Tobacconomics Cigarette Tax Scorecard

Scoring Component Policy Note – Tax Share

Suggested citation: Chaloupka, F., Drope, J., Siu, E., Vulovic, V., Stoklosa, M., Mirza, M., Rodriguez-Iglesias, G., & Lee, H. (2021). Tobacconomics cigarette tax scorecard: Scoring component policy note – tax share. Chicago, IL: Health Policy Center, Institute for Health Research and Policy, University of Illinois Chicago. www.tobacconomics.org

Authors: This policy note was written by the Tobacconomics team: Frank Chaloupka, PhD; Jeff Drope, PhD; Erika Siu, JD LLM; Violeta Vulovic, PhD; Michal Stoklosa, PhD; Maryam Mirza, PhD; Germán Rodriguez-Iglesias, MSc; and Hye Myung Lee, MPH.

About Tobacconomics: Tobacconomics is a collaboration of leading researchers who have been studying the economics of tobacco control policy for nearly 30 years. The team is dedicated to helping researchers, advocates, and policy makers access the latest and best research about what's working—or not working—to curb tobacco consumption and its economic impacts. As a program of the University of Illinois Chicago, Tobacconomics is not affiliated with any tobacco manufacturer. Visit www.tobacconomics.org or follow us on Twitter at www.twitter.com/tobacconomics.

This Policy Note was funded by Bloomberg Philanthropies. The University of Illinois Chicago (UIC) is a partner of the Bloomberg Initiative to Reduce Tobacco Use. The views expressed in this document cannot be attributed to, nor do they represent, the views of UIC, the Institute for Health Research and Policy, or Bloomberg Philanthropies.

For any comments or questions please email us at info@tobacconomics.org.

The Tobacconomics Cigarette Tax Scorecard evaluates countries' cigarette tax systems based on a five-point rating system that incorporates international guidance and best practices in tobacco taxation developed by the World Health Organization (WHO), the WHO Framework Convention on Tobacco Control (FCTC), the World Bank (WB), and academics and researchers worldwide. The five-point index uses data from the World Health Organization's biennial *Report on the Global Tobacco Epidemic (RGTE)* to score countries on the following four components: cigarette price, changes in the affordability of cigarettes over time, the share of taxes in retail cigarette prices, and the structure of cigarette taxes. The total score reflects an average of the four component scores.

Why is tax share important?

The share of tax in retail price is a critical tax performance measure. Higher tax shares generally result in higher retail prices, reduced tobacco consumption, and greater government gains in revenue. The share of taxes in cigarette prices has been the focus of multiple recommendations and has been the most widely used metric for assessing the strength of tobacco tax systems and performance globally. These recommendations have varied with respect to which taxes are included and what the recommended share of tax should be. Some experts focus on the share of excise taxes in retail cigarette prices, while others include additional taxes such as import duties, general sales taxes, and value added taxes (VAT). Despite these differences, all recommend that taxes account for most of the retail price.

There are two common and related benchmarks of tobacco tax performance that many practitioners and proponents of tobacco taxation use. The first benchmark is whether the sum of all taxes is greater than 75 percent of the average retail price of a tobacco product (for example, cigarettes), and the second benchmark is whether excise taxes account for at least 70 percent of tobacco product retail prices. When taxes are increased to these levels—provided prices are sufficiently high—they lead to significant price increases, motivating many users to quit and deterring large numbers of youth from starting to use tobacco, thereby contributing to large reductions in death and disease caused by tobacco use. Tax share is also a good measure of a government's ability to affect the prices of tobacco products more directly and generate revenue from these taxes.

The 75-percent total tax target has been used consistently by the World Health Organization (WHO) and appears in all editions of the *RGTE* as the minimum benchmark that governments should meet (WHO, 2010, 2014, 2015, 2017, 2019). It draws from the seminal World Bank report, *Curbing the Epidemic*, on the economics of tobacco control, which recommends that taxes account for two-thirds to four-fifths of the retail price (World Bank, 1999). The World Bank based this target on tax shares in high-income countries that were successfully using taxes as part of their tobacco control efforts.

