BRIEFING PAPERS

Global State of Tobacco Harm Reduction

Safer nicotine product taxation and optimal strategies for public health

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Taxation has long been regarded as one of the most effective tools by traditional tobacco control groups for controlling tobacco consumption.[1] Tax on tobacco products is intended to serve two main purposes: to decrease demand by increasing prices, making these products less affordable and less appealing, and to generate government revenue.[2] Critics, however, suggest that tax is a blunt instrument, contributing to the economic inequalities faced by people who smoke and driving illicit markets.

This Briefing Paper examines the current global situation regarding the taxation of safer nicotine products (SNP) and how this relates to product accessibility, before offering evidence-based policy recommendations for optimal taxation strategies in support of harm reduction goals and public health. Our primary focus is on nicotine vapes (e-cigarettes) and heated tobacco products (HTP) as these are the two dominant SNP categories with the most extensive data available. However, conclusions drawn here may apply to other SNP as well.

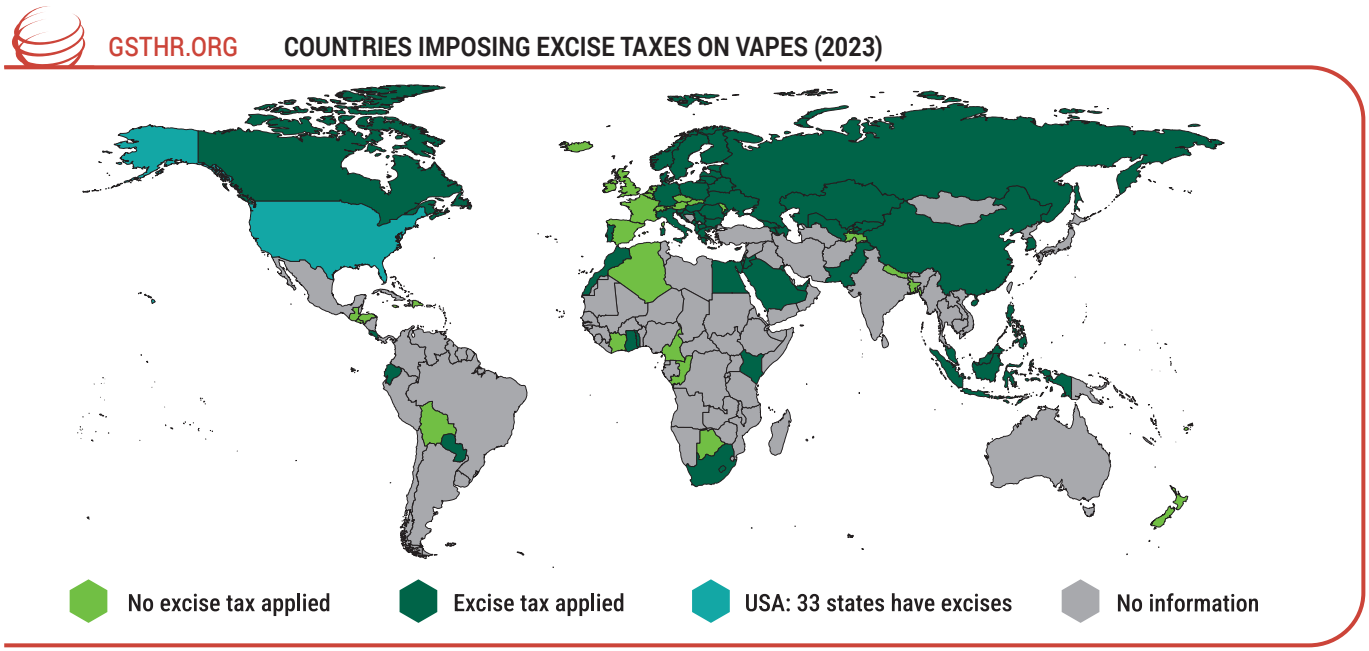
Our analysis centres on excise taxes, which differ from general levies like income tax or value-added tax (VAT). Unlike these broad-based taxes, excise taxes target specific products or activities, making them a critical area of interest in SNP taxation policy. A more detailed description of excise taxes can be found in our latest report, The Global State of Tobacco Harm Reduction 2024: A Situation Report.

What is the current state of global taxation on safer nicotine products?

Vaping

Italy was the first country to introduce an excise tax on nicotine vapes in 2014.[3] Kazakhstan and Kenya followed in 2015, with Latvia, Romania, and Slovenia joining them in 2016. Among nations permitting the sale of vapes, at least 54 countries (based on available data) and 33 US jurisdictions had brought in excise taxes on these products by 2023.[4]

Figure 1.



