

# A Not So Invisible Hand

Deep Within the Lebanese Black Market

## Chapter I: Tax Evasion & Fiscal

### Discrepancies

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## Executive Summary

The country of Lebanon is known to have a comparably low tax rate, unlike the U.S., France, Norway, and other foreign countries. However, it has adopted these taxes as its primary source of income, right before fines. Both these facts have not stopped the Lebanese population from committing tax evasion, a crime defined as the theoretical gap between expected tax revenue and actual revenue.

The concept of taxes has been the main substitute for feudal duties after the rise of Republics. In their nature, taxes are bad for the economy; they create distortions, deadweight loss and a burden for economic participants. However, taxes were developed as a tool to lead the economy somewhere and bring up its optimal output using guided specialization - playing with the costs and benefits of certain sectors. They were also used throughout history to achieve equity. In other words, tax the rich more in order to give back to the poor.

Tax evasion has undeniably been on a steady incline. Since the fall of the Lebanese government in late 2019 and the COVID crisis in 2020, the chaos-dominated administration became an incentive for committing tax fraud. 5 major types of taxes have been analyzed to give out an accurate dynamic of tax evasion, each creating a domino effect of fraud and a spiral of budgeting discrepancies. On top of that, the ongoing evasion is leading to increased leniency towards the Black market, as it has become more beneficial to participate in the informal economy, rather than the legal one.

The rise of the informal economy, shadow behavior, and clientelism encouraged major businessmen to abuse tax evasion. The lack of accountability and the low probability of getting caught have further motivated this crime. In a country where the government has failed to earn the trust of its people, anyone would expect tax evasion, as the citizens are no longer convinced that their taxes are going towards the welfare of society. Realistically speaking, they believe that tax is going to the wrong places.

Within the shoes of wealthy businessmen, tax evasion does not seem to be a serious crime, as there is no direct harm or 'victim'. Deep in the economics of taxation and tax evasion, this concept is rather unfair and disturbs the equity that taxes intend to concretize. The more people avoid taxes, the more the government will impose taxes that the actual taxpayers shall face. While the tax evaders remain unhurt, taxpayers who have no other choice but to pay are consistently burdened. Our policy system failed to address the interaction of the shadows with the surface. It did not find a way to benefit the taxpayers. Instead, it let tax evaders dwell in the tax fraud mentality with little to no legitimacy in economic transactions and business activities.

However, the rise of this tax burden - as proposed in the WhatsApp tax in October 2019 or the new Lebanese tax system of 2024 - may lead to a further decrease in the overall revenues of the government. The cycle of ignoring the tax evaders and punishing the law abiders makes people more prone than ever to commit tax fraud and find ways around the system.

Tax evasion will happen, and it is improbable to stop it completely, especially in the spatial temporal cadre that is imposed on Lebanon nowadays. However, we cannot budget anymore without considering the massive amounts of taxes being avoided, and we must progressively build up towards bringing back the willingness to pay taxes. Taxes are in the end a symbolic gesture to signify

the legitimacy of the firm, individual, or product. The trend of tax evasion would remove this legitimate stamp out of the Lebanese economy step by step, as the country would enter deeper and deeper into cartel governance and the survival of the richest.

Now that we have an aggregate understanding of the idea behind tax evasion and how it transmits a burden from a certain individual to another, the importance of this chapter seems evident. Firstly, it endeavors to model the framework of tax evasion. Using intermediate microeconomic and utilitarian theory, we were finally able to merge the presence of tax evasion within our governmental revenue accounting. As the new budget of 2024 clearly used obsolete taxation mechanisms, this chapter has also been able to give out predictions about the actual tax revenue. Finally, it sheds light on the various variables to consider in order to stop this fraud triangle and bring back the rule of law to its rightful power. Overall, this chapter intends to highlight the hollowness of the state, undermine the rule of law within the taxation dynamics, and introduce a new vision for public finance.

## I) What is Tax evasion?-

-“... In this world nothing can be said to be certain, except death and taxes,” said Benjamin Franklin.<sup>1</sup> But, are we really confident that taxes are certain? As the years pass by, the world as a whole is losing billions of dollars due to people evading taxes, which is an obsolete issue since without taxes, governments would no longer be able to provide us with necessary services such as infrastructure, defense, education, healthcare, etc... If we look at taxes from a sociological perspective, they buy us a civilized society and are an important factor to build a democracy as well as a method to finance the common good.<sup>2</sup> Despite the importance of taxes, people still evade them. But what exactly is tax evasion? Tax evasion is a willful and especially criminal attempt to evade the imposition or payment of a tax.<sup>3</sup> Some often confuse tax evasion with tax avoidance, which is a more legal way of dodging taxes. Tax evasion occurs through different methods such as underreporting or not reporting income, using offshore accounts to conceal income, earning money in an illegal way and not informing the correct authorities, transferring assets to others in order to not pay taxes, etc...<sup>4</sup> Like most things in life, every action (tax evasion) needs a reaction (consequences). Consequences differ among countries, but among the common ones include imprisonment, payment of fines, loss of personal property, and more. Understanding tax evasion and its details is essential because it is a major contributor to the failure of numerous public administrations and economic downturn. Will we ever reach a world where tax evasion becomes null? Will tax evasion laws and punishments become stricter? In the following sections, we will delve into the different types of taxes, dynamics, and methods of tax evasion.

We are mostly going to tackle the following types of taxes in order to assess the dynamics of evasion and the construction of a better tax system:

**Income Tax:** A tax levied on the income of individuals or entities, typically based on earnings from employment, investments, or other sources.

**Municipality Tax:** A tax imposed by a local government, such as a city or town, to generate revenue for local services and infrastructure.

