

## **Measuring the effectiveness of the Algerian tax system using Vito Tenzi indicators**

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### **Abstract :**

This research aims to shed light on the criteria for designing a good tax system, and Vito Tenzi criteria are among the best

We have tried to apply these criteria to the Algerian tax system to find out to what extent it adheres to these indicators.

We concluded that the Algerian tax system does not meet most of the requirements imposed by these criteria, in particular the index of collection costs, the concentration index, and the index of collection times.

**Keywords:** Tax system, Effectiveness, Indicators.

**Jel Classification Codes:** H20, H21, H39.

### **Introduction :**

Algeria witnessed a radical and comprehensive reform of its tax system at the beginning of the last decade of the last century, and this tax reform continues to this day through frequent amendments to legislation and tax rates in an attempt to make the tax system adaptable to the tax system. tax system. tax system. Developments in the regional and global economy.

To design a good and effective tax system, there are several internationally recognized standards and indicators, the most important of which are: Tenzi Vito indicators, Richard Musgrave indicators, in addition to the European Working Group indicators. In this research, we try to find out the extent to which internationally recognized indicators are applied in designing the new tax system in Algeria by measuring the effectiveness of this system using the indicators of tax expert Tanzi Vito.

By answering the research problem:

- How effective and responsive is the tax system in Algeria to the Tenzi Veto indicators for designing an effective tax system?

We test the following hypothesis:

-The tax reform in Algeria did not take into account most of the internationally recognized standards in designing the new tax system.

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### **1- Definition of reforming the tax system :**

Tax reform is to simplify the tax system, remove distortions that characterize it, keep abreast of developments surrounding it and adapt to local and international transformations, by reducing the number and rates of taxes and expanding the tax base because the first goal of tax reform is to simplify tax collection<sup>2</sup>, the tax reform that does not seek to expand the tax base. Increasing tax revenue is tax to confusion, not tax reform<sup>3</sup>, and effective tax reform depends on efforts to adapt it the realities of each country<sup>4</sup>. And taking into account the economic, political, social, and cultural specifics of each country and not importing ready-made reform templates and trying to apply them literally without making modifications that are compatible with the characteristics of each country.

### **2-Tenzi veto pointers for designing an effective tax system**

The Tanzi veto tax indicators are among the most important indicators for determining and designing an effective tax system, especially the concentration and dispersion indicators. Other indicators play a major role in determining the greater effectiveness of tax systems.

Vito Tenzi identifies 8 basic indicators that can be adopted to design an effective the tax system, namely:<sup>5</sup>

#### **2.1. Concentration Indicators:**

This indicator imposes a decrease in the number of taxes and tax rates, along with an increase in the value of collecting taxes derived from them, which leads to a decrease in management and implementation costs. Strict taxes with a high rate can cause significant tax risks for the state. With the concentration index, a large part of the revenue is collected from a small number of taxes, which reduces management and implementation costs.

#### **2.2. Dispersion Index:**

Requires the abolition of low-revenue taxes whose removal does not hurt the suitability of the tax system for simplification. As these taxes distract the effort of the tax administration and increase the cost of tax collection.

**2.3. Wear index:** Excessive granting of tax breaks leads to erosion of the tax base, which leads to raising tax rates to compensate for the shortfall in tax revenues, which inevitably leads to stimulating tax evasion.<sup>6</sup>

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<sup>2</sup> Lauren Turfait; Alexandre Gardette .La réforme du recouvrement fiscal et social, une transformation publique d'envergure Revue française de finances publiques, , N°. 149, 2020, págs. 161-171, p 162 <https://dialnet.unirioja.es/servlet/articulo?codigo=7285422>

<sup>3</sup> Joel Slemrod . Is This Tax Reform, or Just Confusion? Journal of Economic Perspectives— Volume 32, Number 4—Fall 2018—Pages 73–96 P 74 <https://www.aeaweb.org/articles?id=10.1257/jep.32.4.73>

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<sup>5</sup> Abd al-Majid Kadi, "An Introduction to Macroeconomic Policies - An Analytical and Evaluative Study," University Publications Office, Ben Aknoun, Algeria, third edition, 2006, p. 165.

