%	1.56%	-4.25%*	No	Yes
China	2.47%	2.40%	2.16%	2.12%	1.92%	1.93%	-2.76%*	No	Yes
Egypt	3.10%	3.18%	3.33%	2.78%	2.71%	3.10%	-0.93%	No change	Yes
India	14.47%	13.74%	13.76%	13.36%	9.99%	8.43%	-5.27%*	No	No
Indonesia	4.37%	4.52%	5.25%	5.36%	4.84%	5.01%	1.30%	No change	Yes
Mexico	3.00%	2.82%	2.61%	3.51%	3.11%	3.09%	1.06%	No change	No
Pakistan	3.21%	4.10%	2.57%	3.67%	3.75%	5.12%	3.47%	No change	Yes
Philippines	2.01%	2.74%	3.34%	6.08%	6.95%	6.67%	13.40%*	Yes	No
Poland	3.06%	3.01%	2.77%	2.68%	1.98%	1.96%	-5.03%*	No	No
Russia	1.24%	1.81%	1.78%	2.17%	1.64%	1.74%	2.25%	No change	Yes
Thailand	3.36%	4.07%	2.54%	2.67%	2.66%	2.69%	-3.35%	No change	Yes
Turkey	3.02%	3.04%	2.94%	3.06%	1.79%	1.43%	-7.56%*	No	No
Ukraine	2.43%	2.61%	3.43%	4.02%	4.68%	4.88%	7.71%*	Yes	Yes
Vietnam	3.44%	3.29%	2.70%	2.61%	2.39%	1.89%	-5.72%*	No	No

Source: World Health Organization, “WHO Report on the Global Tobacco Epidemic, 2025: Warning About the Dangers of Tobacco” (2025).

Notes:

* Significant at the 99% level.

+ Share of GDP per capita in local currency required to purchase 2,000 cigarettes/100 packs of 20.

++ Based on statistical significance of the least squares growth rate of the affordability measure.

Source: World Health Organization, "WHO Report on the Global Tobacco Epidemic, 2025: Warning About the Dangers of Tobacco" (2025).

Notes:

* Significant at the 99% level

+ Share of GDP per capita in local currency required to purchase 2,000 cigarettes/100 packs of 20.

++ Based on statistical significance of the least squares growth rate of the affordability measure.

Table 4. Trends in Share of Total Tax of the Most Sold Brand in 15 Bloomberg Initiative Countries (2008-2024)

Country	2008	2010	2012	2014	2016	2018	2020	2022	2024
Bangladesh	47.00%	48.00%	54.00%	58.00%	66.00%	71.00%	<i>59.94%</i>	<i>58.40%</i>	73.08%*
Brazil	57.15%	59.35%	63.15%	64.94%	67.95%	82.97%	81.55%	80.25%	79.44%
China	40.51%	49.04%	49.82%	51.57%	55.58%	55.73%	54.76%	52.16%	53.17%
Egypt	59.27%	73.75%	72.50%	73.13%	73.50%	77.19%	78.53%	74.88%	64.63%
India	45.76%	45.18%	41.77%	41.30%	52.74%	54.04%	<i>57.60%</i>	<i>57.60%</i>	58.25%
Indonesia	53.26%	54.11%	50.41%	53.21%	57.71%	51.96%	63.26%	74.02%	78.9%**
Mexico	61.17%	62.70%	68.34%	67.60%	67.29%	67.00%	<i>67.57%</i>	<i>67.59%</i>	67.54%
Pakistan	52.49%	55.01%	60.00%	60.70%	64.80%	56.36%	60.78%	51.80%	60.91%*
Philippines	28.95%	28.42%	28.85%	74.27%	<i>62.57%</i>	71.32%	55.71%	50.57%	51.1%**
Poland	93.84%	<i>86.38%</i>	<i>79.59%</i>	80.29%	78.24%	76.79%	78.40%	78.40%	79.06%
Russia	30.35%	34.98%	40.48%	47.63%	51.06%	57.24%	56.05%	61.04%	56.81%*
Thailand	63.78%	68.74%	70.22%	73.13%	73.48%	78.60%	78.60%	81.32%	78.62%
Turkey	73.25%	78.25%	80.25%	82.13%	83.05%	81.37%	84.88%	80.75%	81.53%*
Ukraine	48.85%	70.23%	67.00%	81.03%	79.35%	74.66%	80.69%	70.66%	67.2%**
Vietnam	31.79%	31.79%	31.79%	31.79%	35.67%	36.65%	36.55%	34.32%	37.22%

Source: World Health Organization, "WHO Report on the Global Tobacco Epidemic, 2025: Warning About the Dangers of Tobacco" (2025).

Notes:

Cell entries coded as follows:

*Total share in 2024 was between 25 and 50 percent higher than in 2008.

**Total share in 2024 >50% higher than in 2008.

Total tax share 4 or more percentage points *higher* over the previous period: *italicized and bolded*.

Total tax share 4 or more percentage points *lower* over the previous period: *italicized*.

Rationalizing and eliminating differential cigarette tax rates has been a linchpin of tax reform in Brazil and the Philippines and during previous periods in Mexico and Turkey. Bangladesh, India, and Indonesia consolidated their tax tiers over the 15-year period. (See also supplementary tables S3-S17 on individual country experiences over time.)

Improving Mixed Tax Regimes

Within mixed tax regimes, the World Health Organization recommends prioritizing specific taxes over ad valorem taxes to successfully

increase total tax per pack.¹⁵ To prevent firms from underpricing products to capture market share, a tax authority administering a mixed regime could impose a minimum specific tax whenever the calculated mixed tax falls below that minimum amount. A minimum price in any tax regime can have the same effect. Poland, Russia, Turkey, and Ukraine employ some or all of these practices. Bangladesh, Brazil, Indonesia, and Pakistan have de facto price floors for cigarettes.

¹⁵ See World Health Organization (2021), *supra* note 16.

Table 5. Trends in Share of Excise Tax of the Most Sold Brands in 15 Bloomberg Initiative Countries (2008-2024)

Country	2008	2010	2012	2014	2016	2018	2020	2022	2024
Bangladesh	32.00%	33.00%	39.00%	42.00%	50.00%	55.00%	46.80%	45.60%	57.69%*
Brazil	25.79%	23.38%	27.18%	28.97%	31.98%	40.00%	38.57%	37.27%	36.47%
China	21.62%	29.42%	29.30%	30.79%	34.46%	35.38%	36.63%	34.45%	35.17%
Egypt	55.64%	71.25%	70.83%	71.88%	72.50%	71.88%	73.53%	69.51%	61.25%
India	28.24%	27.69%	24.37%	23.91%	36.08%	31.21%	31.04%	31.04%	31.00%
Indonesia	44.24%	45.71%	42.60%	40.91%	44.31%	40.05%	48.33%	57.31%	61.55%**
Mexico	48.13%	48.91%	54.55%	53.80%	53.50%	53.20%	53.77%	53.80%	53.75%
Pakistan	38.26%	39.90%	46.21%	46.17%	45.79%	35.58%	41.25%	33.64%	43.91%*
Philippines	18.23%	17.71%	18.13%	63.55%	51.85%	60.61%	45.00%	39.86%	40.38%**
Poland	75.81%	68.35%	60.89%	61.59%	59.54%	58.09%	59.70%	59.70%	60.36%
Russia	15.10%	19.73%	25.23%	32.38%	35.81%	41.99%	39.39%	44.37%	40.15%*
Thailand	53.16%	58.43%	58.43%	61.57%	62.58%	58.69%	58.69%	61.24%	59.08%
Turkey	58.00%	63.00%	65.00%	66.88%	67.80%	66.11%	69.62%	65.50%	64.87%
Ukraine	32.18%	53.56%	50.34%	64.36%	57.93%	53.23%	59.26%	49.23%	45.78%**
Vietnam	25.35%	25.35%	25.35%	25.35%	28.70%	28.65%	28.56%	26.81%	29.08%

Source: World Health Organization, "WHO Report on the Global Tobacco Epidemic, 2025: Warning About the Dangers of Tobacco" (2025).