**Customs Duty:** A tax levied by a government on goods imported or exported across its borders. It's often used to regulate trade and protect domestic industries.

**Property Tax:** A tax based on the value of real estate or other property owned by an individual or entity. It's usually assessed by local governments and used to fund local services like schools and infrastructure.

**Value Added Tax (VAT):** A consumption tax placed on the value added to goods and services at each stage of production or distribution. It's typically borne by the end consumer and collected by businesses on behalf of the government

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<sup>1</sup> Benjamin Franklin, Letter to Jean-Baptiste Le Roy, November 13, 1789, in *The Writings of Benjamin Franklin*, ed. Albert Henry Smyth, vol. 10 (New York: Macmillan, 1905–1907), 69.

<sup>2</sup> Joseph E. Stiglitz, *The Road to Freedom: Economics and the Good Society* (New York: W. W. Norton & Company, 2024).

<sup>3</sup> *Merriam-Webster.com Dictionary*, s.v. "tax evasion," , <https://www.merriam-webster.com/dictionary/tax%20evasion>.

<sup>4</sup> Ram Dutt Sharma, *Common Mode of Tax Evasion* (New Delhi: Commercial Law Publishers, 2024).

## The Lebanese taxation system

Lebanon is characterized by a free enterprise system, one of the freest in the region to be more precise.<sup>5</sup> Although it follows a certain French model in its taxation system, its leniency and overall randomization made room for tax evasion.

After 2008, the Lebanese authorities wanted to attract as much investment as possible, putting the property tax in a wide range between 4% and 14%. On top of that, custom duties became malleable depending on the country of export. Some, including the European Union, the Arab Area, Turkey, and the United States, ended up getting exempted from taxes.

The progressive taxation of corporate profits from 4% to 21% did not encourage the growth of any private corporation in the country, as the unregulated progressive tax may have led to lesser profit.<sup>6</sup> It is also worth mentioning the exemption of taxes on educational institutions, hospitals, NGOs, and most importantly, offshore companies encouraged the Lebanese investor to open somewhere other than Lebanon.

Taxation has always created market distortions, but it was supposed to be a tool for equity. As the monarchies fell and republics rose, taxes became the major way to finance the governments, covering external costs and paving the path toward the desired type of economy. For example, the levitation of taxes on educational institutions opened a hub of knowledge in the country, as it was attempting to transform itself into an epicenter of knowledge. This was a relatively good decision by the Ministry of Finances. However, what is the point of an educated population if the job market is oversaturated?

The major taxation of corporations did not become a tool for equity. It was needed to construct a progressive tax system that did not wear out small businesses, but it became a threat to growth. The incentive to upgrade and invest in the country majorly decreased over time, sometimes resulting in the shadows absorbing this desire to grow and leading to the rise of unregistered businesses.

Many tax incentives enacted in the 1950s have become obsolete and are still unaddressed in the new fiscal balances. For example, the exemption of taxes for Middle East Airlines have led towards the monopolization of the market in the region.<sup>7</sup> The nation relies the most on VAT for revenues, as this indirect tax has been well-incorporated into the heavy consumerist lifestyle of the population.

So where is equity? As Lebanon has been heading towards poverty since late 2019, the consumption based tax is encouraging more and more inequalities;<sup>8</sup> the people who consume most of their incomes (usually the poor) are paying the price of decades of neglect and obsolescence in the Lebanese taxation system. We would have expected a rise in investment, but the exemption of taxes for specific lobbyist companies made competition nearly impossible.

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<sup>5</sup> The Heritage Foundation, "2019 Index of Economic Freedom: Lebanon" (Washington, DC: The Heritage Foundation, 2019).

<sup>6</sup> Republic of Lebanon Ministry of Finance, *A Brief Overview of the Lebanese Tax System* (Beirut: Ministry of Finance, 2018).

<sup>7</sup> Sami Atallah and Maha Yahya, *Lebanon's Political Economy of Sectarianism and the Rentier State* (Beirut: Lebanese Center for Policy Studies, 2021).

<sup>8</sup> World Bank Group, *Lebanon Economic Monitor: The Deliberate Depression* (Washington, DC: World Bank, Fall 2020), 12-15.

If the heavy punishment that comes with a growing business isn't enough, new investors in Lebanon must also face an unfair game in the rigged economy of the country. In this scenario, it is not only normal, but expected to lean towards the black market and the informal economy. There is a need to grow, and most importantly, there is a need to satisfy the market's demand.

The main question in taxation is who is going to pay more, the consumer or the saver? Lebanon's adoption of the multifaceted taxation, putting a certain range of tax in most legal activities, did not achieve the equity that it endeavored to do so. Even worse, it led to the non-incentive of investment, blockade of competition, and misguidance of the country's economy, as there is no clear economic path in the tax exemption mechanism of the nation. The favoritism of some institutions over the others created an unfair competition and deadweight loss, as exemplified by the certain goods that are in current underproduction.

In fine, the rise of the black market is related to the country's taxation system. Minimal investigations and institutionalized nepotism opened a new option, the informal economy. The tax system is expected to become a major tool for market regulations, equity, and economic guidance. It was intended to play with incentives and improve the market. However, it only led to creating well prepared generations that are ready to integrate into the already saturated job market. The shadows satisfied the needs of the various investors, as bribes became less expensive than paying taxes. Here we are, living in the detriments of the neglect of tax strategies.

## **II) Dynamics and methods of tax evasion**

It must be noted that Lebanon has a low level of tax revenues, which made up about 15% of its GDP in 2018 - similar to that of Senegal and Costa Rica, but lower than the average of all developing regions including Sub-Saharan African (17%), the MENA oil-importers (18% GDP), and Latin America (23%)<sup>9</sup>. In 2019, Lebanon was ranked 137th among 180 countries in the Corruption Perceptions Index of the Transparency International Organization.<sup>10</sup> Lebanon's high levels of corruption are related to the weak inspection of taxpayers' accounts and financial transactions.