Data source: Dauchy, E. P., & Fuss, C. (2023); GSTHR 2024

National taxation approaches vary significantly. Most countries, 37 in total, tax all e-liquids, while 17 limit taxation to e-liquids containing nicotine. Specific excise taxes, which impose a flat rate on products, are the most common approach, used by 39 countries. In contrast, 11 countries apply an *ad valorem* system. Here, the tax is calculated as a percentage of the retail price. Four countries use a mixed system, combining elements of both specific and *ad valorem* taxation. Additionally, 12 countries levy excise taxes directly on vaping devices, generally applying lower tax burdens on closed systems compared to e-liquids sold separately.

Excise tax burdens, defined as the share of the retail price attributable to excise taxes, show significant variation across the globe for vapes. Belarus led with an exceptionally high tax burden of 88%, followed by Portugal at 85%, Norway at 78%, and Kazakhstan at 77%. (Kazakhstan banned the sale of nicotine vaping products in 2024).[5] At the other end of the spectrum, countries such as Costa Rica and Paraguay impose much lower burdens, at just 4% each, while Kenya levies a mere 3% and Croatia effectively imposes no excise tax at all. Croatia's case is particularly unusual, as its tax code stipulates an excise duty on e-liquids, but the rate is currently set at EUR 0 per millilitre. (figure 2)

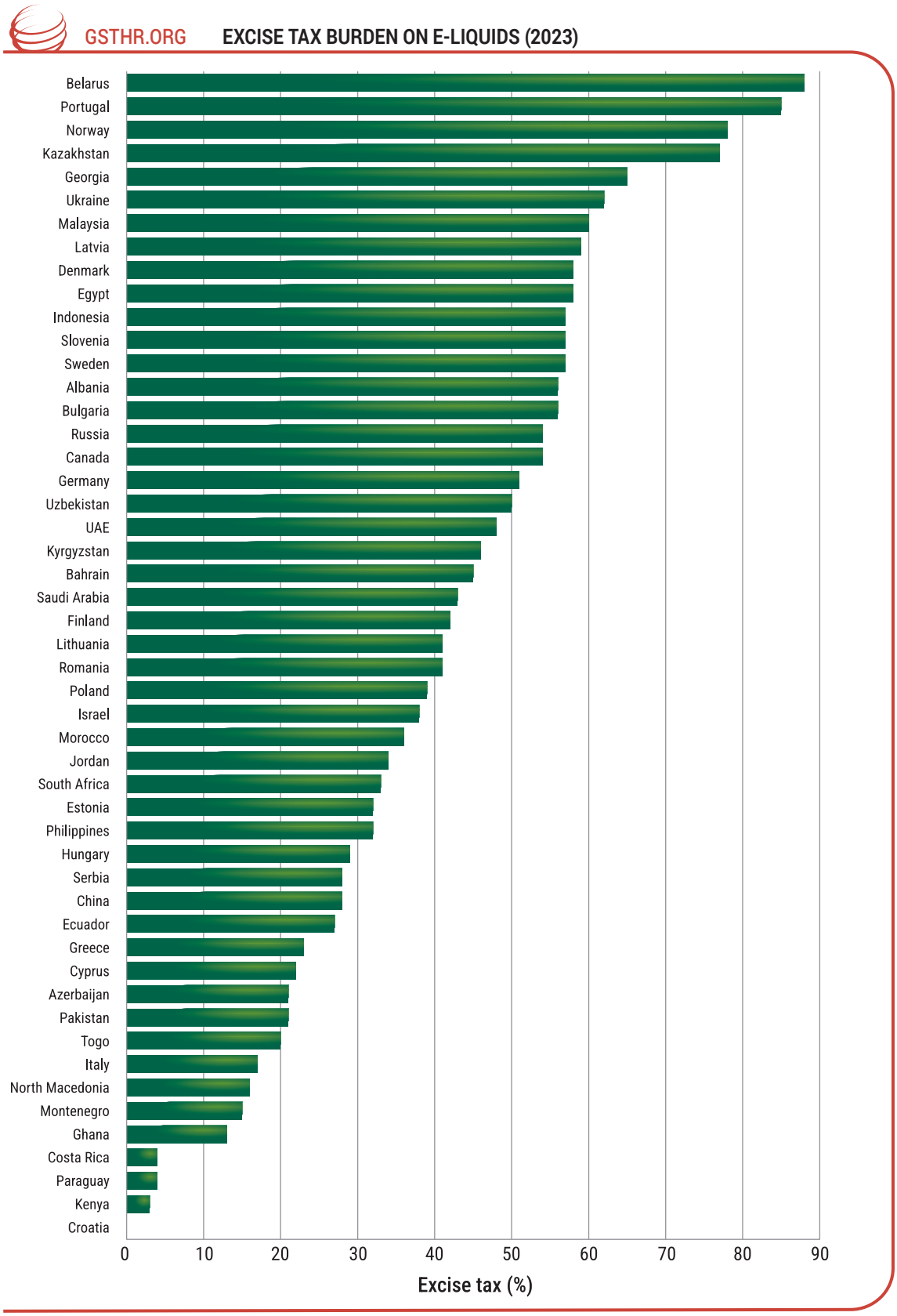
Several European countries, including the Netherlands, Austria, Belgium, Croatia, Luxembourg, Slovakia, Spain, France, the Czech Republic, Malta, Ireland and the United Kingdom, had not levied excise taxes on vaping products as of 2023, effectively maintaining a zero percent rate.[6] However, more and more countries are implementing or planning to introduce excise duties on these products. For example, starting in January 2024, Belgium introduced an excise tax of €0.15 per ml on e-liquids.[7] Spain followed in January 2025 by introducing a tax of €0.20 per ml for e-liquids containing more than 15 mg of nicotine and €0.15 per ml for those with 15 mg or less, including nicotine-free liquids.[8] Similarly, both Ireland and the United Kingdom have announced plans to impose taxes on vaping products starting in 2025 and 2026, respectively.[9,10]

