Lost Funds:
A Study on the Tobacco Tax Revenue Gap in selected ASEAN Countries

Southeast Asia Tobacco Control Alliance

SEATCA

FCTC WHO FRAMEWORK CONVENTION ON TOBACCO CONTROL SECRETARIAT

REEP Research Unit on the Economics of Excisable Products

Lost Funds: A Study on the Tobacco Tax Revenue Gap in selected ASEAN countries

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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).

About the Economics of Tobacco Control Project (ETCP)
ETCP is housed in the Research Unit on the Economics of Excisable Products (REEP) at the University of Cape Town (UCT). It was nominated by the South Africa National Department of Health to establish a Knowledge Hub on behalf of the World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC) Secretariat. Establishing the Knowledge Hub illustrates South Africa's support of the WHO's FCTC, and leadership on tobacco taxation. Our role is to support the Parties to the FCTC by facilitating training, capacity building, technical assistance and knowledge dissemination in the areas of taxation (Article 6) and illicit trade (Article 15).

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Background

Since 2015, the Southeast Asia Tobacco Control Alliance (SEATCA) has published a biannual Tobacco Tax Index Report that identifies and tracks progress and gaps in tobacco tax policy implementation in the ASEAN countries against the WHO Framework Convention on Tobacco Control (FCTC) Article 6 Guidelines. These guidelines are based on best available evidence, best practices, and experiences of Parties that have successfully implemented tax and price measures to reduce tobacco consumption.

While some countries have made significant progress in implementing tobacco tax policies, the region as whole is advancing very slowly.

The Index shows that while some countries have made significant progress over the past several years in formulating and implementing tobacco tax policies according to the Article 6 Guidelines, the region as a whole is advancing very slowly. Most countries lack a long-term vision when it comes to the tobacco tax policy, and therefore do not evaluate nor update their policies regularly according to their fiscal and public health targets. The obstacles to the compliance with the WHO FCTC Article 6 are complex tobacco tax structures, small or non-existent tax increases that fail to decrease the affordability of cigarettes, weak tax administration, and tobacco industry interference in both tobacco tax policy formulation and administration.

As a result, most countries are foregoing important tax revenues while paying for the exponential growing costs of tobacco use. The COVID-19 pandemic has only exacerbated this situation. To ease the consequences of lockdowns, many governments are reluctant to increase tax on businesses, including the tobacco business, even though the tobacco sector as a whole has flourished. For example, British American Tobacco increased its profit by 10% in 2020, the year the pandemic hit most economies the hardest.[1]

Implementing the WHO FCTC Article 6 Guidelines would not only secure more revenue for governments struggling to cover the pandemic-related costs, but also boost the public health of the population by making cigarette less affordable and, subsequently, ease the pressure on the health care system, both in terms of its capacity[2] and its financing.

The goal of this report is to assess the magnitude of fiscal shortfalls in selected countries in the ASEAN that are missing out on collecting more tobacco tax revenue due to the failure to raise tobacco taxes to the recommended levels, reduce the affordability of smoking, remove tax benefits to tobacco companies, and/or remove complex tax structures. All these shortcomings not only shortchange the governments of the much-needed revenue, but also undermine the public health objectives of tobacco taxation.

The report is intended for both policymakers and tobacco control advocates who may be unaware of the full potential of implementing the evidence-based tobacco tax policy in their countries.

Methodology

Tax modeling relies on the well-established economic relationship between the demand for cigarettes and cigarette prices, as well as the epidemiological link between cigarette consumption and premature death. As such it can predict the impact of higher taxes on cigarette consumption the tax revenue and public health.

There are several tobacco tax models. This analysis uses the TETSiM model developed by an economist at the University of Cape Town (UCT). It is a simple tax simulation model programmed in Excel software where all model parameters such as the smoking prevalence, the population size, the GDP growth, inflation, existing tax rates, etc. are user-determined. Using the price and income elasticities of demand, the model calculates likely changes in cigarette consumption, smoking prevalence and excise tax revenues due to an excise tax change. The model is applicable to countries that levy specific, ad valorem, or mixed (specific and ad valorem) excise taxes.[3] The country-specific TETSiM models for Myanmar, Cambodia, and Indonesia were developed by the UCT staff specifically for this project.

The estimates for Vietnam were generated using the WHO TaXSiM model that operates on principles similar to the TETSiM model. Using the WHO TaXSiM model takes the advantage of access to government-level data and years of model refining by the SEATCA partner, Health Bridge Foundation of Canada, Vietnam Office.

The tax increases models are based on the recommendations provided by the WHO, the World Bank, and the local and international NGOs over the last 2 years and relate both to the tax structures and the tax levels.

Cambodia

Background

Cambodia has among the lowest tax burdens (25-31%) on cigarettes in the ASEAN region.[4] The amount of tax charged is also low, making cigarette smoking an affordable habit to most.

The 2004 Law on Taxation set the tobacco excise tax as 15% of 65% of the invoice price. The first major change came 10 years later in 2014 when the tax base increased from 65% to 90% of invoice prices, even though the international practice is to use 100% of a pre-determined tax base.[5] In addition, the choice of the tax base is not consistent with the best practice of using retail prices as the base.[6]

In 2016, the excise tax rate was increased from 15% to 20%, but still continued to use the suboptimal tax base of 90% of invoice prices. Therefore, the applied tax rate represented only 15% of the invoice price after the 2016 tax increase. There have been no further changes in tax since 2016 (Table 1).[7]

Table 1: Tobacco tax in Cambodia 2014 - 2020

	2014	2015	2016	2017	2018	2019	2020
Excise (% of 90% of invoice price)	15	15	20	20	20	20	20
VAT (% of retail price exclusive of VAT)	10	10	10	10	10	10	10

In addition to the ad valorem excise, there is also the VAT rate of 10%, the profit tax of 20%, a public lighting tax (3% of the invoice value), and a turnover tax (2% of the invoice value).

