

## An estimated study of the size of tax evasion in Algeria for the period 2000-2020

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### Abstract:

This research aims to study tax evasion as a widespread phenomenon in economic activity. The state incurs huge losses every year as a result of the failure of many economic activities to pay the taxes due on them.

In this study, the volume of tax evasion in Algeria was estimated from 2000-2020. By calculating the amount of informal income first and then calculating the rate of tax to be paid from it, the study estimated the volume of tax evasion in Algeria during the study period at about 17.5 trillion Algerian dinars.

**Keywords:** Estimation; Tax evasion; Hidden Economy; Tax Rate.

**JEL Classification:** H26; E26; H22.

## **Introduction**

The State needs many permanent financial resources to carry out its public services duties and also it needs to increase these resources for funding more and more future duties.

Taxes are among the most important revenues used by the State to cover its public expenditures, where Their effectiveness varies from country to other and Because tax objectives have evolved with the evolution of state functions, so that it converted from just a financial objective to include other social and economic objectives where all natural and legal persons must bear its burdens by law.

Taxes are the most important sources of internal financing rather it constitutes the most important resource for many countries due to their stable and durable nature, On the contrary of oil revenues and loans the first one is subject to international market prices and the second one is hard to obtain.

In fact, most developing countries that rely on oil wealth (Like Algeria) have found themselves in front of the big problem of fluctuating revenues because of volatile oil prices which leads to imbalance in funding sources and forcing them to find other means of more stable and durable resources.

However, there are a large number of economic activities that are active in the informal economy and do not adhere to government laws and evade paying taxes and thus lead to damage to the economy. this will result to failure of the State in public expenditure policy thus, the State will be unable to perform its basic duties towards its citizens. Therefore, tax evasion can be considered as a barrier to achieving the basic objectives of the tax, which is finance the treasury with sufficient revenues to cover expenditures and to implement its economic policies.

There is no doubt that tax evasion has many effects on the country's macroeconomic indicators such as output, inflation, unemployment, economic growth, etc., These effects vary according to the extent of tax evasion and the type of economic activities that evade taxes. The problem of the study is summarized in the following question: **How can we estimate the size of tax evasion in Algeria?**

### **1- Definition of the tax evasion:**

Tax evasion is a behavior in which the legal taxpayer tries not to pay the tax due in whole or in part without transferring its burden to another person, in order to achieve tax evasion, the legal taxpayer takes several methods that may be legal or illegal. On this basis, we distinguish between two types of tax evasion, which are: **(Murad, 2003)**

- Tax evasion without violating the tax law, which is known as tax evasion.
- Tax evasion by violating the tax law, which is known as tax fraud

#### **1-1- tax evasion**

Tax avoidance means that the legal taxpayer gets rid of paying the tax without violating the existing tax system. But by taking advantage of his shortcomings for example, refraining from consuming or producing goods on which high taxes are imposed in order to avoid paying them. For example, refraining from consuming or producing goods on which high taxes are imposed in order to avoid paying them. Or that the financier invests all his wealth in loan bonds issued by the state and exempting his income from taxes to encourage subscription, or it may be evaded as a result of loopholes in the tax law that are exploited by the taxpayer, **(Atlam & Al-Sayed., 2002)** This type is undesirable as the legislator does not achieve through it any goal, unlike other cases.

#### **1-2- tax fraud**

It is the disposal of taxes in ways that directly violate the tax law by giving a false presentation of reality, or carrying out the activity without notifying the concerned interests, there are several manifestations of tax fraud, which are:

- The taxpayer's failure to submit a tax declaration for the taxable activity, relying on not showing the location of the activity, in this case the evasion is complete.

Entering imported goods undercover and not declaring them at customs

- The taxpayer submits a tax declaration contrary to the truth so that lower taxes are imposed on him.

Exaggeration of the costs deducted from the tax base.

The spread of tax evasion is due to the existence of an environment in which the appropriate conditions are met which helped in its growth and expansion, Therefore, the existence of evasion is considered as a result of the availability of certain reasons Which is related to the taxpayer, the nature of the tax system and the prevailing economic conditions.