Heated Tobacco Products (HTP)

Italy and Serbia were among the first countries to introduce excise taxes on HTP, doing so in 2014 and 2015, respectively.[11] However, it took other nations much longer to amend their tax codes to classify HTP as a distinct tobacco product and impose specific excise taxes. For example, Japan introduced an excise tax on HTP only in 2018, four years after the product was first on sale. By 2023, at least 66 countries had implemented excise taxes on HTP.[12] Most initially adopted a flat-rate tax based on the weight of tobacco in each HTP stick. However, challenges in verifying the exact tobacco content in each stick have led an increasing number of countries to shift towards per-stick taxation instead.

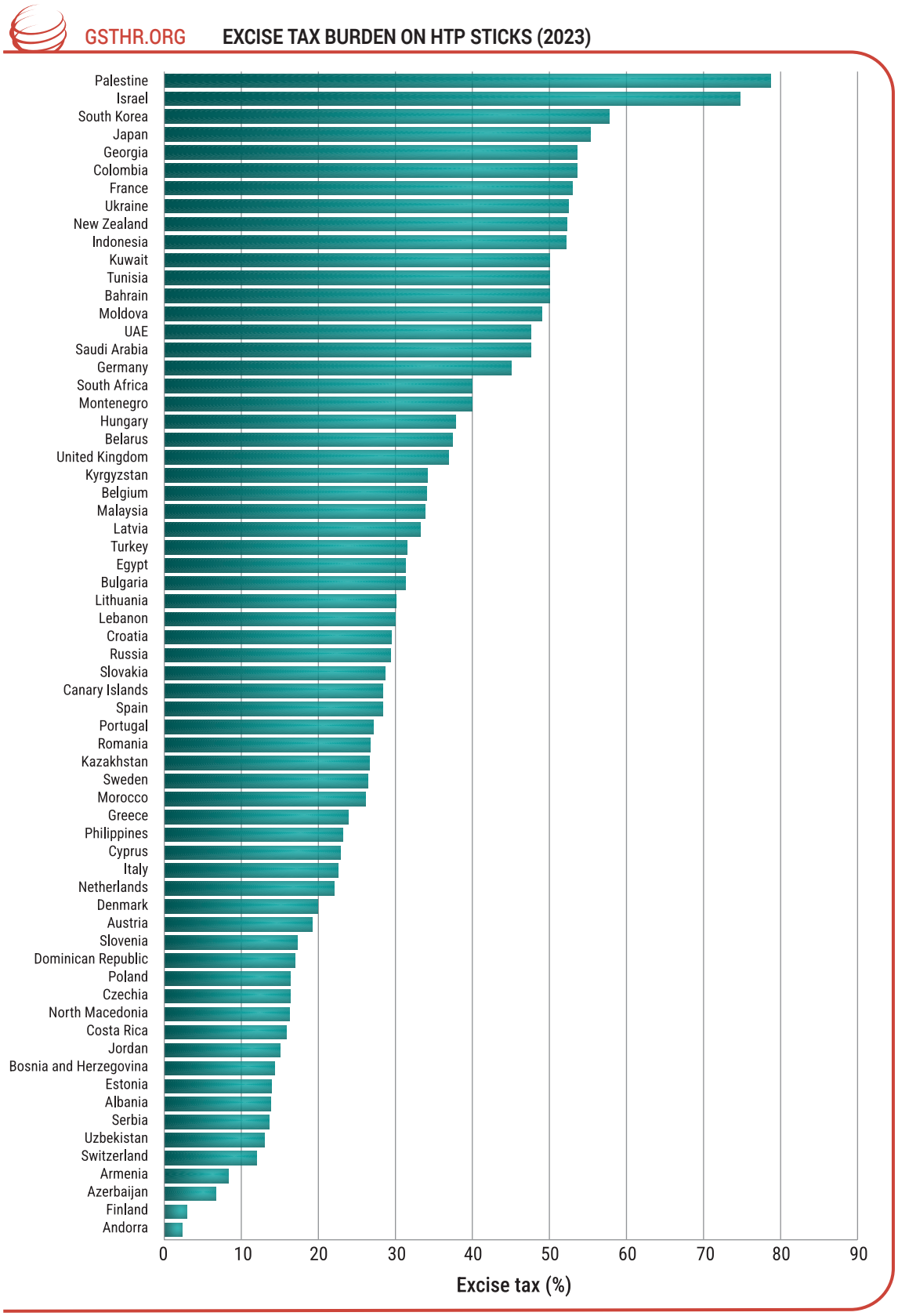
Excise tax burdens for HTP vary widely. At the higher end, Palestine imposes a tax burden of 79%, followed by Israel at 75%, South Korea at 58%, and Japan at 55%. At the lower end, Finland and Andorra impose tax burdens of just 3% and 2%, respectively. Other countries, such as Armenia, Azerbaijan, and Switzerland, also maintain relatively low burdens, at 8%, 7%, and 12%, respectively. (figure 3)

