



Health Taxation in the UNITED ARAB EMIRATES

Policy Brief

Draft version for review

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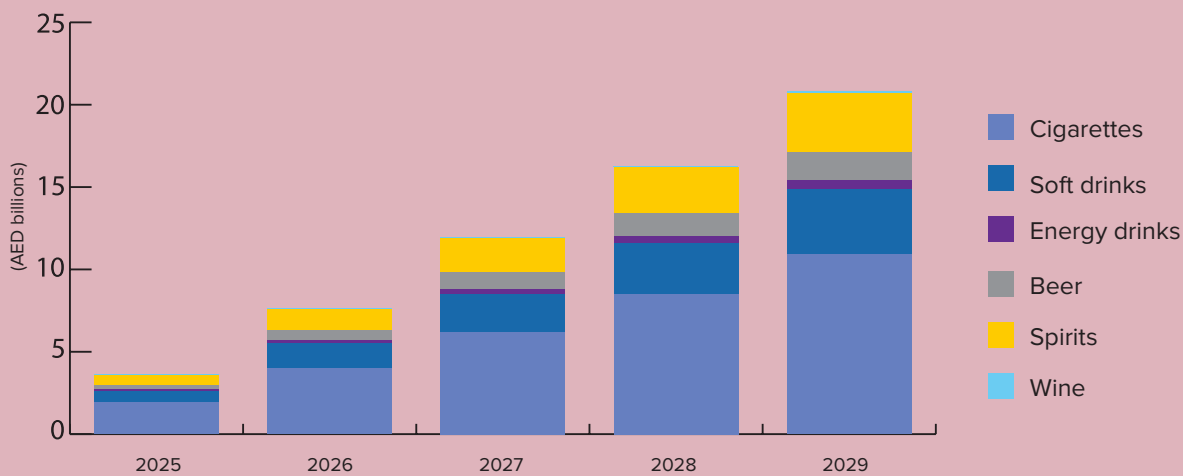
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Health taxes in the UAE

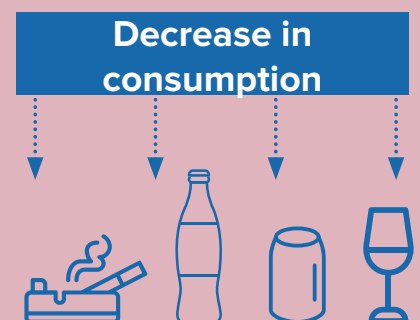
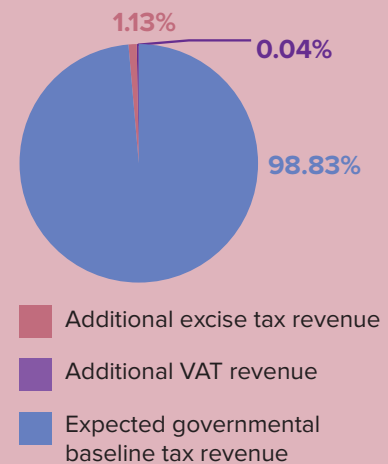
Key messages

For the period between 2025-2029, a moderate increase in health taxes on tobacco, alcohol and sugar-sweetened beverages in the UAE is predicted to generate **AED 21 billion** in additional tax revenue. If the UAE pursued a more ambitious increase in the same health taxes, it could expect additional revenue of **AED 39 billion** over the same five years.



The additional revenue under a moderate increase scenario is equivalent to around **1.21%** of all projected government tax revenue and around **4.50%** of all health-care expenditures for 2025. For the same year, an ambitious increase scenario is projected to result in additional tax revenue equivalent to **2.26%** of all government tax revenue and **8.39%** of total health-care expenditures. A conservative scenario would result in additional tax revenue equivalent to **0.72%** and **2.69%** of the same indicators for 2025.

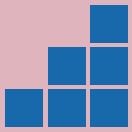
The moderate tax increase scenario would also lead to a **15%** decrease in cigarette consumption, **10%** decrease in sugar-sweetened beverages consumption, **7%** decrease in beer consumption, **12%** decrease in spirit consumption, and a **29%** decrease in wine consumption.



Recommendations

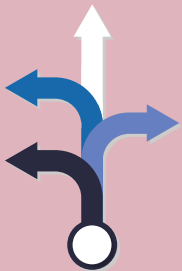
Making the most of health taxes

1



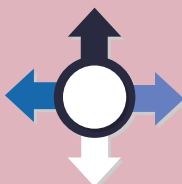
Increase and restructure taxes on tobacco, alcohol and sugar-sweetened beverages

2



Diversify revenue sources and reinvest tax revenue to improve population health and support sustainable economic growth.

3



Reform fossil fuel subsidies to promote renewable energy and diversify energy sources.



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1. Introduction and overview

Health taxes

The *Addis Ababa Action Agenda on Financing for Development* recognizes tobacco taxes as an important revenue stream for financing development [1]. Countries are realizing that the same logic applies to taxes on other health-harming products such as alcohol and sugar. Such ‘health taxes’ present one of the most effective policy measures to reduce consumption of unhealthy products. The *WHO Global Action Plan for Sustainable Development Goal (SDG) 3*, “to ensure healthy lives and promote well-being at all ages” [2], emphasizes the role of taxes on tobacco and sugar in improving population health while reducing healthcare expenditures and widening fiscal space to strengthen health systems.

A global increase in tax on tobacco, alcohol and sugar-sweetened beverages that increases retail prices by 50 percent could “*avert over 50 million premature deaths while raising over US\$20 trillion of additional revenues worldwide over the next 50 years*” [3].

While health taxes hold great potential, they remain under-utilized, including in the United Arab Emirates (UAE). The UAE has made progress in implementing taxes on tobacco, alcohol and SSBs, however these products remain either very affordable or the tax structure could be improved. Health taxes can support the government’s goals per the “We the UAE 2031” vision.