There are many reasons for resorting to tax fraud in Algeria. Including the difficulties and administrative complications in obtaining a commercial

register in order to carry out the activity, The modesty of tax administration tools and their failure to keep pace with modern patterns of management and control. In 2019 (**WorldBank**), Algeria ranked 157th globally in the ease of doing business index And ranked 158th (out of 189 countries) in the Paying Taxes Index It is a very late rank (**doingbusiness**), which indicates the complexity of the tax system and its inflexibility This is despite Algeria's reforms to the tax system In order to reach the effectiveness, which is an indicator of the success of any system.

According to a study conducted by a tax expert in the United States of America on the relationship between the rate of taxation and its proceeds, find that the relationship remains positive the result increases with raising the tax, even to the limit of 30%. And then the outcome begins to decline gradually over time.

Low tax can revive the economy, by raising its rates, it can achieve an adequate income However, exceeding a certain threshold of tax pressure negatively affects financial resources and the economy.

## **2- Different types of tax evasion:**

There are many types of tax evasion that can be mentioned as follows:

**2-1-tax evasion according to the criterion of amount or size:** it is divided into two types, total evasion and partial evasion.

**2-1-1- Total tax evasion:** It is the evasion that occurs when the taxpayer is able to completely get rid of the tax charged with it. And not pay it to the public treasury of the state. This result is achieved either by concealing the entire activity of the taxpayer or by concealing that part of his activity that is subject to a specific tax independent of the rest of its economic activity. (**kadhim, Dakhil, & Hussein, 2020**)

An example of this type of evasion is when a person refrains from registering with the competent tax authority. When his sales amount to the registration limit according to the general tax law Hence, his activity is completely non-taxable. The taxpayer will be completely relieved of the burden of this tax

**2-1-2- Partial tax evasion:** It arises when the taxpayer is able to dispose of part of the tax due from him, either by concealing some elements of his legally taxable activity, or by being able to partly get rid of some kind of tax, by concealing some operations or revenues subject to this tax

**2-2-tax evasion according to the criteria of the place of its occurrence:** Tax evasion is divided according to the regional standard, meaning in terms of its occurrence within or outside the territory of the State, into two main types: internal or national evasion, and external or international evasion.

**2-2-1- Internal (national) tax evasion:** It is the most popular and ancient than the international evasion, it is the evasion located within the borders of a single state. It is more frequently used in the case of direct taxes. Which often depends on submitting tax returns from the taxpayer to the tax administration, as in the tax on the profits of commercial and industrial professions.

**2-2-2- External (international) tax evasion:** It is evasion outside the borders of one country, as a result of the taxpayer benefiting from the principle of tax sovereignty of the state and exploiting his association with a dependency relationship that binds him to several countries, Because of the possession of several nationalities This depends on economic, social or political dependence in order to get rid of his tax obligations.

The practical reality proves the rare occurrence of total tax evasion at the international level.

All countries are usually keen to apply their tax legislation to the citizens associated with them According to one of the dependency criteria mentioned above.

### **3- Reasons for tax evasion**

The most important causes of tax evasion can be summarized as follows:

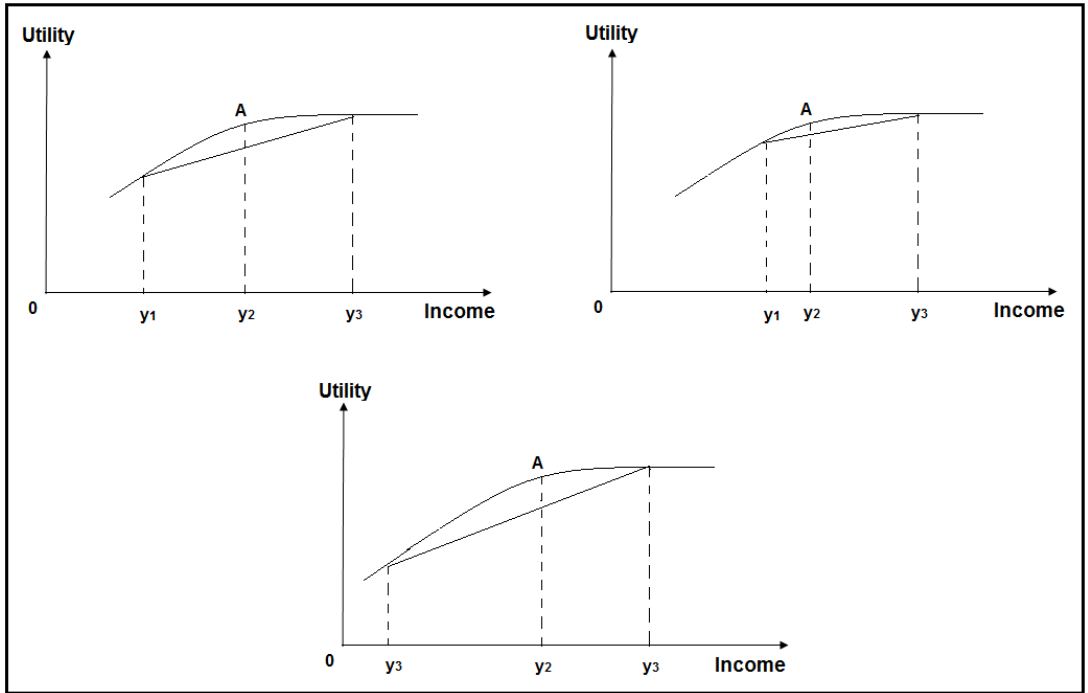
- Low educational level of the population.
- The very structure of the countries' tax system.
- Lack of simplicity and accuracy of the tax legislation.
- A significant informal Economy
- Lack of citizens' tax integrity.
- Tax pressure – high rates.
- Inflation
- Great weight of intangibles, which makes it difficult to assign them their true value and determine their place of origin.
- Difficulty to control the transfer prices of related multinational enterprises: currently over 60% of world trade is carried out through these enterprises and 50% are intragroup operations.
- Inefficiency of the Tax Administrations. (**kadhim, Dakhil, & Hussein, 2020**)
- Possibility of failing to comply without greater risks.

The extent of the punishment imposed by the state on the tax evader affects tax evasion so that the taxpayer compares the degree of risk, If the value of that penalty is greater than the amount that accrues to the taxpayer as a result of evading the tax in this case, the taxpayer avoids that evasion and reduces it. But if the value of the penalty is less than the amount that

accrues to the taxpayer or does not exist at all, in this case, tax evasion will increase.

The following figure illustrates this:

**Figure number (01): The Excess Burden of Tax Evasion and deterrent penalties**



**Source: Abdul Hakim Al-Sharqawi, Tax Evasion and the Black Economy, dare eldjamiaa, 2006, Egypt, p. 186.**

$Y_1$  represents the income that the individual would receive if they evaded taxes but he was arrested and fined

-  $Y_2$  represents the income that the individual would receive if he did not do any evasion (the natural state).

-  $Y_3$  represents the income that an individual would receive if he evaded and was not caught.

Individuals choose between the three incomes ( $Y_3$   $Y_2$   $Y_1$ ) By measuring the risks and the value of the penalties imposed on them, while evasion was discovered. As the distance between  $Y_1$  and  $Y_2$  approaches, the incentive to evade is greater This is because the penalties are not large and the incomes  $Y_1$  and  $Y_2$  are close, this means that the individual takes risks in order to obtain an income  $Y_3$ , and if it is discovered, he will not lose much because

he will get the income Y1 Very close to what Y2 would get if he did not evade, as shown in the following figure:

If the penalties are deterrent, the distance between y1 and y2 will widen Thus, the incentive to evade is reduced. Because if it is discovered, penalties will be imposed that make the individual receive a very weak income y1 compared to y2(y2 income in the event of no evasion),

Therefore, the individual will lose a lot if his evasion is discovered because the penalties are more severe Which is illustrated by the following figure.

