Lost Rupiahs
A Study on Delayed Implementation of Optimal Tax Policy in Indonesia
A Study on Delayed Implementation of Optimal Tax Policy in Indonesia

Editors:
Anton Javier, Mary Assunta, Ulysses Dorotheo, Sophapan Ratanachen-McWhortor


Acknowledgements:
SEATCA would like to acknowledge Dr Hana Ross for her work on the 2021 Lost Funds Report, which forms the basis of this 2022 report. We sincerely thank Dr Widyastuti Soerojo for her insightful assistance throughout the conduct of this work.

Disclaimer:
The information, findings, interpretations, and conclusions expressed herein are those of the author(s) and do not necessarily reflect the views of SEATCA’s funding organization or its Board of Directors. While reasonable efforts have been made to ensure the accuracy of the information presented at the time of publication, SEATCA does not guarantee the completeness and accuracy of the information in this document and shall not be liable for any damages incurred as a result of its use. Any factual errors or omissions are unintentional. For any corrections, please contact SEATCA at info@seatca.org.

© Southeast Asia Tobacco Control Alliance 2022
This document is the intellectual property of SEATCA and its author. SEATCA retains copyright on all text and graphics in this document, unless indicated otherwise. This copyright is protected by domestic copyright laws and international treaty provisions. The information in this document is made available for noncommercial use only. You may store the contents on your own computer or print copies of the information for your own non-commercial use. Commercial use or transmission in any form or by any means, including modifying or reusing the text and graphics in this document, distributing the text and graphics in this document to others, or mirroring the information in this document in other media requires prior written permission from SEATCA. All other rights reserved.

About SEATCA
SEATCA is a multi-sectoral non-governmental alliance promoting health and saving lives by supporting ASEAN countries to accelerate and effectively implement the evidence-based tobacco control measures contained in the WHO Framework Convention on Tobacco Control. Acknowledged by governments, academic institutions, and civil society for its advancement of tobacco control in Southeast Asia, the WHO bestowed upon SEATCA the World No Tobacco Day Award in 2004 and the WHO Director-General’s Special Recognition Award in 2014. SEATCA is an official NGO Observer to the WHO FCTC Conference of Parties and a co-initiator of the Global Center for Good Governance in Tobacco Control (GGTC).
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background</td>
<td>4</td>
</tr>
<tr>
<td>Methodology</td>
<td>5</td>
</tr>
<tr>
<td>Findings and Discussion</td>
<td>7</td>
</tr>
<tr>
<td>Conclusion</td>
<td>11</td>
</tr>
<tr>
<td>References</td>
<td>12</td>
</tr>
<tr>
<td>Annex</td>
<td>14</td>
</tr>
</tbody>
</table>
In 2021, the Southeast Asia Tobacco Control Alliance (SEATCA) published a regional report projecting the revenue loss incurred by select governments in the Association of Southeast Asian Nations (ASEAN) from delaying much-needed reforms in their tobacco tax regimes. This four-country report (Cambodia, Indonesia, Myanmar, and Vietnam) documented immense losses in both human capital and revenue. Along with the revenue losses for non-payment of specific excise tax levies in the Lao People’s Democratic Republic, these five ASEAN nations may have lost up to an accumulated USD 4.812 billion in terms of real revenue. A large proportion of this amount comes from Indonesia alone, with simulated revenue losses amounting to USD 3.46 billion between 2020 and 2021.¹

Taxation of tobacco products is proven to be a highly effective tobacco control measure for countries that have utilized it. Based on existing literature, tobacco taxation can (1) reduce health system strain,² (2) reduce the burden of tobacco-related diseases,³ and (3) increase much needed revenue for essential government activities, such as the provision of public health services.⁴

The taxation regime of Indonesia, with its complicated, multi-tiered scheme, has been criticized for inhibiting progress in tobacco control. This tiered scheme allows for smokers to substitute between tobacco products, reducing or negating the impact of a tax increase on consumption and health. The structure of the tax regime may also be leveraged by tobacco companies to legally avoid payment of the highest tax brackets⁵ and invites the opportunity for tax evasion.¹ This retrogressive tax regime, from the perspective of public health, is exacerbated by other factors such as “low real cigarette prices, population growth, rising household incomes, and mechanization of the kretek industry,” all of which largely contribute to increased smoking in Indonesia.⁵

