Optimal Taxation and Economic Growth in Tunisia: Short and Long Run Analysis

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Abstract: Tax policy is among the most common and relevant instruments in the toolkit of policy-makers when thinking about promoting growth, yet there is not compelling evidence regarding its effect in Tunisia. Using a variety of approaches, we measure firstly the optimal tax burden rate using Scully's static model and the quadratic model. For Scully's static model, gross domestic product is the dependent variable. For the quadratic model, growth rate is a dependent variable explained by tax rate in level and in square. Secondly and according to stationary and cointegration test results, we focus on the long-term effects on gross domestic product of the important taxes, namely tax revenue and private receipts. In this second study, we use a basic Scully model and we develop a vector error correction model technique. Our results show that optimal tax burden rate has to be situated between 12.8% and 19.6% of gross domestic product which is widely lower than the current rates. The long-term analysis estimates an optimal rate of 14% of gross domestic product which can participate to increase economic growth, to stabilize the tax evasion and to encourage investment especially after the Tunisian revolution.

Keywords: Tax burden rate, Growth, Cointegration, Vector error correction model.

1. INTRODUCTION

Economic growth is in the foundation of economic and social development. This makes it a major objective of development policies. In this paper, we focus on fiscal system which must be capable to find the resources necessary for the good functioning of the state. Fiscal policy can be used to regulate economic activity by modifying the fiscal effort required of taxpayers or to take the form of fiscal incentives to reduce the tax burden in order to boost consumption, investment and employment. Some types of public spending contribute to improving the private sector productivity. Security and peacekeeping, infrastructure, health and education expenditures fall into this category of productive public spending. In its annual report on world development in 1994, the World Bank concludes that the lack of socio-economic infrastructure is a major threat to economic growth and social development in many African countries.

On the social level, taxation is an instrument for redistributing incomes in the direction of greater social equity. Budgetary revenues therefore constitute an essential instrument of development strategies. In this context, the problem is the choice of the best conception of a development policy and the effective fight against poverty when the financial resources are insufficient. Compared to other financing resources and with the exception of grants, fiscal resources are unique in that they do not entail any subsequent debt burden, which encourages the use of these resources to preserve the public finances sustainability. The importance of taxation in the economic and social development of developing countries justifies the interest of academics and researchers in this field. On the other hand, the debate on the relationship between taxation and economic development has led to much ink today without arriving at unanimous conclusions as to the nature of this relationship. The results found depend precisely on the specificities of the countries and appear very contingent to the chosen research methodology and the tax variables reserved. From then and as possible, it seems pertinent to revise and to clarify this relation for the Tunisian case taking advantage of recent methodological advances.

Indeed, from 1988 and seen the importance of public spending and fiscal policy, the Tunisian tax system has undergone a major reform in the structural reforms context of the various economic and financial sectors. This reform, which has affected all types of taxes, allowed establishing a modern tax system characterized by broadening of the tax base, rationalization of the tax advantages and granting of more guarantees to taxpayers at the level of the control and of the tax litigation.

The last years, tax burden rates has increased due to the GDP (gross domestic product) slow growth after the Tunisian revolution and to the increase in tax fraud

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rate that accounts for about 40% of revenue. Instead of participating in the financing of major state's projects, these revenues are wasted in unproductive public spending in an inefficient tax system.

In this analysis context of fiscal policy in Tunisia, the objective of this paper is to determine the optimal tax burden rate and its effect on economic growth between 1966 and 2015. Our work finds its relevance due to the scarcity Tunisian studies on this topic. To our knowledge, our study represents the first attempt of the econometric study dealing with the relationship between the tax burden rate and economic growth with the calculation of the short and long term optimal rate using the cointegration analysis developments of time series. The studies conducted so far have been limited to the taxes effects on growth without worrying about demonstrating the existence of a taxation optimal level. Our work thus effectively supplements the literature by proposing for the first time a detailed analysis of the tax burden rate effect on economic growth in Tunisia which tries to attract even more foreign investors especially during this crisis period.

The remainder of this paper will be structured as follows: Methods used are presented in section 2. Section 3 presents a review of the literature on the relationship between the tax burden rate and the economic growth rate. Section 4 describes the econometric models used to estimate the optimal tax rate. Section 5 contains data and analysis of the estimates results. Section 6 concludes and proposes economic policy recommendations to increase fiscal performance in Tunisia.