The 70-percent excise target first appeared in the *WHO Technical Manual on Tobacco Tax Administration* in 2010 and resulted from an earlier meeting of tobacco tax practitioners and researchers from finance ministries, the World Bank, the International Monetary Fund, several leading universities, and other institutions (U.S. National Cancer Institute & World Health Organization, 2016; WHO, 2010). The participants developed the benchmark as an aspirational target that was achievable in most countries but that almost no country had yet reached. The shift to an excise tax-based benchmark reflected the acknowledgement that excise taxes were a more refined tool to stimulate higher prices of tobacco products. Importantly, unlike more general taxes (for example, a VAT) that are typically assessed on most or all goods and services, excise taxes are applied to a small class of products, thereby affecting these prices relative to all other products.

Scoring criteria of tax share in the Cigarette Tax Scorecard

The Scorecard uses the average of the score on total tax share and the score on excise tax share. The shares are based on the price of the most-sold brand of cigarettes. The scoring rubric for each metric is as follows:

Scoring – Total Tax Share:

5: 75% or higher
4: 65% ≤ share < 75%
3: 55% ≤ share < 65%
2: 45% ≤ share < 55%
1: 35% ≤ share < 45%
0: Share < 35%

Scoring – Excise Tax Share:

5: 70% or higher
4: 60% ≤ share < 70%
3: 50% ≤ share < 60%
2: 40% ≤ share < 50%
1: 30% ≤ share < 40%
0: Share < 30%

Strengths and weaknesses of the measure

A major strength of both tax share measures is that they are relatively simple and intuitive: a higher number is a better score, and research consistently shows that a country reaching either or both benchmarks is typically using cigarette taxes effectively as a public health tool to drive down smoking. The measures are consistent and, consequently, can be used effectively to evaluate progress on cigarette taxation over time and across jurisdictions. These measures are increasingly gaining familiarity. Because the 75-percent benchmark has existed for nearly 20 years and the 70-percent benchmark for more than the last decade, they are both well known not just in the public health community but also in the domain of public finance.

Among the four components, the tax share score is the only component using the average of two scores (excise tax share and total tax share). This composite measure is strong because the two tax share scores complement each other as they measure related but also distinct dynamics.

Moreover, both measures are typically straightforward to calculate. Generally, the 70-percent excise share is easier to calculate because it is only necessary to know the excise taxes that are applied. In most countries, even the 75-percent total tax share measure is relatively easy to calculate as most significant taxes such as VAT or sales taxes are largely transparent.

Since tax share is a proportional measure of the tax to the price, there could be potential interpretive challenges when a low or high tax share results from price increases. This can work several ways that make the measure potentially less straightforward. For example, after a tax increase, the share could remain the same or even decrease if the industry raises prices more than the tax increase (which is called "over-shifting"). Tobacco companies over-shift to increase profits and then blame their price increase on the tax. Since the overall goal is higher price, it may be slightly misleading when the tax share score does not improve after a tax increase. New Zealand is a good example of this dynamic: even though it has one of the highest specific excise taxes in the world it scores a four on the excise tax measure because the industry has also raised prices, which is exactly the policy's intended result.

On the other hand, for countries with low production prices—even with a high tax share—retail prices can still be very low and tobacco products can remain extremely affordable. For example, in Argentina, taxes meet the 75-percent total tax and 70-percent excise tax benchmarks, but cigarettes in the country remain very affordable. The cost of producing tobacco products in Argentina is low and, as a result, even when meeting the benchmarks tobacco products remain relatively inexpensive. In these cases, pairing this score with absolute price and affordability change scores is vitally important. This is particularly true for countries where the tax share is high. The absolute price level is particularly helpful in such cases to examine whether the country's policies are continuing to push the price up. Ultimately, of course, the goal is to have both high price and high tax share, as in many European Union countries.