According to the "Fraud Triangle Theory and Tax Evasion in Lebanon", tax evasion in Lebanon mainly comes in the form of personal income tax evasion where many taxpayers do not report their due income taxes.<sup>11</sup> Many also engage in other forms of income tax evasion like submitting unrealistic declarations. Bank Audi (2018) proposes that income tax evasion constitutes the largest kind of tax evasion in the country as it results in a loss of \$2 billion per year, which equals to around 3.9% of the GDP.<sup>12</sup>

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<sup>9</sup> Ishac Diwan, "Lebanon's Political Economy and the Tax System" (Working paper, 2021).

<sup>10</sup> Transparency International, *Corruption Perceptions Index 2019* (Berlin: Transparency International, 2020).

<sup>11</sup> Salloum Abdo, "Fraud Triangle Theory and Income Tax Evasion in Lebanon," *Review of Economics and Finance* (July 2023).

<sup>12</sup> Bank Audi Group Research Department, *Lebanon Economic Report: First Half 2018* (Beirut: Bank Audi, 2018).

In respect to the enterprise level, A study conducted by BLOMINVEST BANK in 2017 presents that Small and Medium Enterprises (SMEs) in Lebanon tend to manipulate their financial statements for income tax evasion incentives.<sup>13</sup> More importantly, the study showed that SMEs working in the informal markets, the black market in particular, do not register with the Ministry of Finance, thus they do not pay any forms of taxes to the government. Moreover, it stressed that those SMEs also tend to keep Syrian refugee-workers undeclared to the tax authorities and declare lower salaries for registered employees in order to evade social security fees.

Lebanon has a high level of customary tax evasion. A report conducted by Bank Audi in 2018 indicates that Lebanon imported \$20 billion worth of goods in 2017. If the average customs duty rate of 13% is taken into account, then \$2 billion in duties would have been collected. However, Lebanon only received \$1.5 billion. This means that there is \$500 million in customs duty evasion, which makes it the third largest source of tax evasion.<sup>14</sup>

There is no dispute that the tax system in Lebanon is unfair, inefficient, and in need of development. The evidence is the amount of tax evasion recorded in 2018 (one year before the collapse), which amounted to \$4.5 billion divided between income tax evasion, which amounted to \$2 billion, and value-added tax evasion (TVA), ranging between \$1.3 and \$1.5 billion annually. Additionally, according to an International Monetary Fund study, tax evasion amounting to \$500 million was also recorded in customs, \$200 million in real estate, as well as other aspects, such as in the field of electricity fees.<sup>15</sup>

### **Effect of the Tax evasion incentive on the market.**

The Fraud Triangle explains the final phase of tax evasion, which is the concretization of fraud incentives within the market of Lebanon. Whether it was in the labor market or goods market, most of the Lebanese business owners would create distortions based on evading taxes.<sup>16</sup>

One major example would be the Syrian refugee crisis, with the argument that refugees are taking most of the jobs and, in turn, inducing a high rise of unemployment. This phenomenon is partially to be blamed on all the business owners who would prefer to hire Syrians to avoid paying any tax, as neither papers nor social security tax are present.<sup>17</sup> On top of that, customs tax evasion and the withholding of the Beirut Port's rightful revenues have led to a complex clearance process

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<sup>13</sup> Rouba Chbeir, *Tax Evasion in Lebanon: How Much of a Burden?* (Beirut: BLOMINVEST Bank, November 2017).

<sup>14</sup> Bank Audi Group Research Department, *Lebanon Economic Report: First Half 2018*.

<sup>15</sup> International Monetary Fund, *Lebanon: 2019 Article IV Consultation—Press Release; Staff Report; and Statement by the Executive Director for Lebanon*, IMF Country Report No. 19/312 (Washington, D.C.: IMF, 2019).

<sup>16</sup> Abdo, "Fraud Triangle Theory and Income Tax Evasion in Lebanon."

for agencies, as the customs program 'Najm' lacks the necessary capital to operate effectively and efficiently. The time factor became one of the burdens of tax evasions, without forgetting that no one can distinguish the legitimate from the illegitimate without taxes.<sup>18</sup>

The game theory, where a competition on prices is taking place between two shops selling the same product, is also being rigged with the tax evasion scheme. People who do not pay taxes can reduce their costs, thus benefitting and drawing in more buyers. The perfect example is the Amhaz brothers who currently have the largest hand in the market for electronic gadgets, therefore leading to an overall discouragement of investment and productivity.<sup>19</sup>The game theory and its cheat codes caused the rise of monopolies, as the fall of the rule of law opened the gates towards frozen economic growth.

It is also worth highlighting the rise of unregistered businesses, which led to the misorganization of the economy. Unregistered businesses are a form of tax evasion, which will be specifically tackled in the second chapter. The main problem is that instead of dealing with these various evasions, the government keeps on raising taxes, eventually leading to the burnout of many laborers in the country, brain drain, and overall increase in the participation in shadow market activities.

As we can see, tax evasions are forbidding the economy to arrive at its actual equilibrium, leading to price distortions and unfair competitions, as the invisible hand is being blockaded by black market operations that do not necessarily achieve efficiency and will never achieve equity.

### **Tax Evasion Interview – Ziad Youssef (Accountant and Auditor)**

Tax evasion in Lebanon is a multifaceted issue that significantly hampers the country's economic stability and public services. Ziad Youssef, an expert on Lebanon's taxation system, provides a detailed overview of the various methods and implications of tax evasion in Lebanon, highlighting its pervasive nature and the sectors most affected.