2. TAXATION AND ECONOMIC GROWTH

The analysis which focuses on the relationship between taxation and growth should take in account that growth is not the unique objective of the fiscal policy. So, the optimal tax rate for the growth could not be the same as the one who would maximize the well-being of the population.

In theory, some economists who discuss the taxes effects on economic development have argued that the impact of budget variables on growth is limited because of the economic agents' expectations. The decision-makers pursued then an interventionist policy centered on the use of taxes having an incentive purpose. Indeed, lower tax rates are seen as a means of boosting economic activity by influencing the economic agents' decisions in terms of investment, savings and job offers.

Recent research concludes that fiscal policy is not economically neutral because high tax rates hold back economic growth and reach consensus on the macroeconomic effects of taxation. This finding is closely linked to the emergence since 1970 of a supply theory based on the fact that " too much tax kills tax " (Laffer 1981). This idea was illustrated by an inverted U-shaped curve indicating that there is a taxation optimal level for a given economy. Therefore, policy makers and economists have warned that excessive taxation is costly for the government in terms of growth and tax revenues. This curve shows that tax revenues do not necessarily increase with the tax rate. High tax rates result in tax avoidance and evasion. More taxpayers are likely to defraud or to avoid paying taxes, lower tax revenue collected will be higher and will be the financial costs needed to comply with tax rules. On the other hand, lower taxes reduce the fraud likelihood and tax evasion. This reasoning suggests that the financing of public spending by proportional taxes on income results in a bell curve between tax rates and tax revenue. This curve makes it possible to determine the tax burden rate where the tax revenues are maximum.

Most empirical studies which try to determine the optimal taxation rate aroused the idea of Laffer who warns that, for a given economy, there is a level of fiscal effort beyond of which the tax system is harmful for the economy.

Testing the relationship between taxes and the growth, Scully (1996:2000) highlighted the existence of a U-reversed relation in the case of New Zealand over the period 1927-1994. The tax rate that maximizes the growth rate is about 20% of GDP. This implies that an increase in the tax burden above this rate will have negative effects on the economy. Using annual data from 1949 to 1989, Scully (1995) estimated that the optimal tax rate for the United States is between 21.5% and 22.9% of GDP. The growth rate corresponding to this tax rate is estimated at 5.56% compared to an average rate of 3.5%. Estimates obtained over the period 1950-1995 indicate an optimal tax rate of 21%. This rate would generate annual growth of 4.8% (Scully 1998). On the other hand, when the period of observation is restricted to 1960-1990, the optimal tax rate for the United States is 19.3% (Scully 2003) which generates an economic growth rate of 6.97 % per year.

Empirical works that attempt to analyze the link between taxes and economic growth shows that results depend on numerous factors and differs from country to country. A variety of studies claim that raising consumption taxes while at the same time lowering taxes on labor and capital can stimulate the economy's growth forces. At the same time, other studies note that tax burden and tax structure would have different impacts on economic activity for different countries and periods and under varying circumstances. Schneider (2008) have shown that raising the tax burden could lead to multiple detours borrowed to avoid taxes through hesitation and the appearance of the underground economy. Using panel regression method on the OECD countries for the period of 2000-2011, Macek (2014) deduced that corporate taxation followed by personal income taxes and social security contribution are the most harmful for economic growth. Several studies have indicated mixed impacts of tax on economic growth. The study of (Onakoya, Adegbemi Babatunde 2017) investigated the impact of taxation on economic growth in Africa from 2004 to 2013. Findings indicated that tax revenue is positively related to GDP and promotes Economic Growth in Africa. High and weak levels of taxation are favorable to economic growth as upheld by the economic effect of Ibn Khaldun's theory on taxation, which approves the positive impact that lower tax rate have on work, output and economic performance.

Testing the impact of tax structure on the economic growth in the EU-28 member states for the period 1996-2013, Stoilova (2017) conclude that tax structure based on selective consumption taxes, taxes on personal income and property is more supporting to the economic growth. To explore the relationship between top marginal tax rates on personal income and economic growth using a data set of consistently measured top marginal tax rates for a panel of 18 OECD countries over the period 1965-2009, Santo M and Rober (2018) finds evidence in favor of a quadratic top tax-growth relationship. Their results show that raising top marginal tax rates which are below their growth maximizing has the largest positive impact on growth when the related additional revenues are used to finance productive public expenditure, reduce budget deficits or reduce some other form of distortionary taxation.