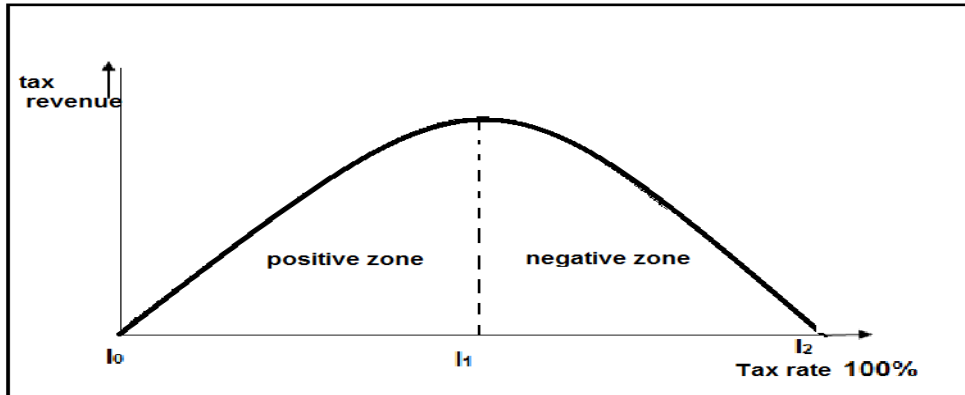
Thoughtful and strict penalties reduce tax evasion, and make individuals refrain from it, because the degree of danger is great and in the event that they evade and discover them, they will lose a very large part of their income as a result of the penalties and fines imposed, Thus, many people will prefer safe income (y2) and avoid risk.

#### **4- Effects of Tax Evasion :**

The phenomenon of tax evasion has very serious effects, which can be summarized as follows:

- **Breach of the financial objective of the tax** the loss of the public treasury a significant part of the expected revenues from the tax deduction, this makes the state unable to cover its public expenditures to carry out its duties towards society to the fullest extent;
- **Increase and impose new taxes:** The decrease in tax revenue as a result of tax evasion pushes the state to increase and raise tax rates or the imposition of new taxes to make up for the shortfall in revenue.
- **Financial problems arising from new borrowing:** Forcing the government to cover the fiscal deficit by issuing cash or obtaining internal or external loans, which leads to creating problems related to the payment of the imposition and its benefits;
- **Misallocation of Tax Burden:** This results in a major breach of the rule of justice and solidarity among members of the community;
- **Social side effects:** The tax sense deteriorated among many taxpayers The deterioration of the honesty factor in transactions and deepening social disparities. (FANCHENG & WANG, 2014)
- **Tax evasion leads to the killing of the tax:** When tax evasion occurs, the tax proceeds decrease, and therefore the state resorts to raising the tax rates again to compensate for the tax loss, When it reaches a certain level, this increase in the tax rate will negatively affect the tax proceeds and thus lead to more evasion, Arthur Laffer, explained this through the curve attributed to him Which meant that “too much tax kills tax”, Any tax pressure exceeding a certain threshold can reduce financial resources.

**Figure number (02): Laffer curve showing the relationship between tax revenue and tax rate.**



**Source: Ruben Espanhol, The laffer curve: an empirical estimation for eurozone countries, Master in Economics, iscte-instituto Universitario de lisboa, business school,2014, p03.**

The laffer curve can be divided into two stages:

In the first stage (I0-I1) there is a direct relationship between the tax rate and tax revenue This is until it reaches an optimum level at (I1).

In the second stage (I1-I2), this relationship becomes inverse So that any increase in the price of taxes negatively affects economic activity It removes the incentive to work and earn a living among the financiers

Which leads to reduced tax bases and consequently lower revenues.

We conclude from the foregoing that raising the level of taxes significantly leads to an increase in their proceeds in the short term only. On the contrary, lowering the level of taxes leads to a decrease in its proceeds in the short term, but these proceeds will rise in the medium and long term This is due to the expansion and large tax base with the accession of many segments to it. (Schneider, Braithwaite, & Reinhart, 2001).

