Landscape Report on Tobacco Consumption and Taxation in Lebanon

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I. Executive Summary

Growing concerns over the economic and health consequences of tobacco consumption have pushed many governments to pursue control policies and tools to reduce its prevalence. Of these, increasing tobacco prices through increased taxes has been identified as the most impactful and cost-effective approach.

In Lebanon, tobacco has been the top risk factor driving death and disability, and the country ranking third in the world for per capita cigarette consumption. Approximately thirty-eight per cent of the population aged 15 or above currently consume tobacco products, 19 percent above the Middle East and North Africa (MENA) regional average, with smoking rates among Lebanese adolescents is remarkably high as well (11 percent). As a result, noncommunicable diseases appear to be among the leading causes of death.

The Lebanese household's average expenditure on tobacco in 2012 accounts for 1.26 percent of its total annual expenditures. In 2019, the cost of purchasing 100 packs of the most-sold brand in the country was equivalent to 1.3 percent of GDP per capita. In 2022, after three years of economic and financial meltdown, this cost surged to 1.77 percent of the projected GDP per capita, indicating that cigarettes are becoming less affordable.

Around 80,000 dunams are currently utilized to grow tobacco leaves (equivalent to 3.5 percent of the total arable land area). The total annual output produced is around 8,000 metric tons per year, grown by approximately 25,000 farmers in 458 villages, 37 percent of whom are concentrated in the south of the country. However, other sources put the number at a much lower 11,000 full-time tobacco farmers.

Tobacco farming in Lebanon is subject to a licensing system that determines the surface area to be planted, the location, the type of seeds to be used, and other conditions. To grow tobacco, a farmer would need a permit from the Régie Libanaise des Tabacs et Tombacs, a state-run monopoly, which is in charge of organizing and monitoring all tobacco-related activities from planting to sorting, packaging, pricing, and selling, and which acts as an intermediary between farmers, international tobacco companies, and distributors of manufactured tobacco products in the country. The Ministry of Finance gives Régie an annual budget to cover its operation.

Unmanufactured tobacco leaves are one of Lebanon's main commodity exports, whereby most of the domestically produced tobacco leaves are exported, and imports of tobacco leaves are limited. On the other hand, Lebanon is a net importer of manufactured tobacco products, particularly cigarettes.

The ongoing economic crisis in Lebanon and its attendant inflation has eroded the purchasing power of Lebanese households, with prices of tobacco products soaring by nearly 345 percent. Yet the actual impact of price changes on tobacco demand remains poorly understood. A study from 2015 indicates that the demand for imported cigarettes is inelastic (-0.22) while that for

local ones is relatively more elastic (-1.54). The own-price elasticity of demand for waterpipe reveals a high sensitivity to price changes (-1.45), higher than most other countries.

In summer 2019 (at the onset of the economic crisis), the demand for premium cigarettes has become elastic (-1.16), whereas discount cigarettes are inelastic (-0.63). The authors attribute the higher elasticity for premium cigarettes to the price rises over the past ten years and declining affordability over time. The own-price elasticities of waterpipe tobacco remained high, as in 2015.

The difference in cigarette elasticity estimates between the two time periods seems to be due to the evolution of cigarette market conditions and consumer behavior adjustments, whereby the drastic changes macroeconomic conditions had significant impact on consumer responsiveness to price changes. Moreover, there were changes in product characteristics, mostly in the local brand, which could have impacted consumer perception and subsequently relative willingness to pay and substitutability between the products.

Taxes on imported tobacco products in Lebanon can be broken down into three categories: (i) an ad valorem excise tax (108% of CIF), (ii) an import tax, and (iii) a value-added tax (VAT; 11%). In terms of tobacco control policies, these remain insufficient. Lebanon adopted several tobacco control policies, among which Law 174 stands as the most comprehensive control policy adopted. Law 174 controls product manufacturing, packaging, and advertising of tobacco products and regulates smoking in public places, workplaces, and public transport. However, the law has not been effectively enforced.

Simulation exercises conducted by previous studies indicate that raising the specific tax on waterpipe tobacco by USD 2.41 (from 0.03 to 2.4) while removing the ad valorem component would avert 1,000,000 premature deaths, reduce consumption by 71 percent and raise government revenues by 37 percent. Similarly, enacting a tax on all cigarettes instead of imported ones will significantly raise government's revenues and reduce the amount of cigarettes consumed highlighting the public health and economic benefits of tobacco tax controls.

II. Introduction

Background

Tobacco consumption is the leading cause of mortality and morbidity around the globe. Every year, tobacco kills around eight million people, with more than 80 percent of these deaths occurring in low- and middle-income countries (WHO, 2022). While direct exposure to tobacco kills more than 85 percent of those who die globally from tobacco use, exposure to second-hand smoke is responsible for nearly 15 percent of global tobacco-attributable deaths (WHO, 2022). Tobacco consumption is harmful in any form because it causes a spectrum of adverse health effects and diseases such as lung and heart diseases, respiratory problems, cancers, and diabetes. Additionally, tobacco use can also increase the risk for tuberculosis, dental issues, and problems in the immune system as it renders smokers more susceptible to illness (CDC, 2021). For every person who passes away due to tobacco consumption, a minimum of 30 people live with serious tobacco-related diseases which can seriously impact the quality of their lives and their long-term productivity.

In addition to its health burden, tobacco imposes heavy economic and environmental costs. The economic costs consist of significant increases in health care costs, absenteeism (as well as presenteeism), productivity loss from sickness and premature death, and second-hand smoking. There are ample studies that attempt to estimate the economic burden of tobacco smoking in various countries. For instance, Boachie et al. (2021) estimated the economic costs of smoking in South Africa in 2016 relying on the direct health care costs of smoking (such as hospitalization and outpatient department visits) including two indirect cost measures: i) the value of years of productive life lost and ii) the cost of output lost due to absences from work as a result of smoking-related diseases. Their results reveal a total of 25,708 deaths due to smoking, a total of 621,058 workdays lost due to smoking-related diseases, and USD 2.88 billion forgone in 2016 (Boachie et al., 2021).

Similarly, the cost of smoking and second-hand smoking in Gulf Cooperation Council (GCC) countries was estimated to be USD 34.5 billion adjusted for purchasing power parity (PPP) in 2016, or 1.04 percent of the region's total gross domestic product (GDP), with second-hand smoking responsible for 20.4 percent of this cost (Koronaiou et al., 2021). In Indonesia, the cost of smoking appears to be even higher, varying between 1.16 percent and 2.59 percent of GDP (Meilissa et al., 2022).

At the environmental level, the costs of tobacco consumption and production are equally substantial. According to WHO (2022), the tobacco industry costs the world more than 500 million trees, 200,000 hectares of land, 22 billion tons of water, and 84 million tons of carbon dioxide. Additionally, tobacco farming occupies significant amounts of land that could otherwise be utilized to promote sustainable food production and food security. Further, tobacco farming requires large amounts of chemical fertilizers and pesticides that are likely to affect soil quality and contaminate surface water. In addition to soil degradation and deforestation, cigarette butts

constitute one of the top water pollutants as they are commonly thrown into oceans, rivers, and other water sources (Vulovic, 2019).

Growing concerns over the economic and health consequences of tobacco use have pushed many governments to pursue tobacco control policies and tools to reduce its consumption. These policies include taxation, consumer education, the use of health warning labels, limitations on tobacco smoking in public places, the prohibition of tobacco advertising and promotion, and smoking cessation programs. Of these, increasing tobacco prices through increased taxes has been identified as the most impactful policy approach for reducing tobacco smoking prevalence (Salloum et al., 2022).

According to the WHO (2022), taxes on tobacco products are also the most cost-effective tool to curb consumption and its associated economic costs and health care expenses. The main channel by which taxes reduce consumption is higher prices. Based on the WHO estimates, a 10-percent increase in the price of tobacco would reduce demand by around four percent in high-income countries and five percent in low- to middle-income countries (WHO, 2022). In line with these figures, Salti et al. (2015) note that a 10-percent increase in cigarette prices, specifically, would diminish consumption by an average of 4–6 percent in high-income countries and 2–7 percent in low- and middle-income countries.

III. Prevalence of Tobacco Use in Lebanon

For a decade, tobacco has been the top risk factor driving death and disability (measured in disability-adjusted life years, or DALYs) in Lebanon (IHME, 2019). The country ranks third in the world for the highest cigarette consumption per capita, with 3,500 annual deaths resulting from tobacco-related diseases (Akel et al., 2022). However, despite its detrimental effects, tobacco smoking remains highly prevalent among both the adult and youth population in Lebanon. As a logical and predictable consequence of the high smoking rates in the country, noncommunicable diseases appear to be among the leading causes of death. Ischemic heart diseases, stroke, and lung cancer—which account for 58.3 percent of deaths in Lebanon—are directly associated with tobacco smoking (IHME, 2019).

As shown in Figure 1, according to World Bank indicators, **38.2 percent** of the population in Lebanon aged 15 and older currently consume tobacco products[1] on a daily or non-daily basis. This rate is **19 percent above the Middle East and North Africa (MENA) regional average and 15.1 percent above the low- and middle-income countries (LMIC) average** (World Bank, 2020). When accounting for non-permanent smokers and those who occasionally experiment with different tobacco products, the rate of tobacco use reaches 70 percent according to Nakkash et al. (2022). These findings are based on nationally representative household surveys collected from three countries (Jordan, Lebanon, and Palestine) in 2019 to analyze tobacco consumption

[1] Tobacco products include cigarettes, pipes, cigars, cigarillos, waterpipes (hookah, shisha), bidis, kretek, heated tobacco products, and all forms of smokeless (oral and nasal) tobacco.