A major drawback of the Indonesian tobacco tax regime is that the standard retail prices (banderol prices) and specific taxes are not regularly revisited.⁵ In 2018, a planned stepwise and gradual collapse of this tiered taxation regime was postponed by the government, which reportedly yielded to the request of local clove cigarette manufacturers.⁶

This study looks back at the last two years to see how much more funds and how many more lives could have been saved if (1) only tobacco tax rates were raised and if (2) the tobacco tax regimes were simplified into a two-tiered system.
Building on the established methodology of the Lost Funds Report by Ross in 2021, this study retrospectively modeled three taxation reform scenarios to project the magnitude of funds potentially lost via gradual, versus more rapid, increases of excise tax rates and simplification of the tobacco tax regime.

This study retrospectively simulated three tobacco tax reform scenarios, reckoned from the year 2020, via the tobacco excise tax simulator “TETSiM” used by Ross for the Lost Funds Report and developed especially for Indonesia. Where possible, this updated simulation used the most recent figures and projections available for inflation, cigarette consumption, smoking prevalence, and population. New elasticity data were also considered.

TETSiM was implemented to retrospectively explore the effects of three proposed reform scenarios, and each scenario simplified the taxation regime down to six, five, and two tiers. All these scenarios looked back from the year 2020, and the corresponding schedules for banderol prices and tax rates from that time were implemented in this simulation exercise. The recent change in 2022 collapsing the regime into an eight-tiered system and raising specific tax rates by an average 12.5% was accordingly not considered. The scenarios are illustrated in Table 1.

Scenario 1 simulated a one-year reform where the ten-tiered regime was collapsed into a six-tier regime in 2021, with at least a 20% increase in tax rates across the board.

Scenario 2 simulated a two-year reform where the ten-tiered regime was collapsed into a six-tier regime in 2021 and then into a five-tier regime in 2022, with at least a 20% increase in tax rates across the board. In this scenario, the entire class of machine-made white cigarettes were placed under a unified tier.

Scenario 3 simulated a two-year reform where the ten-tiered regime was collapsed into a five-tier regime in 2021 and then into a two-tier regime in 2022, with at least a 25% increase in tax rates across the board. In this scenario, the entire class of machine-made tobacco products and the entire class of hand-rolled, clove (kretek) cigarettes were each placed under a unified tier, resulting in a much simpler two-tiered system. This updated approach considers the current political economy of tobacco tax reforms with its staggered journey towards higher rates under simplified regimes.
### Table 1. Taxation regime scenarios simulated in this report

<table>
<thead>
<tr>
<th>Cigarette Type</th>
<th>Group</th>
<th>Tariff Schedule, Scenario 1</th>
<th>Tariff Schedule, Scenario 2</th>
<th>Tariff Schedule, Scenario 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>SKM</td>
<td>I</td>
<td>935</td>
<td>1040</td>
<td>1040</td>
</tr>
<tr>
<td></td>
<td>IIA</td>
<td>565</td>
<td>640</td>
<td>640</td>
</tr>
<tr>
<td></td>
<td>IIB</td>
<td>555</td>
<td>640</td>
<td>640</td>
</tr>
<tr>
<td>SPM</td>
<td>I</td>
<td>865</td>
<td>1100</td>
<td>1100</td>
</tr>
<tr>
<td></td>
<td>IIA</td>
<td>535</td>
<td>800</td>
<td>800</td>
</tr>
<tr>
<td></td>
<td>IIB</td>
<td>525</td>
<td>800</td>
<td>800</td>
</tr>
<tr>
<td>SKT</td>
<td>IA</td>
<td>425</td>
<td>510</td>
<td>510</td>
</tr>
<tr>
<td></td>
<td>IB</td>
<td>330</td>
<td>510</td>
<td>510</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>200</td>
<td>240</td>
<td>240</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>110</td>
<td>240</td>
<td>240</td>
</tr>
</tbody>
</table>

* SKM: machine-made kreteks; SPM: machine-made white cigarettes; SKT: hand-rolled kreteks
** 2020 figures reflect the banderol prices at the time; figures for 2021 and 2022 reflect the proposed annual changes, by scenario