### **5- Ways to curb the phenomenon of tax evasion**

Due to the seriousness of the phenomenon of tax evasion to society as an effort by us to give some solutions that would mitigate the effects of the phenomenon, where these solutions include the following: (Collosa, 2019)

- Achieving the principles of good governance and complete transparency in the presentation of the tax system
- Emphasis on the principle of tax fairness;
- Establishing tax courts for judicial follow-up and reduction of tax evasion;
- simplification of the tax system, clarity and ease of its rules;
- Increasing tax awareness among taxpayers



- Avoiding the causes that lead to tax evasion, such as double taxation, discrimination in taxation, Exaggerated tax procedures.

### **6- Estimation of tax evasion**

There are many ways to estimate the extent of tax evasion such as tax audits, accounting audits, etc., All of these methods are characterized by inaccuracy and uncertainty Because it depends on a sample of taxpayers only, and it is not possible to study all files. Therefore, in calculating tax evasion, we relied on calculating the size of the informal economy first and it represents the gross product or base on which the tax could have been imposed the following table shows the size of the informal economy as follows:

**Table number (01): Estimating the size of the hidden economy**

<b>Year</b>	<b>GDP*</b>	<b>hidden economy (% GDP )</b>	<b>The size of the hidden economy *</b>
<b>2000</b>	10436	34,09	3558
<b>2001</b>	10749	33,89	3643
<b>2002</b>	11351	33,49	3802
<b>2003</b>	12169	32,91	4005
<b>2004</b>	12692	32,37	4108
<b>2005</b>	13441	31,38	4218
<b>2006</b>	13669	31,24	4270
<b>2007</b>	14134	31,30	4425
<b>2008</b>	14473	31,49	4558
<b>2009</b>	14705	31,91	4693
<b>2010</b>	15234	31,83	4850
<b>2011</b>	15676	32,42	5082
<b>2012</b>	16209	32,23	5225
<b>2013</b>	16663	31,94	5322
<b>2014</b>	17296	31,83	5505
<b>2015</b>	17936	32,04	5746
<b>2016</b>	18510	31,83	5891
<b>2017</b>	18751	31,74	5952
<b>2018</b>	18957	31,31	5936
<b>2019</b>	19147	31,14	5963
<b>2020</b>	18170	31,35	5697

**Source: Prepared by researcher using:  
<https://data.albankaldawli.org/country/DZ>**

\* In constant prices of the local currency (billion dinars).

After calculating the size of the informal economy in Algeria Tax evasion can now be accounted for through the taxation of the informal economy It is the amount that was supposed to be paid to the state in the formal economy

The size of tax evasion is determined by two main factors: **(Andrews, 2005)**

- The average rate of income tax, representing the ratio of the actual proceeds of income taxes GDP.

- The value of hidden or undeclared income.

Under the assumption that the average price of income tax is similar in both the formal and hidden economies,

The amount of tax leakage can be determined by multiplying the average price of the income tax in the hidden income **(Athanasios, Eleni, & Charalampos, 2020)** value as shown in the following table (02).

- Tax rate = total taxes on income / GDP

- Tax evasion = (hidden income) (tax rate) **(touhami, 2018)**

**Table number (02): Estimating the size of tax evasion**

Year	The size of the hidden economy*	Tax rate%	The size of tax evasion*
2000	3558	14,88%	529
2001	3643	15,97%	581
2002	3802	16,19%	615
2003	4005	16,64%	666
2004	4108	15,77%	647
2005	4218	15,79%	666
2006	4270	16,14%	689
2007	4425	14,95%	661
2008	4558	16,27%	741
2009	4693	17,09%	802
2010	4850	16,76%	812
2011	5082	16,57%	842
2012	5225	18,22%	952
2013	5322	17,74%	944
2014	5505	16,91%	931
2015	5746	18,83%	1082
2016	5891	17,69%	1042
2017	5952	18,49%	1100
2018	5936	17,73%	1052
2019	5963	17,78%	1060
2020	5697	17,83%	1015

**Source: Prepared by researcher using:**

**<https://data.albankaldawli.org/country/DZ>**

\* In constant prices of the local currency (billion dinars)

We notice from the previous table No. 02 that the volume of tax evasion in Algeria is constantly increasing over time. It was estimated at 529 billion dinars in 2000, to reach 1015 billion dinars in 2020. These are very large sums that the state loses every year as a result of the existence of informal economy activities and thus tax evasion.