### **Common Forms of Tax Evasion**

Firstly, one of the most common forms of tax evasion in Lebanon involves unregistered businesses. According to Youssef, these businesses avoid paying the Value Added Tax (TVA) by circumventing the official registration process. Normally, businesses must obtain government authorization to operate legally and issue invoices sealed by the government, ensuring the payment of TVA. However, around 80% of businesses evade this requirement, operating without official status and therefore not issuing official invoices. This allows them to escape TVA payments entirely.

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<sup>18</sup> World Bank Group, *Beirut Port: An Assessment of Operations and Customs Clearance Procedures* (Washington, DC: World Bank, 2019).

<sup>19</sup> Jamil Mouawad, *Lebanon's Border Politics: Smuggling and the State* (Paris: Arab Reform Initiative, 2018).

Furthermore, extensive bribery enables these unregistered businesses to bypass the Chamber of Commerce's taxation system. The lack of a license means these businesses cannot be compelled to issue official invoices, leading to widespread tax evasion.

Secondly, the ongoing economic crisis in Lebanon has exacerbated these issues. Businesses increasingly use the "lollar," deposits denominated in US dollars within the Lebanese banking system, complicating the declaration of salaries for personal income tax purposes. Youssef notes that auditors struggle to publish accurate financial statements due to the ambiguity surrounding the lollar, leading to significant financial losses. This has prompted businesses to pay part of their employees' salaries in cash, evading high personal income taxes and conducting transactions off the books.

### **Vulnerable Sectors**

Furthermore, tax evasion in Lebanon is particularly rampant in specific sectors due to their reliance on cash transactions. Youssef identifies retail and wholesale trade, real estate and construction, healthcare, and hospitality and tourism as the most affected sectors. The economic crisis has pushed more transactions into the informal economy, with the closure of banks and rising inflation exacerbating the situation. Many citizens, now impoverished, cannot afford basic services, leading businesses to resort to tax evasion to survive. This, in turn, reduces government revenue and weakens public services, creating a vicious cycle of tax evasion and economic instability.

### **Perpetrators of Tax Evasion**

In addition, those most likely to commit tax evasion in Lebanon are individuals in positions of power, including politicians and influential business leaders. These individuals engage in white-collar crimes, leveraging their control over economic resources and regulatory mechanisms to evade taxes with relative impunity. Employees in the banking and real estate sectors also frequently commit tax fraud, given the ample opportunities to conceal financial activities and falsify documentation. The culture of corruption and lack of stringent regulatory enforcement further facilitates these illicit activities, allowing these individuals and entities to evade taxes without significant fear of repercussions.

### **Economic Impact**

Moreover, the economic impact of tax evasion on Lebanon is profound but challenging to quantify precisely. The Lebanese government struggles to estimate the exact revenue loss, partly because tax fees were historically set at an outdated exchange rate. This undervaluation exacerbates the decline in government income. The severe economic crisis has led to widespread evasion and corruption, complicating accurate revenue assessments. Consequently, the government's inability to effectively track and collect taxes has resulted in a significant reduction in public funds, hampering essential services and deepening financial instability.

### **Public Services**

To add, tax evasion severely undermines Lebanon's ability to provide public services. The substantial revenue losses for the government lead to inflated prices for basic necessities and public services. Youssef explains that unregistered businesses exploit the lack of regulation, manipulating prices and exacerbating inflation. This reduces the government's monetary liquidity, limiting its investment in public services such as healthcare, education, and infrastructure. Additionally, the distortion of supply and demand dynamics caused by tax evasion burdens consumers with exorbitant prices for essential goods. The lack of tax revenue also impairs government intervention in the economy, preventing it from stabilizing prices and ensuring fair market practices.

### **Effectiveness of Tax Laws and Enforcement**

Furthermore, Lebanon's current tax laws and enforcement mechanisms are largely ineffective in combating tax evasion. Youssef highlights the lack of an organizational economic plan within the government, leading to inefficiencies and mismanagement. Despite being modeled after France's tax laws, Lebanon's regulations have not been updated to address contemporary challenges. The enforcement of these laws is virtually nonexistent, allowing tax evasion to flourish due to the absence of deterrents or penalties for those bypassing the system. This perpetuates a cycle of corruption and financial instability, undermining efforts to combat tax evasion effectively.

### **Steps Towards a Fair Tax System**

In short, to develop a more effective and fair tax system in Lebanon, several steps are necessary. Youssef advocates for the adoption of advanced technology, including AI, to enhance tax compliance by streamlining tax collection and detecting evasion patterns. Modernizing the tax infrastructure and updating the legal framework to close loopholes and align with international standards are crucial. Enhancing transparency and accountability, increasing public awareness about tax compliance, and strengthening the capacity of tax authorities through training are also essential measures. Implementing a comprehensive system of checks and balances, including independent audits and regular evaluations of tax policies, will ensure continuous improvement and adaptation to changing economic conditions. By taking these steps, Lebanon can create a more effective and fair tax system that supports economic growth and stability.

In conclusion, tax evasion in Lebanon is a significant issue with far-reaching implications for the country's economy and public services. Addressing this problem requires comprehensive reforms, technological advancements, and a commitment to transparency and accountability. By implementing these measures, Lebanon can mitigate the detrimental effects of tax evasion and foster a more stable and prosperous economic environment.

### **III) Economic assessment**

Tax evasion comes up into many types: custom tax evasion, income tax evasion, VAT evasion etc... However, it seems to us that one can be an indicator for another in the following year. We are assuming the maximization of utility since we are currently considering the market as a whole and because the possibility of illegitimacy is present.