Notes:

Cells entries coded as follows:

*Excise share in 2024 was between 25 and 50 percent higher than in 2008.

**Excise share in 2024 >50% higher than in 2008.

Excise tax share 4 or more percentage points *higher* over the previous period *italicized and bolded*.

Excise tax share 4 or more percentage points *lower* over the previous period *italicized*.

Choice of Tax Base for Ad Valorem Taxes

Sunley recommended that countries applying an ad valorem tax use the final retail price as the tax base. Taxes imposed earlier in the supply chain are typically levied on a smaller base that may be more susceptible to manipulation by manufacturers. China, India, Mexico, and Vietnam use tax bases other than retail price for their ad valorem taxes. While China, India, and Mexico use mixed systems — in which a sufficiently high specific tax can offset some revenue losses from a low ad valorem tax base — Vietnam features both low ad valorem tax rates and low prices.

Price Gaps

The textbook case of a simple market with cigarettes sold at one price does not reflect real-world conditions. As with any product, cigarette prices vary widely, typically mirroring market segmentation. A large low-price cigarette market segment weakens tobacco control efforts by preserving cheap, affordable alternatives that remain easily accessible to young people and smokers attempting to quit. By examining price gaps, governments can obtain immediate feedback on the effects of recent tax changes. Between 2022 and 2024, the gap between cheap and premium cigarettes widened in seven

countries (Table 7). Between 2008 and 2024, the price of the cheapest brand rose and came closer to the premium brand price in seven of the BI-15, although this was statistically significant in only four instances. The cheapest cigarettes in China, Indonesia, and Vietnam remained less than one-fifth of the price of the most expensive brand, whereas Bangladesh, Russia, and Ukraine saw prices gradually increase at the lower end.

Tobacco Taxation Progress in the BI-15

Sunley's 2010 article summarized each country's tobacco tax situation in 2009 and provided recommendations for reform. Many recommendations corresponded to policy reforms already under consideration or proposed and modeled in whitepapers published between 2008 and 2013.¹⁹

Table 8 presents a snapshot of cigarette taxes in 2009 and 2025.²⁰ Table 9 summarizes Sunley's key recommendations for each country and assesses the degree to which the recommendations were achieved. Supplementary tables S3-S17 provide year-by-year details.

'Big Bang' Tax Increases – Relatively Rare Despite Reforms

The Philippines led the group with its sin tax reform (2012-2017). No other country experienced as complete a transformation of its tax system. Many changes were introduced, sometimes after years without progress. Brazil's elimination of many differential taxes, Mexico's introduction of a specific tax, and Turkey's adoption of a European style mixed system with a minimum tax were all reforms that corresponded directly to Sunley's recommendations.

Complex, Tiered Excise Systems Remain Dominant

Many countries that have maintained legacy tax systems explicitly or implicitly favor certain tobacco products whether based on product features (cigarette length in India), predefined price tiers (Bangladesh), or a combination of production technology (handmade versus machine-made), production capacity, and price (Indonesia).

Even countries with relatively uniform tax rates can have complex tiers and grades of cigarettes that affect how tax changes are reflected in prices and product mix. For example, China has a mixed excise tax but an underlying five-tier classification of cigarettes based on price. Wholesale and retail margins give producers – or, in China's case, the state monopoly – another mechanism for influencing final retail prices.

Long-Standing Domestic Manufacturers Remain Favored

Neither Bangladesh nor India made substantive changes to their bidi tax systems. An increase in bidi tax rates in Bangladesh in 2013 and 2014 presented one change, but these remained *ad valorem* rates and remained lower than the cigarette tax rates. India's basic duty on bidis is one-hundredth that on cigarettes. In Indonesia, handmade kreteks are taxed at little more than one-tenth of the highest tax rate. In Egypt, Cleopatra cigarettes produced by Eastern Company retail at prices exceeding their assigned tax bracket.

¹⁹ The white papers all shared a simple comparative statics approach, modeling the effects tax increases – typically a spirational goal or policy proposals under consideration at the time of writing – on price, consumption, smoking prevalence, and the potential lives saved by preventing young people from starting to smoke. Supplementary Table S1 compile model estimates of projected revenue gains and potential lives saved and compares the modeled one-time price increases from those analyses with the actual real price increases in WHO data on most sold brands from 2008 to 2024.

²⁰ Unlike the snapshots in Sunley, *supra* note 1, and this analysis, WHO's data in tables 2-5 and figures 2-3 refer to taxes and prices collected in every even-numbered year from 2008 to 2024.

Table 6. Tax Performance Metrics for 15 Bloomberg Initiative Countries (2024)

	I. Tax Structure/Level – Cigarettes								II. Tax Administration	
	Type of Excise Tax Applied	Uniform Excise Tax Applied Yes (Uniform), No (Tiered/ Varying Rates)	Greater Reliance on Specific Tax in Mixed Excise Regime	Minimum Specific Tax Applied in Ad Valorem or Mixed Excise Regime	Minimum Price	Retail Price Used as Base of Ad Valorem (Component in Ad Valorem or Mixed Excise Regime (or Retail Price Exclusive of VAT)	Specific Tax Component Automatically Adjusted for Inflation (or Other)	Price Gap Decreased Between 2022 and 2024	Tax Stamp, Fiscal Mark, or Any Other Type of Marking Applied on Cigarettes	Unique Identifiers/ Markings Required to Contain Data for Tracking and Tracing Purposes
Country										
Bangladesh	Ad valorem	No	—	No	Yes	Yes	No	Yes	Yes	No
Brazil	Mixed	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes
China	Mixed	No	No	No	No	No	No	Yes	No	No
Egypt	Mixed	No	No	No	No	Yes	No	No	Yes	No
India	Mixed	No	Yes	No	No	No	No	...	No	No
Indonesia	Specific	No	—	—	Yes	—	No	...	Yes	No
Mexico	Mixed	Yes	No	No	No	No	Yes	No	Yes	Yes
Pakistan	Specific	No	—	—	Yes	—	No	No	Yes	Yes
Philippines	Specific	Yes	—	—	No	—	Yes	No	Yes	Yes
Poland	Mixed	Yes	No	Yes	No	Yes	Yes	No	Yes	Yes
Russia	Mixed	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Thailand	Mixed	No	Yes	No	No	Yes	No	Yes	Yes	Yes
Turkey	Mixed	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes
Ukraine	Mixed	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No
Vietnam	Ad valorem	Yes	—	No	No	No	—	...	Yes	No

Table 6. Tax Performance Metrics for 15 Bloomberg Initiative Countries (2024) (Continued)