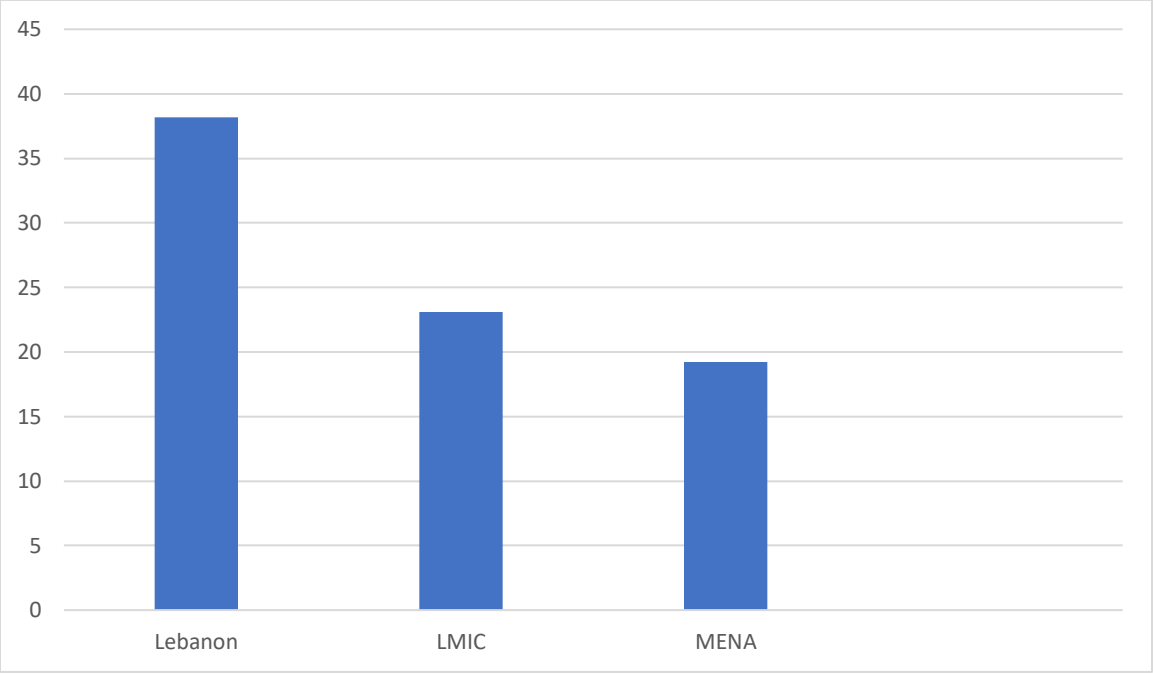
patterns among the adult population of those countries. Tobacco use appears to be more prevalent among males than females, with a 48 percent prevalence among men compared to a 29 percent prevalence among women (World Bank, 2020) as shown in Figure 2. A similar pattern is also found in the WHO data series of 2015 and 2020, as shown in Table 1 and Nakkash et al. (2022).

Table 1. Prevalence of tobacco smoking, 2015–2020

	Estimates of current tobacco smoking prevalence (%)		
Year	Both sexes	Male	Female
2020	34.3 [25.6 – 43.0]	42.8 [32.6 – 53.1]	25.9 [18.6 – 33.1]
2019	34.3 [25.6 – 43.0]	42.6 [32.1 – 53.0]	26.1 [19.2 – 33.0]
2018	34.4 [25.9 – 42.9]	42.6 [32.7 – 52.5]	26.2 [19.1 – 33.3]
2015	34.3 [26.1 – 42.6]	42 [31.6 – 52.5]	26.7 [20.6 – 32.8]

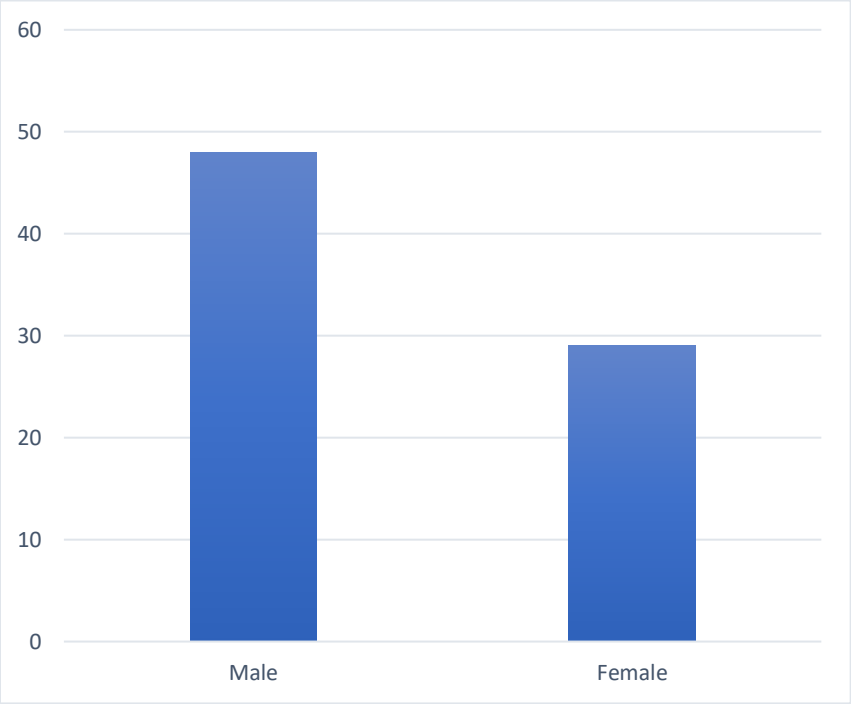
Source: WHO (2020)

Figure 1. Prevalence of current tobacco use (% of adults)



Source: World Bank (2020)

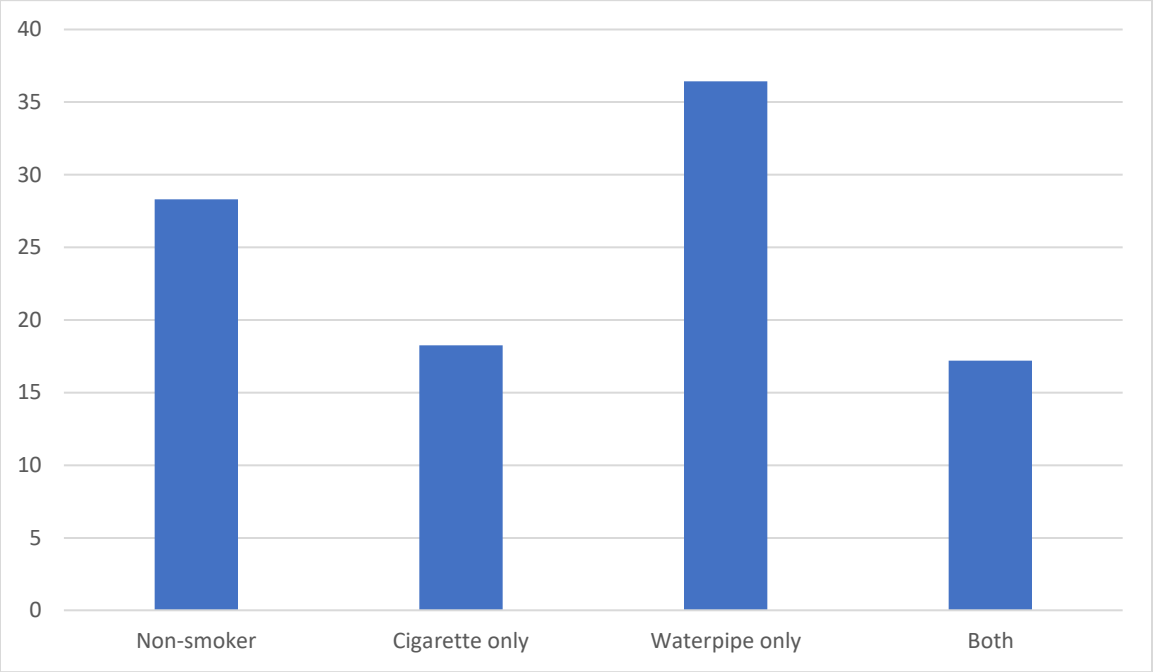
Figure 2. Prevalence of current tobacco use, by gender (% of adults)



Source: World Bank (2020)

It is worth noting that the prevalence of tobacco smoking in the adult population did not see significant variation over the past years, as shown in the WHO data series in Table 1. While cigarette smoking is the predominant form of tobacco use worldwide, waterpipe smoking has been increasingly gaining popularity among Lebanese people (Malaeb et al., 2021). Figure 3 documents this remarkably high consumption of waterpipe smoking using data from the study by Nakkash et al. (2022), who explain that waterpipe smoking is becoming more socially accepted and common. In this context, Akel et al. (2022) note that, although waterpipe consumption is associated with a number of diseases and cancers just like cigarette consumption, it is considered to be less invasive or dangerous than cigarettes; that is mainly due to the social experience, the relaxation, and the entertainment that it offers to smokers (Akel et al., 2022).

Figure 3. Prevalence of tobacco smoking by type[2]



Compared to Jordan and Palestine, Lebanon records higher percentages for cigarette smoking and waterpipe smoking, as shown in Table 2. The rate for dual-smoking prevalence in Lebanon is higher than that of Jordan but lower than in Palestine (Nakkash et. al., 2022). It is important to note that dual smoking may carry a set of challenges that are more complex to deal with. For example, Malaeb et al. (2021) suggest that dual smokers tend to smoke both products (waterpipe and cigarettes) more heavily and frequently than those who smoke only one product.

