



Policy Brief

Health Taxes: Evidence, Revenue Potential, and Policy Lessons for Sustainable Health Financing

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Key Messages

- **Health taxes are most effective when they are substantial.**

Evidence consistently shows that taxes that increase retail prices by approximately 20% or more are most likely to reduce consumption of tobacco, alcohol, and sugar-sweetened beverages (SSBs), while lower tax rates produce limited behavioral change.

- **Health taxes can simultaneously improve health and generate domestic revenue.**

Our modeling of PEPFAR Country Operational Plan (COP) countries estimates that raising the current excise tax share of retail prices by 10 percentage points could generate approximately US\$4.9 billion in combined additional first-year tobacco and alcohol tax revenue while reducing consumption in every country modeled.

- **Health benefits are progressive, even when financial costs are regressive.**

Lower-income populations are generally more responsive to price increases and experience a disproportionate burden of tobacco- and alcohol-related disease, resulting in larger relative health gains.

- **Successful implementation depends on policy design as much as tax rates.**

Political commitment, effective tax administration, transparent earmarking, and strategies to address industry opposition are critical determinants of success.

- **Health taxes should complement, not replace broader domestic resource mobilization strategies.**

While they can generate meaningful fiscal resources, long-term health financing requires a diversified and sustainable financing portfolio.

The Policy Challenge

Low- and middle-income countries (LMICs) face two interconnected challenges. On one hand, noncommunicable diseases (NCDs) associated with tobacco use, harmful alcohol consumption, and unhealthy diets continue to increase, placing growing pressure on already constrained health systems. On the other hand, many countries are confronting declining external assistance and an urgent need to strengthen domestic resource mobilization for health. Within this context, health taxes have emerged as an increasingly important policy option. These excise taxes are levied on products such as tobacco, alcohol, and sugar-sweetened beverages with the dual objective of discouraging unhealthy consumption while generating additional public revenue.¹

The central policy question is therefore no longer whether health taxes can work, but rather under what conditions they are most likely to achieve both health and fiscal objectives. This policy brief synthesizes the international evidence on health taxes, presents original revenue estimates for tobacco and alcohol taxation across PEPFAR Country Operational Plan (COP) countries, and identifies practical lessons for policymakers considering health taxes as part of broader domestic resource mobilization strategies.

Why Health Taxes Matter

Health taxes are among the few public policies capable of simultaneously influencing population health and government finances. The strongest evidence relates to reducing the consumption of harmful products. A systematic review by Wright and colleagues concluded that health taxes increasing retail prices by approximately 20 percent or more are consistently associated with meaningful reductions in the consumption of unhealthy products, with particularly strong evidence for sugar-sweetened beverages and broadly consistent findings across tobacco and alcohol.ⁱⁱ Mexico's one peso-per-liter tax on sugar-sweetened beverages, for example, was associated with an average 7.6 percent reduction in purchases during the first two years following implementation.ⁱⁱⁱ In contrast, smaller taxes of approximately 4 to 5.5 percent have demonstrated little measurable effect, highlighting that tax magnitude is an important determinant of success.^{iv}

What Global Experience Teaches

More than two decades of experience demonstrate that health taxes can be effective across diverse economic and political settings. Several consistent lessons emerge: health taxes are most effective when tax increases are large enough to influence consumer behavior; successful implementation depends as much on political commitment and policy design as on the tax itself; health taxes produce multiple benefits simultaneously; and implementation challenges are predictable rather than exceptional. The experiences of several low- and middle-income countries, including a growing body of evidence from sub-Saharan Africa illustrate these lessons.

Health taxes also influence producer behavior. Hungary provides one of the clearest examples of this response, where approximately 40 percent of manufacturers modified product formulations following taxes on foods high in salt, sugar, and fat.^v In addition, health taxes generate substantial public revenue: Brazil's tobacco excise reforms resulted in a doubling of cigarette tax revenues between 2006 and 2013, while broader regional analyses estimate that a 50 percent increase in tobacco taxation across Latin America could increase revenues by approximately one-third.^{vi} Concerns about regressivity are frequently raised because lower-income households spend a larger proportion of their income on consumption. However, the evidence consistently demonstrates that the health benefits of these policies are progressive: lower-income populations tend to be more responsive to price increases while simultaneously experiencing a greater burden of tobacco- and alcohol-related diseases, and consequently often experience the largest improvements in health outcomes following tax increases.^{vii}



