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2016

Online at <https://mpra.ub.uni-muenchen.de/84568/>

MPRA Paper No. 84568, posted 17 Feb 2018 15:43 UTC

# Local fiscal policy and poverty reduction

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## **Abstract:**

This paper aims to analyze the effect of fiscal policy on local poverty reduction in Morocco. We studied the influence of the local finance management mode (debt, cash, etc.), on the reduction of poverty between Moroccan localities.

Also, we are using data on expenditure and income shared between 2000 and 2007, we tested the convergence process and the type of fiscal policy can help to improve it.

Our result has shown that the policy using debt to finance the expenditure could improve the convergence process and thus help to reduce inequalities of poverty.

JEL classification: H70, I32, R58

## **Introduction**

The rapid economic growths in Morocco lift large number of people out of poverty. Indeed, thanks to development policies implemented, recent years have been characterized by quantitative success achieved in the various sectors of production. However, there has also been a persistent regional imbalance in the distribution of wealth, production and welfare.

To cope with the worsening of the inequalities observed in the recent years, fiscal policy has increasingly sought to redistribute income.

Thus, Morocco like other African countries was engaged in actions for expanding the various components of their fiscal space (Heller, 2005; Chambas et al, 2007).

The objective is twofold:

- Mobilize more public resources.
- Improve the quality of public expenditure.

However, the best type of fiscal policy for growth depends on the economic situation and the implementation schedule. In the long term, fiscal policy should aim to maintain public debt at sustainable levels. In the short term, the fiscal policy choices vary between contractionary policy for areas with high budget deficits and expansionary policy in areas that have achieved fiscal stability but have to face recession problems. Moreover, an expansionary fiscal policy may also be justified in low-income areas with the aim to increase public spending as part of poverty reduction strategy.

### **Context and objective of the study:**

In the early seventies, Moroccan public finances were characterized by a low rate of tax levy (about 17.7% of GDP), a low debt and a moderate fiscal deficit (about 3% of GDP).

In the late seventies, Morocco was engaged in a stabilization policy, then in a structural adjustment program including fiscal consolidation as a key objective. The cost of public finance adjustment was burdened by the weight of public debt. Therefore, Morocco has been forced to reduce budgetary

expenditures. These policy, were permanently reducing Morocco fiscal space<sup>1</sup> which had a negative impact on the living conditions of the poorest social class.

Currently, Morocco faces a risk of decreased government income because of tariff dismantling and the international situation which affect tax income.

Besides, the expenditure situation is not better, due to the increasing payroll and compensation charges policies. These policies hasnot only led to an improvement in consumption and therefore in investment, but also led to worsening budget deficit (from a surplus of 0.4% of GDP in 2008 to a deficit of 7.3% of GDP in 2012). The deficit was financed by debt, so the debt ratio rose from 47.9% in 2009 to 59.6 of GDP in 2012.

Furthermore, Morocco has undertaken since 2000 to achieve the Millennium Development Goals (MDGs) and has made progress in achieving them. However, the MDGs pose a funding problem and raise the issue of fiscal policy.

The objective of this work is to determine the effect of fiscal policy on the reduction of local development inequalities. This questioning is based on the interaction between local finance, fiscal policy instruments and local development.

Specifically, the paper will seek to answer the following questions:

What is the influence of the local finance management mode in the local development?

### **Theoretical and empirical model of convergence and budgetary policy**

The model of convergence is considered to be the synthesis of many neo-classical authors, the main one is the Solow (1956) paper. These works highlight two important conclusions. The first is that the growth rate of a variable is inversely related to its initial level. The second conclusion follows from the first and stipulates that any economy converges to its own steady state.

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<sup>1</sup>"It can be defined as room in a government's budget that allows it to provide resources for a desired purpose without jeopardizing the sustainability of its financial position or the stability of the economy" Peter Heller, 2005

This steady state is a phenomenon that acts in two ways...an economy that has reached not moving...and an economy that has not reached out to him. The steady state is the balance of long period of the economy (Mankiw, 2001, p.101).

Thus, based on these findings, the neoclassical model predicts that a convergence to the same steady state must occur between different economies. However, this prediction assumes that economies should be considered homogeneous. In other words, they must have the same preferences and the same technologies. This phenomenon is called the absolute convergence.

However, when economies have no preferences or similar technologies, equilibrium levels are different so all the economies converge to their own steady states. The model predicts in this case is "conditional" convergence. (Barro and Sala-i-Martin 1990).

To measure convergence, most studies use two measures:

- The first is based on the neoclassical growth models (Solow, 1956). In this model there is convergence when "poor" economy tends to grow faster than "rich" economy. This property corresponds to the  $\beta$ -convergence concept (Sala-i-Martin, 1991), that can be absolute (unconditional) or conditional.
- The second concept used in the literature is  $\sigma$ -convergence, which refers to the decrease in regional differences (Sala-i-Martin, 1995). Thus, it relies on the calculation and comparison of the logarithms of standard deviations in different time periods.

The convergence models have several extensions, including the introduction of fiscal policy (Barro, 1990). Thus, according to Barro, public spending has a double effect:

- The first is to increase the productivity of private companies.
- The second is the effect of the tax on the reduction of corporate income.