Imported cigarettes are subject to the excise tax and an additional 7% customs duty, both levied on the cost, insurance, and freight (CIF) value.[8]

Cambodia's ad valorem system is vulnerable to product undervaluation since it is based on invoice prices.

Cambodia's purely ad valorem system is vulnerable to product undervaluation (reducing the taxable product values in order to reduce the tax paid), especially since it is based on invoice prices. In addition, this system results in larger price differences between lower and higher-priced brands, providing an incentive for downtrading to cheaper products instead of quitting. This reduces the public health impact of any future tax increases.

Understanding the weaknesses of the current tax regime, Cambodia has been in the process of developing a tobacco tax roadmap as a long-term tax policy since 2018.[9] The roadmap considers shifting from ad valorem to either a specific or mixed tax regime.

Methodology

Table 2 shows the proposed policy changes that could have been implemented since 2019 if the 2018 roadmap was adopted. First, the tax base for the ad valorem excise tax would have changed from 90% of the invoice/CIF price to 100% of the invoice/CIF price. Second, a specific component of the tax would have been introduced in 2019. The proposal called for KHR 500 (USD 0.12) per pack in 2019 and for KHR 1,000 (USD 0.24) per pack in 2020.

Table 2: Proposed Tax Changes in Cambodia for 2019 and 2020

Year	Specific rate (KHR per pack)	Ad valorem rate	Tax base (% of CIF/invoice price)
2018 (actual status)	0	20%	90%
2019	500	20%	100%
2020	1000	30%	100%

We employed the TETSiM model to predict the impact of the proposed tax changes on cigarette retail prices, total consumption, prevalence, premature deaths avoided, tobacco excise tax revenue, excise burden and total tax burden.

The model starts with year 2018 using the 2018 tax rates and the cigarette market size for two types of products: the most popular brands (Ara and similarly priced brands) and the economy brands. It then applies price elasticity of demand (-0.4 for Ara and -0.6 for economy brands)[10] and the income elasticity of demand (+0.55)[11] to calculate changes in the cigarette market in 2019 and 2020 following the tax changes outlined in Table 2. The economic growth as reported by the World Bank serves as a proxy for the changes in income.

Table 3: Summary of Simulation Results 2019 – 2020

	2018	2019	2020
Average retail price per pack (KHR)	1491	2252	3103
Consumption (million packs)	644.8	530.5	460.5
Smoking prevalence %	16.6	15.1	14.1
Number of premature deaths avoided in each year	NA	53,929	36,594
Total tax revenue (billion KHR)	252.3	531.9	784.6
Total revenue gap (billion KHR)	NA	279.6	532.3
Excise tax revenue (billion KHR)	110.3	369.3	598.5
Excise revenue gap (billion KHR)	NA	258.9	488.2
Excise tax burden (%)	11.4	33.3	44.5
Total tax burden (%)	26.6	44.3	54.1

Results

The results (Table 3) show that the proposed tax reform, if implemented, would have reduced the smoking prevalence from 16.6% to 14.1%, or by 15.1%. This reduction would have averted 90,523 premature death just in 2 years. At the same time, the government would have increased its excise tax revenue by 443% and collected an additional KHR 811.9 billion (USD 198.2 million) tax revenue in 2019 – 2020, assuming that the actual revenue in those years was similar to 2018. This is a reasonable assumption given no tax changes in either 2019 or 2020. The 2020 revenue loss of KHR 532.3 billion (USD 130.0 million) represents about 0.5% of Cambodia GDP in 2020.[12]

The proposed tax reform would have reduced smoking prevalence and averted 90,523 premature deaths. The government would have collected an additional KHR 811.9 billion (USD 198.2 million) in 2 years.

Conclusions

One of the poorest countries in the ASEAN, Cambodia cannot afford to lose 0.5% of its GDP in foregone tax revenue. The time to act is now, when the country is looking for funding sources to help with the post-Covid recovery. The additional revenue and lower smoking rate thanks to higher tobacco taxes and lower affordability of smoking would bring Cambodia closer to achieving its Sustainable Development Goals (SDG) 2030. As demonstrated, the proposed changes in the tax structure and the tax level will not only generate the much-needed revenue, but also save lives and alleviate human suffering.

Indonesia

Background

Higher tobacco taxes are the most effective and the most cost-effective measure to curb tobacco use, reduce associated costs, and build a healthy Indonesian nation.[13] The tobacco excise tax in Indonesia averages only about 54% of the retail price, while the global best practice calls for a level of at least 70% of retail price.[14] The current policy of small tax increases (by about 10% annually)[i] does not keep up with inflation (~4.8%) and the rising level of income (~4.5%)[ii], making cigarettes in Indonesia more affordable over time.[15,16]

Even though Indonesia imposes a specific tax on cigarettes, its multi-tiered system is extremely complicated and mimics the less efficient ad valorem system.

[i] Even though the tax increased by 23% in 2020, the average annual tax increase for 2019 – 2020 adjusted for inflation was 11% since there was not tax increase in 2019.
[ii] Income dropped by 2% in 2020 due to Covid-19 pandemic, but it is expected to return to pre-Covid levels by 2021.

The current tax structure consisting of 10 tax tiers (Table 4) is administratively inefficient, invites tax avoidance and evasion, and undermines the public health benefits of higher tobacco taxes, since it creates wide price gaps between brands motivating users to switch to a cheaper one instead of quitting.