Approach

The tax projection model for the UAE estimates the potential additional government revenue the UAE could receive from increasing tax rates on tobacco, alcohol and SSBs under three scenarios:

- 1 an ambitious scenario based on implementing an ad valorem tax of 250 percent on cigarettes, 125 percent on alcoholic beverages and energy drinks and 200 percent on soft drinks
- 2 a moderate scenario based on implementing an ad valorem tax of 200 percent on cigarettes, 80 percent on alcoholic beverages and energy drinks and 140 percent on soft drinks
- 3 a conservative scenario based on implementing an ad valorem tax of 160 percent on cigarettes, 65 percent on alcoholic beverages and energy drinks and 120 percent on soft drinks

Please refer to **Annex 2** of this report for more details on the methodology.

Background

Since 2019, the Gulf Health Council (GHC), United Nations Development Programme (UNDP), the UN Inter-agency Task Force on the Prevention and Control of NCDs (UNIATF), and the World Health Organization (WHO) have been cooperating with the Ministry of Health (MOH) in the United Arab Emirates under a Joint Programme to strengthen the economic evidence base around population health, healthcare delivery and reform.

Under this Joint Programme, the Ministry of Health led the development, with UN and GHC partners, of an investment case for the prevention and control of non-communicable diseases (NCDs).¹ The study found that every year, the four main NCDs kill around 4,800 people in the UAE, with nearly one in five adults dying from NCDs before the age of 70 [4]. According to WHO estimates from 2022, NCDs cause 77 percent of all deaths in the UAE [5]. Furthermore, the premature death, morbidity and disability associated with NCDs have a substantial negative impact on socioeconomic development. NCDs are estimated to cost the UAE AED39.9 billion (US\$10.9 billion) annually, or 2.7 percent of GDP [4].

The rising incidence and prevalence of NCDs in the UAE can be attributed to the country's increased life expectancy and lifestyle changes over the last few decades. Modifiable risk factors including unhealthy diets, physical inactivity and tobacco consumption along with environmental factors, among others, contribute to the growing NCD burden [4]. The top ten risks contributing to total number of disability-adjusted life years (DALYs) in 2019 in the UAE and their percentage change between 2009 and 2019, ranked from the first to the last were: high body-mass index (133 percent); high blood pressure (140 percent); tobacco (136 percent); high fasting plasma glucose (147 percent); high LDL (142 percent); air pollution (119 percent); dietary risks (137 percent); kidney dysfunction (103 percent); drug use (17.8 percent); and occupational risks (33 percent) [6].

Addressing the health and economic burden of NCDs in the UAE will require whole-of-government and whole-of-society approaches, as well as targeted investments to scale-up cost-effective clinical and population-based interventions, enhancing efficiency in the health sector and overall public sector fiscal sustainability. Among the interventions modeled in the investment case, health taxes were the most cost-effective measure to improve population health. **Therefore, Gulf Cooperation Council (GCC) countries have requested UN and GHC support in modelling different scenarios for increasing health taxes and their revenue impacts.**

¹ This includes cancer, cardiovascular disease, diabetes and chronic respiratory diseases.

2. Consumption and taxation of unhealthy products in UAE

Tobacco, alcohol, unhealthy diet and physical inactivity are among the leading risk factors for NCDs, representing a massive health and economic burden in the UAE. To mitigate this growing burden, the UAE has introduced several policies. In 2017, all GCC countries, including the UAE, levied an excise tax on goods harmful to human health. The below provides an overview of consumption levels and tax policies for these goods in the country.

Tobacco products

In 2017/18, 9.1 percent of adults in the UAE were current smokers, the second lowest prevalence among the Gulf states after Oman (7.6 percent). Men are around 7 times more likely to be current smokers than women (15.7 percent vs 2.4 percent). The majority of smokers (89 percent) use tobacco products daily and daily smokers (aged 18–69) smoke on average 12 manufactured cigarettes. The majority of current smokers use manufactured cigarettes (70 percent), followed by shisha (9 percent), Medwakh (6.6 percent), tobacco pipes (0.8 percent) [7].

According to the most recent GYTS survey conducted in 2013, 12.2 percent of students (aged 13-15) currently used some form of tobacco product (16 percent of boys and 8.2 percent of girls). Of these current tobacco users, 6.2 percent smoked cigarettes [8].

United Arab Emirates imposes an ad valorem excise tax of 100 percent of retail price on cigarettes, in addition to VAT of 5 percent of retail price. Cigarettes also face import duty of 100 percent of the CIF value and a minimum duty of 200 Emirati dirhams per 1,000 cigarettes [9].

Currently, total tobacco taxes account for 72.59 percent of the retail price of the most sold brand of cigarettes, of which 48.78 percent is ad valorem excise, 19.05 percent is import duty and 4.76 percent a value added tax/sales tax [10].

The United Arab Emirates also levies an excise tax of 100 per cent on electronic smoking devices and liquids used in electronic devices and tools [11].

According to the Cigarette Tax Scorecard, the United Arab Emirates overall score in 2018² was 3.5/5, scoring above the Eastern Mediterranean region, high income and global averages, but still not on par with the top performing countries [12].

Sugar-sweetened beverages

Over-consumption of sugar has been considered a main contributor of obesity, diabetes and tooth decay, with sugar-sweetened beverages (SSBs) being a leading source of sugar consumption [13]. Examples of SSBs include but are not limited to: carbonated soft drinks, juices, flavoured milks, energy drinks, vitamin waters, sweetened teas, sweetened coffee drinks, fruit-flavoured drinks, and sports drinks³ [14].

² There was insufficient data reported in 2020 to calculate an overall score [12].

³ WHO defines SSBs as “all types of beverages containing free sugars, and these include carbonated or non-carbonated soft drinks, fruit/vegetable juices and drinks, liquid and powder concentrates, flavoured water, energy and sports drinks, ready-to-drink tea, ready-to-drink coffee and flavoured milk drinks”[13].

The United Arab Emirates ranks among the highest rates of consumption of soft drinks⁴ globally, with an estimated 27.3 gallons per capita [15]. Sugar-sweetened beverage consumption among youth in UAE is also of concern. Among children and adolescents, sugar-sweetened beverages are the most consumed beverages, accounting for 14 percent of total water intake [16]. A study conducted among university students found that 85 percent consumed energy drinks, and 16.7 percent drink them on at least a daily basis [17]. The International Diabetes Federation's Diabetes Atlas of 2021 reported adult diabetes prevalence in the United Arab Emirates to be 16.4 percent, much higher than the global diabetes prevalence of 9.8 percent [18].