Country	I. Tax Structure/Level – Cigarettes						II. Tax Administration			
	Type of Excise Tax Applied	Uniform Excise Tax Applied Yes (Uniform), No (Tiered/Varying Rates)	Greater Reliance on Specific Tax in Mixed Excise Regime	Minimum Specific Tax Applied in Ad Valorem or Mixed Excise Regime	Minimum Price	Retail Price Used as Base of Ad Valorem (Component in Ad Valorem or Mixed Excise Regime) (or Retail Price Exclusive of VAT)	Specific Tax Component Automatically Adjusted for Inflation (or Other)	Price Gap Decreased Between 2022 and 2024	Tax Stamp, Fiscal Marking, Banderoles, or Any Other Type of Marking Applied on Cigarettes	Unique Identifiers/Markings Required to Contain Data for Tracking and Tracing Purposes
Share of countries reporting YES for each best practice tax structure characteristic (as a fraction of Yes or No, denominators vary)										
BI-15		53%	50%	33%	33%	67%	36%	42%		
Middle-income		72%	57%	25%	11%	29%	37%	66%		
All		83%	59%	45%	8%	49%	29%	56%		
Source: World Health Organization, "WHO Report on the Global Tobacco Epidemic, 2025: Warning About the Dangers of Tobacco" (2025); and author's calculations.										
Notes:										
Shares calculated for 15 BI, 100 middle-income, and 189 total countries; denominators differ for each category (sum of Yes+No).										
Cell entries in bold indicate departures from best practice, or the lowest share of countries meeting best practice (among BI-15, middle-income, and all countries).										
— Category not applicable.										
... Data not available.										

**Table 7. Price Dispersion Ratio Over Time in 15 Bloomberg Initiative Countries
(Price of Cheapest Reported Brand/Price of Premium Brand)
(2008-2024)**

Country	2008	2010	2012	2014	2016	2018	2020	2022	2024	Annual Trend Change (%)
Bangladesh	0.17	0.14	0.19	0.16	0.23	0.33	0.32	0.25	0.31	1%**
Brazil	0.8	0.72	0.6	0.59	0.67	0.63	0.61	0.53	0.46	-2%**
China	0.17	0.13	...	0.16	0.06	0.06	0.06	0.06	0.09	-1%*
Egypt	0.32	0.38	0.43	0.4	0.43	0.43	0.38	0.39	0.39	0%
India	0.76	0.71	0.84	0.2	0.24	0.4	0.39	0.39	...	-3%
Indonesia	0.96	0.83	0.89	0.43	0.34	0.77	0.4	...	0.16	-5%*
Mexico	0.61	0.67	0.7	0.82	0.44	0.5	0.83	0.4	0.31	-2%
Pakistan	0.21	0.41	0.35	0.39	0.52	0.37	0.44	0.44	0.4	1%
Philippines	0.5	0.5	...	...	0.68	0.67	0.7	0.6	0.58	1%
Poland	0.43	0.71	0.78	0.68	0.71	0.77	0.72	0.76	0.72	1%
Russia	0.11	0.23	0.3	0.4	0.38	0.48	0.42	0.56	0.55	3%**
Thailand	0.41	0.38	0.31	0.36	0.56	0.38	0.38	0.38	0.39	0%
Turkey	0.45	0.6	0.56	0.58	0.65	0.56	0.59	0.63	0.78	1%*
Ukraine	0.13	0.34	0.24	0.28	0.4	0.72	0.52	0.5	0.7	3%**
Vietnam	0.16	0.24	0.24	0.25	0.23	0.2	0.31	0.18	...	0%

Source: World Health Organization, "WHO Report on the Global Tobacco Epidemic, 2025: Warning About the Dangers of Tobacco" (2025); and author's calculations.

Notes:

Ratio of price of cheapest brand to the price of premium brand (typically Marlboro) in each year, from various WHO reports. Data for 2008-2022 validated by countries in those years and not retrospectively.

... indicates cheapest, premium, or both prices missing.

Annual trend change computed from a simple linear regression of the price dispersion ratio on time.

* Significant at the 95% level.

** Significant at the 99% level.

Several Countries Simplified Complex Tiers Without Eliminating Them

Simplifying multiple tax rates can ease constraints in administering taxes and reduce opportunities for companies to manipulate pricing to avoid higher tax burdens. These policies have taken several forms, producing varying results such as:

- A straightforward transition to a considerably different, simpler tax system — between 2011 and 2014, Egypt pivoted from

an eight-tier specific tax structure to a mixed tax system with a single specific tax of EGP 1.25 per pack and a single ad valorem tax based on retail price.

- A direct elimination of a previously tax-favored category. For example, Russia eliminated the lower tax applied to unfiltered cigarettes between 2011 and 2012; previously, unfiltered cigarettes had been taxed at less than 60 percent of the rate applied to filtered cigarettes. In 2015 Brazil similarly moved to

eliminate the tax preference assigned to soft packs.

- *Merging tiers*, although this has typically occurred at the higher end of product prices rather than reducing the large gap between expensive and economy cigarettes. Between 2011 and 2022, Indonesia reduced its tax tiers from 19 to eight, primarily by merging higher-priced and higher-taxed tiers. Bangladesh and India also merged the top two tiers in their tobacco tax systems and raised the tax on those tiers, eliminating a layer of complexity. However, this occurred at the premium end of the product distribution, where smokers are likely less price sensitive. Similarly, Pakistan has maintained a large gap between the prices and taxes applicable to its two tiers. To the extent that countries maintain distinct price bands, tax increases targeting the most expensive cigarette brands consequently preserve market segmentation and reinforce price discrimination.
- A sustained increase in taxes across tiers but with *larger increases in the lowest tax tiers* — progressively narrowing the gap in taxes borne by economy and premium cigarettes. Brazil's four-year reform plan eliminated the difference in specific taxes per pack between 2012 and 2015 (specific taxes on soft packs started at one-half the rate applied to hard packs — however, because Brazil also raised ad valorem tax rates over time, price gaps between the cheapest and most expensive brands may have widened). The Philippines adopted a more direct solution to a grandfathered low tax rate applied to its cheapest cigarettes; taxes rose from PHP 2.72 to PHP 12 on January 1, 2013, and continued increases targeting cheaper cigarettes ultimately led to a uniform specific tax in 2017.

Frequent Tax Changes But Limited Ambition

The frequency of tax rate changes varied considerably, ranging from only one or two small increases during the 15-year period (China, Thailand, and Vietnam) to nearly annual adjustments (Russia and Ukraine). Countries that largely rely on ad valorem systems — even when

resulting tax revenues fall below potential — tend to adjust tax rates less frequently. Conversely, countries that levy specific taxes do so more frequently, typically through the budget process and in some cases (Mexico and the Philippines) through automatic adjustments to counter the effects of inflation.

For many BI-15 countries, annual increases of specific tax rates presents a method to match inflation. However, modest annual tax increases do not necessarily raise tobacco prices enough to reduce tobacco consumption. For example, India has raised tobacco taxes in nearly every budget cycle; however, because annual consumer price inflation exceeded 8 percent in most years, the cheapest tier of cigarettes became more affordable over time.

Simplifying Taxes: Not a Linear Process

Pakistan reduced tiers from three to two in 2013, only to reintroduce a third tier in 2017 before reverting to two tiers in 2019. In 2014 Egypt moved to increase its excise tax after initially simplifying its tax tiers. However, it did so by raising the specific tax differentially across price tiers; cheaper cigarettes bore a lower share of taxes once again.

Practical Policy Moves Have Protected the Tax Base and Revenue Collections

For countries implementing mixed systems that rely more heavily on ad valorem taxes, the risk of a low tax-yielding discount segment remains. In response, some countries have moved to enact some form of minimum tax or minimum price mechanisms. For example, Turkey's use of ad valorem or minimum specific tax helped ensure upward pressure on prices when transitioning from a tiered system to its present system.