Table 2. Prevalence of smoking among adults, by product type

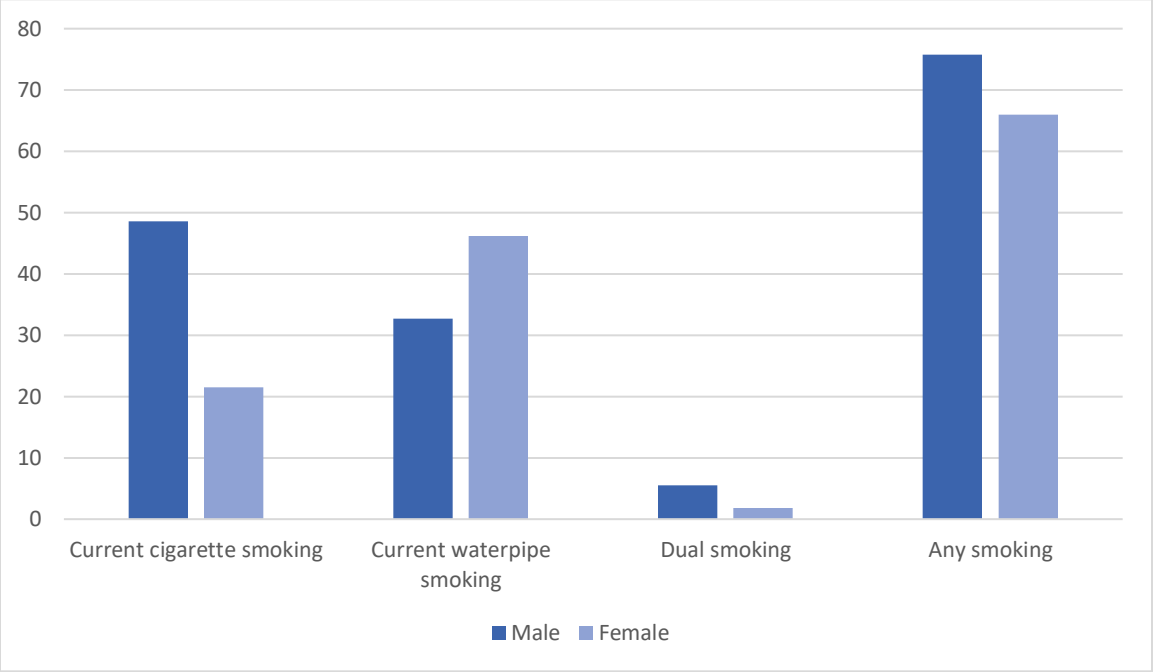
Country	Prevalence of cigarette smoking	Prevalence of waterpipe smoking	Dual smoking
Lebanon	35.1%	39.5%	3.6%
Jordan	32%	11%	2.8%
Palestine	28.2%	12.9%	4.4%

Source: Nakkash et al. (2022)

[2] Data set courtesy of the Eastern Mediterranean Consortium on the Economics of Waterpipe Tobacco Smoking (ECON-WTS), a project funded by the International Development Research Centre (IDRC), grant no. 108821. Available on AUB Scholarworkslink: http://hdl.handle.net/10938/23738

As previously mentioned, smoking rates among males generally tend to be higher than smoking rates among females. Figure 4 shows that around 51 percent of male smokers and 43 percent of female smokers in Lebanon report consuming **20 or more cigarettes on a daily basis** (Nakkash et al., 2022). However, Nakkash et al. (2022) reveal **that cigarettes and dual smoking are predominant among Lebanese males while waterpipe smoking is significantly more popular among Lebanese females**. In comparison with the figures estimated by Salti et al. (2015), using the 2005 national survey of household living conditions, Nakkash et al.'s (2022) data reveal an increase in the monthly consumption rate of cigarettes from 12.4 packs per person per month to 17 packs per month, keeping in mind that these consumption figures were measured before the outbreak of the economic crisis.

Figure 4. Prevalence rates of current cigarette smoking, current waterpipe smoking, dual smoking, and any smoking, by gender



Source: Nakkash et al. (2022)

Table 3. Patterns of cigarette and waterpipe smoking among current smokers according to gender(2019)

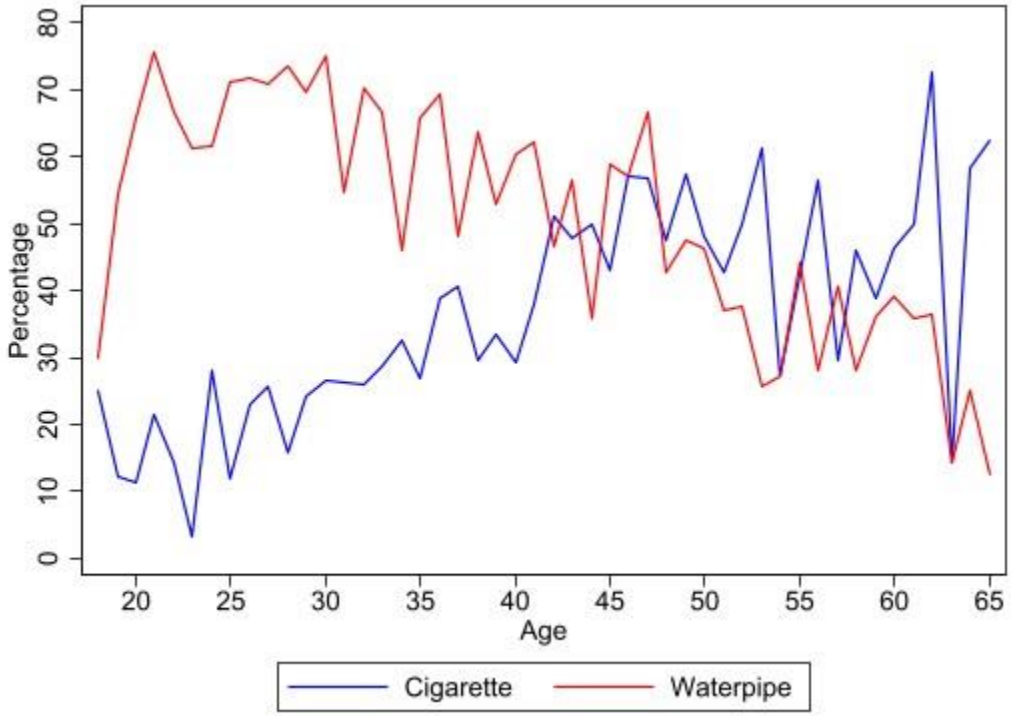
	Males	Females
	(%) n	%(n)
Cigarettes per day		
<10	(35.0) 143	(34.8) 63
10–20	(42.6) 174	(51.9) 94
>20	(22.3) 91	(13.3) 24
Total	(100.0) 408	(100.0) 181
Waterpipe sessions at home, per week		
≤3	(7.5) 19	(13.1) 49
>3	(92.5) 234	(86.9) 326
Waterpipe sessions at café, per week		
≤3	(90.9) 180	(96.3) 236
>3	(9.1) 18	(3.7) 9
Type of waterpipe tobacco smoked		
Flavored	(86.2) 237	(89.2) 346
Non-flavored	(13.8) 38	(10.8) 42

Source: Nakkash et al. (2022)

Overall, waterpipe smoking appears to be more prevalent among younger age brackets while cigarette smoking is more common among higher age brackets. This distribution aligns with the results found in Malaeb et al. (2021), which also reveal associations between nicotine dependency and the different products among age groups—that is, higher nicotine dependency is associated with cigarette smoking among older persons in Lebanon while higher nicotine dependency is associated with waterpipe smoking among younger age brackets. Similarly, when examining the prevalence of each tobacco product by age and gender, waterpipe smoking appears more common among younger age brackets in both males and females, as shown in figures 5 and 6.

Although the existing body of literature focuses on smoking prevalence among Lebanese adults, smoking rates among Lebanese adolescents is remarkably high as well. Around 11 percent of young teens aged 13 to 15 years old smoke. Tobacco consumption prevalence in this age group varies significantly between genders: 15.6 percent of males and 7.2 percent of females are smokers (*Tobacco Atlas*, 2017). Similarly, Akel et al. (2022) report that 24.5 percent of adolescent school students aged 11 to 18 years old have experimented with cigarette smoking, and nearly 40 percent use waterpipes (Akel et al., 2022).