Figure 2.



Data source: Dauchy, E. P., & Fuss, C. (2023); GSTHR 2024

Figure 3.



Data source: Campaign for Tobacco-Free Kids: Heated Tobacco Products and Cigarettes Taxes and Prices Around The World; GSTHR 2024

Snus and nicotine pouches

There is less data available on the taxation of snus and nicotine pouches than for vapes and HTP, probably as they are less widely used, with primary markets focused in North America and Western Europe. In many countries, these products either lack specific regulatory frameworks, fall under general tobacco laws, or are banned outright. According to our database, in countries where these products are legally available and regulated, at least 16 countries have implemented excise taxes on snus, and at least 14 tax nicotine pouches.[13] As these products gain popularity and begin penetrating wider markets, the number of countries adopting excise taxes on them is expected to increase.

How are SNP taxed compared to cigarettes?

When analysing SNP taxation, it is important to examine how these taxes compare to those on cigarettes. This comparison is challenging due to differences in the units of measurement, since cigarettes are taxed per stick, vape liquids are typically taxed per millilitre, and snus and nicotine pouches per pouch. Adding to the complexity, nicotine concentrations vary significantly across these products. HTP, which are measured in sticks, contain less nicotine per stick than a traditional cigarette. This means that, to achieve a similar nicotine intake, people who switch to HTP might use more sticks per day than the number of cigarettes they used to smoke.[14]

In an effort to account for these differences, we have compared excise tax burdens – which are calculated as the percentage share of taxes in the retail price – as these offer a more consistent metric. Analysis of data from 2023 reveals that most countries impose lower excise tax burdens on SNP than on cigarettes.[15] However, in 15 countries (out of 50) the excise tax burden on e-liquids exceeds that on cigarettes. Similarly, the excise tax burden on HTP exceeds that of cigarettes in seven countries and is equal to cigarette taxation in six (out of 65). (figure 4)

While SNP are generally taxed more favourably than cigarettes, what ultimately matters to consumers is the final retail price, not the portion of that price attributable to taxes. This raises an important question: how do differences in tax rates translate into price differences between cigarettes and SNP?

Figure 4.