While Mexico and the Philippines (after its reform) show rare instances of automatic inflation adjustments, some countries have implemented schedules of specific tax increases covering multiple years (Indonesia, Poland, Russia) or use the annual budget process (India, Pakistan) to achieve the same objective of preventing or correcting an erosion in the real value of tax revenues.

Table 8. Summary of Tax Structure and Rates in 15 Bloomberg Initiative Countries, 2009 and 2025

Country and Excise System in 2009	July 31, 2009		July 31, 2025	
	Rates	Other Taxes	Rates and Excise System in 2025	Other Taxes
Bangladesh Multi-tier, price-based and valorem	For domestic products (price bands per 10 cigarettes): • BDT 6.50 to 7.50, – 32% of RSP • BDT 13.25 to 14.25 – 52% of RSP • BDT 21.00 to 28.00, – 53% of RSP • BDT 41.00 or above, – 5% of RSP	VAT: 15%	For domestic products (price bands per 10 cigarette sticks): • Low: Final price BDT 60, – 67% of RSP • Medium: Final price BDT 80, – 67% of RSP • High: Final price BDT 140, – 53% of RSP • Premium: Final price BDT 185 – 67% of RSP	VAT: 15%
Brazil Multi-tier, length and presentation-based, specific	<87 mm and soft pack only, – BRL 0.764 per pack; >87 mm and soft pack only, – BRL 0.900 per pack; <87 mm and soft pack and same brand box pack exists, – BRL 1.004 per pack; <87 mm and box pack, – BRL 1.135 per pack; >87 mm and soft pack and same brand box pack exists, – BRL 1.266 per pack; <87 mm and box pack, – BRL 1.397 per pack	Volume control system: BRL 0.032 per 20 sticks Stamp cost: BRL 0.03344 per 20 sticks PIS: 2.22% of RSP and COFINS: 8.79% of RSP minus stamp cost ICMS (VAT): 2.9% of RSP	Mixed tax Specific tax (IPI): BRL 2.25 per pack (up from BRL 1.53 per pack in 2024 and several years prior) Ad valorem tax: 10% of RSP	Volume control system: BRL 0.032 per 20 sticks – reimbursed Stamp cost: BRL 0.03344 per 20 sticks PIS: 0.69% of 3.42 x RSP and COFINS: 3% of 2.9169 x RSP minus stamp cost ICMS (VAT): 3.2% of RSP

Table 8. Summary of Tax Structure and Rates in 15 Bloomberg Initiative Countries, 2009 and 2025 (Continued)

Country and Excise System in 2009	July 31, 2009		July 31, 2025	
	Rates	Other Taxes	Rates and Excise System in 2025	Other Taxes
China Multi-tier, gross ex-factory-based, ad valorem + single-rate specific	Gross ex-factory $\geq$ CNY 70/carton, = 56% + CNY 3,000 Gross ex-factory < CNY 70/carton, = 36% + CNY 3,000	VAT: 17% Education tax: 3% of (VAT + excise) City construction tax: 7% of (VAT + excise)	Gross ex-factory $\geq$ CNY 70/carton, = 56% + 5 specific tax of CNY 8/1,000 sticks Gross ex-factory < CNY 70/carton, = 36% + specific tax CNY 8/1,000 Specific tax computed at two stages: producer (CNY 0.06/20 sticks) and wholesale (CNY 0.1/20 sticks) Tax at wholesale stage: 11%	VAT: 13% Education tax: 3% of (VAT + excise) City maintenance & construction tax, education surtax, local education surcharge: 12% of (VAT + excise), Tobacco Leaf Tax: 20%, Totalling 6.5% of weighted average price.
Egypt Multi-tier, NEFP price-based, specific	NEFP (per 1,000) 0 to 32.5 – EGP 54,000 NEFP $\geq$ 32.5 to 36.5 – EGP 56,000 NEFP $\geq$ 36.5 to 42.0, – EGP 62,500 NEFP $\geq$ 42.0 to 47.5 – EGP 70,000 NEFP $\geq$ 47.5 to 53.0, – EGP 76,500 NEFP $\geq$ 53.0 to 59.0, – EGP 87,500 NEFP $\geq$ 59.0 to 212.5 – EGP 157,500 NEFP $\geq$ 212.5 – EGP 162,500	Health tax: EGP 5 per 1,000 cigarettes	Mixed: 50% of market price plus specific tax varying by market segment Economy, market price < EGP 48: EGP 5 Market price EGP 48-69: EGP 7.5 Market price > EGP 69: EGP 8	Student health insurance EGP 5 per 1,000 sticks and health insurance contribution EGP 20 per 1,000 sticks (total of EGP 1.11/pack of 20).

Table 8. Summary of Tax Structure and Rates in 15 Bloomberg Initiative Countries, 2009 and 2025 (Continued)

Country and Excise System in 2009	July 31, 2009		July 31, 2025	
	Rates	Other Taxes	Rates and Excise System in 2025	Other Taxes
India Multi-tier, length-based, specific	Non-filter: ≤60 mm, = INR 819/000 >60-70 mm, = INR 1,323/000 Filter: ≤70 mm, = INR 819/000 >70-75 mm, = INR 1,323/000 >75-85 mm, = INR 1,759/000 >85 mm, = INR 2,163/000	Education cess: 3% of (import duty + excise tax) Additional education cess for imports: 3% of excise Ceetroi (local tax): 7.07% of price to stock list	Non-filter: ≤65 mm, GST 28%, Compensation cess rate 5% + INR 2,076/1,000 >65 to 70 mm, GST 28%, Compensation cess rate 5% + INR 2,747/1,000 Filter: ≤65 mm, GST 28%, Compensation cess rate 5% + INR 2,076/1,000 >65 to 70 mm, GST 28%, Compensation cess rate 5% + INR 2,747/1,000 >70 to 75 mm, GST 28%, Compensation cess rate 5% + INR 3,668/1,000 >75 mm, GST 28%, Compensation cess rate 5% + INR 4,170/1,000	National Calamity Contingent Duty INR 230/1,000 + INR 5/100 INR 290/1,000 + INR 5/100 INR 290/1,000 + INR 5/100 INR 290/1,000 + INR 5/100 INR 850/1,000 + INR 10/1,000 INR 850/1,000 + INR 10/1,000
India, hand-rolled bidis			GST 28% + INR 0 compensation cess	INR 0.05/1,000
Indonesia Multi-tier specific rate based on production volume and price	See Supplementary Table S8	VAT: 8.4% of bundle price	See Supplementary Table S8	VAT: 10% (6% of retail price) Regional cigarette tax: 10% of specific excise tax
Mexico Single-rate ad valorem	160 percent of the wholesale price (at retail price - VAT - excise - retail margin)	VAT: 15%	Specific tax MXN 644.347/1,000 sticks AND Ad valorem tax: percent of (retail price - excise - retail margin)	VAT: 16%

Table 8. Summary of Tax Structure and Rates in 15 Bloomberg Initiative Countries, 2009 and 2025 (Continued)