Table 4: Indonesia: Current Tax Structure and Tax Level

Cigarette Type	Group	Volume of production (billions of sticks)	Tariff (IDR/Stick)		
			2019	2020	2021
SKM (machine-made kreteks)	I	>= 3	590	740	865
	II A	< 3	385	470	535
	II B		370	455	525
SPM (machine-made white)	I	>= 3	625	790	935
	II A	< 3	370	485	565
	II B		355	470	555
SKT (hand-made kreteks)	I A	>= 2	365	425	425
	I B		290	330	330
	II	0.5 - 2	180	200	200
	III	< 0.5	100	110	110

The government of Indonesia has adopted several roadmaps towards simplifying tobacco tax structure. In the period of 2009 - 2015, the number of excise tax tiers decreased from 19 to 12 and a 2018 – 2021 roadmap aimed for further simplification to 5 tiers. The ultimate goal of these roadmaps was to end with one, or a maximum of two tiers. However, these plans were not implemented. This is extremely beneficial to the tobacco industry that keeps proposing its own tobacco tax roadmaps to the government in order to maintain the multi-tier system.[17]

It seems that the excise tax policies are primarily intended to achieve revenue goals with very little concern about high smoking prevalence and its negative economic consequences. The planned reduction in youth smoking prevalence for the 10 – 18 age group from 7.2% in 2013[18] to 5.4% by 2019,[19] for example, has not been achieved since the prevalence in this age group increased instead to 9.1% by 2018.[20]

Both 2020 and 2021 excise tax regulations missed the opportunity to reduce smoking prevalence by their failure to simplify the tax tier system and by keeping the tax rate on hand-made kretek constant in 2021.

Methodology

We employed the TETSiM model to predict the impact of a tax path Indonesia should have taken in 2020 and in 2021 in order to address its persistently high smoking prevalence. It reduces the current 10 tiers to 5 tiers in 2020, and further to 2 tiers by 2021, and increases tax rates annually by about 25% as recommended by both the Indonesian National Development Planning Agency (BAPPENAS)[21] and the WHO[22] (Table 5). The model ends with 2 tiers (one for manufactured cigarettes and one for hand-rolled cigarettes) out of concern for small businesses and its employees, even though the ultimate goal is to have only a one-tier specific tax system in Indonesia.

The model starts in 2019 using the 2019 tax rates and the size of the cigarette market by tax tier. It then applies price elasticity of demand (ranging from -0.6 for the lowest tier to -0.3 for the highest tier)[23] and the income elasticity of demand (ranging from 0.76 for the lowest tier to 0.32 for the highest tier)[24] to calculate 2020 and 2021 cigarette consumption while taking into account the economic growth in 2020 and 2021 as reported by BAPPENAS.

Table 5: Indonesia: Proposed Tax Structure and Tax Level

Cigarette Type	Group	Volume of production (billions of sticks)	Tariff (IDR/Stick)		
			2019	2020	2021
SKM (machine-made kreteks)	I	>= 3	590	740	850
	II A	< 3	385	470	850
	II B		370	470	850
SPM (machine-made white)	I	>= 3	625	790	850
	II A	< 3	370	790	850
	II B		355	790	850
SKT (hand-made kreteks)	I A	>= 2	365	425	500
	I B		290	425	500
	II	0.5 - 2	180	200	500
	III	< 0.5	100	200	500

Results

Table 6 shows results of the tax simulation with an estimate of the revenue potential as result of simplification of tax tiers in 2020 and in 2021, as well as an increase of excise tax on SKT that did not occur in 2021. The weighted average tax increase is about 25% in both years.

Table 6: Summary of Simulation Results for Simplified Tax Structure & Excise Tariff Increase 2020 – 2021

	2019	2020	2021
Average retail price per pack (IDR)	18,200	24,620	30,960
Consumption (billion sticks)	357	298	278
Smoking prevalence (%)	33.8	31.0	30.0
Number of premature deaths averted	NA	1,922,147	729,242
Cumulative number of premature deaths averted	NA	1,922,147	2,670,611
Excise tax revenue (trillion IDR)	164.51	176.16	214.34
Excise tax revenue gap (trillion IDR)	NA	11.22	40.56
Excise tax burden (% of retail price)	54.0	52.8	54.7
Total tax burden (% of retail price)	63.6	62.9	64.3

The excise revenue collection from cigarettes in 2020 was IDR 164.94 trillion[25](USD 11.44 billion), but it could have been IDR 176.16 trillion (USD 12.10 billion). Therefore, the revenue loss was IDR 11.22 trillion (USD 660 million).

The Ministry of Finance of Indonesia expects to collect IDR 173.78 trillion[26](USD 12.06 billion) from cigarette excise taxes in 2021. The model shows that if the proposed tax reform had been implemented, the excise tax revenue would have reached IDR 214.34 trillion (USD 14.77 billion). This is a revenue loss of IDR 40.56 trillion (USD 2.80 billion) in 2021 alone.

The combined revenue loss for 2020 and 2021 is IDR 51.78 trillion (USD 3.46 billion).

In terms of the public health impact, our model predicts 30% smoking prevalence by the end of 2021. The current tax policy is likely to achieve 31% smoking prevalence by that time.[27] This difference represents about 2 million smokers that would have quit if the government followed the best practice.

2 million more smokers would have quit if the government followed best practice tax policy.

Following proposed tax changes would prevent an additional 618,708 premature deaths in 2020 and 2021.

Our model predicts 2,670,611 cumulative number of preventable deaths averted. The tax changes implemented in Indonesia in 2020 and 2021 are expected to prevent 2,051,903 premature deaths.[28] Following the tax changes as proposed in Table 5 would prevent at least an additional 618,708 premature deaths in 2020 and 2021.

