

METAS SOCIAIS

Think Global, Act Local: Social Credit based on MDGs

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Abstract: This paper discusses the economic rationality of a system of social targets and credit based on the Millennium Development Goals (MDGs), as a way for the federal government to increase efficiency in the use of its social budget transferred to local governments (states, municipalities etc).

The Millennium declaration mediates social indicators and deadlines to be pursued at the global level. As the fight against poverty transcends mandates and boundaries, the first proposal studied is that specific locations—in particular, those at the sub-national level—announce a commitment with the global targets specified. In practice, this would involve that states and municipalities, other than nations, challenge their respective population to reach the proposed targets. Since the deadline for the global goals outlasts the time frame of a single government, it inhibits discontinuity of actions between political mandates. In other words, international MDGs enjoy the attribute of being exogenously given which allows not only time consistency in decisions but a better integration of social efforts across different government levels. The second proposal studied is that the distribution of resources transferred from higher to lower government levels be linked to social performance through a social credit contract. We discuss whether it is the case, why and what would be the desirable characteristics of such contracts.

The objectives of this paper are divided in two parts: First, we offer a theoretical framework that allows the designing of different contract clauses in different environments (e.g. static and dynamic; with and without imperfect information, with and without complete contracts; and different commitment technologies). This analysis is performed by developing extensions of a standard principal-agent model. The results show that the use of the focalization criteria where the poorest municipalities get more resources may lead to adverse incentives to poverty eradication. We also show that unconditional transfers from the federal government crowd-out local social expenditures. We argue in favor of the use of contracts where the greater the improvement in relevant social indicators, the more resources each municipality would receive. The introduction of imperfect information basically generates a penalty to the poor segments in areas where local governments are less averse to poverty. Another advantage of this type of a social credit contract is to reduce the problem of political favoritism when certain social groups receive greater attention from specific governments. With the establishment of social targets it becomes possible to generate proper incentives so that social spending is distributed more equitably between groups. Key words: **1. social targets, 2. poverty, 3. inequality, 4. social spending, 5. social welfare**

1- General Motivation:

The management of Brazilian social policy has become more complex and challenging than ever. The decentralization of public actions allied to the growing involvement of NGOs and private firms creates a widespread diversity of simultaneous actions. On the other hand, the internationalization process of economies, concomitant with contagious macroeconomic instabilities, broadens the scope of opportunities to the realization of transfers of resources and social technology between countries.

The question interesting us is: how should we increase the returns obtained by society from this myriad of actions? It is up to the diverse levels of public activity (multilateral entities, several levels of the state, and civil society) to act simultaneously towards the same goals. These involve the coordination of diffused efforts through the settlement of targets and the design of mechanisms providing the incentives to achieve them.

The Millennium declaration, recently promulgated, mediates not only social indicators, as well as values and deadlines to be pursued at the global level. Our proposal is that specific locations—in particular, those at the sub-national level—announce a commitment to the global targets as they have been specified. In practice, this would involve that states and municipalities, other than nations, challenge their respective populace to reach the proposed auspicious targets. An example: state A, or district B, would adhere to the target of reducing by one half the proportion of its population with income per capita below US\$1.00 daily at PPP, by the year 2015. The recent Brazilian experience with inflationary targets enlightens the strength of tangible objectives.

Now why should we only adhere to the Millennium goals and not others? a) The proposed indicators have already been formulated, monitored and benefit from inherent credibility. b) The uniformity of the goals may contribute to the convergence of social efforts at the global scale, by guaranteeing a positive externality. c) The fact that the deadline for the global goals outlasts the mandate of a single government inhibits discontinuity of actions between political mandates; external goals tend to establish temporal consistency in decisions. d) The perceived exogeneity of the goals across localities also provide a neutral ground for agreements across different government levels, allowing a better integration of social efforts. The goals ideally belong to society and its

citizens, as being perceived as independent from the idiosyncrasies of specific governments.

Aside from the coordinating and mobilizing characteristics of the social targets, the conditioning of the financial aspect to the observed social outcome—be that considering individuals or levels of government—is an interesting principal. The same spirit of cash for education programs of rewarding poor families whose children attend school such as Bolsa-Escola in Brazil or Progressa in Mexico can be applied to the annual reallocation of the social budget at numerous administrative levels. The process of rewarding, with additional resources, those units progressing swiftly, may be applied towards the lower levels of government: from the federal to the state realm, from the state to their respective municipalities and from the latter to their respective administrative regions. The Demographic Census form the Brazilian Statistical Bureau (IBGE) provides recent information constituting the stepping-stone for these various geographical levels.

Following this line of reasoning, the magnitude of the external debt forgiven for heavily indebted poor countries (HIPC), currently in place, should also consider the future path of these nations' social indices. Those attaining financing from lost funds tend to lose their motivation. On many occasions, the best remedy against poverty is not charity, but credit instead. There is no doubt that the core of social action should be upon the poorest, but nonetheless, those moving towards the emancipation of their wanting should be rewarded. The main comparative advantage of being poor is the relative capacity of prospering. Future success should also be rewarded, instead of only compensating for past failures.

The social credit mechanisms discussed here can also be perceived as a process of converting social debt into financial wealth. Think it as a measure the social debt the amount of resources lacking in a given society for a given period of time to come, say T years¹. This society would be entitled a given cash flow as social indicators show that it is emancipating from its social debt. One may think that efficiency is not a comparative advantage of a poor society. However, one of the few advantages of being poor is the ability to improve. For example, if 50% of the children are out of school, one may double

¹ Perhaps the easiest example visualize is the present value of the average income gap (P1) times the population size discounted over T periods.

the initial figure, while if the starting point is 97% of the children in school, there is not much room for improvement. In this way in the case of social credit equity and efficiency walk hand in hand.