Country and Excise System in 2009	July 31, 2009		July 31, 2025	
	Rates	Other Taxes	Rates and Excise System in 2025	Other Taxes
Pakistan Domestic: Multi-tier specific and ad valorem Import: ad valorem	Domestic: • RSP ≤ PKR 1,000,000, = PKR 475,000; RSP > PKR 1,000,000 to 1,950,000, = PKR 475,000 + 70% per incremental PKR • RSP > PKR 1,950,000, = 64% of RSP before sales tax • Import: 64% of retail price • 1% special excise duty on retail price less VAT	Domestic: Sales Tax = 16% of printed retail price Import: Sales Tax = 16% of customs value + import and excise duty	Domestic: • RSP ≤ PKR 9,000/1,000, = PKR 5,050/1,000; • RSP > PKR 12,500/1,000 = PKR 16,500/1,000 sticks	Domestic: Sales Tax = 16% of printed retail price Import: Sales Tax = 16% of customs value + import and excise duty
Philippines Multi-tier, price-based specific rate	Tax per pack of 20s Net RRSP (PHP/pack) • ≥ PHP 10.0, = PHP 27.16 • ≥ PHP 6.5-10.0, = PHP 11.43 • ≥ PHP 5.0-6.5, = PHP 7.14 • < PHP 5.0, = PHP 2.47 Net RRSP = RRSP - excise tax - VAT	VAT: 12%	Tax per pack of 20s PHP 66.15/20 sticks (Unitary rate since 2017, with annual increases)	VAT: 12%
Poland EU mixed system	Ad valorem 31.41% of retail price Specific: PLN 138.5/000 Minimum excise tax: PLN 228.8/000	VAT: 22%	Ad valorem 32.05% of retail price Specific: PLN 345/1,000 sticks Minimum excise tax: PLN 660.1318/1,000 sticks	VAT: 23%
Russia Mixed system	Ad valorem 6 percent of maximum retail price Specific: RUB 150/000 for filters RUB 72/000 for non-filters Minimum excise tax: RUB 177/000 for filters RUB 93/000 for non-filters	VAT: 18%	Ad valorem 16 percent of maximum retail price Specific: RUB 2945/1,000 sticks, uniform Minimum excise tax: RUB 4,000/1,000 sticks	VAT: 20%

Table 8. Summary of Tax Structure and Rates in 15 Bloomberg Initiative Countries, 2009 and 2025 (Continued)

Country and Excise System in 2009	July 31, 2009		July 31, 2025	
	Rates	Other Taxes	Rates and Excise System in 2025	Other Taxes
Thailand NEEP/CIF-based ad valorem	8.9% tax inclusive rate Calculation domestic: • $(\text{Ex-factory price}) \times (8.9\% / (100\% - 8.9\%)) = 567\%$ of ex-factory price Calculation imports: • $(\text{CIF} + \text{Import Duty}) \times (8.9\% / (100\% - 8.9\%)) = 567\%$ of $(\text{CIF} + \text{import duty})$	VAT: 7% Provincial Tax = Range from THB 0.908 to THB 1.87 per pack (except Bangkok) Health Tax: 2% of excise TV tax: 1.5% of excise	Two-tiered mixed system Cigarettes priced ≤ THB 77: THB 1.25/stick + 2.9% ad valorem rate on retail price net of tax Cigarettes priced > THB 77: THB 1.25/stick + 4.2% ad valorem rate on retail price net of tax	VAT: 7% Thai Health Promotion (2%), Thai Public Broadcasting Tax (1.5%), Interior Tax (10% excise), National Sports Development Fund (2%), Elder Fund (2%), all surtaxes on the excise tax amount, and THB 1.86 provincial tax per pack.
Turkey Ad valorem + minimum excise tax	Ad valorem 98% of retail price minimum excise tax: TRY 2.05 per pack of 20	VAT: 18%	Mixed system with minimum excise tax Ad valorem 52% of retail price (2025 avg. from 56% in 2024 and 63% previously) Specific excise: TRY 10.250 per pack of 20 (avg) Minimum excise tax: TRY 39.50 per pack of 20	VAT: 20%
Ukraine Mixed system	Ad valorem 20% of retail price net of VAT Specific: UAH 60/000 for filters UAH 35/000 for non-filters minimum excise tax: UAH 100/000 for filters UAH 100/000 for non-filters	VAT: 20%	Tax in euro effective March 2025 (Law No. 4115) Specific excise: €78/1,000 pieces Ad valorem 12% of price	VAT: 20%
Vietnam Ad valorem	Calculation domestic: • 6.9% of ex-factory price	VAT: 10%	Calculation domestic: • 6.7% of ex-factory price	VAT: 10% Tobacco control fund: 2% of ex-factory price

Table 9. Situational Summary and Recommendations From Sunley (2010) and Subsequent Developments in 15 Bloomberg Initiative Countries Through July 2025

Country	Summary of Tax System in 2009	Recommendations	Whether Achieved	When Achieved	Current Situation
Bangladesh	1. Biri dominated in 2008, with a low, 20% tax (on pre-retail price) and small producers. 2. Four price bands with varying ad valorem rates (32, 52, 53, and 57% tax, with pre-set bands). Lowest tier strongly favors cheap cigarettes.	Combine the top three cigarette tax tiers.	Yes	2019	In 2024, all cigarettes above BDT 70 had a 65.5% tax rate. 2015-2018 effectively had 3 rates, and 2019 onwards saw two rates.
		If a multi-tiered regime is retained, switch to specific rates with inflation adjustment	No	—	The cheapest cigarette tier accounts for over 75% of the market. Cigarettes sold at prices above the prescribed retail price (estimated loss of BDT 70 billion/annually).
		Increase biri tax rates.	Partial	—	Much smaller increases in biri tax rates.
Brazil	1. From 1999, a multi-tiered specific tax, varying by length and pack type (6 categories), favoring low-priced cigarettes in soft packs. 2. Overall VAT equivalent taxes high (federal COFINS and PIS of 8.75 and 2.22%, and a state-level VAT of roughly 25% of price).	Option 1: Higher specific tax rates for each category.	Yes	2011	Eliminated length-based differential in 2011. Specific component has been increased, but not in all years.
		Option 2: Move to a mixed tax.	Yes	2012	Roadmap introduced an ad valorem rate in 2012 after the elimination of tiered specific taxes. The system is loaded towards the VAT (PIS+COFINS), so the share of excise is low compared to most countries.
		Option 3: Single high specific tax.	No	—	Tax is uniform since 2015 but mixed: ad valorem + specific.
		Option 4: Abolish differentials by pack type (hard/soft).	Yes	2015	Tax is uniform since 2015 but mixed: ad valorem + specific.

Table 9. Situational Summary and Recommendations From Sunley (2010) and Subsequent Developments in 15 Bloomberg Initiative Countries Through July 2025 (Continued)

Country	Summary of Tax System in 2009	Recommendations	Whether Achieved	When Achieved	Current Situation
China	1. A de minimis specific tax (CNY 0.06/pack). 2. A two-tiered ad valorem tax, varying with gross ex-factory price (36% for GEP < CNY 7, 56% for GEP >= CNY 7).	Option 1: Retain current structure, raise specific tax from CNY 0.06/pack to CNY 1/pack through CNY 4/pack, and increase with inflation beyond that. Option 2: Repeal the de minimis specific tax, introduce a specific tax and have companies pay the higher of the ad valorem or specific tax.	No	—	Consumption tax on whole sale tobacco raised from 9% to 11% in May 2015, and a small specific tax of CNY 0.005 added per stick.
		Change the base of the ad valorem tax from Gross Ex-Factory price to retail price.	No	—	—
Egypt	1. 8-tiered specific tax regime, ranging from EGP 1.08 to EGP 3.25/pack. 2. Rates were not adjusted for inflation for many years. 3. Most sold brand (Cleopatra) also the cheapest.	Abolish the bottom four tiers, first step in moving to a single specific rate. Adjust rates annually for inflation.	Partial	2010	Egypt moved to a mixed tax system, (2010-2014) and then went back to a system with a mixed tax but with three tiers.
		Make cigarettes subject to the regular sales tax and have a separate excise tax.	No	—	Both price tiers and the specific tax rates applicable on those tiers have been raised several times. However, in some years, only price tier thresholds are raised, essentially reducing tax share/pack while allowing producers to raise prices.
		If Egyptian market liberalized, move away from use of ex-factory prices as they can be manipulated.	Yes	2010	Implemented (separate excise tax, though cigarettes are not subject to a separate VAT).
			Yes	2010	Ad valorem rates are based on the official retail price. But the Cleopatra brand up retailing at a price higher than the official price (while paying the lower tax rate).