Conclusions

The tax revenue gap in Indonesia is especially large in 2021, because the government did not increase taxes on the hand-rolled kretek cigarettes in this year and continued with its complicated tax system of 10 tiers. The 2020 tax loss can be primarily blamed on the complexity of the tax system, because the tax was increased by 23% in 2020, an increase close to the recommended tax increase of 25%.

In order to avoid the revenue losses and so many preventable deaths, the tobacco tax policy in Indonesia needs to focus on changing the current tax structure, because it is administratively inefficient, invites tax avoidance and evasion, and undermines the public health benefit of higher tobacco taxes. All cigarettes inflict harm, independent of their type, and therefore should have the same tax rate. Simplifying the tax structure and increasing tobacco excise tax regularly above the level of inflation and income growth would reduce smoking prevalence, reduce the affordability of smoking, curtail health care costs, decrease the administrative costs of tax collection, and increase government revenue.

The additional revenue can be invested into the post-COVID recovery and to support the ambitious Indonesia Golden 2045 plan proposed by President Joko Widodo that focuses on health and human capital development.[29]

Myanmar

Background

The most popular tobacco product in Myanmar is betel quid mixed with tobacco (45% of tobacco market), followed by cheroots (43% of tobacco market). Other tobacco products hold a much smaller share of the market with cigarettes accounting for 5%, hand-rolled cheroots and cigars both accounting for 3%, and chewing tobacco accounting for 1% of tobacco market.[30]

A major change in the tobacco tax system in Myanmar came with the adoption of the Union Tax Law in April 2016 that introduced the Special Goods Tax (SGT)[iii] and changed the system from a purely ad valorem to a specific system with 4 tiers for cigarettes[31] (Table 7). The SGT is also levied on cheroots, pipe tobacco, cigars/cigarillos, smoking tobacco, and betel chewing preparation.[32] The Internal Revenue Department (IRD) determines the prices of tobacco products (based on information provided by the manufacturers and their own market survey). These prices are subject to the review by IRD and determine the tax rates.[33]

[iii] SGT is the same as excise tax.

In addition to the SGT, a Commercial Tax[iv] of 5% is levied on the duty-paid value. The Commercial Tax is waived for a local tobacco manufacturer with annual sales value less than MMK 20 million (USD 14,000).[34] All companies are subject to an Advance Income Tax of 2%.[35]

Table 7: Special Goods Tax Rates, Myanmar 2016 - 2020

	Price	2016	2017	2018	2019	2020
Cigarettes	< MMK 400 (2016 & 2017); < MMK 500 (2018); < MMK 600 (2018 & 2020) per 20 sticks	MMK 3 per stick	MMK 4 per stick	MMK 4 per stick	MMK 8 per stick	MMK 9 per stick
	MMK 401- 600 (2016 & 2017); MMK 501- 700 (2018); MMK 601- 800 (2019 & 2020) per 20 sticks	MMK 8 per stick	MMK 9 per stick	MMK 9 per stick	MMK 17 per stick	MMK 18 per stick
	MMK 601- 800 (2016 & 2017); MMK 701- 900 (2018); MMK 801- 1000 (2019 & 2020) per 20 sticks	MMK 12 per stick	MMK 13 per stick	MMK 13 per stick	MMK 22 per stick	MMK 23 per stick
	> MMK 800 (2016 & 2017); > MMK 900 (2018); > MMK 1000 (2019 & 2020) per 20 sticks	MMK 15 per stick	MMK 16 per stick	MMK 16 per stick	MMK 25 per stick	MMK 26 per stick
Cheroots	≤ MMK 10 per stick		MMK 0.50 per stick			
	> MMK 10 per stick		MMK 1 per stick			
	Any price	60%		MMK 0.25 per stick	MMK 0.75 per stick	MMK 0.80 per stick

Source: The Ministry of Finance, Internal Revenue Department. 2020.

Cheroots

Cheroots remain the main alternative to manufactured cigarettes. Still popular in rural areas, recent figures put the cheroot market at 25 billion pieces annually.[v, 36]

In 2018, the Local Cheroot Manufacturers and Distributors Association achieved a reduction in SGT on cheroots from MMK 0.50 – 1.00 per stick (the rate based on the price) to MMK 0.25 per stick independent of price (Table 7). Even though this was a simplification of the tax system, the reduction of the tax rate had a negative impact on tax revenue and possibly on the public health if it kept the prices of cheroots low. However, the tax loss on cheroot is much larger, because these products are taxed at a very low rate, and only a fraction of these products are being taxed.

[iv] Equivalent to VAT.
[v] The estimate is plausible given that the size of the cigarette market is about 10 mil sticks, and manufactured cigarettes are used by about 1/5 to 1/4 of smokers. Cheroots (cigars) are used by most smokers.

Methodology – Cheroots

There are at least three sources of cheroots tax revenue gap. The first occurred due to the 2018 tax reduction. We used the cheroots market volume of 25 billion pieces per year and two assumptions (the average tax rate of MMK 0.75 in 2017[vi] and no pass through of the tax cut as observed in the case of Ruby Red)[37] to calculate this revenue loss.

The second source of the tax revenue gap is the low tax rate. To calculate the revenue gap, we used the cheroots market volume and the 2020 tax rate of MMK 0.80 per stick (the tax represents about 5.3% of the retail price given the average cheroot price of MMK 15 per stick).[38] We then applied the excise tax that represented 70% of the cheroots price as recommended by the WHO[39] (Table 8).