Figure 5. Prevalence of smoking by age[3]



[3] Data set courtesy of the Eastern Mediterranean Consortium on the Economics of Waterpipe Tobacco Smoking (ECON-WTS), a project funded by the International Development Research Centre (IDRC), grant no. 108821. Available on AUB Scholarworks link: http://hdl.handle.net/10938/23738

Figure 6. Prevalence of smoking by age and sex[4]

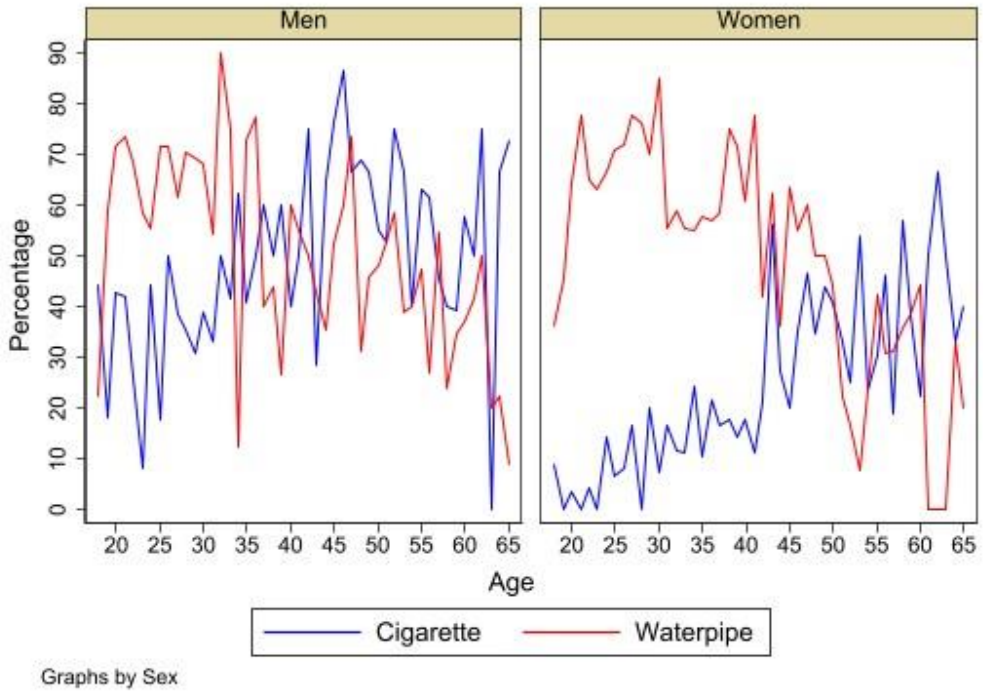


Table 4. Prevalence of current cigarette smoking among adolescents (%)

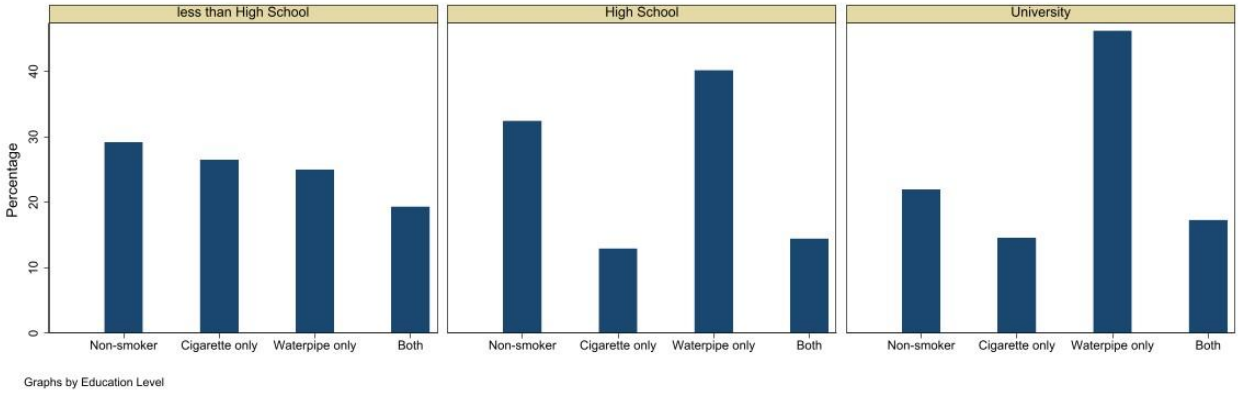
Survey period	Age range of most recent adolescent survey	Prevalence of current cigarette smoking among adolescents (%)		
		Both sexes	Male	Female
2017	13-15	11.2	15.6	7.2

Source: *Tobacco Atlas 2017*, using GYTS data

When examining the association between educational level and smoking prevalence—shown in Figure 7—no obvious association appears. However, one point to note is that waterpipe smoking is remarkably higher among smokers with high school or university educational levels, which may be more related to co-occurring factors such as age or social norms than to education.

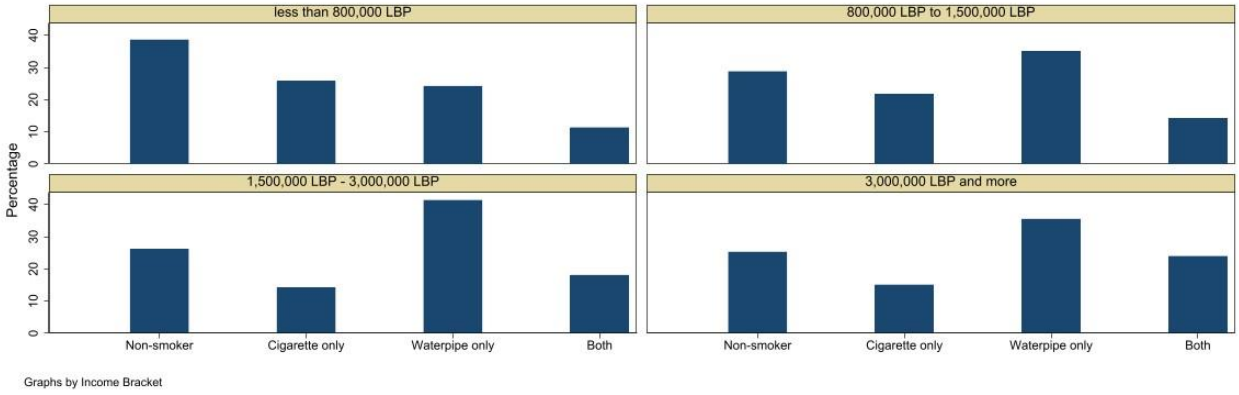
[4] Refer to footnote 3.

Figure 7. Smoking prevalence, by education level[5]



Finally, the association between income and smoking is even less clear, as shown in Figure 8. Waterpipe smoking tends to be more prevalent than cigarette smoking for all income brackets except for households earning less than LBP 800,000 (below USD 530 before currency devaluation) per month, where cigarette prevalence is relatively higher than it is for the other income groups. In fact, before the economic crisis tobacco products were widely available in the market and easily accessible due to their low prices.

Figure 8. Smoking prevalence by monthly income[6]



[5] Data set courtesy of the Eastern Mediterranean Consortium on the Economics of Waterpipe Tobacco Smoking (ECON-WTS), a project funded by the International Development Research Centre (IDRC), grant no. 108821. Available on AUB Scholarworkslink: http://hdl.handle.net/10938/23738

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For example, in 2019 the cost of a pack of the cheapest brand ranged from LBP 1,000–1,500, while a pack of the most expensive brand ranged from LBP 4,250–5,250, as shown in Table 5. This was equivalent to USD 0.66–1.00 and USD 2.80–3.40, respectively, and constituted less than 0.8 percent of the monthly minimum wage at that time. The current crisis, however, is expected to significantly reduce the affordability of these products.

Table 5. Prices of cigarette brands before 2020

Brand	Cost of a pack before 2020 in LBP	Cost of a pack before 2020 in USD
Cheapest brand	1,000–1,500	0.66–1.00
Most expensive brand	4,250–5,250	2.80–3.40

Source: Régie price lists

Household expenditure on tobacco

Data and reports on household expenditures on tobacco products in Lebanon remain scarce. Based on the 2012 household budget survey, the Lebanese household's average expenditure on tobacco accounts for 1.26 percent of its total annual expenditures (CAS, 2012). To approximate expenditures on tobacco products this analysis follows the WHO tobacco affordability[7] rationale, relying on data from Nakkash et. al (2022) to identify the most-sold brand and the associated expenditures on it. Based on the survey data, the most-sold brand is the locally manufactured brand Cedars, the price of which ranged from LBP 1,000–1,500[8] per pack of 20 cigarettes in 2019. Accordingly, the cost of purchasing 100 packs of the most-sold brand in the country is LBP 150,000, assuming the price in December 2019, which equivalent is to **1.3 percent of GDP per capita in the same year.**[9] Today, based on Régie's published price lists for September 2022 and the current exchange rate in the parallel market,[10] the cost of 100 packs of the most-sold brand has surged to LBP 2,150,000, which is 1.77 percent of the projected GDP per capita for 2022, indicating that cigarettes are becoming less affordable.

[7] The percent of the country's GDP per capita required to purchase 100 packs of the most-sold brand of cigarettes in the country.

[8] Based on Regie lists.