Table 9. Situational Summary and Recommendations From Sunley (2010) and Subsequent Developments in 15 Bloomberg Initiative Countries Through July 2025 (Continued)

Country	Summary of Tax System in 2009	Recommendations	Whether Achieved	When Achieved	Current Situation
India	1. In 2008, excise taxes for filter and non-filter cigarettes were equalized. A concern at the time was that it was moving smokers from cheap non-filter cigarettes to bidis. 2. Rates continued to vary by length. 3. A centralized VAT applied (CENVAT), though only at the manufacturing stage. No state-level taxes for cigarettes.	Anticipating a move from the sales tax to a GST system, suggested a single national GST, as is the normal international practice.	Partial	2017	The GST system has higher tax rates for tobacco products (28%) in addition to a specific excise tax. For a period prior to that (2010-2017) VATs levied varied by state. From 2026, the GST base is retail price, and the rate is 40%.
		Cigarettes should (continue to) have a separate excise tax that is included in the base of the GST.	Yes	2017	The GST system preserves an excise tax on cigarettes, with some changes to the additional levies over the years.
		A single specific tax rate for all cigarettes.	No	—	Rates for filtered and unfiltered cigarettes were aligned in 2009-2010, but rates continue to vary by length. Lengths themselves were altered on multiple occasions. Four categories of tax persist, with tax on the shortest cigarettes 50% of the tax on premium cigarettes.
		Adjust specific excise tax rates for inflation.	Partial	—	Many budget years did not see tax increases but, when passed, the effective taxes typically account for inflation.
		Eliminate unbranded bidis.	Unclear	—	—
India, bidis	1. Bid excise rates were less than 2% of the lowest cigarette excise (on micro cigarettes ≤ 60mm). 2. Hand made and machine-made bidis had different rates, and a small producer exemption applies.	Improve reporting along the supply chain.	Unclear	—	—
		Raise bidi excise taxes over time, to reach cigarette tax rates.	No	—	Bidi is continue to be taxed very low — beside the 28% GST rate, the only specific tax is a basic excise duty of INR 0.05/1,000 sticks, 1% of the corresponding levy on cigarettes. The 2025 GST reform reduced the GST rate on bidis to 18%.

Table 9. Situational Summary and Recommendations From Sunley (2010) and Subsequent Developments in 15 Bloomberg Initiative Countries Through July 2025 (Continued)

Country	Summary of Tax System in 2009	Recommendations	Whether Achieved	When Achieved	Current Situation
Indonesia	1. Complex system (reformed 2008, w.e.f. Feb 2009) with ad valorem and specific tax rates, varying by type of product, and levels of production. 2. Multi-tier specific tax from 2009, varying by production levels and price (and type) with 28 different tiers.	Roadmap to reduce the number of tiers (from January 2010), to follow a focus on revenue and greater weight over time to health and less to employment. The Finance Minister has considerable latitude as long as the excise burden is less than 50% of bundle net price.	Yes	Multiple years	8 tiers by 2022 (down from 19 tiers in 2009). In 2024, the most sold brand reached a total tax share of over 75 percent.
		From 2016, only two specific rates, i) for white cigarettes and machine-made kreteks and ii) for hand-made kreteks.	No	—	Hand-made cigarettes taxed less than machine-made cigarettes, and clove cigarettes (kretek) taxed less than white cigarettes in each category. Additional divisions by minimum retail price and production capacity persist.
		Endorsed the additional cigarette tax, a surtax of 10% of cigarette excise, redistributed to provinces based on population.	Yes	2013	Surtax, 10% of cigarette excise.

Table 9. Situational Summary and Recommendations From Sunley (2010) and Subsequent Developments in 15 Bloomberg Initiative Countries Through July 2025 (Continued)

Country	Summary of Tax System in 2009	Recommendations	Whether Achieved	When Achieved	Current Situation
Mexico	Single ad valorem tax, 160% of whole sale price (raised from 140% in 2007 and 150% in 2008).	Option 1: Increase ad valorem tax to 225%.	No	—	Not applicable — Mexico's reform authorities chose Option 2.
		Option 2: Introduced a mixed tax to reduce price differentials.	Yes	2010	Introduced a specific tax of MXN0.80/pack, raised to MXN7/pack in 2011. The tax stayed unchanged through 2018. Effective Jan 1, 2020 — inflation adjustment introduced, accounting for small increases in the specific tax amount. Proposals include an increase in the specific tax component of MXN 1-3 as part of a comprehensive tax reform.
		Option 3: Introduce a minimum specific tax alongside the ad valorem tax.	No	—	—
		Change the base of the ad valorem tax from whole sale price to retail price.	No	—	—
		(Not mentioned) Adjust specific rate for inflation.	Yes	2019, effective 2020	Mexico's ad valorem tax remained at 160%; specific tax has risen since 2020.

Table 9. Situational Summary and Recommendations From Sunley (2010) and Subsequent Developments in 15 Bloomberg Initiative Countries Through July 2025 (Continued)

Country	Summary of Tax System in 2009	Recommendations	Whether Achieved	When Achieved	Current Situation
Pakistan	3 tiers: lowest specific (PKR 9.5/pack), mid-priced with mixed regime, and Tier III with 64% ad valorem tax.	Return to a two-tier tax regime (in place before 2001), with an inflation adjustment for Tier I to cover over 80% of the market — this would lead to a 50% increase in most brands.	Partial	—	2 tiered system in 2013, followed by revenue declines due to under-reporting. Reversion to 3 tiers in 2017 with lower taxes on cheaper cigarettes. 2 tiers reinstated in 2019. 2022-2023: three rounds of tax increase doubling minimum price of cigarettes and raising tax shares and revenues. Market continues to be dominated by cigarettes in the cheapest tier (over 80% of market share).
Philippines	1. 1996 reform with 4 tiers (based on price brands) and grandfathered brands taxed w.r.t. their October 1996 price. 2. Tax rates were increased in 2004, but unequally — lowest priced cigarettes still had a very low excise tax.	Abolishing the lowest tier as a first step (under RA 9334, in 2011, rates were PHP 2.72 for the lowest tier and PHP 28.30 for the most expensive cigarettes).	Yes	2013-2017	Major tax reform (Sin Tax reform of 2012) with a graduated increase in tax rates. Removal of a “price classification freeze” advantaging legacy brands. 2013: 3 tiers collapsed and tax on lowest price cigarettes raised 341%. 2014-2017: increases in rates in both tiers leading to a unitary system in 2017.
		A single specific tax rate for all cigarettes — likely a major, politically challenging reform (compare Ennle bill of 2004).	Yes	Achieved by 2017	Earmarked incremental revenues to universal healthcare and safety nets for tobacco farmers.
		At a minimum, adjust current rates for inflation on annually.	Yes	2017	Indexation of 5% p.a. is automatic, and exceeded inflation.