In 2017, the United Arab Emirates introduced an excise tax of 50 percent on carbonated drinks⁵ and 100 percent on energy drinks. In 2019, this was extended to include sweetened drinks [11]. Ideally, the excise tax would be a specific excise tax based on the sugar content of the beverage based on WHO recommendations. See **Box 1** below for examples of best practices.

Box 1. Examples of specific tax structures based on sugar-content of SSBs and their impacts

- In the United Kingdom, a two-tier tax was levied on SSBs which charged manufacturers and importers GBP £0.24 per litre for drinks with over 8 grams of sugar per 100 milliliters and £0.18 per litre for drinks with 5 to 8 grams of sugar per 100 milliliters. As a result, households reduced their consumption by 30 grams of sugar per week [19]. The United Kingdom tax on SSBs has since been linked to decreases in obesity among girls and lower-income groups [20].
- In Portugal, reformulation following an increase in SSB taxes led to an 11 percent reduction of total energy intake through SSB consumption by the Portuguese population, averting 27 deaths each year [21].
- In South Africa, an SSB tax led to a decrease in sugar consumption by 57 percent for lower socioeconomic urban households and by 31 percent for youth, where about 30 percent of the reduction was due to reformulation and 70 percent was due to behaviour change [22].
- Chile's SSB tax increase from 13 to 18 percent [23] for beverages with more than 6.25 grams of sugar per 100 milliliters reduced the monthly volume of sugary soft drinks purchased by 21.6 percent [24].
- A study in the United States found that a 20 percent increase in the cost of SSBs could reduce consumption and lead to an average weight loss of 1.7 kilograms over one year for adults [25].

Alcohol

Alcohol consumption in the UAE is not widespread. In 2017/18, 2.5 percent of adults (aged 18-69) were current drinkers (3.7 percent of men and 1.2 percent of women). Among current drinkers, more than half (56 percent) had consumed unrecorded alcohol over the past 7 days. Home-brewed beer or wine was the most common form of unrecorded alcohol consumed by 47 percent of current drinkers in the last seven days, followed by alcohol brought over the border (35 percent) [7].

The United Arab Emirates has a customs duty for alcoholic products which varies depending on the port of entry in the Emirate, each Emirate also adds a sales tax. Abu Dhabi and Dubai both have a 30 percent municipality tax on alcohol sold in off-licenses [26]. Dubai has currently suspended the tax [27].

⁴ Here analysis of soft drinks included annual purchases of carbonated soft drinks and did not include bottled still or carbonated water, fruit or vegetable juices, coffee, tea, or sports drinks (in US gallons) [15].

⁵ This does not include unflavoured carbonated water. Concentrations, powders, gels or extracts intended to be made into a carbonated drink are also subject to the excise tax.

Box 2. Taxes and regulations on other health-harming products

A 2022 WHO Political Declaration recommends fiscal and price policies “that emphasize the consumption of whole grains, legumes, nuts, vegetables and fruit and reduce the demand for products high in fats, sugars and salt/sodium” [42]. In line with this recommendation, countries have enacted taxes on other health-harming products. Countries have taxed unhealthy foods based on different characterizations. For example, in 2014 Mexico enacted an 8 percent ad valorem excise tax on foods considered “nonessential foods” with more than 275 kcal per 100 grams. There were less purchases of taxed foods in the first three years of implementation of the tax, particularly among lower socioeconomic households [43]. Similarly, Hungary enacted the Public Health Product Tax in 2011 which is applied to “ready-to-eat food and beverages with high salt, sugar or caffeine content, with rates varying depending on the product category”. Assessments of the tax found that following the introduction of the tax purchases of processed food decreased, while purchases of unprocessed foods increased [43]. An additional fiscal approach to promote a healthy diet is to remove taxes, such as VAT, on healthy foods, namely fruits and vegetables. The Government of Tonga followed this approach by abolishing a 15 percent VAT on fruit, vegetables, eggs, water and yogurt. Similarly, the Government of Fiji lifted the 10 percent excise duty on imported vegetables resulting in a substantial increase in their import [43]. Countries are recommended to go even further by subsidizing these healthy foods to promote their consumption [43]. While not fiscal, the 2022 Updated Appendix 3 of the WHO Global NCD Action Plan 2013-2030 includes the recommended cost-effective intervention to reformulate food and beverages to be healthier through the elimination of trans-fatty acids [44]. The REPLACE action package provides technical guidance for countries to implement this intervention [45].

3. Fiscal context

Diversification of government revenues is a stated priority in all six GCC countries [28]. Yet, shifting away from fossil fuels remains a challenge with oil and gas production accounting for more than 40 percent of GDP in most GCC countries, except for the UAE at 30 percent and Bahrain at 18 percent. Hydrocarbon remains a key source of revenue in the United Arab Emirates, representing 30 percent of its GDP and accounting for 13 percent of its exports [29]. Efforts have been made to diversify government revenue such as the introduction of Value Added Tax and Corporate Income Tax. In 2022, tax revenue accounted for 13.2 percent of GDP [30]. The UAE in its “We the UAE 2031” vision also sets out goals to increase the contribution of the tourism sector to AED 450 billion and increase non-oil exports to AED 800 billion [31].

Historically, the UAE has spent a large amount on subsidizing fossil fuels, ranking 8th in 2013 and total subsidies surpassing 20 billion dollars [32]. In 2015, the UAE removed fuel subsidies to decrease the burden on the national budget, reduce fuel consumption, increase public transport use and alternative fuel use [33], [34]. However, following the COVID-19 pandemic the government introduced various fiscal measures including support to lower electricity bills by 20 percent for the private sector subnational support measures such as the Ghadan-21 program in Abu Dhabi which included water and electricity subsidies to citizens [33].

The UAE has also set out clear aims to diversify its energy sources. UAE’s Energy Strategy 2050 includes targets to increase clean energy to account for 50 percent of total energy. The strategy also includes the governments plan to invest AED 600 billion by 2050 to meet the increasing demand for energy and promote sustainable economic growth [35].