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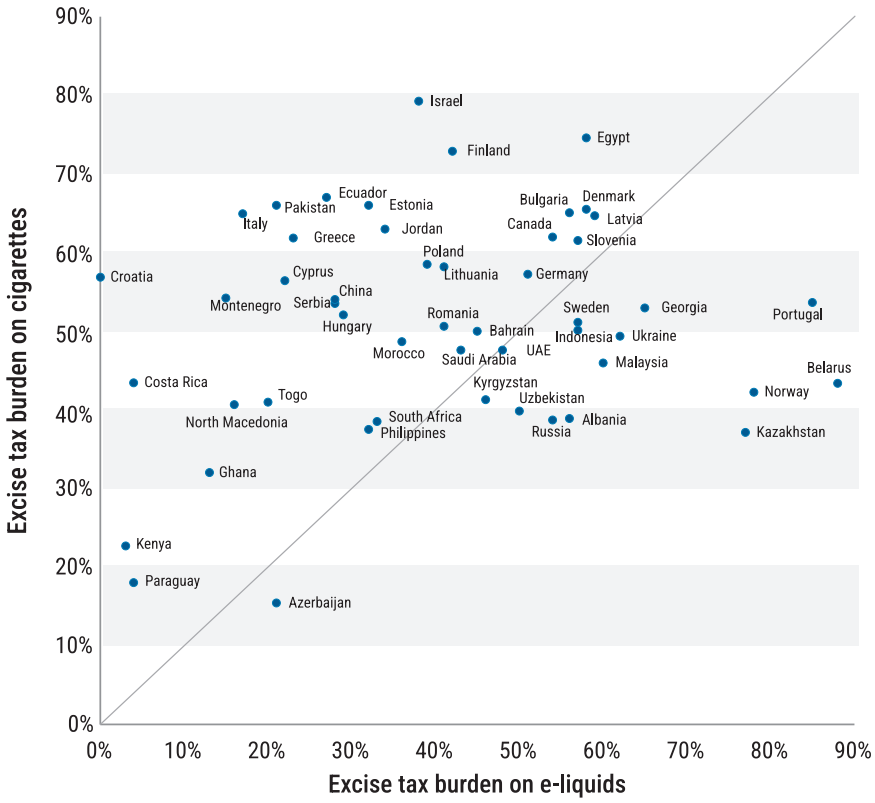
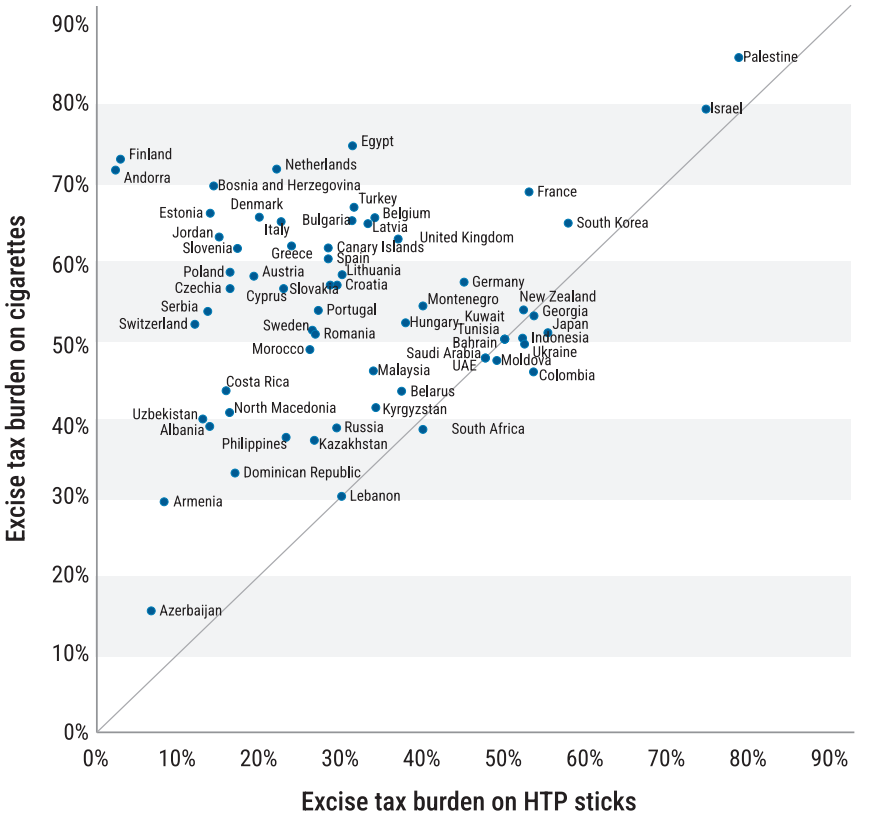
EXCISE TAX BURDEN ON E-LIQUIDS AND HTP STICKS VERSUS CIGARETTES (2023)





Data source: Dauchy, E. P., & Fuss, C. (2023); Campaign for Tobacco-Free Kids: Heated Tobacco Products and Cigarettes Taxes and Prices Around The World; GSTHR 2024

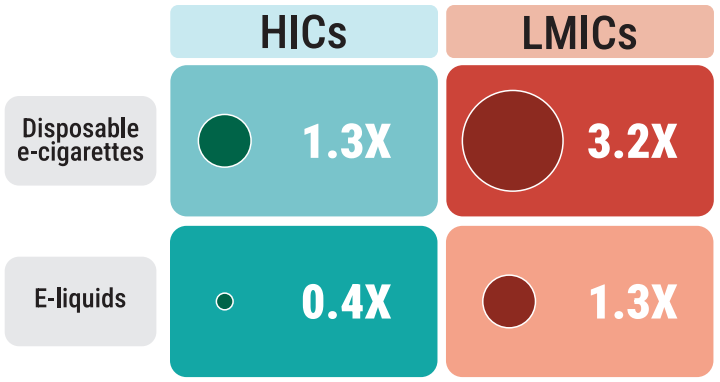
How affordable are SNP compared to cigarettes?