Exploratory analyses of per-scenario trends in projected real and nominal revenue, smoking prevalence, cumulative number of preventable deaths averted, and per-capita consumption of cigarettes, for 2021 and 2022, were conducted through routine visualization using either ggplot2 or base graphics in R (ver. 4.0.4.; The R Development Core Team; Vienna, Austria).
Based on our simulations, Indonesia may have lost between IDR 86.09 trillion - 108.4 trillion (USD 5.44 - 7.22 billion) from not raising tobacco taxes and not simplifying the tobacco tax regime (Figure 1); this was calculated from the actual tobacco tax collections reported by the Directorate General of Customs and Excise,\textsuperscript{13} amounting to IDR 188.8 trillion in 2021. Among the scenarios simulated, scenario 3 yielded the highest revenues for that same year (at IDR 297.19 trillion). A summary of results is presented in Supplementary Table 1. Based on the simulation performed, the collections from tobacco taxes would have been higher for 2021, under any of the reform scenarios, whether the tiers were diminished to retain only six, five, or two tiers (Figure 1). However, the only scenario where the tobacco tax revenue gains would have been sustainable, after adjusting for inflation, was if the Ministry of Finance had simplified the tax regime to a two-tiered system while raising specific taxes by at least 25% in 2020 (Figure 2).

Figure 1. Nominal revenue comparison for 2021 between the collections declared by the Directorate General of Customs and Excise 13 (“Baseline”) and scenarios 1, 2, and 3. The gap between scenario 3 and the declared collections for 2021 suggests that up to IDR 108.39 trillion (or USD 7.2 billion) may have been lost.
As far as public health outcomes are concerned, smoking prevalence (Figure 3a) and per capita consumption of tobacco products (Figure 3b) would have only consistently declined if the taxation reform schedule targeted the highest increase in excise taxes (at least 25% increase over 2020 rates) and the lowest number of tiers. The same goes for the effect on the cumulative number of preventable deaths averted; however, the effects are even more pronounced, because collapsing the tax regime to a five or six-tiered system in the year 2020 would have still been insufficient to avert completely preventable deaths from tobacco-related diseases by 2022. Unless drastic simplification and tax increases are implemented, the public health gains would remain to be conservative.
Figure 3. Projected (a) smoking prevalence and (b) per capita consumption of tobacco products, by scenario. Around 1.3 million smokers would have quit by 2022, if the Ministry of Finance had a minimum 25% increase in tobacco excise taxes and a maximum of two tiers. The per capita consumption of tobacco products would be similarly affected, despite projected upward trends in population growth.

Figure 4. Projected cumulative number of deaths averted on an annual basis. The yearly decline in these cumulative figures indicates that the initial effects of the tax reform, blunting preventable mortality from smoking-related diseases, can be reversed over time by increases in income and purchasing power. It appears, however, that the public health impact would have been more durable over time, with a simplified excise tax regime, with the lowest number of tiers possible. Based on SEATCA's simulations, the greatest number of lives could be saved with swift simplification and raising of tobacco taxes (Scenario 3).
A simplified taxation regime for tobacco products, with higher rates of specific excise tax, is more effective at both generating revenue and reducing tobacco use and its negative impacts on society.

In 2016, the World Health Organization asserted that tax reforms imposing unitary systems offer rich lessons for both revenue generation and improving health outcomes. Enhanced and simplified tobacco taxes, especially when earmarked to social goods such as public health, are a win-win solution for improving tax administration and governance for public health. In countries like the Philippines, such reforms helped surmount political barriers preventing expanded social health insurance and helped diminish the burden of tobacco-related diseases.

However, the move for a similar tax reform in Indonesia has been slow and ad hoc for various reasons. One reason for forestalled tobacco control reforms, especially with tobacco tax, is that tobacco is provided a special status through the pre-emption of other laws. The tobacco tax burden is capped at 57% of net retail price, compared to alcohol, where that rate goes up to 80% of the sticker price of the product. In addition, tobacco industry influence has delayed the much-needed reforms in tobacco taxation. For example, in 2019, an election year, there was no tobacco tax increase, a reflection of the industry's vested interests in politics and tobacco control.