Table 9. Situational Summary and Recommendations From Sunley (2010) and Subsequent Developments in 15 Bloomberg Initiative Countries Through July 2025 (Continued)

Country	Summary of Tax System in 2009	Recommendations	Whether Achieved	When Achieved	Current Situation
Poland	After joining the EU in May 2004, Poland was required to have a mixed tax system, with room for transitioning countries.	Increase reliance on specific tax, in line with the EU tobacco products directive which widened the band of specific tax from 5-55% to 10-79%. An additional €90 minimum would not have to be met until July 2018.	Yes	Multiple years	Tax increases and minimum taxes in line with EU members ad valorem rate was lowered in 2011, increasing reliance on specific tax, though the ad valorem burden is still greater than the specific tax burden in retail price of the most sold brand. Minimum taxes were increased; the minimum excise yield amounts to over €183 in 2026.
Russia	1. Mixed system, with ad valorem rate based on retail price (from 2007, previously wholesale). 2. Minimum tax of RUB 3.54/pack applicable for filter cigarettes cheaper than RUB 10, lower for non-filter. 3. A lower specific tax rates for non-filter cigarettes (RUB 72 vs. RUB 150/1,000 cigarettes).	Treat filters and non-filter categories the same.	Yes	2012	Rates merged in 2012, country relies more on specific tax. Annual rate increases are specified a few years ahead — e.g., rate increases through 2027 instituted on Jan. 2025.
		Increase the minimum excise tax.	Yes	Every year	Specific taxes increased every year. Ad valorem rates increased multiple times.
		Alternatively, raise the specific excise and possibly lower the ad valorem excise.	Partial	—	
Thailand	1. Single ad valorem rate (85% of ex-factory price, including tax) — simple for administrative purposes. 2. Using the ex-factory price deemed non-optimal, being difficult to monitor.	Move from ex-factory price to retail price for all cigarettes.	Yes	2017	Ad valorem system changed base from ex-factory price to pre-tax retail price, but two separate rates persist by price category.
		Consider moving to a single specific tax rate.	No	—	Specific tax rate introduced, first on a per gram basis and then on a per stick basis (raised to THB 1.25/stick in 2025) as part of a mixed system.
		Consider using a minimum specific tax or a tax ceiling (if sticking with ad valorem).	Partial	2012	With the introduction of a mixed tax, the mixed tax excise provides an implicit floor.

Table 9. Situational Summary and Recommendations From Sunley (2010) and Subsequent Developments in 15 Bloomberg Initiative Countries Through July 2025 (Continued)

Country	Summary of Tax System in 2009	Recommendations	Whether Achieved	When Achieved	Current Situation
Turkey	1. Multiple changes to the excise tax regime. As of 2009, the tax composed of i) a 58% ad valorem tax based on retail price ii) a minimum specific tax of 2.05/pack (USD 1.31). 2. The minimum tax itself was raised, from 1.5 to 2.05 TRY/pack and helped raise the tax burden on lower priced cigarettes.	Option 1: Raise ad valorem rates to 63 percent of price (higher than EU states at that point). Option 2: Increase the minimum excise tax (from TRY 2.05 to TRY 3.15/pack). Option 3: Introduced a specific tax while retaining a minimum tax — structured to reduce price differences. Adjust specific excise tax component for inflation.	Yes	2011	63% tax used for higher priced cigarettes in 2010; this was further raised to 65% in 2011, 65.3% in 2014, and then 67%. Tax rate was 63% in 2023, and was reduced to 57% in 2024.
			Yes	2011, continuing	Continued increases, 5,7424/20 sticks in 2024.
			Yes	2013	Introduced after 2012 and increased since. The minimum tax was dropped in a few years, but resumed in 2015.
			Partial	—	Not automatic — executive discretion in whether the specific tax rate is increased.
Ukraine	1. Differential rates for filter and non-filter cigarettes (lower specific tax). 2. A minimum tax (minimum specific tax - previously minimum% of price). 3. Ad valorem rate based on max retail price minus VAT (20% rate).	Raise specific tax rate. Switch base from whole sale to retail price to prevent transfer pricing. Treat filter and non-filter categories the same. Adjust specific excise tax component for inflation.	Yes	2011, continuing	The minimum specific excise tax is crucial in Ukraine, since the tax amount calculated using the ad valorem-specific applied to the most sold brand is not high enough.
			Yes	2009	Budgetary process has to ensure specific tax increases account for inflation.
			Yes	2015	Rates increase multiple times in some years.
			Yes	Continuing	March 2025 adoption of a euro-equivalent minimum tax, of 0001/063 of gross '0001/873 by 2028.

Table 9. Situational Summary and Recommendations From Sunley (2010) and Subsequent Developments in 15 Bloomberg Initiative Countries Through July 2025 (Continued)

Country	Summary of Tax System in 2009	Recommendations	Whether Achieved	When Achieved	Current Situation
Vietnam	1. Pre-2006, a three-tiered, ad valorem rate (depending on local leaf content and filter/unfiltered). 2. From 2007, due to WTO considerations (taxing all inputs similarly), a 55% tax rate, raised to 65% from 2008.	Option 1: Continue to increase ad valorem rate by 20 percentage points each year and introduce an inflation-adjusted specific tax for the cheapest cigarettes.	No	—	Ad valorem system preserved through 2025. Tax rate raised from 65% to 70% of ex-factory price on Jan. 1, 2016. Tax rate raised from 70% to 75% of ex-factory price on Jan. 1, 2019.
		Option 2: Introduce a minimum specific tax and set the tax as the higher of the ad valorem or specific tax.	No	But excise tax law amended in 2025 for future years	2025 reform: Specific tax introduced with effect from 2027 (VND 2,000/pack rising to VND 10,000/pack by 2031).
		Switch ad valorem base to retail price if the country liberalizes its market.	No	—	

Ad Valorem Tax Base: Shift to Retail Price

Several of the BI-15 countries apply ad valorem excise taxes, whether exclusively (Bangladesh, Thailand until 2012, and Vietnam) or as part of a mixed system (Brazil, China, Egypt, Pakistan, Poland, Russia, Turkey, and Ukraine). Of these countries, Bangladesh, China, Thailand, and Vietnam applied ad valorem taxes to bases that were either arbitrarily defined or difficult to identify (for example, the ex-factory price in China, Vietnam, and Thailand). In each case, it is difficult to estimate, without manufacturer data, the relationship between the tax levied and the tax share borne by the final product. Since 2010, Egypt, Thailand, and Ukraine successfully shifted the tax base away from earlier points in the supply chain to the retail price.

Discussion

When it began in 2007, the Bloomberg Initiative to Reduce Tobacco Use was unique in its scope and ambition to effect fiscal policy reforms aimed at raising tobacco taxes and prices in low- and middle-income economies to reduce demand for a leading risk factor in preventable deaths. Without significant tax reforms, higher prices are not guaranteed when countries have complicated tax systems, entrenched commercial interests, and histories of treating tobacco as any other consumer good — rather than as a product that shortens people's lives. Since Sunley's 2010 analysis, individual BI-15 countries have undertaken major tobacco tax reforms, incremental tax policy improvements, and varying degrees of tax and price increases within a broader global public health effort to regulate and reduce tobacco use.²¹

As tobacco product markets evolve and government priorities shift, several insights from the BI-15 carry over to future tax policy efforts.

Large tax increases over short time horizons are possible, translate into higher real prices, and have significantly influenced public health outcomes. Following tax increases, smoking rates

significantly dropped in Mexico, the Philippines, and Ukraine.