Despite their favourable taxation, SNP are not always cheaper than cigarettes. A 2017 study comparing the prices of combustible cigarettes, disposable e-cigarettes, e-liquids and rechargeable vaping devices across 45 countries found that cigarettes were often more affordable.[16] Single-use disposable e-cigarettes were 3.2 times more expensive than cigarettes in low- and middle-income countries (LMIC) and 1.3 times more expensive in high-income countries (HIC). E-liquids alone were 27% more expensive than cigarettes in LMIC but were priced at just 44% of cigarette prices in HIC.

> safer nicotine products are often more expensive than cigarettes in low- and middle-income countries, making affordability a major barrier to their adoption

Figure 5.

GSTHR.ORG **RELATIVE PRICE OF VAPES COMPARED TO CIGARETTES**



Data source: Liber, A. C., Drope, J. M., & Stoklosa, M. (2017); GSTHR 2024.

The initial cost of rechargeable vaping devices creates another significant financial barrier to switching from smoking to vaping. The same study highlighted that when accounting for both e-liquid and device costs, vaping was less affordable than smoking in nearly all countries, the United Kingdom being a notable exception.

A 2019 study of 34 countries showed that HTP, despite being taxed at lower rates than cigarettes, were more expensive in half of the surveyed markets.[17] By 2023, data indicated that HTP were generally cheaper than premium brand cigarettes, but exceptions remained, including Poland, South Korea, and Uzbekistan.[18] In 17 countries, the price difference between HTP and cigarettes was a modest 10%. However, in the UK and New Zealand, HTP were significantly cheaper, costing 2.5 times less than cigarettes (without accounting for device prices).

> heated tobacco products are a tobacco harm reduction option primarily accessible to wealthier populations

A 2022 study further examined the cost of nicotine across different products in Switzerland, Germany, the USA, Sweden, France, and the UK.[19] It found that when accounting for device prices, HTP were more expensive than both regular tobacco products in most markets (except in the USA) and other nicotine-containing products. Given that cigarette taxes and, consequently, prices are generally higher in these countries compared to LMIC, this trend is likely to be even more pronounced in lower-income countries. This disparity means HTP are a tobacco harm reduction option primarily accessible to wealthier populations.

Why do lower taxes on SNP not simply translate into lower prices?

The primary reason lower taxes on SNP do not always result in lower prices lies in the industry's pricing strategies. Research suggests that tax advantages often benefit producers rather than consumers. Instead of reducing prices to encourage a transition from smoking to safer products, companies leverage these tax benefits to maintain higher profit margins.[20] Data from 2023 supports this argument, showing that the difference in excise taxes between cigarettes and HTP was often larger than the retail price differences.[21] Industry reports confirm that producers strategically position HTP as a value-oriented alternative to premium cigarette brands, enabling them to enjoy significantly higher profits from them compared to cigarettes.

Additional factors contributing to the higher cost of HTP include the substantial initial investments made by companies in product development. These investments meant that sales were unprofitable during the initial years following the launch of these products.

What is the optimal taxation strategy for SNP?

Why do governments tax cigarettes?

To determine the optimal taxation approach for SNP, it is important to first revisit the rationale for imposing excise taxes on combustible cigarettes. Governments have historically taxed cigarettes for two primary reasons: to generate revenue and to reduce smoking in order to alleviate its significant public health burden. Higher taxes have consistently been shown to lower cigarette consumption, though their effectiveness depends on various factors, including the sensitivity of those who smoke to price changes, the design of the tax, the availability and taxation of substitutes, trends in cigarette affordability, and the government's ability to counter the illicit tobacco market.[22,23,24,25]

One factor that makes excise taxes particularly appealing to finance ministries is the low price sensitivity of cigarette demand. According to economic studies, a 1% increase in cigarette prices typically results in only a 0.4%–0.7% decrease in consumption.[26] More recent evidence suggests even lower price elasticity, with consumption decreasing by just 0.1%–0.3% for every 1% price increase.[27] This means that unless those who smoke switch to alternatives, such as SNP, or illegal markets expand significantly, raising cigarette taxes will consistently boost government revenue.