Economists have also asserted that the Indonesian excise tax regime for tobacco products is specifically designed to meet only revenue and job-generation targets. Indeed, past increases have reportedly not had an impact on consumption, and cigarettes had historically become more affordable, in real terms, in Indonesia between 1980 and 1998. Similar assessments were conveyed in SEATCA's Lost Funds Report, and the findings of that study also appeared to corroborate this assertion. Furthermore, it is worth noting that the employment of workers by the tobacco industry is largely affected by the following three factors: (1) mechanization of cigarette production, (2) purchase of imported raw materials, and (3) hikes in wholesale prices which drive up company profits while employing fewer people.

The 2021 Global Adult Tobacco Survey shows a miniscule 1.3 percentage point relative decline in smoking prevalence from 10 years ago; however, the absolute number of Indonesians, who smoke, increased by 8.8 million persons after adjusting for projected population changes provided by the government. Similarly, SEATCA's simulations show an insignificant decline in smoking prevalence, even with the best-case scenario (scenario 3). At this rate, Indonesia will be unable to achieve the globally agreed target of reducing smoking prevalence by 30% by 2025.

In the roadmap for tobacco tax simplification, any simplification and any raise in rates is always a step in the right direction; however, based on SEATCA’s simulation exercise, meaningful revenue and public health gains of such tobacco tax reform can only be achieved if the process is expedited. Reducing the regime to an eight-tiered system and increasing the tax rates to by 12.5% in 2021 was probably insufficient for balance — let alone meaningful gain — in either real revenue or public health.

The findings of this study are consistent with the Center for Indonesia’s Strategic Development Initiatives, which recommended large increases of tobacco tax rates and the swift merger of the tobacco tax tiers as a means of plugging unnecessary expenditure from preventable diseases.
Based on updated insights, Indonesia had lost the opportunity to collect an additional IDR 108.4 trillion (USD 7.2 billion) and avert 457,500 Indonesian deaths in 2021, as a result of listening to tobacco industry arguments opposed to higher tobacco tax increases. In the current situation, only the tobacco industry profits from the complicated tax structure, as more Indonesians continue to smoke and eventually become sick and die prematurely, creating a large but preventable burden on the national health system and economy.

This study recommends that it is critical for Indonesia to reform its tobacco tax system by collapsing the tiered taxation regime and raising the level of specific tax to a degree that meaningfully reduces the affordability and use of tobacco products. The scenarios simulated here illustrate only bare-minimum public health gains and moderate fiscal gains, underscoring the need for even more robust tax reforms, if Indonesia is to benefit from their full potential of revenue mobilization, preventing disease, and promoting health as part of sustainable development. This is even more relevant for building back better, following the setbacks induced by the COVID-19 pandemic.

Indonesia had lost the opportunity to collect an additional IDR 108.4 trillion (USD 7.2 billion) and avert 457,500 Indonesian deaths in 2021.
References


7. van Walbek C. A simulation model to predict the fiscal and public health impact of a change in cigarette excise taxes. Tobacco Control 2009:19, 31-36. doi:10.1136/tc.2008.028779


21. Indonesia to raise 2021 excise tax on tobacco products by 12.5% [Internet]. London (United Kingdom): Reuters; 2020 December 10. Available from: https://www.reuters.com/article/indonesia-tobacco-idUSJ9N2GS00B

### Supplementary Table 1. Summary of simulation results, by scenario

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Tariff Schedule, Scenario 1</th>
<th>Tariff Schedule, Scenario 2</th>
<th>Tariff Schedule, Scenario 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal revenue, in trillion IDR</td>
<td>234.16</td>
<td>274.89</td>
<td>284.96</td>
</tr>
<tr>
<td>Real revenue, in trillion IDR</td>
<td>234.16</td>
<td>270.56</td>
<td>270.72</td>
</tr>
<tr>
<td>Cumulative number of preventable deaths averted (thousands)</td>
<td>N/A</td>
<td>486.2</td>
<td>89.7</td>
</tr>
<tr>
<td>Smoking prevalence</td>
<td>33.5%</td>
<td>32.7%</td>
<td>33.4%</td>
</tr>
<tr>
<td>Annual cigarette consumption per capita</td>
<td>1730</td>
<td>1634</td>
<td>1680</td>
</tr>
</tbody>
</table>