<sup>6</sup> Jamila Leontieva Guzalia Klychova, , Evgenia Zaugarova1 , Alsou Zakirova and Aigul Klychova .The tax system of consolidated taxpayers groups in Russia and ways of its improvement.MATEC Web of Conferences **Volume** 170, (2018)Published online 13 June 2018 p 2 <https://doi.org/10.1051/mateconf/201817001087>

**2.4 . Indicator of delayed collection:**

Establishing mechanisms that make taxpayers pay taxes on time because late payment leads to a decrease in the value of tax revenues due to inflation.

**2.5. Selection Indicator:**

This indicator shows that the tax system contains a small number of taxes at specific rates, with the possibility of replacing some taxes with others at a low rate. For example, it is possible to replace the corporate profit tax and income tax with a single tax on the entire wealth at a reduced rate.

**2.6. Objectivity Index:**

That is, measuring the tax bases objectively, and allowing taxpayers to perform the tax by estimating their tax obligations clearly, which reinforces the principle of certainty, which stipulates the need to clarify the tax paid by the taxpayer in terms of its amount and time. And the method that enables the taxpayer to defend his rights against any abuse by the tax administration.

**2.7- Implementation indicator:**

This indicator relates to the extent of objectivity of tax legislation, its applicability, and its relevance to the social and economic reality of the state. In addition to the effectiveness of applying the tax system in an integrated manner, and the accuracy of estimates and forecasts. It is also linked to the level of qualification of the human element and the tax administration, as they are directly responsible for the implementation process.

**2. 8. Collection Cost Index:**

This indicator relates to the economy in terms of the cost of tax collection, which reflects positively on the level of tax revenues

**3- Measuring the effectiveness of the Algerian tax system using veto indicators:**

Measuring the effectiveness of the Algerian tax system using Vito Tanzi indicators:

We measure the effectiveness of the Algerian tax system by applying the indicators developed by the economist specializing in taxation, Vito Tanzi, on the Algerian tax system, based on statistics and tax data in Algeria.

**3.1. Concentration indicator:**

This indicator states that the largest amount of revenue should be collected from a small number of taxes, which reduces administration and implementation costs. Analysis of tax revenues in Algeria shows that income tax revenues (wage category) and value-added tax revenues together exceed 57% of total tax revenues in Algeria. As shown in the following table:

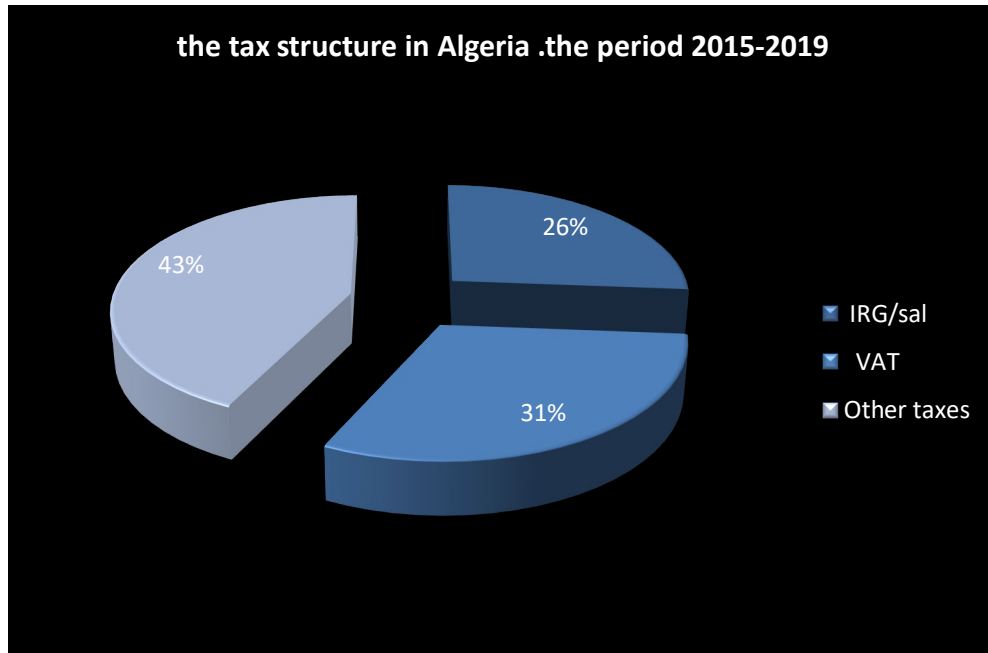
**Table 1. The ratio of IRG/sal and VAT . 2015 to 2019**