[9] GDP per capita of 2019 is USD 7,527.40 per capita based on World Bank indicators, converted to LBP using the old official rate of USD 1,510/LBP. During the period of study there was a significant variation in exchange rate. Until October 2019 the exchange rate was around 1,500 LBP per 1 USD. By September 2022, the exchange rate reach 40,000 LBP per 1 USD

[10] USD 40,000/LBP

IV. The Supply of Tobacco Products

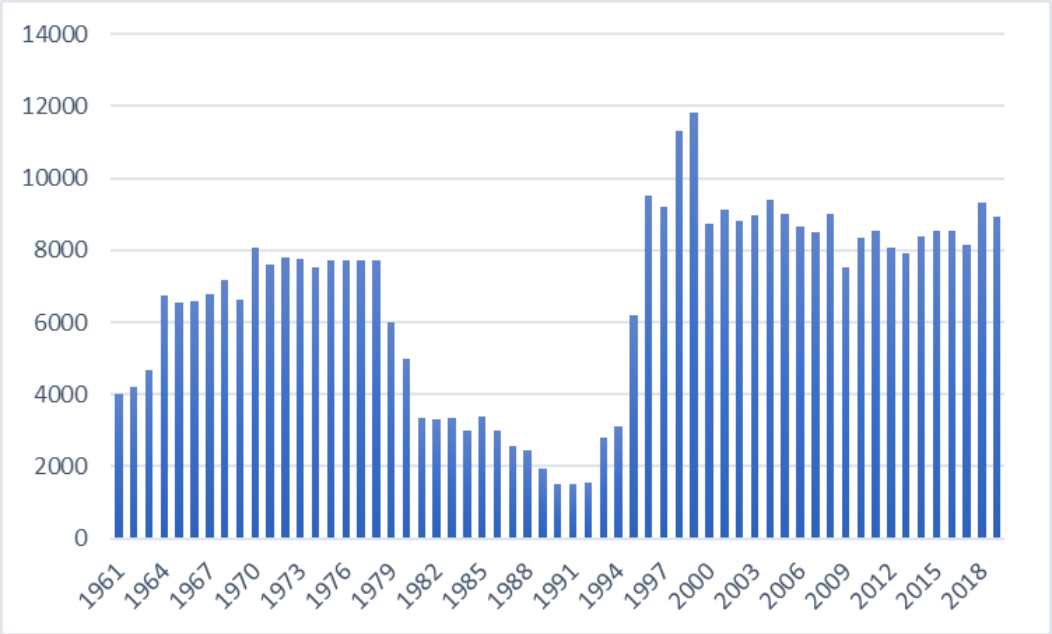
Tobacco history

Literature on tobacco's history in Lebanon is limited, although tobacco farming is not new to the country. It was introduced during the Ottoman Empire era and developed under the French mandate during which the role of the tobacco monopoly, currently known as Régie Libanaise des Tabacs et Tombacs, was reinforced as a key tool for tobacco trade with Europe. According to Hamade (2014), tobacco-related activities prevailed in Mount Lebanon and Beirut until 1958. Then, with President Fouad Chehab's efforts to redistribute wealth and balance growth, these activities expanded to other regions.

President Chehab undertook a series of reforms that covered various sectors including the tobacco sector, but these reforms did not affect the monopoly status of the Régie nor its role. The company maintained its control over all activities throughout the tobacco supply chain, from production to distribution; however, its profits level was capped at four percent of the sector's output. Additionally, the government introduced a new price subsidy program for unmanufactured tobacco production and taxes on imports and consumption (Hamade, 2014).

After the civil war period ended in the early 1990s, Régie was fully nationalized under the jurisdiction of the Ministry of Finance (MOF), and rural households were given the right to obtain a license to grow tobacco leaves on their own lands or leased ones, in an attempt to prevent them from leaving their villages. The decision was mainly driven by political reasons. As shown in Figure 9, the agricultural output increased after 1993.

Figure 9. Unmanufactured tobacco gross value production (USD 1,000)



Source: FAO (2022)

Current production

Today, 80,000 dunams (80 square kilometers) of land are utilized to grow tobacco leaves in Lebanon, which is equivalent to 3.5 percent of the cultivated land area. According to official numbers published by Regie, the total annual output produced is around 8,000 metric tons per year grown by approximately 25,000 farmers in 458 villages, 37 percent of whom are concentrated in the south and producing nearly 57 percent of the total output (RLTT, 2022). Salti et. al. (2014) report that 40 percent of these farmers rely on additional sources of income. The exact number of farmers is not clear, as different sources state distinct numbers. Hamadeh (2014) put the number at around 11,000 full-time tobacco farmers, based on the 2010 Ministry of Agriculture census of farmers, which is in line with ILO estimates from 2002.

As previously mentioned, tobacco farming is subject to a licensing system that determines the surface area to be planted, the location, the type of seeds to be used as well as other conditions. Thus, to grow tobacco, a farmer would need a growing permit from the Régie, the state-run monopoly, which is in charge of organizing and monitoring all tobacco-related activities from planting to sorting, packaging, pricing, and selling (FAO, 2021). Thus, it also acts as an intermediary between farmers and international tobacco companies and between international tobacco companies and distributors of manufactured tobacco products in the country. Additionally, the Regie administers a subsidy program that is mainly a price support program that sets a predetermined price and quota for the quantity produced by the holders of permits (WHO, 2017). For their permits to remain active, farmers should not produce less than 200 kilograms per year for more than two years in a row (Hamadeh, 2014). After production, the farmers sell their output at fixed prices which are not indexed to inflation by the Regie. The latter works on sorting the output in its facilities and reselling it to international companies.

The Régie is given an annual budget by the Ministry of Finance to cover its operations, which include purchasing, sorting, storing, and exporting tobacco, and the cost of the price support program it administers is directly financed through the taxes on tobacco. In 2008, the cost of the program recorded USD 51 million (Salti et al., 2014), an amount that is greater than the budget of the Ministry of Agriculture. The Régie's profits and losses are tied to the public treasury. Based on the company's website, the Regie contributed LBP 699 billion in revenues to the treasury in 2019 and LBP 1,302 billion in 2021.

Tobacco trade

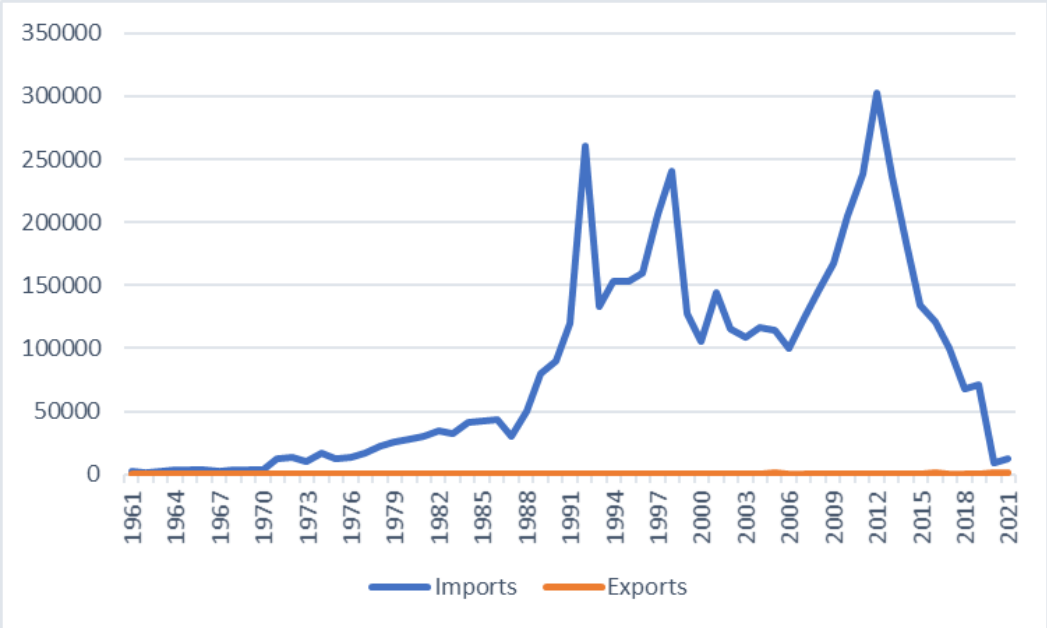
Unmanufactured tobacco leaves is one of Lebanon's main commodity exports. In fact, most of the domestically produced tobacco leaves are exported while imports of tobacco leaves are limited as shown in Figure 10. The Régie imports certain varieties of tobacco leaves which are

used in the domestic production of tobacco products. The main export partners in 2020 were Greece, Bulgaria, the Russian Federation, Belgium, Germany, and Egypt. On the other hand, Lebanon is a net importer of manufactured tobacco products, particularly cigarettes which constitute the bulk of tobacco imports. In terms of cigarette imports, the main import partners for 2020 were Germany, Switzerland, Turkey, Poland, the Russian Federation, Ukraine, United States and Japan. Exports of cigarettes remain limited as shown in Figure 11 with Syria, United Arab Emirates, and Congo being the main markets.

Figure 10. Import and export value of unmanufactured tobacco

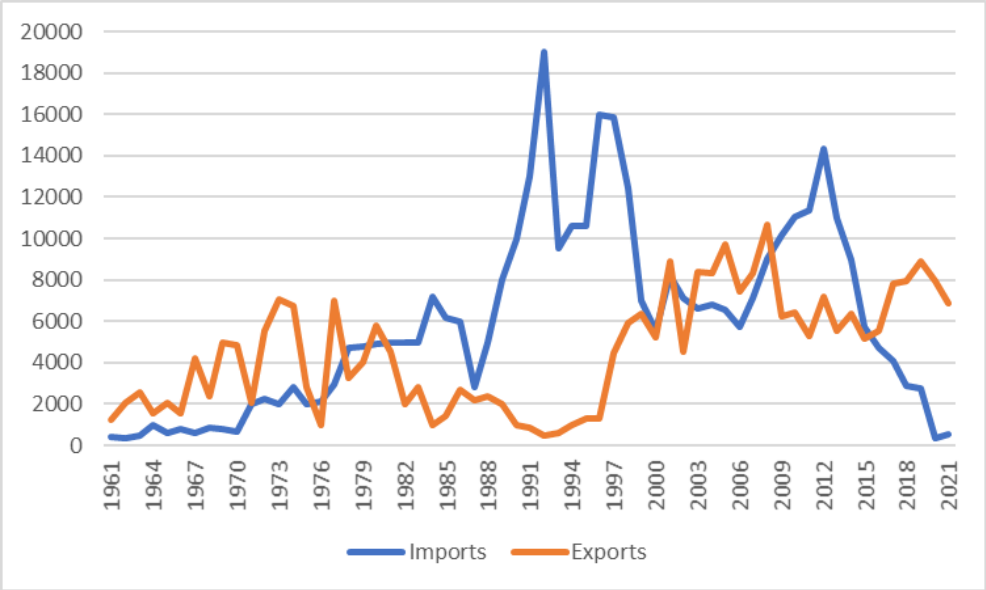
Source: WITS (2022)

Figure 11. Import and export value of cigarettes (USD 1000)



Source: FAO (2022)

Figure 12. Tobacco cigarettes import and export volumes



Source: FAO, 2022

After the outbreak of the civil war in Syria in 2011, the demand for tobacco products, particularly cigarettes, has increased. This increase coincides with the influx of Syrian refugees to Lebanon and the breakdown of Syrian tobacco factories (Dal et al., 2021). The increased demand is also associated with an increase in imports between 2011 and 2015 as shown in figures 11 and 12.