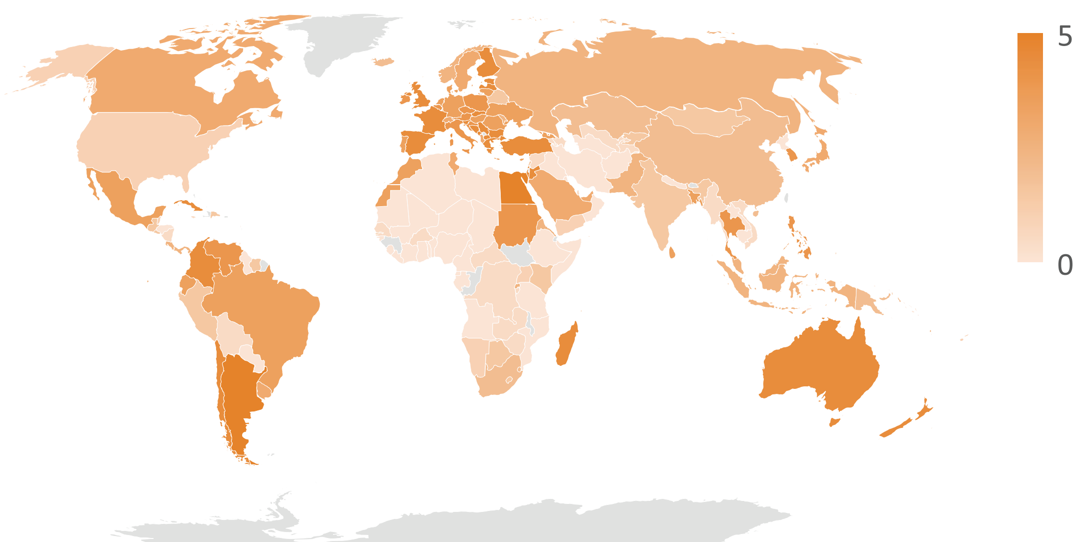
Tax share can also be misleading in countries that are scoring well but have unambitious plans for future tax adjustments upwards. This is perhaps especially true in countries experiencing rapid income growth where the government is not considering this growth in the adjustments on excise tax rates. However, the affordability change component and tax structure component partially address these concerns by incorporating the change in cigarette affordability over time and the automatic adjustments to the specific tax.

Another notable aspect of the tax share measure is that countries with high non-excise taxes such as sales tax or VAT can reach the 75-percent threshold more readily, making this measure less useful for evaluating the effects on cigarette prices. Brazil is a good example of this dynamic because in 2018 non-excise taxes comprised nearly 43 percent of retail price, whereas excise taxes comprised 40 percent of total taxes on tobacco products. Consequently, Brazil scores well on the total tax measure but much less well on the excise tax measure. In fact, for a country like Brazil with such high non-excise taxes, it is not mathematically possible to reach the 70-percent excise tax benchmark.

Tax share scores in 2018

Figure 1 shows the tax share scores in 2018. Only four countries met the highest benchmark, a score of five, on the composite measure (Andorra, Argentina, Egypt, and Mauritius), but 26 countries scored 4.5 points. Many of these countries are in Europe, suggesting that efforts to harmonize tobacco taxes through the the European Union's Tobacco Tax Directive are generating significant benefits.