	2015	2016	2017	2018	2019
IRG/sal(1)	596,435	635,137	685,735	707,36	774,51
VAT(2)	756,794	763,56	810,71	844,848	861,33
total tax revenue(3)	2 360,37	2492	2 661,68	2 713,15	2849,2

Review MECAS	V°19 / N°2 December 2023				
(1)/(3)%	25,27	25,49	25,76	26,07	28,55
(2)/(3)%	32,06	30,64	30,46	31,14	30,23

Source: Accounting advice.( 2020) Appraisal report on the draft law on Budgetary Regulations (APLRB) for the year 2018 p.17

**Figure 1. The Tax structure in Algeria .the period 2015-2019**



Source: Accounting advice.( 2020) Appraisal report on the draft law on Budgetary Regulations for the year 2018 p.17

From Figure 1, we note that value-added tax accounts for 31% of total tax revenue, while income tax/wage class accounts for 26% of total tax revenue from 2015 to 2019.

This is what the concentration indicator stipulates, because the concentration of tax revenue in a few taxes helps to reduce the cost of tax collection, which leads to an increase in the value of tax revenue.

### 3.2. collection cost index:

This indicator is related to the economy in the cost of tax collection, which reflects positively on the level of tax revenues. The table below shows the cost of collecting taxes in Algeria and the annual cost per employee.

**Table2. The cost of tax collection in Algeria from 2012 to 2017**

	Operating expenses(billion DA)	Receipts (billion DA)	Cost	Number of employees	Annual cost per employee (DA)
2012	1 187, 588	33, 826	2,85	20401	1 658 069

Review MECAS

V°19 / N°2 December 2023

2013	1 169,653	27, 434	2,35	22 891	1 198 470
2014	1 264,649	28,346	2,24	27 090	1 046 365
2015	1 450, 720	30, 511	2,1	23 995	1 271 564
2016	1594,15	29,63	1,86		
2017	1754,74	28	1,60		

**Source:** Accounting advice.( 2020) Appraisal report on the draft law on Budgetary Regulations (APLRB) for the year 2017 p.43

Although the overall rate of tax administration cost decreased to 1.86% in 2017, after reaching 1.97% in 2016 and 2.28% in 2015, the cost of tax collection is still high, in addition to the high cost per employee. It reached 1,658,069 in 2012 and decreased to 1,271,564 in 2015. The reason for the high cost of tax administration in Algeria is due to the following factors:

Delay in implementing the tax administration modernization program. And the slowness in managing and processing tax files Increasing the volume of uncollected tax revenues

- insufficient retraining and training programs; And poor distribution of incentives
- The lack of real statistical data on the parallel market and its impact on financial revenues that can be adequately achieved

- The delay in completing the information and communication system, which was supposed to start operating in 2014 inadequate retraining and training programs;

- Poor distribution of incentives. - The lack of real statistical data on the parallel market and its impact on the financial revenues that can be achieved in an appropriate manner

- The delay in completing the information and communication system, which was supposed to start operating in 2014<sup>7</sup>

### 3.3. Dispersion index:

This indicator requires the abolition of low-income taxes, the removal of which does not hurt the profitability of the tax system to simplify it. We note that the tax system contains many taxes whose revenue level is very low and whose tax revenue does not exceed 0.2 % of the total tax revenue. Such as indirect taxes whose tax revenues hardly affect the total tax revenues, as shown in the following table:

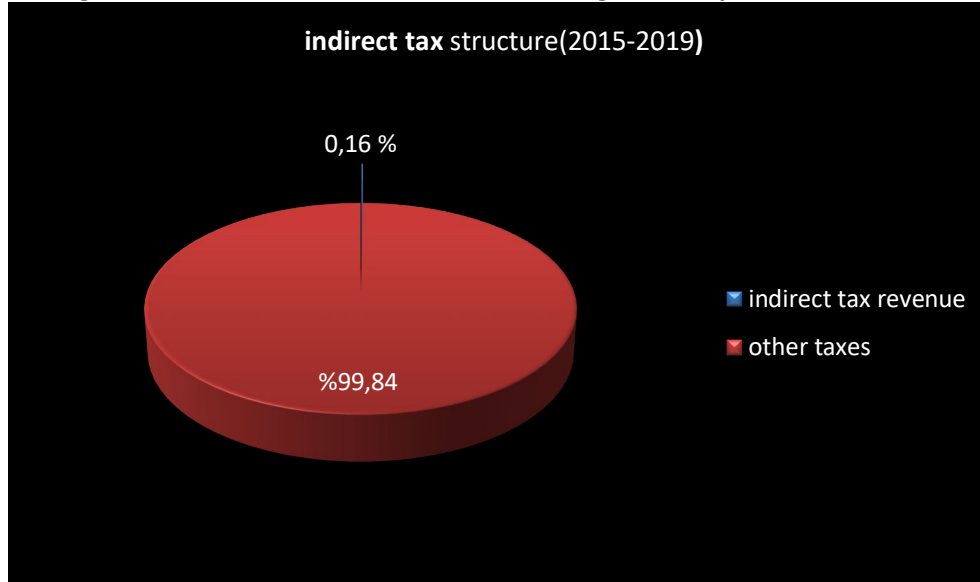
**Table3. The structure of indirect taxes in tax revenues. 2014 to 2019**

	2015	2016	2017	2018	2019
indirect tax revenue(1)	1,501	6,612	4,277	4,181	5,2 3
total tax revenue (2)	2 360,37	2 492	2 661,68	2 713,15	2849,2
(1)/(2)%	0,063	0,265	0,16	0,154	0,18

**Source :**Accounting advice.( 2020) Appraisal report on the draft law on Budgetary Regulations (APLRB) for the year 2018 p.24

<sup>7</sup> Accounting advice. Appraisal report on the draft law on Budgetary Regulations (APLRB) for the year 2015 p.32

**Figure2. The structure of indirect taxes in Algeria .the period 2015-2019**



Source: program outputs EXCEL. Depending on the table data 3

-We note in Figure 2 that the mass of direct taxes is almost non-existent, representing 0.16% of total tax revenue, and this is what causes the dispersion of the tax effort for the tax administration and the high cost of the collection of taxes.

#### 3.4. execution indicator :

Refers to the effectiveness of applying the tax system in an integrated and accurate manner to estimates and forecasts and the rates of completion of these estimates. The completion percentage in the Algerian tax system often ranges between 90% and 100%. While they sometimes exceed 100%, these are acceptable ratios, although better ratios could be achieved if some issues, such as the high cost of tax collection, tax evasion, and excessive granting of tax credits, were addressed. The table below shows estimates and completion rates during the period 2013-2019:

**Table 4. Comparison of tax revenue estimates and achievements. 2013 to 2019**

	Forecasts	Achievements	Completion rate (1)/(2)
2013	1 831,400	2 027,743	110,72
2014	2 267,450	2 089,771	92,16
2015	2 616,370	2 360,373	90,22
2016	2 722,68	2 491,990	91,53
2017	2 845,37	2 661,685	93,54
2018	2 869,776	2 713,154	94,54
2019	3041,418	2849,218	93,68

**3.5.Indicator of late completion:**

This indicator shows that late payment leads to a decrease in the value of tax revenues due to inflation, which makes it imperative for the tax legislator to put in place mechanisms that make taxpayers pay taxes on the specified dates, as the Algerian tax system is distinguished. Through high residual collection rates due to low rates of tax compliance and large procrastination. In the context of paying taxes and tax violations, the remainder of the collection recorded at the level of the Directorate of Large Enterprises, at the end of 2019, amounted to 184.521 billion dinars, compared to 958,151 billion dinars in 2018, 19.232 billion dinars. Dinar. in 2017, and 236.41 billion Algerian dinars in 2016. Most of it is old tax debts. As for the tax directorates in the state, they recorded collection balances for the year 2019 amounting to 13133.743 billion dinars, compared to 12.270 billion dinars in 2018<sup>8</sup>, distributed according to the following table:

**Table 5.The rest of the collection for tax directorates 2018 - 2019**

		tax penalties	taxes and fees	quasi-tax charges	Total Uncollected revenue
2018	amounts	8 259,358	4 605,411	12,518	12 778,2878
	percentage	% 64,64	%35,26	%0,10	%100
2019	amounts	8233,38	4886,57	13,79	13 133,743
	percentage	%62,69	%37,21	%0,10	%100

Source: Accounting advice.( 2020) Appraisal report on the draft law on Budgetary Regulations (APLRB) for the year 2018 p.24