Barro also adds that in the case of a small government, the first effect outweighs the second. Barro and Sala-i-Martin (1990) model provided a useful starting point for our analysis.

However, the extent of fiscal policies field makes difficult to synthesize them into one single indicator. Many are the indicators that have been identified in the empirical literature. These indicators measure both side of fiscal policy (resources and uses).

Regarding the resources, one of the most common indicators is cash flow. This indicator used by several authors as a measure of self-financing policy (O.Thomas, 2011; N.Gemmell, 2003; C.BOUTHEVILLAIN and C.SCHALCK, 2007) is linked to fiscal policy which is based on prudent debt management.

Other arguments have been contemplated in order to explain another fiscal policy choice, which would favor debt to cash flow. According to Klopfer (2002), the loan is best fiscal policy if policymakers provide an expansion of the tax base.

However, both self-financing and debt policies, would not be effective without good tax policy. This is why the fiscal policy needs to be based on a non-tax distortion, in order to ensure great location of resources. Indeed, J. Mirrlees (1971) showed that distortional tax is a tax that not classifies people with low income and people with high income differently.

With regard to uses, the main measure used is public spending. This variable measures the efficiency of investment. These investments can be productive or unproductive (Barro, 1990).

### **Modeling of the process of convergence**

The model that we will estimate is inspired by Islam (1995), Céline BONNEFOND (2013) and N.Gemmell (2003) models.

$$\ln(X_{it1} - X_{it0}) = b + a_1 \ln X_{it0} + a_2 \ln Z_{it1} + u_i$$

Where

**X<sub>it0</sub>** is the level of poverty in locality i during t<sub>0</sub> (pauvret t-1);

$Z_{it}$  are the explanatory variables of fiscal policy convergence level in  $t$ .

$u_i$  is the standard error.

There is  $\beta$ -convergence when  $\beta$  is negative and statistically significant, since in this case, the average growth rate between the two dates is negatively correlated with the initial level.

In regards to the conditioning variables (fiscal policy), we incorporated several variables among those cited in the literature review:

- Self-financing capacity (N.Gemmell, 2003; C.BOUTHEVILLAIN and C.SCHALCK, 2007) (autonomie)
- Debt (O.Thomas, 2011; N.Gemmell, 2003) (*dette*)
- Public expenditure (Barro, 1990, 2005; O.Thomas, 2011) (*dépense*)
- Tax distortion: (N.Gemmell, 2003) (*distorsion*)

Formally, the final equation can be written as:

$$Y = a_1 \text{paupret}_{t-1} + a_2 \text{autonomie} + a_3 \text{distorsion} + a_4 \text{dépense} + a_5 \text{dette} + b + u_i$$

Traditionally, empirical studies that cover this topic are mostly in the form of cross-sectional regression. Also, they are based on several control variables. However, these types of designs are affected by unobserved heterogeneity. This bias can be partly reduced by using panel data (Islam, 1995).

To choose between fixed and random effects, we have conducted a Hausman test. This test has shown a probability lower than 1%. Therefore, the use of fixed effects is the most appropriate. Thus, to estimate the fixed effects we use the LSDV method which consists of adding dummy variables for each locality and each year in order to control the effect of unobserved heterogeneity.

Table 1 depicts the estimation results. To overcome the problems of multicollinearity, our variables have been modeled separately.

For our four models (a, b, c, d), the probabilities of Fisher test is lower than 1%, we can deduce that the estimated coefficients are generally different from zero, so the model is well specified.

The results show the existence of an absolute convergence process in Moroccan localities. Indeed, the coefficients  $\beta$  seem significant and negative. These results confirm the existence of a convergence process.

Conditioning variables are all significant except the self-financing which don't have a significant role in poverty reduction, which confirms the theory that promotes debt (Klopfer, 2002). Indeed, this variable had a negative impact on the evolution of poverty. Likewise, public spending has the same effect on poverty, unlike the tax distortion variable, which favors the increase of poverty.

Generally it would seem that the convergence between Moroccan localities is conditioned by:

- A reduction of the tax distortion.
- An increase in debts to finance public expenditure.

## **Conclusion**

It would seem that, in fiscal policy of Moroccan localities, financing expenditure by the debt would be more profitable than strategy based on self-financing. This result has an explanation on the level of corruption in localities using self-financing. However, the debt involves external actors keen to ensure successful realization of projects which they have contributed.

Regarding tax revenues, the distortion in taxes had negative influenced the productivity of public investments.

Thus, fiscal policies will be less effective if they are only focus on spending without caring about the tax distortion.

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Table 1 : Estimation results

Variable	a	b	c	c
pauvret t-1	-.40757084***	-.40765242***	-.45180977***	-.35060644***
autonomie	-.01574231			
distorsion		.05698012***		
dépenses			-.12614056***	
dette				-.04184182**
_cons	.94585548***	.80356856***	2.782***	1.0881337***
N	472	954	1008	791
Prob > F	.000	.000	.000	.000
r2	.30288544	.282626	.31106802	.18251567

Legend: \* p<.1; \*\* p<.05; \*\*\* p<.001