The custom tax evasion table can be seen below, using a Cobb-Douglass indifference curve to assess the overall amount of utility ( $X^a \cdot Y^{(1-a)}$ ) where  $a$  is the parameter of study.

Year	Expected Custom revenue (In B of USD)	Actual custom revenue	Custom evasion	Alpha custom	Utility
2010	0.52	0.45	0.07	0.135	35.0039504
2011	0.54	0.46	0.08	0.148	35.50806373
2012	0.55	0.48	0.07	0.127	37.58815866
2013	0.55	0.49	0.06	0.109	38.97473703
2014	0.54	0.48	0.06	0.111	38.10642868
2015	0.53	0.47	0.06	0.113	37.24619317
2016	0.55	0.47	0.08	0.145	36.35730778
2017	0.6	0.48	0.12	0.2	36.3771976
2018	0.65	0.49	0.16	0.246	37.20671778
2019	0.55	0.35	0.2	0.364	28.54974244
2020	0.3	0.15	0.15	0.5	15
2021	0.2	0.1	0.1	0.5	10
2022	0.22	0.1	0.12	0.545	11.04469632
2023	0.72	0.48	0.24	0.333	38.10642868

The table above showcases a relatively stable rate of tax evasion between the years 2010 and 2018, which slowly began to downgrade progressively starting 2019. That year is marked by a higher participation in custom evasion, directly implying a lower rate of tax revenue. The alpha indicator can be influenced through the various political and administrative changes that were happening in the country. And most specifically in the case of custom duties, it serves as an indicator for future bank default.

The dynamics between customs and banks are simple. The year 2018 was the last before the declaration of bank default back in 2018, which explains a lot when it comes to taxes in foreign currencies. As the default happened in 2019, we can safely assume a lack of foreign currency reserves in the Lebanese banks, which would lead to higher responsiveness in tax evasion in foreign reserves, as they would sometimes comply with it in order to gain more time before the complete default.

It is also worth mentioning the ministerial gap of the year 2018, which opened the gate for undermining the rule of law. This was not resolved after the appointment of the new cabinet, signaling the start of a crisis.

Without a doubt, the Beirut port explosion led to another reduction in tax revenue rate, mostly due to the crippled administration and the lack of confidence within the customs administration. Considering clientelism had already spread to the maritime and customs offices, the explosion further decreased responsiveness towards the rule of law, created an easier path towards tax evasion, and produced a more complex mechanism towards partitioning taxes.

As the risk of getting caught and the near absence of confidence in the governmental institutions increase, it is expected to have an odd increase in tax evasion rate, which will then lay the path towards evading other taxes as well.

The rate of custom tax evasion seems like an expectation indicator for the income tax evasion rate, which is significantly more flexible than its precedent. We can see the variation of income tax revenue and its analysis in the table below.

Year	Expected income tax (In Billion of USD)	Actual Revenue income	Income evasion	Alpha Income	Utility
2010	2.2	1.7	0.5	0.227	66.0109098
2011	2.3	1.8	0.5	0.217	66.02184353
2012	2.4	1.9	0.5	0.208	66.00320011
2013	2.5	1.95	0.55	0.22	72.65918335
2014	2.6	2	0.6	0.231	79.23849907
2015	2.7	2.1	0.6	0.222	79.23815527
2016	2.8	2.15	0.65	0.232	85.79128654
2017	3.2	2.3	0.9	0.281	117.1509693
2018	3.5	2.5	1	0.286	129.9603411
2019	3.3	3.2	0.1	0.03	11.09569472
2020	2.5	0.8	1.7	0.68	101.8227556
2021	1.5	0.3	1.2	0.8	39.58523732
2022	0.5	0.15	0.35	0.7	19.34123914
2023	0.21	0.2	0.01	0.048	1.154647554

The income tax return rate instantly dropped between the years 2019 and 2020, mostly due to the crisis that took place. The introduction of the whatsapp tax in Lebanon in October 2019 led to a real despotic incentive towards paying regular taxes. This brings out many conclusions in our analysis. As income tax return rate was influenced by custom taxes, we can witness a certain domino effect in these taxation sectors.

Income tax evasion during this time has also been affected by the short run recession of the country. As the wages were not fully adjusted to the skyrocketing prices, the people became more responsive to tax fraud, especially with its null consequences. Following the adjustment of wages around 2022, Lebanese citizens witnessed a higher budget constraint. However, the detriments of

tax evasion remained null, leading to its accustomation. The inefficiency of budget allocation is being highlighted as well, extinguishing people's will to pay their taxes, as the belief that their payment is not contributing toward the welfare of society in addition to the picture of the government as a revenue maximizing Leviathan reached a peak point in the 21st century.

The domino effect is still materializing. As income tax evasion is becoming more malleable, it is opening the gate towards VAT evasion using underground deals that forbid the treasury from its expected revenues. The overall VAT revenues are presented in the table below.