**3.6. selection pointer:**

This indicator shows that the tax system contains a small number of taxes at specific rates, with the possibility of replacing some taxes with others at low rates. This applies to the Flat tax created by the Finance Act 2007, and it replaces the gross income tax, value-added fee, and professional activity tax, which are up to 4% for production and sale activities. of goods and 12% for other activities

**3.7. corrosion index**

This indicator indicates that excessive granting of exemptions leads to erosion of the tax base, which leads to raising tax rates to compensate for the shortfall in tax revenues, which inevitably leads to stimulating tax evasion. Algeria's tax system is characterized by excessive tax exemptions, which have eroded more than 35% of total tax revenues in Algeria.

Where tax exemptions amounted to more than 957 billion Algerian dinars in 2017, which is approximately 36% of the total tax revenues, while the total tax exemptions in 2016 amounted to more than 966 billion Algerian dinars, which is equivalent to 38.78% of the total tax revenues.

<sup>8</sup> Accountancy report. Budget control report for the year 2018 p. 24

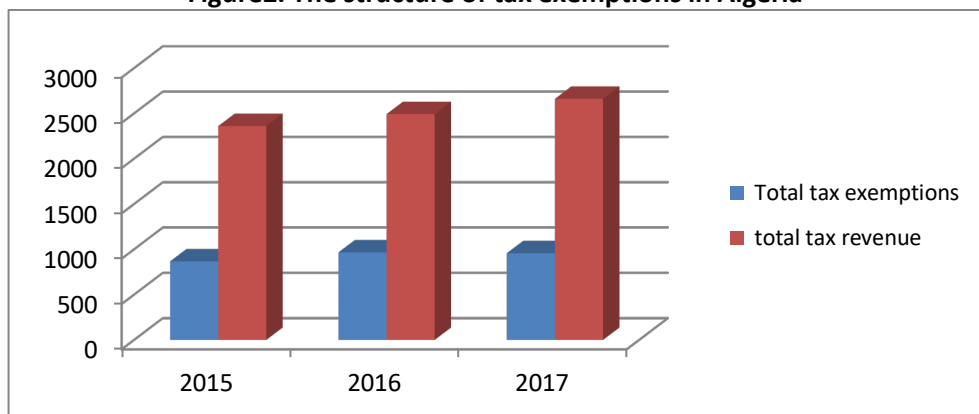
The table below shows the values and rates of tax exemptions granted by the Tax and Customs Department. During the period 2015-2017:

**Table 6. The cost of tax breaks in Algeria- 2015 to2017**

Type of revenue	2015	2016	2017	relative evolution	
				2016/2015	2016/2017
tax administration	385,113	364,397	392,442	- 5,38	7,70
Customs administration	482,371	601,916	564,751	24,78	- 6,17
Total tax exemptions (1)	867,484	966,313	957,193	11,39	- 0,94
total tax revenue(2)	2 360,37	2 491,99	2 661,685	1,05	1,07
(1) / (2)%	36,75	38,78	35,96		

Source: Accounting advice.( 2020) Appraisal report on the draft law on Budgetary Regulations (APLRB) for the year 2017 p.43

**Figure2. The structure of tax exemptions in Algeria**



Source: program outputs EXEL. Depending on the table data 6

From the figure above, we notice the great erosion of the tax base in Algeria due to tax exemptions, which leads to an increase in the number of taxes and an increase in their percentage to compensate for the shortfall in the tax base. tax. This leads to an increase in tax evasion.

**Conclusion:**

Although the tax on total income/wages and the value-added tax together achieve a rate of more than 55% of the total tax revenues, which is consistent with the concentration index, the cost of tax collection has not decreased in Algeria due to the presence of other factors affecting this cost, which reached record levels in Last few years.



In addition, the Algerian tax system includes taxes whose tax revenue does not exceed 0.5% of the total proceeds, which contradicts the dispersion index.

As for the implementation indicator, the Algerian tax system is characterized by completion rates that approximate or exceed estimates, but the problem facing the tax sector in Algeria is the delay in collection, as the uncollected amounts reached record numbers, This leads to a decrease in the value of tax revenue over time due to inflation.

From the foregoing, we conclude that the tax reform in Algeria did not take into account most of the international standards while redesigning the Algerian tax system.

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