Policy Lesson	Country Example	Key Insight
Strong taxes change behavior	Philippines ^{viii}	Large tobacco tax increases substantially reduced smoking while generating major increases in government revenue for health.
Health taxes reduce unhealthy consumption	Mexico ^{ix}	The national tax on sugar-sweetened beverages resulted in sustained reductions in purchases, particularly among lower-income households.
Taxes can improve product quality	Hungary ^x	Taxes on foods high in salt, sugar, and fat prompted widespread product reformulation by manufacturers.
Strong implementation delivers results in Africa	Botswana ^{xi}	Comprehensive tobacco taxation combined with effective implementation reduced consumption and positioned Botswana among Africa's strongest performers in tobacco taxation.
Gains must be defended over time	South Africa ^{xii}	Sustained tax increases drove major reductions in smoking through the 1990s and 2000s, but subsequent enforcement failures and growth in illicit trade eroded earlier gains.
Higher taxes are linked to lower NCD mortality	Malawi, Mozambique, South Africa, Zambia, Zimbabwe ^{xiii}	A five-country analysis found that higher tobacco and alcohol taxes are negatively associated with NCD mortality, supporting progress toward SDG target 3.4.
Tax structure design matters	Zambia ^{xiv}	A tiered excise structure granting preferential rates to domestically manufactured cigarettes reduced the effective tax on cigarettes in 2020, weakening both revenue and health impact.
Political economy shapes outcomes	Ghana ^{xv}	Broad recognition of the potential benefits of health taxes has been tempered by industry influence, political resistance, and relatively low tax rates, illustrating the importance of sustained political commitment.

Revenue Generation Potential: Tobacco Taxation

To complement the existing evidence, we estimated the first-year revenue implications of increasing tobacco taxes across PEPFAR Country Operational Plan (COP) countries using Tobacco Atlas 2022 baseline data^{xvi} and country-specific price elasticities of demand drawn from published national studies, with regional pooled estimates applied where no country-specific study exists.^{xvii} The analysis modeled raising the current excise tax share of retail prices by 10 percentage points, applied uniformly in every country regardless of its current tax structure, assuming full price pass-through from producers to consumers.

Estimated First-Year Tobacco Revenue from Raising the Excise Tax Share of Retail Price by 10 Percentage Points

Raising the current excise tax share of retail prices by 10 percentage points, applied uniformly to every country regardless of its current tax structure is projected to reduce tobacco consumption by 3.0–8.6% and generate approximately US\$1.0 billion in additional first-year tobacco tax revenue across COP countries. Gains scale with the size of each country's tobacco market rather than with the design of the tax increase itself, since the same 10-percentage-point increment is applied everywhere regardless of current tax structure. Projected first-year gains include approximately US\$78 million in South Africa, US\$74 million in Nigeria, US\$33 million in Tanzania, US\$18 million in Mozambique, US\$11 million in Uganda, US\$7 million in Zimbabwe, US\$7 million in Botswana, US\$5 million in Namibia, and US\$1 million in Eswatini. The full country-by-country breakdown is provided in Appendix A.



Methodology

The revenue estimates presented in this brief were developed using Tobacco Atlas 2022 baseline data on tobacco taxation and tax revenues.^{xviii} Baseline cigarette consumption was estimated by dividing reported tax revenue by the tax collected per pack.

Expected changes in consumption were calculated by applying country-specific price elasticities of demand, ranging from -0.30 in Uganda to -0.86 in South Africa, drawn from published national studies where available, with regional pooled estimates applied where country specific values were not available—to the 10-percentage-point excise-share increase modeled for the country-level results in Appendix A, assuming full pass-through of the tax increase to retail prices. This increase raises each country's excise tax as a share of the retail price by a flat 10 percentage points; because this increment is defined directly as a share of the retail price, it produces a uniform 10% increase in retail price, and thus a uniform price-driven consumption response for a given elasticity—in every country, even though the required increase in the tax itself varies with each country's current tax share.^{xix}

Incremental revenue was then estimated as the difference between projected post-tax revenues and baseline revenues. All estimates represent first-year projections and should be interpreted as indicative rather than predictive, recognizing that implementation challenges, illicit trade, and uncertainty in elasticity estimates may influence realized revenues.

Revenue Generation Potential: Alcohol Taxation

Using the same modeling approach, we estimated the first-year revenue implications of raising the current excise tax share of retail prices by 10 percentage points, applied to alcohol, across the same PEPFAR Country Operational Plan (COP) countries, using WHO Global Information System on Alcohol and Health (GISAH) consumption and price data and country-specific or regionally pooled price elasticities of demand. As with tobacco, this increase is applied uniformly in every country regardless of its current tax structure, assuming full price pass-through from producers to consumers.