From an economic perspective, excise taxes on cigarettes are justified by their ability to address market failures associated with smoking.[28] One major issue is the unintended harm smoking causes to others, which is an example of a negative externality. For instance, smoking leads to increased healthcare costs for society, reduced workplace productivity, and higher death rates. These costs are not paid by the person who smokes alone but are shared by everyone, such as through higher public healthcare expenses or the impact of secondhand smoke on those who do not smoke.

Negative internalities are when there are potential, future costs that people do not consider when consuming particular goods or services. In this case, those who smoke may not fully understand the long-term health risks, how addictive smoking can be, or the financial strain it causes over time.

By increasing cigarette prices, excise taxes aim to reduce consumption, mitigate social costs, and correct these market failures. However, cigarettes remain over-consumed from a social perspective due to addiction, misinformation, and the external costs it imposes. Unlike in a perfectly rational market, where individuals would make fully informed decisions, smoking behaviour is heavily influenced by these distortions. Thus, while the theoretical socially optimal level of tobacco consumption might not be zero, in reality, public health and economic considerations support policies that reduce smoking as much as possible.

When it comes to SNP, the rationale for taxation becomes far less clear. SNP are significantly less harmful than cigarettes and play a crucial role in harm reduction strategies. Policymakers must ask whether taxing SNP at the same rate as cigarettes aligns with public health or economic objectives.

any increase in cigarette prices tends to boost vape sales, while raising vape prices often pushes users back to smoking

Why might taxing SNP in the same way as cigarettes backfire?

The World Health Organization has recommended taxing SNP, including HTP, at rates comparable to cigarettes to discourage youth uptake and use by those who do not smoke. The recommendations include uniform taxation on e-liquids, regardless of their nicotine content, and taxes on devices. However, evidence suggests that these policies may lead to unintended negative public health outcomes.

Research indicates that the demand for nicotine vaping products is highly sensitive to price changes, with price elasticity estimates ranging from -0.8 to -2.2.[29,30,31,32,33] This means a 1% increase in price leads to a 0.8%–2.2% decrease in demand, significantly higher than the price sensitivity for cigarettes. Moreover, studies confirm that nicotine vapes and cigarettes are economic substitutes.[34,35,36,37,38] This means that any increase in cigarette prices tends to boost vape sales, while raising vape prices often pushes users back to smoking.

Raising taxes on combustible cigarettes encourages those who smoke to transition to less harmful products like vaping, but higher taxes on SNP can have the opposite effect. Instead of quitting or switching to less harmful alternatives, consumers may continue or even return to smoking. This underscores the need for taxation policies that reflect the relative risks of these products.

nicotine vapes, HTP, snus and nicotine pouches are far less harmful than smoking – tax rates should align with this reduced risk to encourage harm reduction

Aligning SNP taxation with public health goals

One potential solution is to implement taxation structures based on the relative harm of products. For example, nicotine vapes, HTP, snus and nicotine pouches are far less harmful than smoking.[39,40] Tax rates should align with this reduced risk to encourage harm reduction.

However, establishing risk-based taxation for SNP poses challenges. The diverse nature of these products makes it difficult to establish a uniform tax framework, including determining an appropriate tax base and the substitution rate for calculating tax levels. Furthermore, the administrative costs of proportional taxation could outweigh the revenue collected, reducing its overall fiscal impact.

Given these complexities, applying zero excise tax rates to products that have been shown to carry significantly lower risks – nearly negligible compared to cigarettes – could be the most effective and feasible strategy to implement. This approach would acknowledge their lower harm and incentivise their use as substitutes for combustible tobacco products.

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Still, relying on tax differences to be reflected in retail prices assumes that producers pass the savings on to consumers. As noted earlier, favourable taxation often benefits producers more than consumers, as companies use tax advantages to maintain higher profit margins rather than reduce prices.

What can policymakers do to increase taxation effectiveness?

Price ceilings or profit margin caps could be used; as with regulation of the pharmaceutical industry, limits would be placed on the retail price or profit margins of SNP.[41,42] While this may reduce prices for consumers, economic research highlights several potential downsides, including reduced incentives for innovation, the risk of supply shortages if caps are set too low, diminished product quality, and the emergence of black markets in response to overly restrictive controls.[43]

Conditional tax benefits are another option. Governments could link tax advantages to price reductions, with producers required to show significant price differences between SNP and cigarettes to qualify for reduced tax rates. While theoretically appealing, implementation remains untested and could face practical challenges, particularly in monitoring compliance and enforcement.