Table 8: Calculation of Tax Gap, Cheroots, 2020

Variable	Formula	Values/Results
Volume of cheroots 2020		25 billion pieces
Price per stick 2020		MMK 15
Tax per stick 2020		MMK 0.80
Industry price 2020	Price 2020 – Tax 2020	MMK 14.20
Proposed price per stick	(Industry price/30) * 100	MMK 47.33
Proposed tax per stick	Proposed price – Industry price	MMK 33.13 (represents 70% of price)
Price increase (%)	(Proposed price – 2020 price) 2020 price	215.5%
Reduction in consumption/volume (price elasticity -0.36)[40]	formula for arch price elasticity **Arc Ed** = [(Qd2 – Qd1) / midpoint Qd] ÷ [(P2 – P1) / midpoint P]	From 25 billion to 17.13 billion sticks
Current estimated tax revenue	Current volume * 2020 tax	MMK 20 billion
Expected tax revenue	Expected volume * proposed tax	MMK 567.5 billion
Tax revenue gap	Current – Expected tax revenue	MMK 547.5 billion

While calculating the tax gap, we noticed that the actual SGT revenue from cheroots of MMK 786.34 million (Table 9) is much lower than the expected tax revenue in 2019. By subtracting the expected and the actual tax revenue on cheroot, we obtained the third source of the tax gap due to inadequate tax administration.

Table 9: Tax Revenue in 2019 (MMK million)

	Specific Goods Tax	Commercial Tax	Income Tax
Cigarettes	101,558.69	10,267.90	2,407.26
Cheroots	786.34	2480.39	243.94

Source: The Ministry of Finance, Internal Revenue Department. 2020.

[vi] According to the GlobaData, tax represents about 10% of cheroot prices.

Results – Cheroots

The revenue loss due to 2018 tax reduction on cheroots was MMK12.5 billion (USD 9.3 million)
This was calculated as:

Volume of 25 billion sticks per year[41] x Tax reduction of MMK 0.50 per stick = MMK 12.5 billion (USD 9.3 million)

The revenue loss due to low tax rate reaches MMK 547.5 billion (USD 385 million) (Table 8). If Myanmar imposes the WHO recommended tax on cheroots, it could have collected as much as MMK 567.5 billion (USD 399 million) in SGT on cheroots in 2020.

The actual SGT revenue from cheroots in 2019 was MMK 786.34 million. However, the tax authority should have collected about MMK 18.75 billion given the market volume (Table 8) and the 2019 tax rate of MMK 0.75 per stick. This means a tax gap of MMK 17.96 billion (USD 11.75 million) compared to the amount expected if all cheroots are taxed according to the current law (Table 7). It means that only 4.2% of the cheroots sold in Myanmar are being taxed according to the law.

A tax gap of MMK17.96 billion compared to the amount expected if all cheroots are taxed means only 4.2% of cheroots sold are being taxed.

Cigarettes

Myanmar relies on a complex tax structure with 4 tiers that leaves room for the industry to avoid taxes by simply changing prices, or by convincing the government to increase the price tier brackets. The presence of the multiple tiers also promotes brand substitution in response to a price/tax increase as opposed to quitting smoking. This not only leads to lower tax revenue, but also jeopardizes the public health of the population and results in many premature deaths.

Even though the SGT rates for cigarettes have been increasing annually since 2016 with the exception of 2018, the changes in the price tier brackets resulted in lower tax for some cigarette brands.

The 2019 tax increase signaled an attempt to bring the 4 tiers closer together as the tax doubled for the cheapest cigarettes and went up by 56% for the most expensive brands. However, the price tier brackets have also increased. This made it possible for the most popular cigarette brand Ruby Red to stay in the lower 3rd tier with its higher price of MMK 1,000 per pack even though it was previously in the top tier.[42]

The process of closing the gap between the tiers was abandoned in 2020 when the tax increased by just MMK 1 for all tiers (Table 7). There seems to be no plan to update or amend the 2016 SGT Law in terms of the tax structure.[43]

The sale of imported cigarettes is officially illegal in Myanmar with the exception of duty-free shops and hotels.[44] These imported cigarettes are levied import duty of 30% of CIF, the SGT, a Commercial Tax of 5% and an Advance Income Tax of 2%.[45] All imports are also subject to a license fee and 0.5% special landing charge.[46] The license fee is payable on the CIF value at a minimum of MMK 250 for a value up to MMK 10,000, and at MMK 50,000 for a value over MMK 10 million, although during the COVID-19 emergency this rate was changed to a minimum of MMK 30,000 to raise funds.

Methodology – Cigarettes

To calculate the impact of the 2018 tax freeze accompanied by the increase in price tier brackets, we used an example of the most popular cigarette brand Ruby Red. Ruby Red cost MMK 850 per pack in 2018. As a result of the 2018 tax change, this brand moved from the top 4th tier to the 3rd tier where it paid only MMK 13 per stick as opposed to MMK 16 per stick in the previous year. The tax difference of MMK 60 per pack was multiplied by the market volume of Ruby Red to obtain the revenue gap.

We also studied the impact of the 2019 tax increase that was accompanied by the increase in the price tier brackets. The price increase on Ruby Red brand was (MMK1000 – 850=) MMK 150 per pack. The tax for this brand went up by (MMK 22 –13=) MMK 9 per stick, or MMK 180 per pack. However, the tax change in 2018 provided MMK 60 of extra profit to the Ruby Red manufactures due to the tax decrease. This extra profit was decreased by MMK 30 per pack in 2019, even though there was still MMK30 extra profit for each pack compared to 2017. The 2019 tax loss on Ruby Red was similar to the 2018 tax loss.