Tax structure reforms remain critical beyond simply raising tax rates. This is particularly apparent when countries design rate increases that still favor cheaper cigarettes or apply ad valorem taxes unrelated to retail prices. Companies can exploit nonoptimal tax structures through differential pricing strategies, undershifting tax increases in the economy segment while overshifting them in the premium segment to stabilize market shares, thereby preserving and increasing revenues and profit.²² These industry reactions reduce the public health and demand-lowering benefits of tax increases.

Roadmaps — whether explicitly stated in advance or implicitly apparent in yearly progress — have emerged in several countries (Bangladesh, Brazil, the Philippines, Poland, Ukraine, and — to an extent — Pakistan and Russia). Not all of these roadmaps involved a substantial, one-time tax increase or sustained tax increases over time. However, several countries have explicitly acknowledged public health objectives when raising taxes or eliminating some obvious inefficiencies in their tax systems.

Health taxes — excise taxes designed to raise the prices of unhealthy products — have gained broader acceptance, building on tobacco taxation achievements. Mexico's nationwide soda tax serves as an example.²³ Advancements in health-focused tax theory and policy have led many countries to curb public health risks through targeted tax packages on products such as tobacco, alcohol, and sugar-sweetened beverages.²⁴

²² Economic theory suggests that both the undershifting and overshifting of taxes to prices can occur in markets with high seller concentration. Overshifting reflects pricing power, and undershifting can serve as a deterrent to entry by competitors in the economy segment. For the tobacco context regarding these pricing behaviors, see Gilmore et al., "Understanding Tobacco Industry Pricing Strategy and Whether It Undermines Tobacco Tax Policy: The Example of the UK Cigarette Market" 108 *Addiction* 1317-1326 (2013).

²³ M. Arantxa Cokhero et al., "After Mexico Implemented a Tax, Purchases of Sugar-Sweetened Beverages Decreased and Water Increased: Difference by Place of Residence, Household Composition, and Income Level," 147(8) *J. Nutrition* 1552-1557 (Aug. 2017).

²⁴ See, e.g., Mario Zuleta et al., "Political and Socioeconomic Factors That Shaped Health Taxes Implementation in Peru," 8 *BMJ Global Health* (Oct. 2023); Verónica M. Garrido, "Mexico Declares War on Sugary Drinks: More Taxes, Less Tolerance," *El País English* (Sept. 10, 2025).

²¹ For a 20-year progress summary under the world's first international public health treaty, see Anna B. Gilmore et al., "20th Anniversary of the WHO Framework Convention on Tobacco Control Coming Into Force: Time for a Step Change in Ambition," 405 *The Lancet* 677-681 (2025).

As with other omnibus tax reforms, policymakers may be tempted to work backward from an aggregate revenue target, opting for a lower than optimal tobacco tax if a small increase on a widely consumed product like alcohol generates more revenue than a large increase on tobacco, a product typically consumed by fewer people. In those cases, policymakers may need to be reminded that the primary objective of tobacco taxation is to improve public health.

New products, including electronic cigarettes and heated tobacco products, have created additional challenges concerning tobacco tax policy effectiveness. Supplementary Table S18 outlines the 2024 taxation status of some of these new products within the BI-15. Even in smaller markets or where vaping and heated tobacco products are considered a novelty, they can be priced affordably to attract existing smokers and youth. Similarly, the availability of various flavors and forms encourage experimentation.

Several BI-15 countries banned electronic cigarettes and heated tobacco products, but that has not prevented illicit markets that pose a challenge to customs and commercial enforcement. In countries that permit these products, fiscal authorities should ensure that regulations are current and complement public health issues. In heated tobacco product markets, best practice recommends that heated tobacco products are taxed at the same rate as cigarettes.²⁵

Dedicated or earmarked tobacco taxes have not been widely adopted; however, where adopted, they have helped build political support for tax reforms while generating funding for development projects. In the Philippines, all incremental tax revenues from higher taxes were earmarked to expand universal health coverage and provide financial assistance to tobacco farmers. Egypt has used earmarks to fund student medical insurance and, since 2018, broader health insurance programs, with periodic increases of EGP 0.25 per cigarette pack taking effect in 2021 and 2024. Indonesia introduced a surtax of 10

percent on the excise tax, to be remitted to provinces; Vietnam introduced a 2 percent ad valorem tax to fund its tobacco control program. China — which already levies dedicated taxes to fund a menu of development and social expenses — increased those dedicated taxes from 4 percent in 2008 to more than 6 percent of the weighted average retail price by 2024.

Policy opportunities vary in form and frequency, but standalone tobacco tax policy changes are rare. The annual budgetary process presents an opportunity to raise taxes and quickly offset inflation-driven revenue losses. One-time omnibus tax reforms — such as goods and services tax reforms in India and ongoing indirect tax changes in Brazil and Vietnam — can provide another driving force. A risk with omnibus reforms is that, since tobacco is not the primary focus, governments may succumb to the pressure to lower taxes and yield concessions to the tobacco industry under the guise of stimulating economic activity or protecting jobs. Externally guided opportunities include explicitly tying tax increases to an economic group's regulations, as with the European Union's Tobacco Taxation Directive that prescribes minimum tax rates (Poland and Ukraine).²⁶ External pressures include the requirement to respond to the terms and best practice guidance of international lending programs. External benchmarks — such as the WHO's recommended tax levels and tax rates in peer or competitor countries — can be, and have all been, harnessed in country-level tax pushes.

Resources for policymakers considering health taxes include access to policy toolkits that address countries' tax systems and peer-reviewed country-specific evidence that address (1) the effects of tax increases on tobacco consumption, (2) the often-exaggerated extent of illicit trade, and (3) the distributional and revenue impacts of higher taxes.

Industry opposition presents the key barrier to tax reforms, despite evidence demonstrating the benefits of strong tobacco tax policies. The

²⁵ Ukraine aligned its taxes on heated tobacco products and cigarettes in 2021, which equated one heated tobacco product stick with one cigarette stick, reflecting international best practice. This was reversed in 2025. See Zaineb Danish Sheikh et al., "Examining Cigarette, Heated Tobacco and E-Cigarette Market Pricing and Tax Pass-Through in Ukraine During the 2019-2022 Tax Reforms," Tobacco Control (2025).

²⁶ See Council Directive 2011/64/EU of June 21, 2011, on the structure and rates of excise duty applied to manufactured tobacco products. For recommendation regarding harmonizing and raising rates, see Kristijan Fidanovski et al., "Excises on Tobacco Products in the EU," PE772646 (Mar. 2026).

technical aspects of tax policy — tax setting, remedying tax structures, removing loopholes, improving enforcement, incorporating new products into the tax net, and evaluating impact — do not operate in a vacuum. Persistent multinational and domestic industry efforts influence technical recommendations and the politics underlying tax reform opportunities.²⁷ Risk-averse policymakers and fiscal authorities favor incremental changes to existing tax

structures. While small changes might preserve or moderately improve revenue momentum, corresponding public health gains would be minimal.

Since 2009, even while low- and middle-income countries have grown wealthier and reduced tobacco use, demands for domestic resource mobilization have increased, while new generations of young people still face the risk of shortened lifespans due to tobacco consumption. The experiences of the 15 Bloomberg Initiative countries demonstrate that responsive, well-crafted tobacco tax policies present ongoing opportunities to reduce tobacco use, prevent millions of deaths each year, and raise vitally needed tax revenues. ■

²⁷For a summary of pressures that policymakers face, see World Health Organization (2021), *supra* note 16, at 175-270 for a comprehensive treatment and for a brief overview, Jeff Collin and Sarah Hill, "Structure and Tactics of the Tobacco, Alcohol and Sugary Beverage Industries?" (report prepared for the Task Force on Fiscal Policy for Health) (2019).