The UAE has among the highest total health expenditure as a percentage of gross domestic product of the six GCC countries at 5.6 percent. In 2020, the UAE spent US\$2,191 per capita on healthcare – a significant increase from US\$753 in 2000. In 2020, 61 percent of the total health expenditure in the UAE was provided by the government, a decrease from 69 percent in 2000. Private health expenditure increased to 39 percent and out-of-pocket health expenditure decreased to 11 percent [36].

4. Cross-border harmonization

Cross-border tax coordination helps to ensure the effectiveness of health taxes by coordinating the costs and affordability of unhealthy products across neighbouring countries. Without such coordination, health taxes can be undermined through the import of lower-taxed products from neighbouring countries, tax avoidance, and cross-border smuggling. This may encourage consumption of unhealthy products purchased abroad, obstructing the goal of health taxes to reduce consumption. If countries coordinate on cross-border taxation, there is less incentive to undercut tax rates, as countries have similar rates, and the efficiency of taxes is maximised [37].

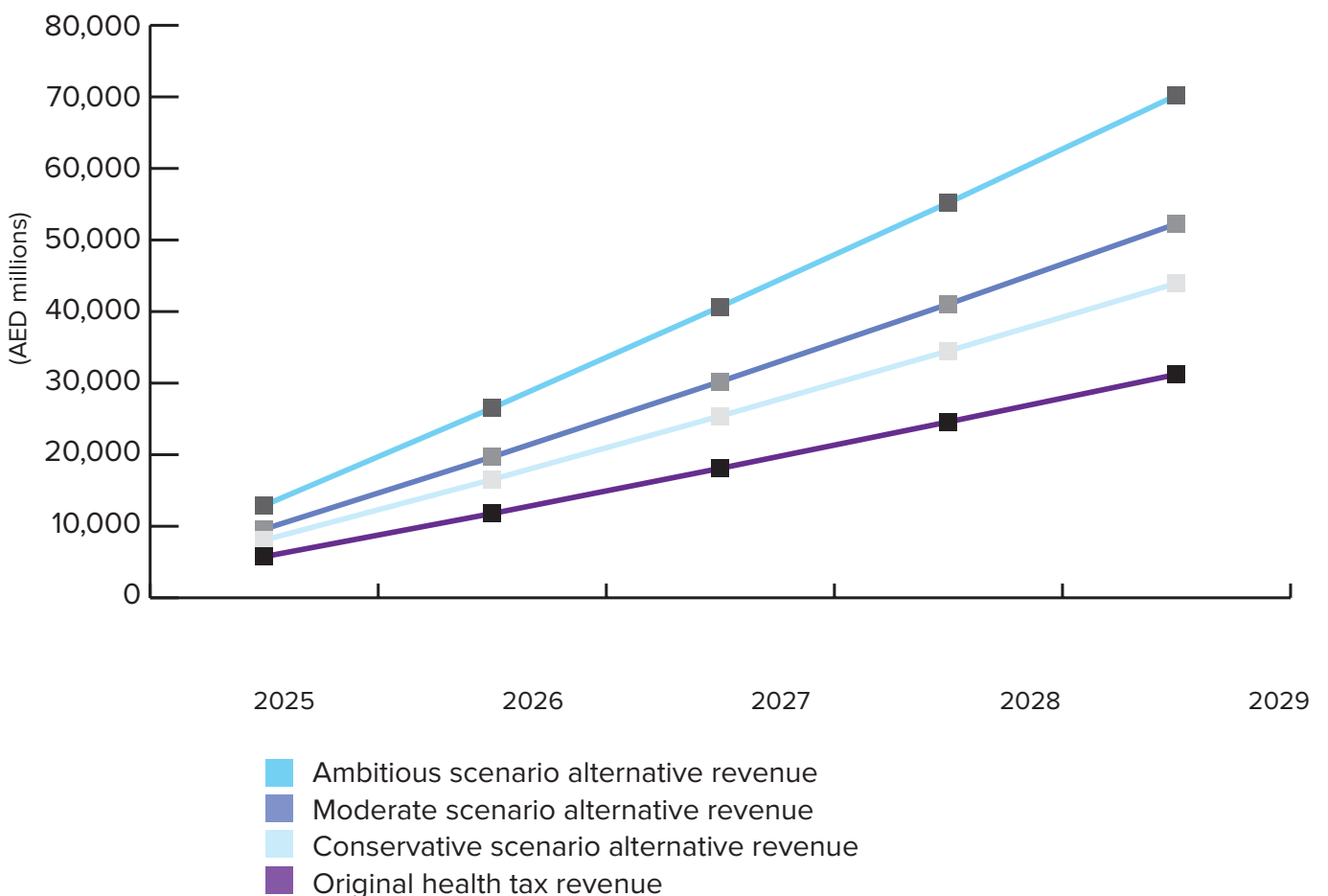
Over the years, the GCC has demonstrated increased commitment to ensure cross-border tax coordination. In the Gulf region, an agreement exists to address coordination of health taxes across borders – the Common Excise Tax Agreement of the States of the GCC of 2016 to adopt and impose excise taxes on goods that are deemed harmful to human health and the environment [38]. This decision embodied the first step away from a historical regime of only applying import duties on these products [39]. Although the GCC countries have levied new excise taxes as a regional bloc, each country levies different additional taxes on products such as import duties and different rates of sales tax. Excise taxes on unhealthy goods are in place in most GCC countries and are set according to the GCC standard [40].

5. Main findings

For the period between 2025-2029, increasing excise tax rates on tobacco, alcohol and SSBs⁶ in the UAE is predicted to generate:

- **AED 39 billion under an ambitious scenario; including AED 38 billion from additional excise tax and AED 1.2 billion from additional VAT;**
- **AED 21 billion under a moderate increase scenario including AED 20.4 billion from additional excise tax and AED 674 million from additional VAT; and**
- **AED 12.7 billion under a conservative scenario, including AED 12.2 billion from additional excise tax and AED 563 million from additional VAT.**

Figure 1: Scenario comparison: alternative total revenue from excise tax and VAT (current AED, non-discounted, cumulative)



Besides excise tax revenues, the increase in excise taxes would also raise additional revenue from VAT as a result of higher VAT tax base (net-of-VAT price which includes excise tax). The moderate scenario is forecasted to bring an additional AED 21 billion between 2025 and 2029.