To estimate the revenue loss due to the failure to simplify the tax system, we employed a tax simulation model TETSiM to study the impact the tax changes proposed by the tobacco control advocates (Table 10). These changes consist of higher SGT taxes and a reduction from the current 4 tiers to 3 tiers in 2019, and reduced to 2 tiers in 2020. The model starts with year 2018 using the 2018 tax rates and the size of cigarette market by tiers. It then applies tier specific price elasticities of demand (ranging from -0.5 for the lowest tier to -0.2 for the highest tier)[47] and the income elasticity of demand (+0.5)[48] to calculate 2019 and 2020 cigarette consumption following a tax simplification path. The economic growth as reported by the World Bank serves as a proxy for the income.

Table 10: Proposed Changes in SGT in Myanmar for 2019 and 2020

	Special Goods Tax (MMK per pack)		
	2018	**2019**	**2020**
Tier 1	80	240	600
Tier 2	180	640	1280
Tier 3	260	640	1280
Tier 4	320	640	1280
Total/ weighted average	228	572	1280

Results – Cigarettes

The impact of the 2018 change in price tier brackets on the revenue gap for Ruby Red brand shows that it was levied (16*20=) MMK 320 tax in 2017, but only (13*20=) MMK 260 tax in 2018.[49] Despite the tax reduction, the price of the brand remained unchanged in 2018.[50] Since Ruby Red accounts for about 40% of the market by volume,[vii] this change resulted in MKK 10.83 billion revenue loss[viii] (USD 8 million) for Ruby Red alone.

The impact of the 2019 tax change on the revenue gap for Ruby Red brand shows that it was levied (22*20=) MMK 440 tax in 2019. If it would stay in the top tier, it would have been levied (26*20=) MMK 520 tax in 2019. Since Ruby Red accounts for about 40% of the market by volume,[ix] this change resulted in MKK 14.44 billion revenue loss[x] (USD 9.5 million) for Ruby Red alone.

Table 11 presents the results of the simulation model. Our model seems to be well defined given that our predicted revenue of MMK 102.92 billion in 2018 is relatively close to the actual tax revenue collected by the authorities (MMK 101.56 billion). The small difference can be a result of either a tax leakage or some variations in segments' market shares.

[vii] Market volume in 2018 was 9,028.3 million sticks, or 451.415 million packs, according to the EM.
[viii] 40% of 451.415 million packs = 180.566 million packs of Ruby Red; each pack paying MMK 60 less tax. 60*180.566 million = MMK 10,834 million
[ix] Market volume in 2018 was 9,028.3 million sticks, or 451.415 million packs, according to the EM.
[x] 40% of 451.415 million packs = 180.566 million packs of Ruby Red; each pack paying MMK 80 less tax. 80*180.566 million = MMK 14,445 million

The model reveals that the combined tax loss in 2019 and 2020 was MMK 440.18 billion (USD 309.5 million) compared to the year 2018, the baseline. The proposed tax changes would have not only substantially increased the tax revenue, but also moved Myanmar closer to the compliance with the WHO recommendation in terms of tax share in retail price. At the same time, the prevalence of smoking could have declined from 16% to 14.2%, or by 11.3%. Such decline would have prevented 225,074 premature deaths.

Table 11: Tax Simulation Model, 2018 – 2020

	2018	2019	2020
Average retail price (MMK)	817	1192	1843
Consumptions (million packs)	451.42	402.14	352.84
Smoking prevalence (%)	16.0	15.1	14.2
Number of premature deaths averted	NA	109,165	115,909
Cumulative number of premature deaths averted	NA	109,165	225,074
SGT revenue (million MMK)	102,923	230,207	415,824
SGT revenue gap (million MMK)	NA	127,284	312,901
SGT share in retail price (%)	28.3	49.1	65.0

Conclusions

The cheroots market is the source of the largest revenue gap in Myanmar. This is due to the failure to impose the WHO recommended tax rate of 70% of retail price that leads to MMK 547.5 billion (USD 385 million) revenue loss every year. Additional loss is due to the inability to collect the applicable taxes on the cheroots. Here the tax gap reaches MMK 17.96 billion (USD 11.75 million) per year, because only about 4% of cheroots are being taxed properly. The lowering of the cheroots tax rate in 2018 costs the government additional MMK 12.5 billion (USD 9.3 million) in that year.

Despite the relatively low popularity of cigarettes in Myanmar, the tax loss amounted to MMK 440.2 billion (USD 309.5 million) in 2019 and 2020. The size of the tax loss in the cigarette market reflects higher prices compared to that of cheroots as well as the failure to follow the best practice in cigarette taxation that would make cigarette smoking less affordable.

Combining the cheroots (MMK 565.5 billion) and cigarette (MMK 327.3 billion) tax loss in 2020 results in an annual tax revenue gap of MMK 892.8 billion (USD 625.9 million).

Additional tax loss of at least MMK 25.3 billion (USD 17.5 million) occurred due to changes in the cigarette tiers prices.

Combining the cheroots (MMK 565.5 billion) and cigarette (MMK 327.3 billion) tax loss in 2020 results in an annual tax revenue gap of MMK 892.8 billion (USD 625.9 million), or about 0.8% of Myanmar's GDP.

Myanmar is currently in the process of developing a tobacco tax roadmap as a long-term tobacco control strategy.[51] This roadmap is projected to lead to a unitary specific tax rate for cigarettes and to a higher share of GST in retail price for all tobacco products. The sooner Myanmar adopts this roadmap, the earlier it can start collecting the much-needed tax revenue for national development and reduce the human suffering from tobacco use.