Promoting market competition represents a more sustainable and organic solution. By reducing regulatory barriers that hinder the entry of new SNP firms and products, as well as lifting bans on specific types of SNP, governments can create a more competitive environment in the safer nicotine market. Increased competition naturally drives down prices without direct intervention, fostering innovation while benefiting consumers and reducing smoking.

tax advantages on safer nicotine products should benefit consumers, not just producers. Market measures such as price ceilings, profit margin caps, or conditional tax benefits can help, but market competition remains the best solution to ensure lower prices

Should governments subsidise SNP?

Subsidising SNP offers another promising policy option, particularly to encourage their uptake among those who smoke. Unlike cigarettes, which impose significant negative externalities on society, SNP deliver

positive externalities by reducing smoking prevalence and improving public health outcomes.[44,45,46,47,48] Direct subsidies aimed at lowering the cost of SNP for those who smoke would address existing market failures, align with harm reduction strategies, and enhance social welfare. This approach mirrors the subsidisation of nicotine replacement therapies (NRT), which has proven cost-effective.[49] Given evidence that vaping products are even more effective than NRT in helping people to quit smoking, subsidising SNP could yield substantial public health and economic benefits, making it a logical and impactful policy choice.

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The reality of SNP taxation: what are the challenges ahead?

While the discussion on optimal SNP taxation presents several compelling strategies, it is important to acknowledge the practical challenges. Governments rely on cigarette excise taxes as a significant source of revenue, particularly in LMIC. The widespread adoption of SNP will reduce cigarette consumption, leading to substantial revenue losses and potential budget shortfalls. Although the long-term public health and economic benefits of harm reduction are well-documented, they are harder to quantify, accumulating over the medium to long term. Fiscal revenue losses are immediate and tangible.

A parallel can be drawn with the electric vehicle (EV) industry. Governments initially provided tax breaks and subsidies to encourage EV adoption but later faced revenue challenges as fuel tax collections declined. For example, in 2024, Switzerland introduced taxes on electric vehicles similar to those on petrol vehicles, eliminating prior exemptions.[50] Similarly, Germany ended its "environmental bonus" programme in December 2023, and the UK plans to impose vehicle excise duty on electric cars starting in 2025.[51,52] This shift reflects the fiscal pressures governments face as new technologies disrupt traditional revenue streams. SNP taxation could follow a similar trajectory, with rates increasing as their adoption grows.

Key takeaways

The taxation of SNP should be carefully aligned with harm reduction objectives to avoid unintended consequences. Current recommendations by traditional tobacco control groups to increase excise tax rates on SNP in general are counterproductive. Such measures risk undermining public health goals by slowing the transition from smoking to safer alternatives, failing to support quitting, and potentially pushing people who used to smoke back to combustible cigarettes.

the long-term public health and economic gains from reducing smoking far outweigh short-term tax revenue losses

Affordability of SNP remains a significant barrier in many countries. SNP are often less affordable than cigarettes, particularly in LMIC where cigarette taxes are substantially lower than in HIC. This affordability gap contributes to the slow adoption of SNP, as cigarettes and SNP are economic substitutes, making relative prices an important factor in consumer decisions.

Governments need to use taxation to ensure that cigarettes are significantly more expensive than SNP, while maintaining low tax rates on SNP to enhance their affordability. This strategy would encourage those who smoke to switch to safer alternatives and reduce smoking prevalence.

Tax advantages on SNP must be made to benefit consumers and not producers, who too often use tax savings to maintain higher profit margins, rather than lowering retail prices. Measures such as price ceilings, profit margin caps, or conditional tax benefits could help address this issue, though promoting market competition remains the most effective solution. Additionally, innovative measures such as subsidising SNP should be considered, as, by lowering financial barriers, subsidies could play a critical role in accelerating the adoption of SNP.

While these strategies may face resistance due to fiscal concerns – especially in countries where cigarette taxes represent a significant revenue source – governments must prioritise harm reduction. The long-term public health and economic benefits of reducing smoking far outweigh the potential short-term losses of excise tax revenue. Optimal SNP taxation combined with innovative policies offers significant opportunities to improve public health outcomes and achieve substantial economic gains over time.

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For further information about the Global State of Tobacco Harm Reduction's work, or the points raised in this **GSTHR Briefing Paper**, please contact info@gsthr.org

About us: **Knowledge•Action•Change (K•A•C)** promotes harm reduction as a key public health strategy grounded in human rights. The team has over forty years of experience of harm reduction work in drug use, HIV, smoking, sexual health, and prisons. K•A•C runs the **Global State of Tobacco Harm Reduction (GSTHR)** which maps the development of tobacco harm reduction and the use, availability and regulatory responses to safer nicotine products, as well as smoking prevalence and related mortality, in over 200 countries and regions around the world. For all publications and live data, visit https://gsthr.org

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