Illicit trade

Reports and studies on illicit tobacco trade in Lebanon are scarce although it has long been identified as a major problem costing the government millions of dollars in lost taxes and tariff revenues on a yearly basis. According to Nakkash and Lee (2008), tobacco smuggling grew considerably during the civil war period due to the decline in local production and the weak state control over customs which made cheap contraband flood the markets. Interestingly, the authors noted that Transnational Tobacco Companies (TTCs) found in the civil war chaos an opportunity to expand their market shares and supply to Lebanon or via Lebanon to other neighboring countries such as Syria, Jordan, and Turkey (Nakkash & Lee, 2008). TTCs' use of Lebanon as a gateway for legally and illegally selling tobacco products in neighboring countries has also been noted by Alaoui et al. (2022). Unfortunately, most "research" on illicit trade has been commissioned by the tobacco industry and neither report is clear in its methodology. First, Oxford Economics (2020) estimated the incidence of the illicit tobacco trade in Lebanon to be 27.3 percent in 2019, costing the economy around USD 92 million in tax losses. Second, in the Blominvest Bank report of 2018, the Régie manager provided a comparable range of 20 percent to 30 percent while other market players reported a higher percentage of 40 percent of the market share (Blominvest Bank, 2018). Importantly, Alaoui et al. (2022) point out that TTCs tend

to overstate estimates of illicit trade to discourage tax reforms on the pretext that higher taxes reduce the government's tobacco tax revenues by stimulating tax evasion and smuggling. The tobacco industry's interference and efforts to delay or weaken tobacco are not novel, they were well documented by Nakkash and Lee (2008) and Alaoui et al. (2022).

Industry & market players

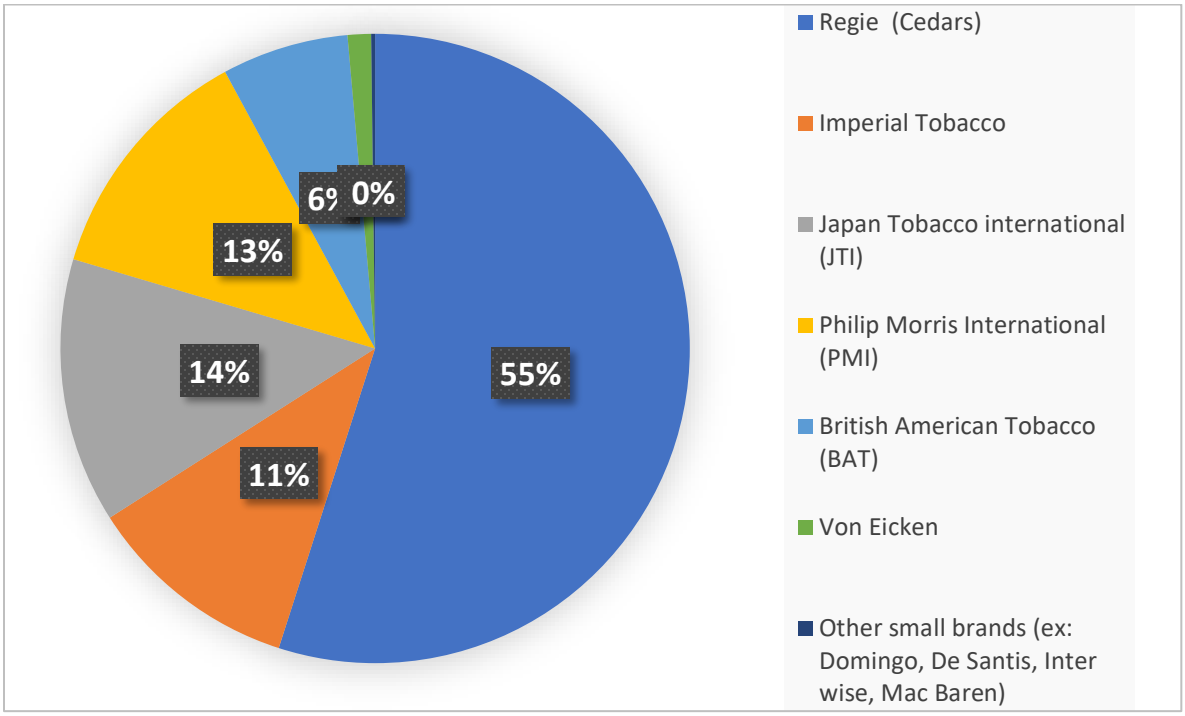
As already noted, the Régie is the key player in the tobacco industry. It acts as an intermediary between farmers and international companies and between international tobacco companies and distributors, and provides local brands to wholesalers. In accordance with Law 151, "Régie is the exclusive agent for all imported tobacco products and the sole agency that has the authority to grant permits for the sale of tobacco". The company issues two types of permits, wholesale and retail, which follow terms that are imposed by the Ministry of Finance (RTTL, 2022).

There are significant discrepancies in the numbers of licensed distributors reported in published articles and stated on the Régie website. For instance, while Salti et al. (2014) reported around 450 licensed tobacco distributors and roughly 100,000 licensed retailers, Alaoui et al. (2022) reported around 800 licensed wholesalers and the Régie website indicated a group of 668 representatives of retail and wholesale.

Among the many authorities given to the Régie is the authority to set the retail price of available tobacco products. The company updates the retail prices on a regular basis and posts the price lists on its website; however, many wholesalers and retailers do not always abide by the listed prices.

When it comes to brands and products, there are many brands of cigarettes and Mouassal available in the market. The Régie produces the local cigarette brand "Cedars" which has witnessed a significant increase in sales in the past few years and enjoys the largest share of the market. In addition to Régie, which controls 55 percent of the market, there are five main international tobacco companies with a few small brands. These companies are, in order of their market shares, Japan Tobacco International (or JTI), Philip Morris International (PMI), Imperial Tobacco, British American Tobacco, Von Eicken, and a few other small brands as shown in Figure 13.

Figure 13. Distribution of market shares in Lebanon's cigarette sales, 2017



Source: Blominvest Bank (2018)

V. The Demand for Tobacco Products

The ongoing economic crisis in Lebanon has cast its shadow on all industries, including the tobacco industry. Inflation has hit record highs eroding the purchasing power of Lebanese households and prices of tobacco products were no exception. In fact, the prices of these products soared by nearly 345 percent (CAS, 2022) making smoking less affordable. However, due to fast-changing macroeconomic conditions and the lack of recent studies, the actual impact of price changes on tobacco demand is still not fully understood. The available studies and reports were mostly conducted before 2020, thus they do not reflect the current changes in consumption, yet they remain useful to understand the nature of the demand and its responsiveness to price changes which is crucial to formulating any tobacco control policy and evaluating its effectiveness.

In an attempt to understand the potential impact of a tax increase on tobacco consumption and government revenues in Lebanon, Salti et al. (2015) rely on nationally representative expenditure data from the 2005 national survey of household living conditions to estimate the price elasticities of demand for local and imported tobacco cigarettes and shisha (waterpipe) in the country. The results of this study revealed that the expenditures on these tobacco products hit USD 553 million in 2010 and the own-price elasticity for imported cigarettes is less than one while that of local and shisha tobacco is greater than one as shown in Table 7**.** An elasticity that is less

than one indicates a low sensitivity or responsiveness to price changes whereas an elasticity that is greater than one indicates a higher responsiveness to price changes. Accordingly, the demand for imported cigarettes is inelastic while that for local ones is relatively more elastic (Salti et al., 2015). For every 10-percent increase in the price of imported cigarettes, the quantity demanded would drop by 2.2 percent whereas a 10-percent increase in the price of local cigarettes would result in a 15.4 percent drop in quantity. At the time of the study the local brand was still regarded as the cheaper/lower quality product compared to imported brands which were available and affordable, hence the relatively more elastic demand.

The own-price elasticity of demand for waterpipe reveals a high sensitivity to price changes, as a 10 percent increase in price would decrease quantity demanded by 14.5 percent (Salti et al., 2015). The obtained waterpipe elasticity is higher than the usually obtained elasticities in other countries. There are several possible interpretations for this high elasticity such as (i) the high prevalence of waterpipe consumption in the country and the widespread availability of waterpipes or (ii) the lack of a strict definition for who's considered a waterpipe smoker because people who smoke on an irregular basis or occasionally may be included and display different behaviors than regular users. Moreover, the cross-price elasticities indicate that local cigarettes and shisha tobacco are regarded as substitutes for imported cigarettes.