Year	Expected VAT (Billions USD)	Actual Collected (Billions USD)	Evasion Rate	Alpha VAT	Utility
2010	2.4	2.1	0.3	0.125	64.5942 2072
2011	2.5	2.2	0.3	0.12	65.6070 3744
2012	2.5	2.3	0.2	0.08	98.5064 5007
2013	2.6	2.4	0.2	0.077	101.006 2629
2014	2.6	2.4	0.2	0.077	101.006 2629
2015	2.7	2.3	0.4	0.148	45.0963 6951
2016	2.7	2.4	0.3	0.111	67.6251 6355
2017	3	2.6	0.4	0.133	45.9259 3297
2018	3.2	2.65	0.55	0.172	24.5359 5836
2019	2.8	2	0.8	0.286	10.1039 162
2020	2.2	0.8	1.4	0.636	4.01514 6869
2021	1.5	0.2	1.3	0.867	27.7000 0757

2022	0.4	0.15	0.25	0.625	56.9876 7642
2023	0.75	0.5	0.25	0.333	54.9213 9075

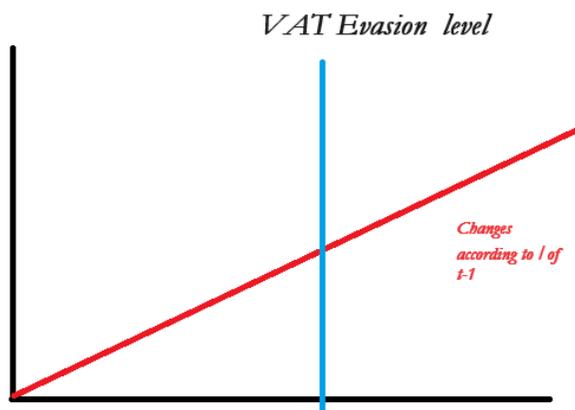
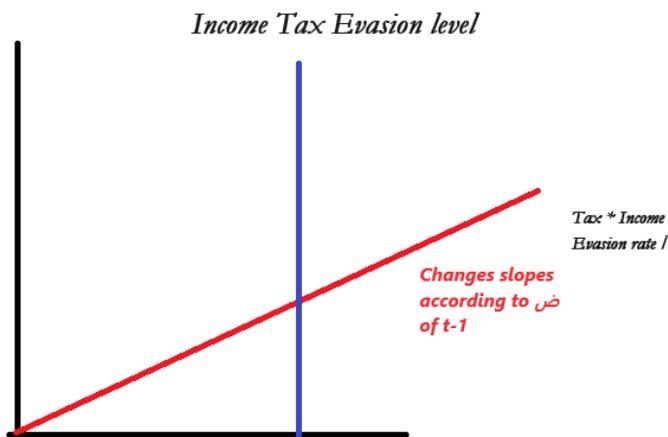
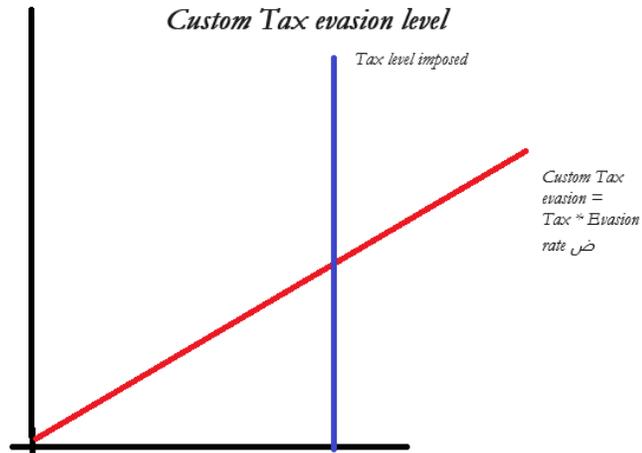
The decrease in tax revenue rate in VAT is much harder than other tax evasion rates due to the overall difficulty in evading VAT. Most Ad Valorem taxes are included in the pricing of a certain good, and unless there are good connections between buyer and seller, it is nearly impossible to evade VAT.

When possible, VAT evasion takes place to successfully compete with the pricing of the markets. Especially in perfect competition, suppliers can increase their profits by refusing to pay the overall ad-valorem tax they were supposed to. On top of that, this illegitimate activity creates a sort of loyalty between the supplier and the client, as the “partner in crime” effect leads to prosperity in terms of the clientele.

The snowball effect became more than clear in the tax evasion study. Starting with custom taxes (due to some simplifications) and the narrowing of the rule of law, the path towards more types of evasion was laid. As poverty hits, people do their best to maximize their income, and government inefficiency only makes the situation worse..

It is also worth mentioning that the people are not the only ones guilty of tax evasion. The administration deadweight loss and the aggregate mistreatment of the average citizen is not encouraging individuals to pay their taxes either. Moreover, any type of discrepancies on behalf of the administration or deceptions in terms of tax revenue are also under the umbrella of evasion. The taxes that were supposed to keep the state’s treasury alive disappeared due to miscalculation, mistrust, discouragement, and greed.

The causality chain can be depicted in the following model which would assess the correlation between these three different types of taxes on different timelines.



Clearly, one tax evasion rate affects the other. The next part is going to depict how we can find the tax evasion rate of each one using econometric relations and the causality chain.

### Property and Municipality taxes:

Within this type of taxes, we can witness an odd constancy of tax evasion, which gives us strong insights about the contrast of local and central administration. The local administration possesses a fixed rate of tax evasion, as we can see in the tables below, describing property and municipality tax evasion phenomena:

Year	Expected BPT (Billions USD)	Actual Collected (Billions USD)	Tax evaded	Alpha Property	Utility
2010	0.38	0.14	0.24	0.632	19.68197 256
2011	0.39	0.14	0.25	0.641	20.30203 211
2012	0.4	0.15	0.25	0.625	20.64176 016
2013	0.41	0.15	0.26	0.634	21.25898 392
2014	0.42	0.16	0.26	0.619	21.60917 645
2015	0.43	0.17	0.26	0.605	21.98296 151
2016	0.44	0.17	0.27	0.614	22.58450 805
2017	0.45	0.18	0.27	0.6	22.95764 101
2018	0.46	0.19	0.27	0.587	23.35262 83
2019	0.41	0.11	0.3	0.732	22.92693 491
2020	0.22	0.04	0.18	0.818	13.68950 761
2021	0.11	0.015	0.095	0.864	7.390972 837