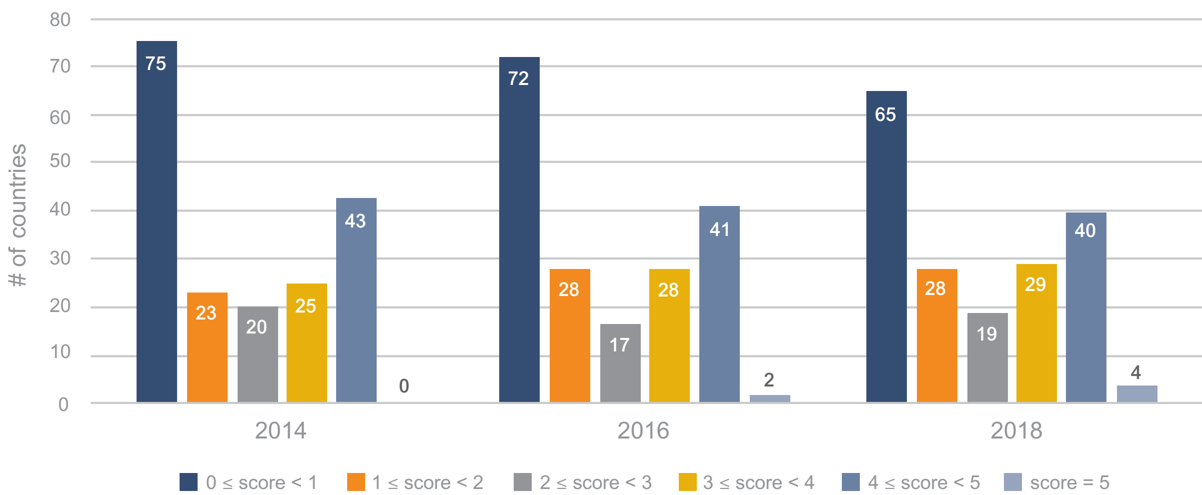
Figure 1 Tax share scores, 2018



Tax share score changes over time (2014–2018)

Few countries made significant progress in increasing the tax share from 2014 to 2018. There was, however, a decline in the number of countries with scores of zero or one as well as a slight increase in the number of countries receiving the highest score (5) (Figure 2).

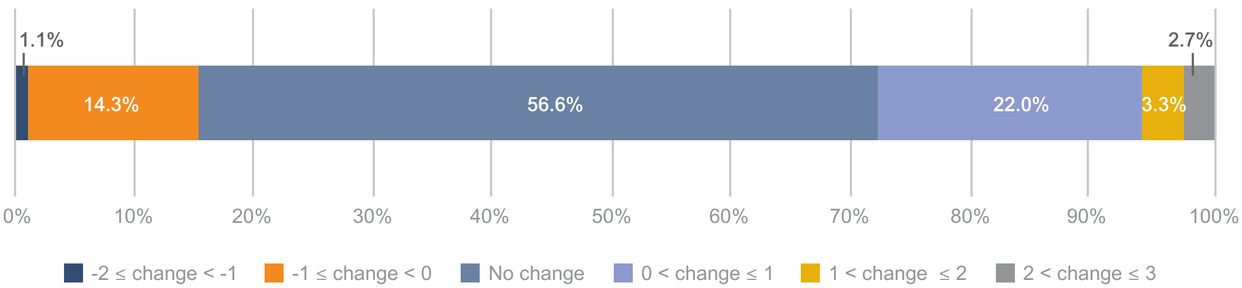
Figure 2 Evaluated countries by tax share score and by year



Notes: Based on 186 countries in 2014, 188 in 2016, and 185 in 2018. For 179 countries the score was available in all three years.
Source: Authors' calculations

Among the 182 available countries which had data for both 2014 and 2018, the majority of the observed countries (56.6 percent)—103 in total—experienced no change in their score during this time period, meaning that there was no or negligible change in the tax shares (Figure 3). Whereas some of these countries were high-scoring and remained so, the vast majority were low-scoring, which again indicates the overall and continuing poor performance across many countries. There were 51 countries that experienced improved tax share scores from 2014 to 2018, with an average increase of slightly more than one point. Among these, Bahrain, Saudi Arabia, and the United Arab Emirates increased from a score of zero in 2014 to three in 2018, largely as a result of the regional Gulf Cooperation Council's decision to implement a large ad valorem tax on tobacco and other unhealthy products. Similarly, Colombia enjoyed a three-point increase from 1.5 to 4.5 when they markedly raised excise taxes on cigarettes. Rwanda's tax share score also rose dramatically from zero to 2.5 in this same period, when they raised both the specific and ad valorem taxes on cigarettes. In contrast, 28 countries experienced decreases in their score. For example, Mongolia experienced a two-point decrease (3.5 in 2014 to 1.5 in 2018) in the composite tax share score. In this case, the government shifted from assessing taxes using US$ to the local currency and, though they increased excise taxes, the increase did not compensate for the changes from the shift in currency for the calculations.