The total tax evasion over twenty years, which represents the study period 2000-2022, amounted to about 17,438 billion Algerian dinars. That is, approximately \$130 billion is lost by the state as a result of evasion, which is very large sums.

Through the previous analysis we conclude that Algeria loses every year large amounts due to tax evasion and non-registration economic activities. These funds, which the state loses every year, can contribute to raising the value of the state's public revenues. Thus reducing the overall deficit in the public budget, and even turned the deficit into a surplus. Therefore, the State has to take care to these permanent resources, and trying hard to preserve it and contain the tax leak in scientific ways sound, By integrating the hidden economy activities into the formal economic activity. and combating tax evasion.

### **Conclusion**

Algeria, like other countries in the world, suffers from the spread of informal economic activities Which evades the payment of taxes to the public treasury of the state. This incurs them huge losses every year and limits its ability to properly spend publicly.

The study estimated the volume of tax evasion in Algeria during the period 2000-2020 by calculating the volume of informal income. Then simulate the imposition of the tax rate on it the volume of tax evasion amounted to more than 17.5 trillion dinars during the study period that Equivalent to about 130 billion dollars during the study period (twenty years).

The main findings of the study were as follows:

- There are many economic activities that evade paying taxes in Algeria
- - The average volume of tax evasion in Algeria is estimated at 871 billion dinars each year.
- The large scale of tax evasion affects the state's ability to properly exercise the function of public spending
- - The volume of tax evasion in Algeria during twenty years (2000-2020) amounted to approximately 17.5 trillion dinars, equivalent to 130 billion dollars.
- - The state must work to reduce tax evasion by integrating the activities of the informal economy.

**Bibliography:**

- Andrews, A. W. (2005). *The Shadow Economy*. Alexandria, Egypt: Encyclopedia of University Youth.
- Athanasios, A., Eleni, K., & Charalampos, K. (2020). Estimation of the size of tax evasion in Greece. *Bulletin of Applied Economics* , 103.
- Atlam, B., & Al-Sayed., S. (2002). *Public finance and the role of the public sector in achieving economic well-being.*. Cairo : Dar Al-Taawon for printing and publishing.
- Bank, T. W. (s.d.<https://data.albankaldawli.org/indicator/IC.BUS.EASE.XQ?locations=DZ>. Consulté le 11 20, 2022, sur albankaldawli : <https://data.albankaldawli.org/indicator/IC.BUS.EASE.XQ?locations=DZ>
- Collosa, A. (2019, 06 25). Inter-American Center of Tax Administrations. Consulté le 11 17, 2022, sur C I A T: <https://www.ciat.org/which-are-the-causes-of-tax-evasion/?lang=en>
- doingbusiness. (s.d.). The World Bank. Consulté le 11 20, 2022, sur doingbusiness: <https://archive.doingbusiness.org/ar/data/exploretopics/paying-taxes>
- FANCHENG, K., & WANG, C. (2014). THE DETERMINANTS OF TAX EVASION: GDAŃSKIE STUDIA AZJI WSCHODNIEJ , 75.
- kadhim, S. j., Dakhil, A. A., & Hussein, B. A. (2020, 11). TAX EVASION AND ITS EFFECTS ON THE IRAQI ECONOMY. *Journal of Archaeology of Egypt/Egyptology* , 513.
- Murad, N. (2003). *The effectiveness of the tax system between theory and practice*. Algeria, Algeria: Houma Publishing House.
- Schneider, F., Braithwaite, V., & Reinhart, M. (2001). *Individual Behavior in the Cash/Shadow Economy in Australia: Facts - Empirical Findings and some Mysteries*. . department of economics, Austria:University of Linz. , 12.
- touhami, m. r. (2018, 11). *An analytical study of the hidden economy in Algeria*. PhD dissertation . m'sila, Faculty of Economic, Commercial and Management Sciences, algeria: M'sila University.
- WorldBank, i. (s.d.). albankaldawl. Consulté le 11 22, 2022, sur albankaldawl: <https://data.albankaldawli.org/indicator/IC.BUS.EASE.XQ?locations=DZ>