2022	0.07	0.008	0.062	0.886	4.909206 442
2023	0.04	0.015	0.025	0.625	2.064176 016

Year	Expected Municipal Tax (Billions USD)	Actual Collected (Billions USD)	Tax Evaded	Alpha Municipality	Utility
2010	0.12	0.04	0.08	0.667	6.351071 447
2011	0.13	0.05	0.08	0.615	6.675807 324
2012	0.14	0.05	0.09	0.643	7.296426 72
2013	0.14	0.05	0.09	0.643	7.296426 72
2014	0.14	0.05	0.09	0.643	7.296426 72
2015	0.14	0.05	0.09	0.643	7.296426 72
2016	0.14	0.05	0.09	0.643	7.296426 72
2017	0.15	0.06	0.09	0.6	7.652547 004
2018	0.16	0.06	0.1	0.625	8.256704 063
2019	0.14	0.04	0.1	0.714	7.694655 09
2020	0.08	0.01	0.07	0.875	5.488589 937
2021	0.04	0.005	0.035	0.875	2.744294 968
2022	0.03	0.002	0.028	0.933	2.346213

					087
2023	0.01	0.005	0.005	0.5	0.5

The data presented in the property and municipality tax tables reveals an "odd constancy" of tax evasion, which offers strong insight into the contrast between local and central administration tax systems. Unlike the central government taxes (like Customs or Income Tax) which showed a strong "domino effect," the local administration taxes maintained what the analysis suggests is a "fixed rate of tax evasion" during the period of relative economic stability. This stability suggests a different set of dynamics at the local level compared to the more volatile central tax evasion schemes.

During the pre-crisis years (2010 to 2018), both the Property Tax (BPT) and Municipal Tax showed predictable, constant rates of evasion. Expected BPT revenue rose slightly from \$0.38 billion to \$0.46 billion, while the amount evaded remained nearly fixed, hovering between \$0.24 billion and \$0.27 billion. Similarly, Expected Municipal Tax revenue grew from \$0.12 billion to \$0.16 billion, with the amount evaded constant between \$0.08 billion and \$0.1\$ billion. The Alpha rates (percentage of expected tax revenue that is actually collected) for both taxes generally maintained a narrow range, illustrating the local administration's steady but persistently high rate of tax evasion before the financial collapse.

The onset of the crisis starting around 2019 led to a significant drop in both the expected and actual collected revenues for both property and municipal taxes. Expected BPT revenue collapsed from \$0.46 billion in 2018 to just \$0.04 billion in 2023. Municipal tax revenue followed a similar sharp decline, with expected revenue dropping from \$0.16 billion in 2018 to \$0.01\$ billion in 2023. While the absolute amount of tax evaded also decreased significantly in these later years, the Alpha rates became much more volatile, suggesting the breakdown of the "fixed rate" consistency as the underlying economic circumstances drastically shifted.

The analysis acknowledges a core limitation: while the models provide accuracy and evasion expectations, they cannot point to the specific exogenous phenomena that caused the shifts. For instance, the data cannot distinguish whether a decrease in the evasion rate is due to successful enforcement or an increase in money laundering that legitimizes funds outside the expected tax system. Nonetheless, the model uses these expected revenues as a basis to analyze the cause and effect chain of tax evasion dynamics, ultimately to determine the optimal tax choice and recommend steps toward a new vision in public finance

**Limitations:** The core problem out of these models is that they give the final results without being able to point to the specific exogenous phenomenon that shifted the whole table. For

example, an increase in money laundering would obviously decrease the tax evasion rate, as money is being legitimized out of nowhere. Moreover, there can be a lack of income statements that can play within the expected revenue of the government. However, all in all, this model was able to give out accuracy and evasion expectations to be used forward towards a new vision in public finance.

Using the expected revenue as a basis, the model analyzed the cause and effect chain to determine the optimal tax choice and identify the next steps to stop tax evasion. This brings us to the following part which will apply our models in Lebanon and develop a new reform of taxation, generally criticizing the weak economic foundation of the new fiscal balance sheet of 2024.

Let us not forget that these are only within registered businesses, which we will consider the 1st degree of tax evasion. However, there are plenty of unregistered commerce that are not even counted within the expected tax, leading to a new degree of tax evasion, the 2nd degree. The following chapter will give insight on this specific topic, analyzing the dynamics of unregistered businesses and why they decided to go unregistered.

### **Policy recommendations:**

#### **I) The wall theory**

Let us consider the laws of opportunity cost in order to develop a concrete method to stop tax evasion. In this case, the main problem with our judicial system is that it does not take into account the probability of getting caught. In most countries, this probability is extremely high, which explains why we have not thought of this before. We tend to copy other nations' legal behaviors as they are working there.

The games of probability can play a huge role in punishing tax evasion. The main goal is ascertaining how much is enough in order to have a non-encouraged fraud.

First, let us denote 'p' the probability of getting caught, so there is (1-p) chances that the evader will not pay anything, and p chances that they will have to pay a certain amount as a penalty for their actions, which we will denote C. The expectation of the fine would finally become  $p \cdot C$ , as the other part would be nullified due to successful escape.

All in all,  $E[C]$  must stay larger than the tax that must supposedly be paid. Playing with the incentive that despite this little chance of getting caught, there is a massive amount to pay, or despite the relatively small fine, there is a large chance of getting caught, the evader will see more costs than benefits in committing tax fraud, leading to a new system of applying fines in the tax evasion cadre.

The wall theory would suggest committing a fine where  $p \cdot C > T$  where T is the tax evasion committed in this case. This would not completely erase tax evasion, as irrational economics still plays a role in people's decisions. However, it is a matter of time that people will acknowledge the cost vs benefits of tax evasion, and the wall theory gives us a clear way to discourage this illegitimate act.