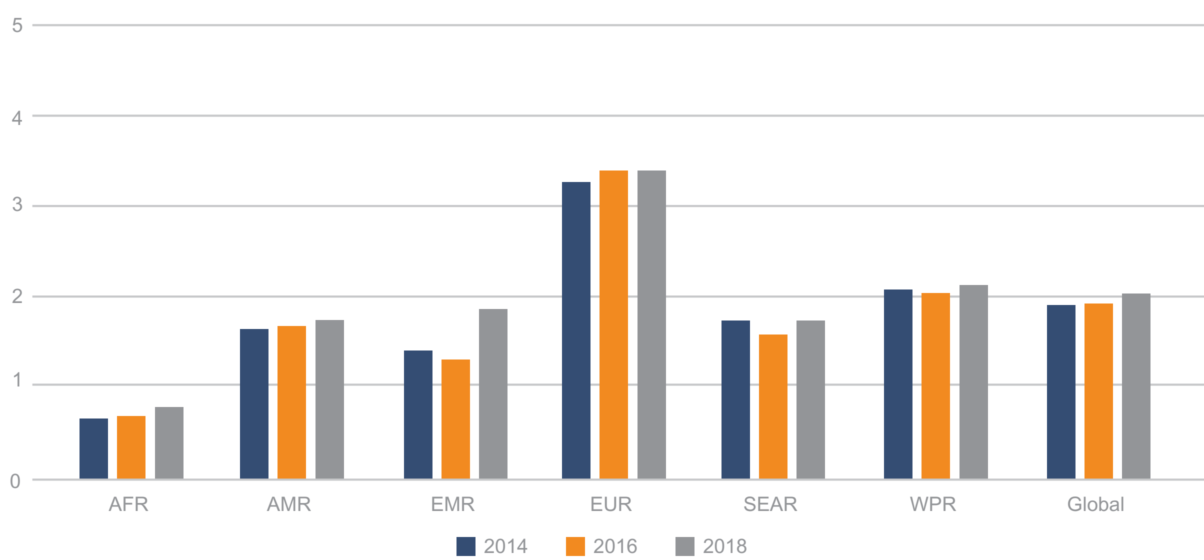
Figure 3 Percent distribution of score changes in tax share between 2014–2018



Notes: Based on 186 countries in 2014, 188 in 2016, and 185 in 2018. For 179 countries the score was available in all three years.
Source: Authors' calculations

The global average score for tax share shows a small increase over time, from 1.91 (2014) to 2.06 (2018) (Figure 4). When comparing scores from 2014 to 2018, the largest average score increases were found in Eastern Mediterranean region countries, where the score increased from 1.43 (2014) to 1.88 (2018), despite a small drop in scores in 2016. Countries in South-East Asia showed no increases in their average tax share scores, as the score dropped slightly from 1.75 (2014) to 1.60 (2016) and then increased back to 1.75 (2018).

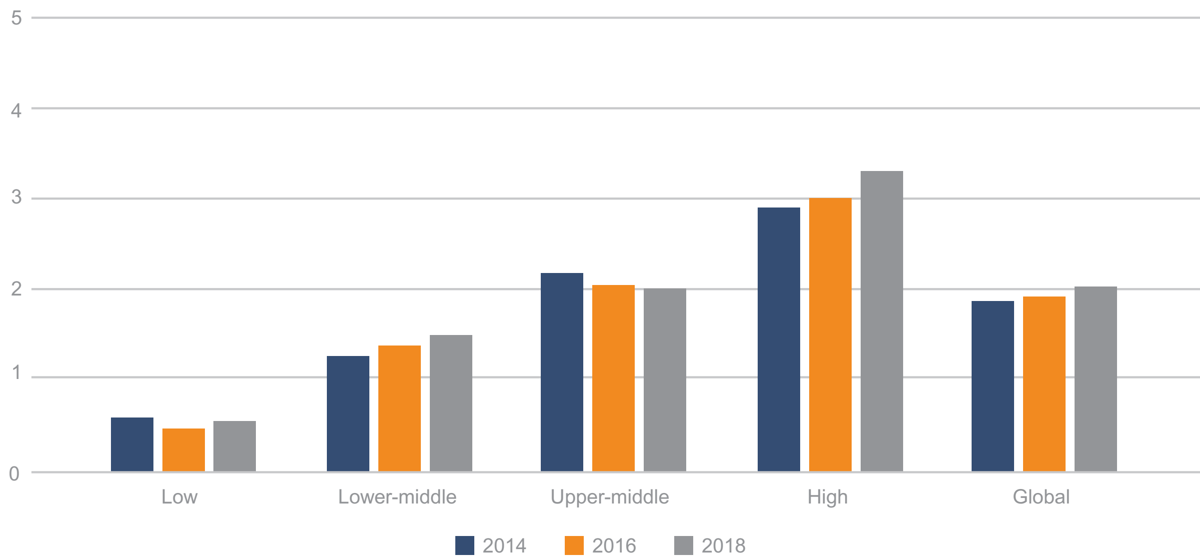
Figure 4 Average score on tax share, by WHO region and by year