Table 7. Estimated own- and cross-price elasticities of demand for tobacco products

	Local cigarettes	Imported Cigarettes	Shisha Tobacco
Local cigarettes	-1.54		
Imported cigarettes	0.13	-0.22	
Shisha tobacco	- 0.37	0.15	-1.45

Source: Salti et al. (2015)

Furthermore, Salti et al., (2015) estimated the impact of tax reforms on consumption and government revenues taking into account illicit trade. Their results revealed that a 50 percent increase in the ad valorem excise tax, imposing a rate of USD 0.17 per pack on locally-produced cigarettes, USD 1 per pack on imported cigarettes, and USD 0.33 per pack on waterpipe tobacco pack would reduce consumption of local and imported cigarettes by 90 percent and 7 percent respectively and would raise government revenues by 52 percent (Salti et al., 2015).

Using volumetric choice experiments, Chalak et al. (2021) estimated the own-price elasticities and cross-price elasticities of demand for eight cigarette and waterpipe tobacco products in Lebanon, Jordan, and Palestine. The products included were (i) premium cigarettes, (ii) discount cigarettes, (iii) premium waterpipe tobacco, (iv) discount waterpipe tobacco, (v) non-flavored waterpipe tobacco, (vi) waterpipe tobacco home delivery, (vii) premium café waterpipe smoking session, and (viii) discount café waterpipe smoking session. In the absence of actual market data, the authors rely on the collected survey data and use the median price at the last purchase as a

proxy threshold to distinguish between premium and discount products such as discount products have a price below the median price and premium products are priced above it (Chalak et al., 2021).

The estimated elasticities are summarized in Table 8. The demand for premium cigarettes appears to be elastic or sensitive to price changes whereas that for discount cigarettes is inelastic. Consequently, with a 10 percent increase in the price of premium cigarettes consumption would drop by 11.57 percent, whereas a 10 percent increase in the price of discount cigarettes would reduce consumption by 6.3 percent. Furthermore, the authors attribute the higher elasticity for premium cigarettes to the price rises over the past ten years and declining affordability over time (Chalak et al., 2021).

Interestingly, the own-price elasticities of waterpipe tobacco are high, confirming Salti et al. (2015). Estimates of the cross-price elasticity between cigarettes and waterpipe tobacco were nearly zero revealing that the products are not regarded as substitutes (Chalak et al., 2021). Stated differently, cigarettes and waterpipes provide different experiences to their smokers. This is particularly important as it suggests that different policy considerations may be needed for these products.

Table 8. Own-price elasticity estimates, by product and country

Tobacco product	Lebanon	Jordan	Palestine
Premium cigarettes	−1.157***	−1.080***	−1.042***
Discount cigarettes	−0.639***	−0.719***	−1.209***
Roll-your-own cigarettes	–	–	−0.065
Premium waterpipe tobacco	−1.949***	−0.601***	0.196*
Discount waterpipe tobacco	−1.700***	−0.915***	−0.650**
Non-flavored waterpipe tobacco	0.095	0.816***	–
Waterpipe home delivery	−1.869***	0.104	−0.379
Premium waterpipe café	−2.312***	−0.674***	−1.120***
Discount waterpipe café	−1.699***	−0.335**	−0.291**

Source: Chalak et al. (2021)

The difference in cigarette elasticity measurement documented in the two studies could be attributed to the evolution of cigarette market conditions and consumer behavior adjustments over the time span separating the data used in each study. The data used in Chalak et al. (2021) was collected in late 2019 at the onset of the financial crisis and the beginning of currency devaluation. The macroeconomic conditions at that point in time could have significant behavioral impact on consumer choices especially on their responsiveness to price changes. Moreover, there were changes in product characteristics, mostly in the local brand, which could have impacted consumer perception and subsequently relative willingness to pay and substitutability between the products.

VI. Tobacco Taxation & Tobacco Control Policies

Taxes & government revenues

Taxes on imported tobacco products in Lebanon can be broken down into three categories: (i) an ad valorem excise tax, (ii) an import tax, and (iii) a value-added tax (VAT).

As reported by WHO (2020), The ad valorem excise tax base is based on producer price or the declared imported value (cost, insurance and freight (CIF)) and equivalent to 108 percent while the import tax is levied at five percent of the producer price and the VAT at 11 percent of the retail price.

In 2018, the government enacted a specific excise tax on imported products only, while local tobacco products were kept with no specific tax despite the potential revenues that could have been generated had these products been taxed too. Locally produced tobacco products are taxed through a 48 percent tax on imported raw tobacco (five percent import tax and 43 percent excise) and subject to VAT. This difference in taxes is intended to protect locally produced tobacco products (IMF 2023).

In terms of tax revenues, and as shown in Table 9, the excise tax contributes to the greatest share of tax revenues generated from tobacco products. According to Jawad et al. (2022), the annual revenues from tobacco products amount to USD 1.2 billion per year, which is around 15 percent of the total revenues generated in 2020.

Table 9. Tobacco tax revenues in 2020

Annual tax revenues	Year	LBP
Annual tax revenues - total excise (specific and ad valorem)	2020	97 000 000 000
Annual tax revenues - import duties and all other taxes (excluding corporate taxes on tobacco companies)	2020	10 500 000 000
Annual tax revenues – value-added tax (vat) and other sales taxes	2020	66 000 000 000

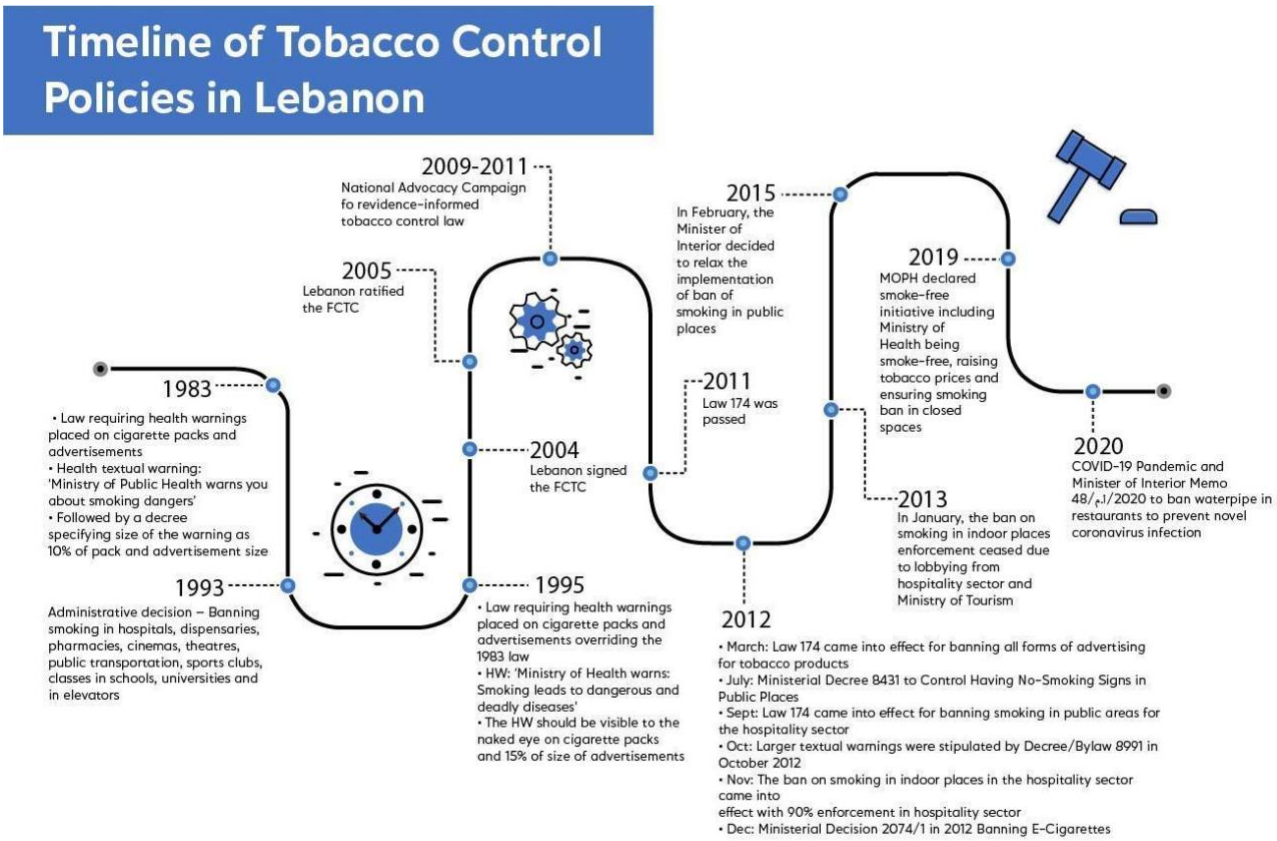
Source: WHO (2020)

Tobacco control policies

Despite all the proven health, economic and environmental costs associated with tobacco consumption, tobacco control remains insufficient in the country. Over the past three decades, and particularly after the ratification of the WHO Framework Convention on Tobacco Control (FCTC) in 2005, Lebanon adopted a number of tobacco control policies, among which Law 174 stands as the most comprehensive control policy adopted. The law 174 controls product manufacturing, packaging, and advertising of tobacco products and regulates smoking in public places, workplaces and public transport. However, the law has not been effectively enforced.

Although tobacco taxation has been identified as one of the potent tools to reduce tobacco consumption and generate revenues, none of the successive governments succeeded in enforcing a tobacco control tax. Various challenges stemmed the progress in this domain and undermined the efforts to impose such taxes. These challenges include weak governments, interlinkages between tobacco industry players, politicians and legislators, and poor coordination between key stakeholders such as the Ministry of Public Health, the Ministry of Finance, the Parliament's public health committee, and other stakeholders.