Vietnam

Background

Vietnam serves as an example of a country with both a weak excise tax structure and low excise tax level. The current special consumption tax (i.e. excise tax) rate for cigarettes in Vietnam is 75% of the pre-tax ex-factory price. Since the tax base is poorly defined, it is easily manipulated by the industry to reduce the amount of tax it pays.

This purely ad valorem excise system leads to large price differences between lower and higher-priced brands, providing an incentive for downtrading to cheaper products, thereby dampening any expected reduction in consumption after a tax increase.

In the last 15 years the tax rates in Vietnam have only increased three times: from 55% to 65% of the ex-factory price in 2008, from 65% to 70% of the ex-factory price in 2016, and from 70% to 75% of the ex-factory price in 2019.[52,53] These increases had little impact on retail cigarette prices because the ex-factory price has remained low and relatively unchanged when adjusted for inflation. In 2019, tobacco excise tax represented only 35.3% of retail price,[54] even though the WHO calls for this tax to represent at least 70% of the retail price in addition to making cigarettes less affordable over time.[55]

Ad valorem excise system causes large price differences between lower and higher-priced brands, providing an incentive to downtrading to cheaper products, dampening expected reduction in smoking.

As result of the poor tax policy, cigarettes in Vietnam became much more affordable since 2014, fueling Vietnam's enormous burden of tobacco-related death and disease.[56] At the same time, the government is losing excise tax revenue that remains stagnant (Table 12) despite the growing cigarette market.[57]

Table 12: Tobacco Excise Revenue in Vietnam, 2013 - 2018

Revenue	2013	2014	2015	2016	2017	2018
VND (trillion)	13.5	11.5	12.6	13.5	13.5	13.8
USD (billion)	0.58	0.50	0.54	0.58	0.59	0.60
Volume (million pieces)	NA	90,000	93,352	96,164	99,808	100,050

Source: Ministry of Finance, January 2021.

In addition to the excise tax, Vietnam also levies a 10% valued-added tax (VAT) on the total of the ex-factory price plus the special consumption tax, and a compulsory contribution to the Tobacco Control Fund worth 2% of pre-tax ex-factory price.[58] The import tariff is 135% of CIF, even though the cigarette import in Vietnam remains negligible.[59]

A large strong increase in taxes and a change in the tax structure are needed to make tobacco products less affordable and to reduce tobacco use and its health and economic consequences. Even though the best practice calls for a uniform specific tax, Vietnam can implement a mixed system by adding a specific tax to the ad valorem tax as a transition step. The mixed system would likely reduce the price gap between premium and discount brands, it would be easier for tax administration, and the revenue stream would be more stable and predictable. In addition, any future tax increases would likely have a greater public health impact.

Methodology

The Ministry of Finance is currently developing a tobacco tax roadmap to reduce the cigarette consumption and plans to substantially revise the current Law on Excise Tax adopted in 2014.

The proposals on how to revise the law discussed in 2019 included several options. The public health community, supported by the WHO, advocated for adding a specific tax of VND 2,000 per pack to the current ad valorem tax rate of 75% of the ex-factory price. This first tax increase was supposed to be followed by addition VND 3,000 per pack increase the following year ending up at VND 5,000 per pack specific excise tax plus 75% of the ex-factory price.

We estimated the impact of these proposed tax changes on tax revenue and public health using the WHO TaXSiM model that operates on principles similar to the TETSiM model. Using the WHO TaXSiM model takes the advantage of access to government-level data and years of model refining by the SEATCA partner, Health Bridge Foundation of Canada, Vietnam Office.

The model starts in 2019 using the tax rates and the size of the cigarette market in that year. It then applies price elasticity of demand (–0.3 for the premium brands, –0.5 for the mid-price brands and –0.7 for economy brands)[60] and the income elasticity of demand (+0.3 for the premium brands, +0.15 for mid-price brands and 0 for economy brands since the consumers of economy brands are more likely to trade-up for better brands than consume more of economy brands as their income increases)[61] to calculate what cigarette consumption would have been in 2020 and 2021, while taking into account the economic growth in 2020, the expected economic growth in 2021, and the temporary disruptions to production and distribution chains due to COVID-19.

Results

Table 13 shows results of the tax simulation with an estimate of the revenue potential as result of the proposed change in the tax structure by adding a specific component, which would increase from VND 2,000 per pack in 2020 to VND 5,000 per pack in 2021.

Table 13: Summary of Simulation Results for Vietnam, 2020 – 2021

Tax Option/ Outcomes	Current 2014 Law on Excise Tax: 75% Ad valorem of ex-factory price	CSO proposal: 75% Ad valorem of ex-factory price + VND 2,500/pack	Proposal: 75% Ad valorem of ex-factory price + VND 5,000/pack
	2019 (estimated values)	**2020** (simulated values)	**2021** (simulated values)
Average retail price per pack (VND)	14,000	16,600	20,200
Consumption (billion packs)	3,651	3,350	3,029
Smoking prevalence (%)	21.2	20.2	19.1
Number of smokers (millions)	15.2	14.6	14.0
Premature deaths averted	NA	200,000	200,000
Cumulative premature deaths averted	NA	200,000	400,000
Excise tax revenue (billion VND)	14,883	20,662	28,112
Excise tax loss	NA	5,779	13,229
Cumulative excise tax loss	NA	5,779	19,008
Total tax revenue (billion VND): VAT + Excise + compulsory contribution	18,753	24,962	32,997
Excise tax burden (% of average retail price)	29.1	37.3	45.9
Total tax burden (% of average retail price)	36.6	45.0	53.8

Source: WHO estimates, 2021.