Estimated First-Year Alcohol Revenue from Raising the Excise Tax Share of Retail Price by 10 Percentage Points

Raising the current excise tax share of retail prices by 10 percentage points is projected to generate approximately US\$3.9 billion in additional first-year alcohol excise revenue across COP countries—substantially larger than the comparable tobacco estimate, reflecting both the larger base of taxed alcohol consumption in several markets and the generally low current excise shares from which the increase is applied. Because alcohol excise is typically a smaller share of retail price than tobacco excise, consumption responses to this increment are modest even in relatively elastic markets, so revenue gains are close to the full value of the increase in most countries. Projected first-year gains include approximately US\$433 million in Nigeria, US\$266 million in South Africa, US\$167 million in Zimbabwe, US\$152 million in Tanzania, US\$90 million in Mozambique, US\$51 million in Uganda, US\$47 million in Namibia, US\$25 million in Botswana, and US\$10 million in Eswatini. The full country-by-country breakdown is provided in Appendix B.



Methodology

The alcohol revenue estimates were developed using GISAH recorded per-capita consumption (three-year average, 2021–2023) and adult population data to derive taxed consumption volumes, combined with beer and spirits prices and excise shares of price from the WHO Global Report on the Use of Alcohol Taxes (2023), weighted by each country's recorded beer-to-spirits consumption mix. Baseline excise revenue was modeled as taxed consumption multiplied by excise per litre of pure alcohol. Expected changes in consumption were calculated by applying country-specific price elasticities of demand—ranging from -1.43 in South Africa to -0.63 in Kenya, drawn from published national studies where available, with a pooled LMIC estimate applied where country-specific values were not available—to this +10-percentage-point increase in the excise share of price. Incremental revenue was estimated as the difference between projected post-tax revenues and baseline revenues. All estimates represent first-year projections and should be interpreted as indicative rather than predictive; unrecorded and cross-border consumption, which is substantial in several COP countries, is a particular source of uncertainty for alcohol relative to tobacco.

Why Health Taxes Succeed or Fail: Lessons from Implementation Experience

Although the evidence demonstrates that health taxes can reduce harmful consumption and generate government revenue, their effectiveness is not automatic. Countries implementing health taxes face predictable economic, political, and administrative challenges that can substantially influence outcomes.

Policy Design Matters: Tax Structure Determines Impact

One important challenge is tax pass-through, or the extent to which companies transfer the tax increase to consumers through higher prices. If manufacturers absorb part of the tax burden, retail prices may not increase sufficiently to change consumption patterns. Evidence from 12 sub-Saharan African countries demonstrates considerable variation in industry responses, with some countries experiencing over-shifting of taxes into higher consumer prices, while others experienced under-shifting that weakened the intended public health impact.^{xx}

Consumers may also respond to tax increases by substituting toward cheaper, untaxed, or lower-quality alternatives, including informal products or illicit markets, reducing both health benefits and government revenue. Effective tax design therefore requires consideration of the broader market environment, not simply the tax rate itself.

“Health taxes increasing retail prices by approximately 20 percent or more are consistently associated with meaningful reductions in the consumption of unhealthy products.”ⁱⁱⁱ

Political Commitment Determines Whether Evidence Becomes Policy

Health taxes are among the most politically contested public health interventions because they directly affect powerful commercial interests. Successful countries have generally overcome industry opposition by framing health taxes primarily as public health interventions rather than revenue-generating mechanisms, building broader coalitions among ministries of health, finance authorities, civil society organizations, and public health advocates.

The Philippines provides one of the strongest examples of this approach. The 2012 Sin Tax Reform Act succeeded because policymakers built a broad coalition, used evidence to counter industry arguments, and emphasized the health benefits of reform rather than focusing exclusively on revenue generation.^{xxi} Tobacco taxes increased significantly, smoking prevalence declined from approximately 31 percent to below 26 percent within one year, and government revenues increased substantially, with revenues directed toward health priorities, including expanded health insurance coverage and increased investment in the Department of Health.



Implementation Capacity Determines Long-Term Effectiveness

South Africa illustrates both the potential and vulnerability of health taxes. Tobacco taxation contributed to substantial reductions in smoking and increased government revenue between the 1990s and 2000s. However, subsequent institutional weaknesses, increased illicit trade, and enforcement challenges undermined earlier progress. By 2020, illicit cigarettes represented a substantial share of the tobacco market, demonstrating how implementation failures can weaken otherwise successful policies.^{xxii}

Similar challenges have been observed elsewhere in Africa. Approximately one-third of alcohol consumed in sub-Saharan Africa is estimated to be unrecorded, often produced informally and outside the excise tax system.^{xxiii} Cross-border differences in taxation create additional challenges: when neighboring countries maintain substantially lower tax rates, consumers and distributors may shift purchases across borders, reducing both revenue collection and health impacts.



Long-Term Sustainability Requires Realistic Expectations

Although health taxes can generate meaningful revenue, they should not be viewed as a permanent replacement for broader health financing mechanisms. In fact, successful health taxes reduce their own revenue base over time because fewer people consume harmful products. Governments considering earmarking health tax revenues must therefore account for this dynamic and avoid creating long-term programs dependent on a shrinking source of financing.