As we announced previously, few are the studies which concern the determination of optimal tax burden rate and its effect on the growth for the African countries. This paper represents then an attempt of contribution to the empirical literature by examining the Tunisian case over the period 1966-2015.

3. EVALUATION OF THE FISCAL POLICY

Empirically, we have three objects. Firstly we analyze the impact of tax burden rate on economic growth. Then, we test the existence of a threshold effect in this relation and finally try to determine an optimal level of this tax burden.

3.1. Data Description

The data used in this study are annual and cover the period between 1966 and 2015. They concern the GDP and the tax burden rate which expresses the total fiscal receipts in percentage of the GDP. The source of data is the World Development Indicators from World Bank of 2016. Besides these variables, the empirical estimate involves indicator variables to capture some macroeconomic shocks effect.

3.2. Econometric Methodology

The methodology adopted in this paper consists of two steps. The first step is to determine the optimal tax burden rate using Scully's static model and the quadratic model. At the second stage, emphasis will be placed on the long-term relationship. This approach is based on the results of the unit root tests and the cointegration test on the Scully model.

3.2.1. Presentation of the Scully Model

Scully (1996:2003) developed an econometric model which allows to estimate the tax burden rate which maximizes economic growth. This model considers that economy have two sectors. The government provides public goods financed exclusively by tax revenues such as the budgetary constraint of the government is written $G = \tau Y$. G represents the public expenditure level, Y the GDP and τ the tax rate. Private revenues after deduction of taxes $(1-\tau)Y$ are used to produce private goods. Public and private goods are used for global national production. The production function has the following Cobb-Douglas form:

$$Y_t = \alpha (G_{t-1})^a \left[(1-\tau_{t-1})Y_{t-1}\right]^b \tag{1}$$

Following the budget constraint and considering the logarithmic form, we will have:

$$\ln Y_t = \ln \alpha + a \ln(\tau_{t-1} Y_{t-1}) + b \ln\left[(1-\tau_{t-1})Y_{t-1}\right] \tag{2}$$

Where $\alpha, a \text{ and } b$ represent constant parameters verifying $\alpha > 0, a < 1 \text{ and } b < 1$. A differentiation of this latter equation gives the expression of the taxation optimal rate:

$$\tau_S^* = \frac{a}{a+b} \tag{3}$$

Thus, the empirical estimate of the optimal tax burden rate will be based on the following equation:

$$\ln y_t = \delta + a\ln(\tau_{t-1}y_{t-1}) + b\ln\left[(1-\tau_{t-1})y_{t-1}\right] + \upsilon_t \tag{4}$$

Where y_t is the GDP and υ_t is an error term having white noise characteristics.

Kennedy (2000) and Hill (2008) announced that Scully's model is inappropriate for estimating the optimal tax rate in an endogenous growth context. They support the idea that the model assumes a capital depreciation rate of 100% in each period. Put it differently, we can say that the capital is completely exhausted in the annual production process. In other words, Scully's model ignores the contribution of capital goods of the previous periods to the production. In answer to this criticism, Scully (2000) indicated that the contribution of previously capital accumulated and eventual technological changes are implicitly captured by the presence of delayed production in the current production function. He also demonstrated that the estimations are not affected by the consideration of the production factors in the model.

3.2.2. Quadratic Model

We tried to estimate the relation between the tax burden level and the economic growth rate or the GDP. The empirical specifications authorize the presence of a concave parabolic tendency in coherence with the curve of Laffer. This method which consists in using quadratic forms is generally believed to follow an inverted-U-shaped curve. So, in complement to the Scully model, we specify a polynomial relation of degree 2 between the growth rate g_t and the tax rate τ_t.

$$g_t = \theta + \phi\tau_t + \varphi\tau_t^2 + \vartheta_t \tag{5}$$

Where ϑ_t is an error term. A differentiation gives us the expression of tax burden rate which maximizes the economic growth rate:

$$\tau_Q^* = -\frac{\phi}{2\varphi} \tag{6}$$

The signs of the coefficients ϕ and φ are opposite. The first coefficient which reflects the public spending effects on the growth should be positive. The second which highlights the negative effects associated to the increase of the fiscal burden beyond the optimal rate should be negative (Keho (2010); Anago (2015)).