The model estimates that under the current tax regime the government of Vietnam should have collected VND 14.9 trillion in 2019 (USD 634 million). If the new tax policy was implemented in 2020, the tax revenue would have reached VND 20.7 trillion in 2020 (USD 888 million), an increase by 38.8%. Increasing the specific excise component in 2021 to VND 5000 per pack would add additional VND 7.4 trillion in 2021 (USD 323 million). Therefore, by not adopting the tax reform in 2020 and in 2021, the government of Vietnam lost about VND 19 trillion (USD 825 million) in excise tax revenue assuming that its tax revenue collection would not change for other reasons (e.g., an increase in cigarette consumption, reduction in illicit cigarette market share) in those two years.

In terms of the public health impact, the model predicts 19.1% smoking prevalence by the end of 2021. Assuming that the smoking prevalence did not change under the current tax policy, about 1.2 million smokers that would have quit or not initiated smoking between 2020 and 2021 if the government followed the public health advice. This would have resulted in avoiding about 400,000 premature deaths under the standard assumption about the epidemiological link between cigarette consumption and premature death.

Conclusions

The tax model demonstrates the enormous revenue and life-saving potential of the proposed tax changes in Vietnam. In order to avoid the revenue losses and many preventable deaths, the government of Vietnam cannot afford to delay the much-needed excise tax reform, because every year of inaction represents enormous loss, both monetary and human. The additional revenue collected after a tax increase will be a welcome contribution to domestic resource mobilization efforts needed for the post-COVID recovery and for achieving the Sustainable Development Goals.

Changing the current tax structure is an imperative, because it is administratively inefficient, invites tax avoidance and evasion, and undermines the public health benefit of higher tobacco taxes. The tobacco industry strongly objects to a tax increase and the introduction of a specific component of the excise tax. It claims that a mixed (ad valorem and specific) tax will disadvantage the domestic brands compared to foreign brands. It also argues that a tax increase will lead to more illicit cigarettes on the market, job losses, and an adverse impact on the poor.

These claims are unsubstantiated based on the growing body of research evidence using data from Vietnam.[62,63,64]

Adding the specific component to the current tax and increasing it regularly above the level of inflation and income growth would reduce smoking prevalence, reduce the affordability of smoking, curtail health care costs, and increase government revenue.

Discussion and Recommendations

Raising tobacco taxes is the most cost-effective and feasible intervention to prevent and control non-communicable diseases (NCDs). Thanks to the huge health and economic benefits of implementing evidence-based tobacco tax policy, the WHO designates it as one of the Best Buys interventions.[65]

This report demonstrates the magnitude of the human and fiscal losses in several ASEAN countries that failed to implement the tobacco tax best practice. If the governments of Cambodia, Indonesia, Myanmar and Vietnam implemented the recommended tax changes, 1.3 million premature deaths could be prevented and additional USD 4.81 billion in tax revenue would have been collected in these 4 countries in the last 2 years alone (Table 14). The tobacco industry interfered in tax policies by opposing, pushing back tax increases or proposing low rates in these countries.

Apart from these 4 countries, another huge loss of human lives and tax revenue is happening in Lao PDR where the 25-year Investment License Agreement (ILA) signed by the government in 2001 with the joint-venture cigarette manufacturer prevents the government from collecting all applicable taxes.[66] The local tobacco companies[xi] are not only paying the lower tax rate, but also refusing to comply with the mandatory contribution to the Tobacco Control Fund (TCF) established in 2013. The fund is supposed to receive 2% of the profit of tobacco companies[xii] and an additional LAK 200 (USD 0.02) levied on each cigarette pack.[67] In protest against the 2019 tax increase, domestic producers, pointing to the ILA, stopped paying the specific tax. Since the specific tax is currently LAK 600 per pack and the local companies supply about 154.7 million packs each year to the domestic market,[68] the government is losing at least LAK 92.82 billion (USD 9.8 million) per year (or USD 19.6 million in 2 years) from just the specific component of the excise tax (Table 14).

Table 14: Revenue Benefit Enjoyed by Tobacco Industry in 2 Years (Cigarettes)

Country	Revenue Loss (USD million)
Cambodia	198.2
Indonesia	3,460.0
Myanmar	309.5
Vietnam	825.0
Laos	19.6
Total	**4,812.3**

Higher taxes are one of the low-cost tools the government can use to achieve the Sustainable Development Goals (SDG) 2030 set by the United Nations General Assembly in 2015. Lower tobacco use is directly linked SDG 3: Good Health and Well-Being, and indirectly linked to the poverty and inequality goals, sustainable economic growth, the environment, and good governance.[69]

[xi] Even though the ILA applies only to LTC, other local companies (e.g., Hongta and Lao Sakol) apply the same rates without the government permission.
[xii] The tobacco industry profit tax rate is therefore 26% as opposed 24% profit tax rate imposed on other businesses (KPMG, 2018).

Therefore, all governments should develop and implement long-term tobacco tax policies that include public health targets with periodic evaluations and adjustments. These policies need to take into account both price elasticity and income elasticity of demand, as well as inflation and changes in household income to make tobacco products less affordable over time in order to reduce consumption and prevalence.

Governments should apply a uniform specific tax system or a mixed system with a minimum specific tax floor, as these systems are administratively superior while also more effective in achieving the public health goals. In addition, all tobacco products should be taxed in a comparable way to prevent possible substitution and dampening the impact of higher taxes. Dedicating tobacco excise revenues for FCTC implementation, such as in Lao PDR and Vietnam, would speed up the process of lowering the tobacco-related death toll in the region.

Governments should also protect their tax policies from tobacco industry interference by adopting procedures for engaging transparently and accountably with the tobacco industry and not allowing it to undermine government taxation efforts.

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