Figure 14. Timeline of tobacco control policies



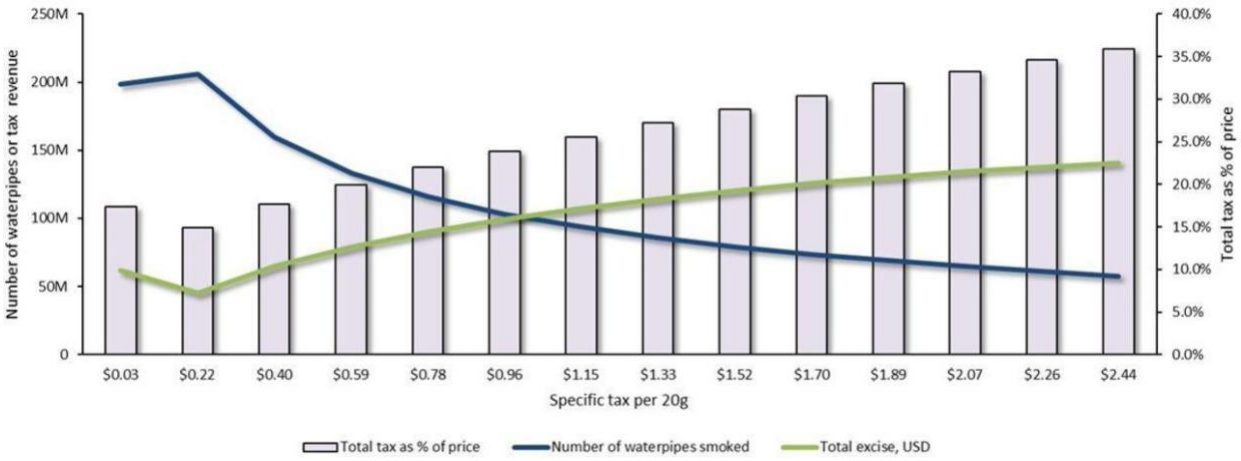
Source: Allam et al. (2017)

Tax Simulation

Based on a recent study by Jawad et al. (2022), tax reforms can yield substantial benefits such as reducing tobacco consumption, sparing tobacco-attributable deaths and generating additional government revenues which can be invested in public health programs. The authors revealed that raising the specific tax on waterpipe tobacco by USD 2.41 (from 0.03 to 2.4) while removing the ad valorem component would avert 1,000,000 premature deaths, reduce consumption by 71 percent and raise government revenues by 37 percent (Jawad et al., 2022) as shown in Figure 15.

A similar tax simulation was performed[11] using data on tobacco market shares, prices and consumption in Lebanon and modelling the impact of USD 0.05 incremental changes in specific tax on total tax revenues and consumption of cigarettes. Two scenarios were developed with Scenario 1 applying specific tax on imported cigarettes only and Scenario 2 applying the tax on all cigarette's types. The same exercise was repeated for waterpipe tobacco. As shown in Figure 16, enacting the tax on all cigarettes instead of imported ones will significantly raise government's revenues and reduce the amount of cigarettes consumed highlighting the public health and economic benefits of tobacco tax controls.

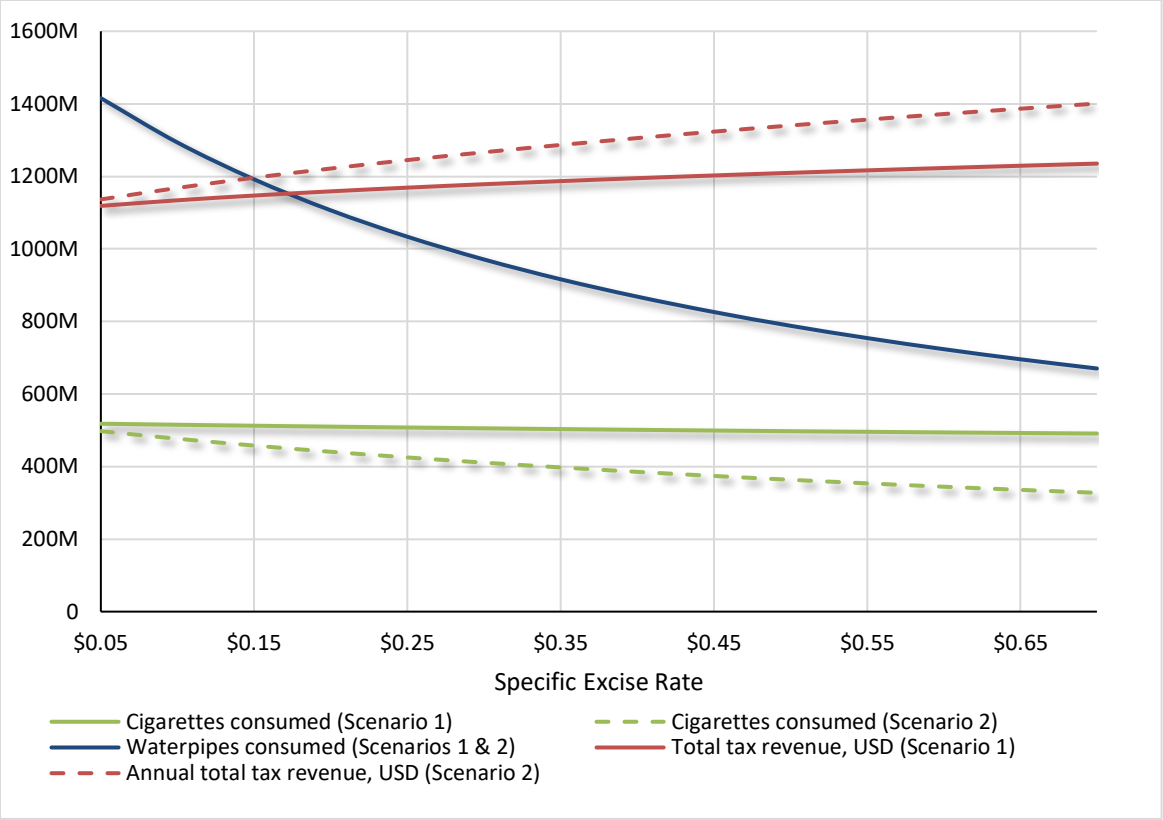
Figure 15. The impact of waterpipe tobacco tax increases on the annual number of waterpipes smoked, government revenue from excise and market-weighted tax burden as a percentage of retail price in Lebanon



Source: Jawad et al. (2022)

Figure 16. The impact of a tax increase on cigarettes and waterpipe on government revenues and consumption in Lebanon

[11] The tax simulations were modeled by Dr. Mohammad Jawad using data provided by Ali Chalak.



Source: Estimations provided by Dr. Mohammad Jawad

VII. Policy Progress and Lessons Learned

Progress in tobacco control policy in Lebanon has been slow for numerous reasons including (i) the political unrest that has been diverting attention away from reforms in other areas, (ii) the political system and the influence of the tobacco industry and its efforts to undermine control policies reforms (Nakkash & Lee, 2008), (iii) the vast authority given to the Régie and the lack of mechanism to monitor or hold it and other TTCs accountable for their actions (Alaoui et al., 2022), (iv) close alliances between tobacco industry players and legislators (Alaoui et al., 2022), (v) lack of transparency and limited publicly available data on the tobacco industry, and (vi) the poor coordination among the public bodies involved in decision-making and legislation such as the parliament, the Ministry of Public Health, the Ministry of Finance, and other key stakeholders.

Despite these challenges, tobacco control policies remain essential to curb the high consumption of tobacco, spare premature deaths due to tobacco use, and reduce other health, economic and environmental costs. Reflecting on the experience with the 174 Law, many useful lessons can be drawn such as:

i. Involving academics, researchers and practitioners to provide credible evidence-based solutions during agenda setting and policy formulation and later on in policy evaluation (Nakkash et al., 2018)
ii. Partnering with civil society organizations and media to advocate for the proposed policies. In fact, civil society organizations helped push tobacco control forward on the national agenda by meeting legislators, promoting evidence-based position statements and lobbying for a comprehensive tobacco control law (Allam et al., 2017)
iii. Advocacy campaigns, if led by the right groups, can be effective in communicating the right message to the public and gain support (Nakkash et al., 2018).

Moreover, as previously highlighted, the economic crisis is expected to have altered tobacco consumption patterns. Therefore, exploring the recent changes in consumption is crucial to formulate an adequate tobacco control policy and requires more timely data and research to better understand and estimate the impact of tobacco taxes as well as other possible control policies on demand.

VIII. Conclusion

The alarmingly high prevalence of tobacco consumption among the adult and adolescent Lebanese population is a source of concern with 3500 annual deaths attributed to tobacco use. In addition to premature death and illness, high consumption of tobacco imposes heavy economic and environmental burdens in both the short-run and long-run. Despite the substantial costs associated with tobacco use, progress in tobacco control policy in the country has been sluggish due to various factors including the political system, the lack of accountability, the high interference of the tobacco industry in the policy process and the strong connections between the key players in the industry and the legislators. This report provides an overview of the prevalence of tobacco use among the Lebanese population, the demand for different tobacco products and the impact of tax reform scenarios on consumption and government revenues accentuating the substantial public health and economic benefits a tobacco tax control can provide. Additionally, the report provides a landscape of the tobacco industry and the key players pointing to the vast authorities attributed to the state-owned monopoly and regulator of the industry, the Régie.

Despite the many challenges that can decelerate policy progress, tobacco control policies remain a need. This report provides a number of recommendations that may pave the way to better policy formulation and push tobacco control policies to the forefront of the public agenda.

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