3.2.3. Long Term Equilibrium

In our model, GDP is influenced by exogenous variables explaining tax revenue, private receipts after deduction of taxes and dummy variable to sense different shocks. Indeed, to find out the impact of these variables on the GDP structure, we estimate a model with general form is as follows:

$$y_t = \delta + a(\tau_{t-1}y_{t-1}) + b\left[(1-\tau_{t-1})y_{t-1}\right] + cD86_t + \upsilon_t \tag{7}$$

Where we note respectively by y_t the series of GDP, τ_t the series of tax burden, $\tau_t y_t$ the series of tax revenue, $(1-\tau_t)y_t$ the series of private receipts and $D86_t$ a dummy variable which sense shocks on GDP. υ_t is the error term. Variables are taken in logarithm except the dummy one.

In our econometric methodology, we apply unit root tests method on the various series to study their stationary. Then, we will be interested in a long-term equilibrium study between GDP and its components. This will be done through a cointegration analysis between variables. According to Johansen cointegration test results, we decide to estimate VECM. The null hypotheses of this cointegration test suppose the existence of r cointegration relation between all variables or variables with significant effect on GDP.

4. RESULTS AND DISCUSSION

The results will be interpreted in two parts. At first, we interested in the results which concern the estimations of both basic models (equations (4) and (5)). Then we concentrate on the results of stationary and cointegration tests and the estimation of the long-term cointegration model with the VECM model.

4.1. Determination of the Tax Burden Rate from the Basic Models

An effective fiscal policy requires the application of a tax burden rate allowing an optimal growth without wasting and without unproductive spending. The estimation's[1] results of the equation (4)[2] are presented in the following equation:

[1]Equations 8 and 9 are regressed with OLS method: the results of these regressions shall be taken with high precaution since this method relies on stationary variables. Hence, the results should be considered as preliminary. OLS method is used here to deduce the tax burden.
The dummy variables in equation 9 (except *D86*) are statistically not significant when introduced in equation 8; and therefore, they are not included in equation 8.

[2] $D86 = 1_{\{t=1986\}}$ is used to capture the shock effect concerning the application of the structural adjustment program on the GDP. Other shocks have no significant coefficients.

$$\ln y_t = \underset{(3.08)}{0.537} + \underset{(3.07)}{0.127} \ln(\tau_{t-1} y_{t-1}) + \underset{(17.37)}{0.865} \ln\left[(1-\tau_{t-1}) y_{t-1}\right] - \underset{(-1.837)}{0.06} D86_t + e_t (DW = 2.29) \quad (8)$$

Where the values in brackets are the t-statistics. All the coefficients seem significant at 5 % except the last one which is significant at 10%. By applying the formula of the equation (3), the equation (8) suggests that the optimal tax burden rate in percentage of the GDP is equal to 12.8.

The equation (9)[3] shows the estimation[1] results of the quadratic shape concerning the relation between the growth rate and the tax rate:

$$g_t = -\underset{(-3.36)}{0.711} + \underset{(2.78)}{6.812} \tau_t - \underset{(-2.47)}{17.35} \tau_t^2 - \underset{(-3.41)}{0.085} D73_t - \underset{(-2.43)}{0.060} D82_t - \underset{(-2.29)}{0.056} D86_t - \underset{(-2.33)}{0.034} D11{,}15_t + e_t^{'} (DW = 2.21) \quad (9)$$

Where the values in brackets are the t-statistics. All the coefficients seem significant at 5 %. Furthermore, the results are coherent with the hypothesis that the tax rate affects negatively the economic growth beyond a certain level.

By applying the formula (6), the tax burden rate in percentage of the GDP is equal to 19.6%. The annual average growth rate corresponding to this imposition level is 4.93 %. The results show that the existence of a maximal border in the fiscal policy beyond which the mobilization of the public resources would be at the origin of economic costs.

According to these estimations, the optimal tax burden rate shall be between 12.8% and 19.6% of the GDP. This rate which is widely lower than the current rates: Does it mean that economic growth and real level of GDP were above[4] their optimal levels?

Two points seem important to explain this over-optimality of the tax burden in Tunisia. Firstly, a higher imposition on taxpayers favoring the fraud, the corruption and the tax evasion. Secondly, the low return of taxes in the economic and social cycle. In fact, in the conventional vision of the tax, the government just takes the necessary taxes for the common well-being.

At present, the taxpayers realize that the government strives especially to operate transfers and spending in the detriment of the development objective questions which can be added to the numerous reproaches made for the public finances management. The resources diversion towards unproductive redistributive activities discourages the fiscal public-spiritedness, delays the growth and prevents the economy from achieving its full potential.