⁶ As the UAE applies a higher tax rate on energy drinks, this was reflected in the model by modelling soft drinks separate from energy drinks.

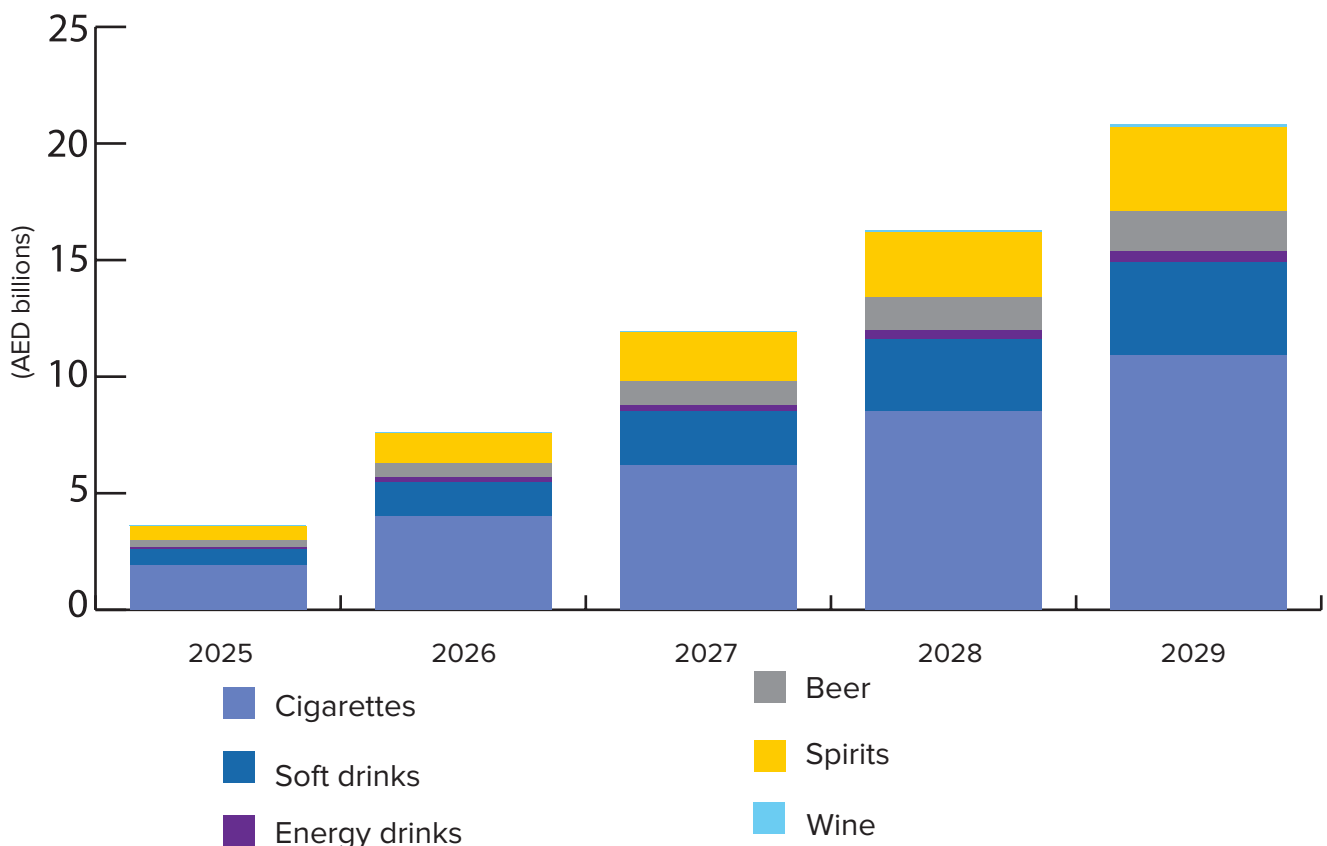
The additional revenue under a moderate increase scenario is equivalent to around 1.21 percent of all projected government tax revenue and around 4.50 percent of all health-care expenditures for 2025. For the same year, an ambitious increase scenario is projected to result in additional tax revenue equivalent to 2.26 percent of all government tax revenue and 8.39 percent of total health-care expenditures. A conservative scenario would result in additional tax revenue equivalent to 0.72 and 2.69 percent of the same indicators for 2025.