#### **II) Accurate budgeting**

The whole point of this chapter is to consider the fact that tax evasion exists, but its magnitude remains unknown, despite having many indicators. The table below shows the points and

variables that may affect Alpha custom, which is the rate of tax revenue, or the percentage of expected tax revenue that actually enters into the treasury. Unfortunately, Lebanon's credit default swap has not been calculated since 2020. Still, to get an idea of its magnitude, we can compare the nominal interest rate of the United States with the Lebanese one on USD, bringing us an indicator on how big our CDS is.

Year	CDS indicator	Gov Conf	Corruption index	Custom efficiency	Alpha
2010		45%	30	3.34	0.135
2011	3.16	42%	30	2.96	0.148
2012	2.97	40%	30	2.58	0.127
2013	2.37	0.38	28	2.655	0.109
2014	2.16	35%	27	2.73	0.111
2015	2.44	32%	28	2.725	0.113
2016	2.84	30%	28	2.72	0.145
2017	3.51	28%	28	2.72	0.2
2018	4.01	25%	28	2.72	0.246
2019	3.83	20%	28	2.76	0.364
2020	4.36	18%	25	2.77	0.5
2021	3.85	15%	24	2.78	0.5
2022	2.04	12%	24	2.79	0.545
2023	-3.23	10%	24	2.8	0.333

Using an exponential regression analysis, we can find the correlation between all these factors and the custom tax rate of return.

Thus using the variables of 2024, we can predict an estimation of the tax return based on the government expectations to have an accurate budgeting with more reasonable numbers. This is assuming that the government is not willing to change or to influence the exogenous variables that may change Alpha in the customs

Applying the same method for both VAT and Income tax would give us a certain clue on where we lie on counterweighting tax evasion. As the people keep on maximizing their utility, alpha can shift based on what could affect their overall level of satisfaction, considering how both risky and beneficial tax evasion is.

Year	Political Stability	PPP	CTE (t-1)	Alpha Income
2010	-1.65	14835.4		0.14
2011	-1.62	15125.8		0.135

2012	-1.7	16300	0.148	0.208
2013	-1.7	16501.2	0.127	0.22
2014	-1.7	16326.7	0.109	0.231
2015	-1.7	17241.8	0.111	0.222
2016	-1.62	19135.6	0.113	0.232
2017	-1.62	21138.4	0.145	0.281
2018	-1.62	21381.8	0.2	0.286
2019	-1.67	21029.7	0.246	0.03
2020	-1.62	15581.8	0.364	0.68
2021	-1.48	11860.1	0.5	0.8
2022	-1.47		0.5	0.7
2023			0.545	0.048

Year	ITE t-1	Rule of Law	MPC by %	Alpha VAT
2010	0.23	-0.71	88.1	0.125
2011	0.227	-0.75	89.45	0.12
2012	0.217	-0.75	90.8	0.08
2013	0.208	-0.75	90.8	0.077
2014	0.22	-0.78	94.59	0.077
2015	0.231	-0.81	90.8	0.148
2016	0.222	-0.81	88.14	0.111
2017	0.232	-0.81	89.6	0.133
2018	0.281	-0.78	88.92	0.172
2019	0.286	-0.85	93.63	0.286
2020	0.03	-0.91	100.2	0.636
2021	0.68	-1.09	119.2	0.867
2022	0.8	-1.1		0.625
2023	0.7			0.333

Again, this data provides a reasonable basis for predicting the tax return rate, as we derived three final proportions that allow us to estimate changes in alpha, which we aim to maximize.

**Maximizing custom tax return rate:** The 4 variables that we presented above affect the custom tax return rate in a certain proportionality. However, custom bureaucracy seems to be doing well according to the indicators, and the corruption index is out of our hands. If we would like to increase the return in tax rates, the central Bank must regulate the interest rate and re-compile an economic and banking system that would reduce the Credit Default Swap so there would be no problem in paying taxes in foreign currencies.

On top of that, the government must become more credible and professional. It should show that it cares about the people. Progressively, it would increase the utility of paying taxes and discourage tax evasions, as banks would have a more regulated reserve in foreign currencies now that the peg is no longer active.

**Maximizing income tax return:** Political stability would create more motivation for people to fulfill their duties, as a better administration would assert the prospect that income taxes are going somewhere and that we are benefitting from our taxes. As strikes continue, carrying out public duties is becoming more and more of a burden. It is also worth mentioning that the staff is not being well trained for its duties, as many report a lack of understanding with public employees. All in all, planning and training would help increase political stability and even encourage more people to pay their taxes.

Moreover, an increase in purchasing power would obviously lead to less incentive to commit income tax fraud, since the money's depreciating marginal utility would decrease the benefits of tax evasion. The authorities must attract foreign investments and closure of deals in order to induce an overall increase in production and employment opportunities. As more investments would come in, the labor demand in the country would eventually increase, leading to an overall increase in wages, and thus, an increase in the purchasing power. Within this scheme, it must regulate its corporate taxes mentioned above to attract investment growth rather than discourage it. By doing so, less tax evasion would open some space for a reduction in VAT, leaving the consumers better off and achieving progressive equity. In turn, the level of VAT evasion will decrease due to the domino effect that was explained above. As it follows, with greater establishment of the rule of law, institutionalization of inspection, and compliance with the social contract of Lebanon, the VAT return rate would increase progressively. This would lead to more revenue by reducing the benefits of tax evasion rather than increasing taxes.

Using these affections, we can expect more accurate budgeting, as the treasury is now aware of the black market power that is repeatedly forbidding it of its rightful returns.