4.2. Long Run Relationship: Optimal Tax Burden Rate

A successful fiscal policy which depends of optimal tax burden can serve to regulate the economic activity through social equity. Indeed, the major objective of the various estimations is to detect the effect of different variables constituting the model (7) on GDP.

Concerning stationary process, we used unit root tests of the Augmented Dickey-Fuller, Philips-Perrin and KPSS. For the two first tests (ADF and P-P), the null hypothesis is that the variable has a unit root which mean that it's not stationary. For K-P-S-S test, the null hypothesis supposes the stationarity of the variable. The Table **1** resumed the results of unit root test when both trend and intercept are included in the equation with 0.146 as asymptotic critical value at 5% for K-P-S-S unit root test. The same results for stationarity are obtained when intercept only or none are included in the equation (None is not available in K-P-S-S test).

Table **1** show that all series are not stationary in level and they become stationary in first differences which mean that all variables are integrated in the same order $I(1)$. This result is in accordance with the theory which stipulates that the macroeconomic series are generally stationary only after differentiation.

To assure satisfactory level of economic growth in Tunisia, the equilibrium between GDP and its components must be realized. If these variables are cointegrated then they have a long-run relationship. So, a cointegration technique (model without time-dummy variable *D86* which cannot cointegrates with other explanatory variables) will be performed because its importance in the analysis of a long-term equilibrium.

4.2.1. Cointegration Test

In this study and to test the cointegration, we used a multi-varied approach (Johansen 1988). This test allows determining the number of cointegrating equations between the integrated variables with same order. According to stationary test results, we chose to study the cointegration. The Johansen cointegration

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[3] $D73 = 1_{\{t=1973\}}$, $D82 = 1_{\{t=1982\}}$, $D86 = 1_{\{t=1986\}}$ et $D11{,}15 = 1_{\{2011 \le t \le 2015\}}$ are used to capture the shocks effects on the growth rate.

[4] Contrary to the results obtained for Côte d'Ivoire (Keho 2010).

Table 1: Unit Root Tests

	Test For Unit Root in Level			Test For Unit Root in 1st Difference		
	ADF Prob	P-P Prob	K-P-S-S LM -Stat	ADF Prob	P-P Prob	K-P-S-S LM -Stat
$\ln y_t$	0.852	0.899	0.179	0.000	0.000	0.075
$\ln(\tau_{t-1} y_{t-1})$	0.765	0.841	0.217	0.000	0.000	0.048
$\ln\left[(1-\tau_{t-1}) y_{t-1}\right]$	0.816	0.837	0.151	0.000	0.000	0.056

Table 2: Cointegration Test

Trace Test				Maximum Eigen-value Test			
H_0	H_a	Trace	5%	H_0	H_a	Max	5%
$r=0$	$r \geq 1$	52.56	35.19	$r=0$	$r=1$	38.17	22.30
$r \leq 1$	$r \geq 2$	**14.39**	**20.26**	$r=1$	$r=2$	**8.99**	**15.89**
$r \leq 2$	$r \geq 3$	5.40	9.16	$r=2$	$r=3$	5.40	9.16

test use two statistics to determine the number of cointegrating vectors:

- Trace test with the hypothesis corresponding to the existence of at most r cointegrating vectors;
- The maximum Eigen-value test with hypothesis corresponding to the existence of exactly r cointegrating vectors. The table below presents results of this test.

The empirical results show that the null hypotheses $(r=0)$ for Trace Test and null hypotheses $(r=0)$ for Maximum Eigen-value Test are rejected at 5%. However, the null hypothesis $(r \leq 1)$ for the Trace Test and $(r=1)$ for Maximum Eigen-value Test cannot be rejected at 5% because the statistics of both the two tests are lower than the critical values which are associated with them. Consequently, these two cointegration tests confirm that variables are cointegrated and there is 1 cointegrating equation.

Table **3** presents the results of long-term estimated cointegration relationship, the values in parentheses are the estimated standard deviation associated to estimated coefficients.