Table 1. Total additional tax revenue in 2025

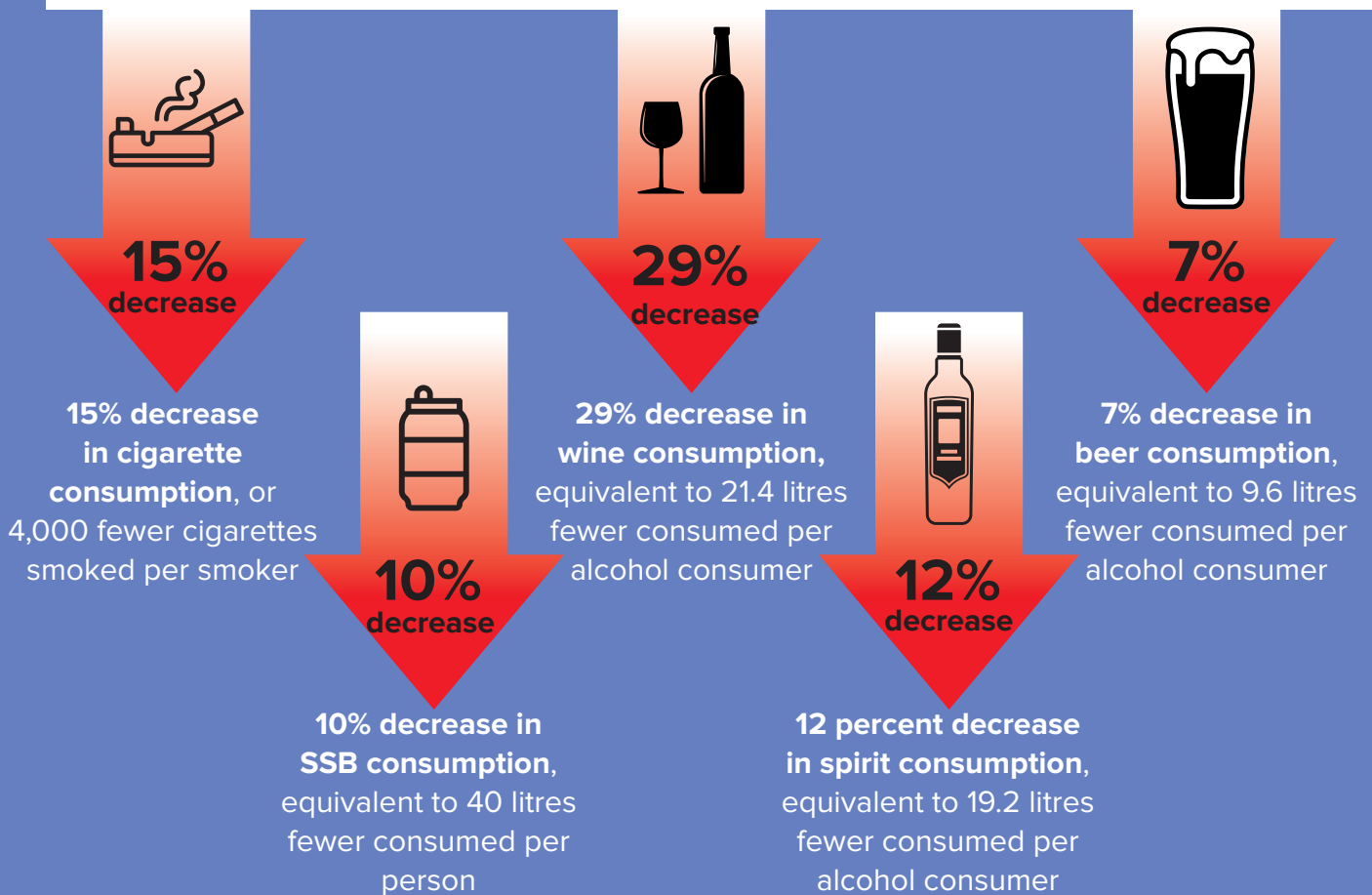
Tax increase scenario	Total additional health tax revenue in 2025	Additional tax revenue as share of				
		GDP (%)	Total tax revenue (%)	Total healthcare expenditure (%)	Household out-of-pocket health expenditure (%)	Government healthcare financing schemes (%)
Ambitious	7,165,281,214	0.44	2.26	8.39	98	23
Moderate	3,844,733,734	0.23	1.21	4.50	53	12.07
Conservative	2,293,590,552	0.13	0.72	2.69	31	7.20

Under a moderate scenario, over five years, the tax on cigarettes is projected to contribute most of the additional revenue (AED 11 billion), followed by soft drinks (AED 4.1 billion), spirits (AED 3.6 billion), beer (AED 1.8 billion), energy drinks (AED 557 million) and wine (AED 90 million).

Figure 2: Cumulative additional health tax revenue from excise tax and VAT under a moderate scenario (current AED, non-discounted)



Scaled-up health taxes would significantly reduce consumption of tobacco, alcohol and SSBs. Over the five-year period, the moderate excise tax increase scenario would lead to:



Reinvesting the additional revenue from two years of projected health tax increases under the moderate-increase scenario, or just one year under the ambitious scenario, could finance 15 years' worth of NCD prevention and control measures, which have the potential to save 32,000 lives and AED 20.4 billion [4].

6. Conclusion and recommendations

The result show that beyond improving public health, increasing taxes on tobacco, SSBs and alcoholic beverages has the potential to significantly increase government revenues. This would assist the Government of the United Arab Emirates to advance economic growth and the prosperity of society in line with its “We the UAE 2031” strategy.

To increase the success of health taxes, tax reform requires a robust tax and customs administration regime, good policy design, as well as effective communication and coordination among multiple stakeholders, to promote consensus building. Public support for health taxes is important and should not be overlooked. The GCC makes tax decisions as a regional bloc and as such the UAE can play a key role by providing evidence of the fiscal and health benefits of increasing health taxes, leading the way for strong health taxation regionally and globally.



Making the most of health taxes

1

Increase and restructure taxes on tobacco, alcohol and SSBs

Tobacco

The UAE has made progress making cigarettes less affordable in recent years [12], however there remains scope to increase and restructure taxes to reduce consumption and substitution. The UAE is encouraged to consistently raise the tax share of the retail price of tobacco to meet or exceed 75 percent of the retail price (considered in the WHO Report on the Global Tobacco Epidemic, 2021 as a high-level of achievement) [41]. The UAE can also consider increasing excise taxes on tobacco to represent at least 70 percent of the retail price, as recommended in the WHO Technical Manual on Tobacco Tax Administration [42].

It is also recommended to revise tax rates frequently with regard to income growth to prevent increasing affordability of tobacco.

The UAE can also consider introducing legislation to require a minimum unit price for tobacco products and banning price discounts and promotions, in addition to reducing or banning duty-free sales of tobacco products to further decrease the affordability, reduce consumption and increase tobacco tax revenue.

Given the high income levels in the UAE, decision makers can look to the experiences of countries with high tax rates and high cigarette prices such as Australia or New Zealand, where the prices of cigarettes in PPP are still higher than in the UAE. Australia and New Zealand both have high specific excise tax rates at 69 and 65 percent of the retail price of the most sold brand, respectively. Combined with regular price increases to adjust for inflation, these excise taxes lead to high consumer prices for tobacco products in those countries.

Alcohol

Increasing taxes on alcohol can help reduce consumption and the associated health consequences, while also bringing economic benefits. Notably, tourist alcohol purchases contribute to the alcohol tax revenue discouraging consumption among everyone in the UAE, not only among the locals. Moreover, it is important that the UAE harmonizes tax rates imposed on alcoholic beverages across those Emirates in which alcohol is legally permitted.