Notes: WHO regional groupings are AFR = African Region, AMR = Region of the Americas, EMR = Eastern Mediterranean Region, EUR = European Region, SEAR = South-East Asian Region, WPR = Western Pacific Region. Based on 186 countries in 2014, 188 in 2016, and 185 in 2018. For 179 countries the score was available in all three years.
Source: Authors' calculations

The average scores for the tax share component continuously increased in lower-middle-income and high-income countries (Figure 5). However, the scores decreased in upper-middle-income countries from 2.19 (2014) to 2.01 (2018). For low-income countries, the average score decreased from 0.61 (2014) to 0.50 (2016) then increased back to 0.58 (2018), which is still lower than the first average score calculated in 2014.

Figure 5 Average score on tax share, by World Bank income group and by year



Notes: Based on 186 countries in 2014, 188 in 2016, and 185 in 2018. For 179 countries the score was available in all three years.
Source: Authors' calculations

Policy recommendations

The Scorecard shows that there is ample room for improvement in the tax share component. For example, among the low performers in 2018 there are 44 countries that scored a zero on the combined measure and dozens more that failed to score more than one point. Optimistically, this suggests that there are tremendous opportunities to use tobacco excise taxation as a tool for improving public health across the globe. On the other hand, tax share is a good indicator of how poorly governments are performing on cigarette tax policies. Very low taxes consistently translate into low prices in most countries, exacerbating the ongoing tobacco epidemic or, as is the case in some low-prevalence countries, representing a likely harbinger of enormous burdens from tobacco-attributable diseases in the not-so-distant future. The poor performance also reflects a missed opportunity for much-needed tax revenue collection for governments.

By increasing cigarette tax share, countries can raise cigarette prices, which would reduce cigarette smoking. In addition to reducing smoking participation, increased prices also lower smoking intensity among smokers, which can further reduce the burden of smoking-attributable diseases and improve population health. Moreover, as countries impose higher and better-designed cigarette taxes, governments could generate more revenue which could be spent to improve public health generally and tobacco control specifically.

References

U.S. National Cancer Institute and World Health Organization. (2016). *The economics of tobacco and tobacco control.* National Cancer Institute Tobacco Control Monograph 21. NIH Publication No. 16-CA-8029A. Bethesda, MD: U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute; and Geneva, CH: World Health Organization.

World Bank. (1999). *Curbing the epidemic: Governments and the economics of tobacco control.*

World Health Organization. (2010). *WHO technical manual on tobacco tax administration.*

World Health Organization. (2014). *Guidelines for implementation of Article 6 of the WHO FCTC.*

World Health Organization. (2015). *WHO report on the global tobacco epidemic, 2015: Raising taxes on tobacco.*

World Health Organization. (2017). *WHO report on the global tobacco epidemic, 2017: Monitoring tobacco use and prevention policies.*

World Health Organization. (2019). *WHO report on the global tobacco epidemic, 2019: Offer help to quit tobacco use.*