Experience from Zimbabwe's AIDS Levy, established in 1999 through a 3 percent tax on personal income and a 3 percent tax on corporate profits, provides a relevant example of innovative domestic financing.^{xxiv} The levy generated substantial resources for HIV prevention, treatment, and care and served as a model for similar financing approaches in other countries, including proposed HIV trust funds in Tanzania, Kenya, and Uganda.^{xxv} At the same time, Zimbabwe's experience highlights the importance of transparency, accountability, and governance: weak accountability structures may undermine the legitimacy and long-term impact of dedicated financing mechanisms.^{xxvi}

A Different Model: Using Revenue to Reinforce Health Promotion

Thailand implemented a 2 percent surcharge on tobacco and alcohol products, with revenues earmarked for health promotion activities.^{xxvii} These resources supported nationwide prevention programs targeting smoking, alcohol consumption, road safety, and other noncommunicable disease risk factors. By linking revenues directly to prevention and health promotion, Thailand created a policy model in which taxation supports behavioral change rather than relying on continued consumption of harmful products to sustain financing.



Policy Recommendations



Invest in country-specific evidence before implementation.

The effectiveness of health taxes depends heavily on local market conditions, consumption patterns, price responsiveness, and administrative capacity. Evidence generated locally is often more persuasive to policymakers and the public than international estimates alone, and country-specific modeling can help identify appropriate tax levels and anticipate potential unintended consequences.



Establish transparent mechanisms for allocating and monitoring revenues.

Public support for health taxes is strengthened when citizens can clearly see how revenues contribute to social priorities. Where appropriate, allocating revenues toward health promotion, prevention programs, and universal health coverage initiatives may strengthen both political feasibility and public health impact.



Anticipate industry opposition and implementation challenges early.

Opposition from affected industries is predictable and should be incorporated into policy planning from the beginning, alongside clear strategies to address enforcement challenges, including informal markets, cross-border smuggling, and tax avoidance during policy design rather than after implementation.



Position health taxes as one component of broader sustainable financing strategies.

Health taxes should complement, rather than replace, broader efforts to strengthen domestic health financing. Sustainable health systems require diversified revenue sources, improved efficiency, stronger governance, and continued investments in primary care and prevention.



Frame health taxes as public health interventions, not simply revenue-generating tools.

The primary justification for health taxes should be their ability to prevent disease and improve population health. Emphasizing fiscal objectives alone may strengthen opposition from affected industries and reduce public support; the experience of the Philippines demonstrates that framing taxation as a health intervention can build broader coalitions and improve policy durability.^{xxviii}

“By linking revenues directly to prevention and health promotion, Thailand created a policy model in which taxation supports behavioral change rather than relying on continued consumption of harmful products to sustain financing.”

Appendix A

Tobacco Revenue by COP Country — Raising the Excise Tax Share of Retail Price by 10 Percentage Points (US\$ millions)

COP Country	Revenue (US\$M)
Vietnam	326.1
Ukraine	221.0
Kenya	87.9
South Africa	78.1
Nigeria	73.7
Angola	39.6
Tanzania	32.7
Dominican Republic	31.9
Cote d'Ivoire	20.8
Mozambique	18.0
Ethiopia	13.2

Estimated first-year incremental tobacco tax revenue by COP country, sorted from largest to smallest. South Sudan is not currently included in this analysis.

COP Country	Revenue (US\$M)
Democratic Republic of the Congo	12.0
Uganda	10.6
Cameroon	9.5
Haiti	8.6
Zambia	7.8
Zimbabwe	6.9
Botswana	6.5
Lesotho	6.3
Malawi	6.3
Burundi	5.2
Namibia	4.7
Rwanda	4.4
Eswatini	1.3
Total	1,033.1

Appendix B

Alcohol Revenue by COP Country — Raising the Excise Tax Share of Retail Price by 10 Percentage Points (US\$ millions)

COP Country	Revenue (US\$M)
Vietnam	659.0
Nigeria	432.8
Kenya	399.2
Ethiopia	297.3
South Africa	265.9
Dominican Republic	175.0
Angola	172.8
Zimbabwe	166.6
Ukraine	160.7
Tanzania	151.5
Cameroon	140.7
Democratic Republic of the Congo	140.5

COP Country	Revenue (US\$M)
Burundi	128.8
Zambia	111.3
Cote d'Ivoire	104.3
Haiti	102.9
Mozambique	89.5
Uganda	51.4
Namibia	46.9
Rwanda	45.6
Botswana	25.4
Lesotho	14.1
Eswatini	9.6
Malawi	3.2
Total	3,895.2

Estimated first-year incremental alcohol excise revenue by COP country, sorted from largest to smallest. South Sudan is not currently included in this analysis.

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