SSBs

The UAE can increase and modify its tax structure on SSBs to improve population health and increase government revenue. The UAE should consider taxes on non-sugar sweetened beverages (e.g. artificial sweeteners) based on health grounds.⁷ Although not modeled, the UAE should shift from an excise tax based on the price alone to using a specific tax structure that is based on sugar content [43] that is applicable to all types of SSBs and does not differentiate between SSBs and energy drinks. The tax may be based on sugar content as in South Africa, or based on thresholds as in the United Kingdom which levied a two-tier tax on SSBs which charges GBP £0.24 per litre for drinks with over 8 grams of sugar per 100 mL and £0.18 per litre for drinks with 5 to 8 grams of sugar per 100 mL.

This would influence consumer choice, encouraging individuals and households to choose smaller portions and/or lower-sugar beverages, if they do not choose to switch to water or other non-SSBs. A tiered, specific tax structure, in addition, motivates manufacturers to lower the sugar content in their products, also known as reformulation, to qualify into a lower tax tier (see Box 1 on page 6). The UAE should ensure that all beverages containing sugar are taxed.

2

Increase taxes on alcohol and unify tax rates across the Emirates

Despite comparatively low levels of alcohol consumption in the UAE, increasing taxes on alcohol can still help reduce consumption and the associated health consequences, while also bringing economic benefits. Notably, such taxation can help discourage the consumption of spirits, the most frequently consumed alcoholic beverages in the UAE. Additionally, tourist alcohol purchased contribute to the alcohol tax revenue discouraging consumption among everyone in the UAE, not only among the locals.

The differing tax rates across the Emirates may hinder pricing and tax measures to reduce consumption in the country. Customs duties vary depending on the port of entry and Emirates can levy additional municipality taxes (Abu Dhabi imposes a 30 percent tax while Dubai has temporarily reversed this). The United Arab Emirates would benefit from unifying tax rates to maximise the health and revenue benefits from increasing taxes.

⁷ In 2023, WHO released a new guideline to not use non-sugar sweeteners (NSSs) to control body weight or reduce risk of NCDs. The guideline is based on a systematic review of available evidence suggesting that NSSs may increase the risk of type 2 diabetes, cardiovascular disease and mortality in adults. For more information, see: <https://www.who.int/publications/item/9789240073616>

3

Diversify revenue sources and reinvest tax revenue to improve population health and support sustainable economic growth

Health taxes are an efficient way for the government to diversify financially, shifting away from reliance on hydrocarbon and generating alternative revenue, while promoting population health and supporting sustainable development. Despite efforts to diversify, hydrocarbon remains a key source of revenue in the United Arab Emirates, representing 30 percent of its GDP and accounting for 13 percent of its exports [29], making it vulnerable to macroeconomic volatility from oil price fluctuations.

The UAE can strengthen economic stability by increasing investment in other sectors, by developing the regulatory and institutional framework to provide sound policies that ensure successful economic diversification. The UAE can use health tax revenues to promote growth in non-oil sectors such as tourism as set out in the “We the UAE 2031” [31]. The UAE can also allocate revenue to advance population health.

The UAE could increase public support for higher health taxes by informing the public on how additional tax revenue will be spent. For example, the Philippines announced in advance how tax revenues would be earmarked towards expanding universal health coverage (UHC), thereby gaining overwhelming public support for the tax increases. Earmarking revenue from excise taxation for health systems strengthening and/or the SDGs has been implemented in many countries. While the Philippines earmarked excise tax revenues towards UHC, Egypt allocated tax revenue from tobacco products to fund its national health insurance [44].

Annex 1. Discussion of key policy considerations

Equity implications

Tobacco and SSB companies often use misinformation to discourage governments from taxing unhealthy products [45]. For example, they will use the argument that health taxes are regressive and unfair to the poor. In reality, unregulated policy environments are unfair to the poor because they reinforce inequities. Implementing or increasing health taxes has multiple benefits on health, poverty reduction and education that accrue mostly to the poor, while wealthier consumers end up paying the main portion of the tax increases [46].

Recent evidence confirms that health taxes bring net gains to lower-income households [46]–[48], in part by reducing the incidence of NCDs which disproportionately affect low-income groups. Out-of-pocket expenditures on health represent a greater proportion of income for poorer households rendering them less able to afford quality care when it is needed most. Lower-income households are more responsive to tax changes, decreasing their consumption more in response to higher prices. For instance, a study in Germany found that a 20 percent SSB tax reduced consumption in all individuals 15-29 years old, with higher reductions in low-income groups compared to middle- or high- income groups [49]. Two years after the introduction of an SSB tax in Mexico, households with the fewest resources were more responsive to the tax, reducing their SSB purchases by 12 percent, compared to 8 percent among the general population [50], [13].

This pro-poor effect can be amplified by earmarking revenues from health taxes to programmes targeting poorer groups, and generally by reinvesting into the health sector (see **Box 3** below). In addition, the COVID-19 pandemic has exacerbated inequalities and governments are advised to adapt tax and fiscal policies to address these, as well as secure financing and promote sustainable economic growth [51].

Box 3. Example of a catalytic investment

The estimated additional annual tax revenue generated under a moderate increase scenario as modelled here totals AED 21 billion, representing an opportunity to further improve health by reinvesting into the health sector. For instance, as modeled in the Case for Investment in Prevention and Control of Non-communicable Diseases in the United Arab Emirates, investing to scale-up highly cost-effective NCD prevention and control measures would save more than AED 20.4 billion⁸ in economic losses and 32,000 lives over 15 years [4]. Implementing these measures would cost an estimated AED 9 billion, which could be covered by the additional revenue expected to be raised by increases in health tax revenue in 2026.

⁸ The future economic benefits are discounted to the net present value by the discounting rate of 3 percent.