In this relation, the $\ln y_t$ coefficient is normalized then this variable is chosen as endogenous and the others are exogenous variables. Consequently, the estimated relationship is written as follows:

$$\ln y_t = \underset{(8.647)}{0.474} + \underset{(9.593)}{0.137} \ln(\tau_{t-1} y_{t-1}) + \underset{(51.633)}{0.860} \ln\left[(1-\tau_{t-1}) y_{t-1}\right] + e_t^{''} \tag{10}$$

Where the values in brackets are the t-statistics. The estimation result of cointegration relationship shows that all coefficients are significant in 5%. Indeed, a 1% increase tax revenue and private receipts will respectively cause in long-term a GDP increase of 0.14% and 0.86%.

According to equation (3), equation (10) suggests that in the long term optimal tax burden rate is of the order of 14% of GDP. In this context and using annual data from 1960 to 2006, Keho (2010) find that the growth-maximizing tax rate has been found to be

Table 3: Estimation of the Cointegration Relationship

$\ln y_t$	$\ln(\tau_{t-1} y_{t-1})$	$\ln\left[(1-\tau_{t-1}) y_{t-1}\right]$	**Intercept**
1.000	-0.137 (0.014)	-0.860 (0.017)	-0.474 (0.055)

Loglikelihood 424.2478.

21.1% of GDP. At that tax rate, the economic growth rate would be 6.2% instead of the actual 3.2%. The actual low tax rates are shown to be responsible for substantial losses in growth and tax revenues.

With the existence of cointegartion relationship, it is then possible to estimate a VECM. The VECMs are a theoretically-driven approach useful for estimating both hort-term and long-term effects of one time series on another.

4.2.2. Estimation of Error Correction Model

The quality of the VECM estimation result is judged according to the coefficients signs. Signification of the coefficients is deduced through the t-statistics values which appear in parentheses.

Table 4: Error Correction Model Estimation

Error Correction	$D(\ln y_t)$
CointEq1	-2.4897
	(-5.3903)
$D(\ln y_t(-1))$	2.1983
	(6.1571)
$D(\ln(\tau_{t-1} y_{t-1})(-1))$	-0.0711
	(-1.254)
$D(\ln\left[(1-\tau_{t-1})y_{t-1}\right](-1))$	-0.1190
	(-0.9420)
R-squared	0.22
Adj. R-squared	0.17
Sum sq. resids	0.04
S.E. equation	0.03
F-statistic	4.23
Log likehood	102.98
Akaike AIC	-4.12
Schwartz SC	-3.97
Mean dependent	0.05
S.D. dependent	0.03
Determinant Residual covariance (dof adj) Determinant Residual covariance	5.48E-12 4.22E-12
Loglikelihood	424.2478
Akaike Information Criteria	-17.01033
Schwartz Criteria	-16.38659

In this Table **4**, CointEq1 is the error-correction term. This term relates to the fact that last periods deviation from a long-run equilibrium influences its short-run dynamics. Thus VECM directly estimates the speed at which a dependent variable returns to equilibrium after a change in other variables.

The results of the second column of this table allow noting that the error-correction term is negative and significant confirming the existence of a long-term relationship between GDP and other variables. *CointEq1* denotes residues, delayed one period, of the cointegration relationship found previously. The value of this parameter measures the GDP speed of return to equilibrium state in case of short-term disequilibrium. The negative and non significant coefficients of tax revenue and private receipts show the short-term inefficiently effect of these variables which confirm results of long-term.

5. CONCLUSION

In this paper, we tried to study the relation between the tax burden level and the growth rate for Tunisian case with estimation of the optimal tax rate. Our results accredit the idea that taxes reduce the growth beyond a certain threshold. The basic model gave an optimal tax burden rate equal to 19.6% of the GDP. The use of the cointegration techniques for temporal series allowed us to make a long-term analysis which releases an optimal tax burden rate of 14% of the GDP. The current rates of imposition are widely above these rates what explain disappointing performances in terms of growth and fiscal.

In this context, a more credible strategy will have to look for the ways to improve the taxes collection system. Any politics aimed to increase the fiscal burden without improving the efficiency of the fiscal device risks to be counterproductive. These types of politics would encourage the tax evasion and would push the economy towards underground activities or less liable to tax. The efforts of fiscal decentralization begun since a few years as well as the fight against the evasion and the fraud will have to be pursued. Besides, it is important that the government uses the public resources in an efficient[5] and transparent way to attract the taxpayers how often have the impression that fiscal receipts do not serve their interests.

[5]During the sharp economic downturns of 1974-82, public investment did not contribute to GDP growth; hence a tax-financed increase in government investment equal to 5 percent of GDP is predicted to have reduced output growth by nearly 0.6 percentage points (Skinner 1987).

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