Illicit trade in tobacco products

Increases in tobacco taxes are often opposed by the tobacco industry with the argument that they will lead to increases in illicit trade. Evidence demonstrates however, that raising tobacco taxes is not accompanied by significant increases in illicit trade [52]. The tobacco industry's claims about the size of the illicit market have often been proven to be misrepresentations [52]–[54] with most industry-funded studies on the impact of taxes on the illicit market having serious methodological limitations [56]. Some studies find that the tobacco industry itself is responsible for the production of the majority of illicit cigarettes [57].

In reality, the impact of taxes on illicit trade is limited [58] and empirical data shows that the illicit market is often larger in countries with low taxes and prices than in countries with higher taxes and prices [59]. Other factors, such as the strength of tax administration and enforcement, social norms and market characteristics play a more important role in the size of the illicit market [60].

To appropriately address illicit trade, governments can implement policy, administrative, and enforcement measures to reduce illicit trade while increasing tobacco taxes [52]. Regulation and monitoring of the entire supply chain significantly reduces unofficial tobacco flows as well as consumption [61]. The WHO FCTC's Protocol to Eliminate Illicit Trade in Tobacco Products provides a framework and guidance to curb illicit trade, in accordance with WHO FCTC Article 15.

Box 4. Examples of tobacco tax reforms and impacts on illicit trade

- Türkiye substantially increased its tobacco tax in January 2013 and the size of the illicit cigarette market remained stable at 12 percent five months after the tax increase [51].
- Significant tax increases in South Africa in the 1990s (from 38 to 50 percent of the retail price) led to only small increases in illicit trade prevalence, amid a doubling of excise tax revenue [62].
- In the United Kingdom, the market share of illicit cigarettes declined from 31 percent in 2000 to 21 percent in 2010 [63] despite increases in cigarette taxes and related revenues; it was also linked to a decline in consumption [64].
- A study from Thailand reported that an increase in cigarette excise taxes decreased consumption but had no impact on the level of illicit trade [65].
- In Viet Nam, the illicit cigarette market share declined from 21 percent in 2012 to 13.7 percent in 2017, despite an ad valorem tax increase from 65 to 70 percent over the same period [66].

Annex 2. Methods

UNDP developed a model in 2020 for estimating potential additional government revenues from raising excise tax rates on tobacco, alcohol and SSBs. The methodological approach builds on previous efforts to quantify excise tax revenues in a static context [67] and is extended by estimating short-term future revenue. This study uses the UNDP-developed model while further accounting for lower consumption due to higher prices.

The model pools estimates for the initial quantity of goods sold from multiple sources, thus smoothing data gaps and measurement errors. It then constructs a range (i.e. a minimum, median and maximum) of consumption levels for tobacco, soft drinks, energy drinks and alcohol (beer, wine and spirits) in a given year in the United Arab Emirates. This is taken as the main input variable to project government tax revenues after an increase in excise tax rates. For the UAE, the model projects revenues following taxes that increase the prices of tobacco by 50 percent of retail price and SSBs by 20 percent in a moderate scenario. The model also projects revenue in a high (75 and 50 percent respectively) and conservative scenario (30 and 10 percent respectively). That is, the target price increase is the modelling constraint and the required increase in the excise tax rate is an outcome parameter of the model.

The model accounts for changes in demand due to higher retail prices after tax increases when calculating the additional tax revenue. **Table 2** below provides an overview of product elasticities used in the model.

Table 2: Product price elasticities of demand and sources

Tobacco products	-0.4	Delipella et al (2022) [68] WHO FCTC 2010 [69]
SSBs	-0.6	Alsukait et al (2021) [70]
Wine	-0.77	Tian and Liu (2011) [71]
Beer	-0.38	Tian and Liu (2011) [71]
Spirits	-0.7	Tian and Liu (2011) [71]

The model estimates future tax revenue by accounting for changes in input variables, including expected revenue growth for each product, expected sales volume growth, expected growth in per capita consumption, population growth, consumer price index for each product and GDP growth.

Products taxed in the model include:

- Tobacco products: The model focuses on manufactured cigarettes. It does not include other smoking tobacco, cigars and cigarillos due to relatively lower volumes of consumption in comparison to manufactured cigarettes.
- Soft drinks include any beverage to which any source of sugar or other sweetener is added (such as fruit nectars and soft drinks with fruit juice content, and sports drinks) as well as carbonated beverages (such as cola drinks and lemonades). These include ready-to-drink beverages as well as any concentrates, powders, gels or extracts which can be converted to drinks.

- Energy drinks include all beverages which may contain stimulants or substances which provide mental or physical stimulation, including but not limited to: caffeine, taurine, ginseng and guarana. Energy drinks shall also include any concentrates, powders, gels or extracts which can be converted to energy drinks.
- NB: Coffee and tea-based drinks are not covered due to lack of data. Beverages based on milk where milk represents more than 75 percent of the prepared drink are not subject to the tax

Table 3: Baseline tax rates

	Baseline ad valorem (tax based on retail price)	Specific tax rate (tax based on volume, alcohol or sugar content)
Cigarettes	100%	0 AED
Soft drinks	50%	0 AED
Energy drinks	100%	0 AED
Wine	50%	0 AED
Beer	50%	0 AED
Spirits	50%	0 AED

Table 4: Modeled tax rates for conservative, moderate and ambitious scenarios

	Conservative	Moderate	Ambitious
Cigarettes	Ad valorem:160%	Ad valorem:200%	Ad valorem:250%
	Specific: 0 AED	Specific: 0 AED	Specific: 0 AED
Soft drinks	Ad valorem:65%	Ad valorem:80%	Ad valorem:125%
	Specific: 0 AED	Specific: 0 AED	Specific: 0 AED
Energy drinks	Ad valorem:120%	Ad valorem:140%	Ad valorem:200%
	Specific: 0 AED	Specific: 0 AED	Specific: 0 AED
Wine	Ad valorem:65%	Ad valorem:80%	Ad valorem:125%
	Specific: 0 AED	Specific: 0 AED	Specific: 0 AED
Beer	Ad valorem:65%	Ad valorem:80%	Ad valorem:125%
	Specific: 0 AED	Specific: 0 AED	Specific: 0 AED
Spirits	Ad valorem:65%	Ad valorem:80%	Ad valorem:125%
	Specific: 0 AED	Specific: 0 AED	Specific: 0 AED

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