The social target's main problem is related particularly to the short run, given the presence of shocks. The result obtained by the social protagonist depends on factors beyond his reach, as the outcome does not depend solely on his efforts or skill. Thus the importance of using a relative evaluation schemes is made clear. The selection of a system capable of international comparisons allows us to place each country within the international norm. The system of incentives should be announced a priori and the relative performance should be evaluated a posteriori. Everything functions as a system of credit in which the financial debt from social projects can be reduced in view of social advancements. The advantage of the social credit apparatus is, if well designed, to attract better social actors and induce them to undertake the best practices.

Many social programs are based upon the transfer of federal government's funds to the poorer regions. Obviously, the expenditure of money in these regions results in an improvement for the local population's living conditions. However, what is not being evaluated—and what establishes the core of this work—is to know whether the final result reached could have been better.

It is impossible for the federal government to know which are the specific needs of each locality within the country. In a region where the HDI² struck as low, it would rarely have more information than the local government about who are the poor and what is the best way to help them, for the mayor is the one who better understands the region's intricacies. For this reason, it is only natural for the local government to be responsible for determining what must be done. The federal government should have the assignment of establishing a partnership with municipalities, via target contracts, and monitor how funds are being spent and which are the goals being achieved.

Facing this situation, we analyze the mechanisms for social targets in relation to the fulfillment of targets by the ones receiving the funds, as pre-established in contract. The

² The HDI is an index composed of health, education and income indicators, being that each one of these three components has the same weight in the index.

mechanisms being analyzed are based upon the selection of an optimum level of governmental transfers—for example, from the federal government to municipalities.

In the studied system of social targets, it is the government's responsibility to establish a group of possible contracts to be asserted between the federal government and the municipality. Such contracts contain clauses to establish the targets to be reached and the value to be forwarded from the federal government to the local one for the accomplishment of these goals. The subjacent idea is that, if the municipality does not reach the established targets, it will not receive the funds, or receive only an amount proportional to the accomplishment reached. This way, what is established between the federal and local governments is similar to a hiring contract, in which the federal government hires the municipality so that it may run a service in the social area. However, in a more realistic situation, so that the targets may be reached, first the municipality must receive the funds, and only after the targets are checked. We can consider the funds received by the local government as an advanced payment – called here as Social Credit – so that the municipality may carry out a specific service pre-determined in the contract—which establishes the goals to be accomplished. In case the targets are not reached, the municipality starts to have a debt with the federal government for the non-fulfillment of an agreed service. The debt is the difference between the advanced payment and payment estimated by the contract for the complete results to be accomplished.

The main issue in this type of model is the establishment of the targets to be reached and the manner of paying for the obtained result. The paper develops extensions of a standard principal-agent framework to discuss the relationship between the federal government and local governments. It is organized as follows: section two presents the basic framework of analysis. The first part of section three extends static models with perfect information in various directions, namely: 1) autarchy; 2) unconditional transfers from the federal government to municipality; 3) perverse incentives where the poorest municipalities get more resources; 4) social targets where the greater the improvement in relevant social indicators, the more resources each municipality would receive. 5) political favoritism when certain groups of poor receive greater, or smaller, attention from specific governments. 6) political favoritism with social targets. The fact that youth is underrepresented in the electoral market (i.e., individuals below 16 years of age are not

allowed to vote) makes social expenses on children less palatable to politicians, opening room for the adoption of social targets to make expenditures more equitable. The final part of section three analyses the implications of the introduction of imperfect information in the static model with two types and a continuum of types of agents.

Section four develops dynamic models with different renegotiation possibilities, namely: 1) Full Commitment when there is not the possibility of any type of renegotiation of contracts across periods, even if all parties involved agree about a change. 2) Long term commitment when renegotiation is allowed if both parties are in agreement. 3) No commitment when the government does not have the commitment to maintain the contract established in the first period. 4) Incomplete contracts. Finally, section five presents the main findings of the paper.

2 – Basic Model

The model is based on the structure of principal and agent. In our case, the federal government (F) may be regarded as the principal. The agents are the municipal governments (M), here forth referred to as municipalities. Aside from the federal and municipal governments, we have the poor (P), whom the social targets to be established in contract between the government and the municipality will be affecting.

A basic hypothesis of the model is that the federal and local governments seek to improve living conditions of the poor, for this means to the representatives an increase in their chances of reelection. In the model, their level of income will measure this improvement in living conditions of the poor. This is equivalent to saying that the social target sought is the increase of average income of the poor.³

However, the key issue when discussing poverty reduction, is to know who will pay the bill. If on one hand, the reduction of poverty brings electoral benefits, on the other hand, for it to occur, it is necessary to invest in income transfer programs, which reduces the available budget for other types of investments.

³ However, an identical analysis can be made with other social indicators or even with an average of them, such as occurs with Human Development Index—HDI—or with the Life Conditions Index—LCI (Índice de Condições de Vida—ICV). Where one reads *income*, child mortality, school attendance rate, HDI, etc. could be placed instead. The choice of the target *income* throughout the text has the objective of trying to make the model more intuitive.

The local government would love it if the federal government made large social investments in its region, and preferably, if such expenses did not include a counter-measure from the municipality. It would be the authentic “free lunch.” The federal government would spend part of its budget, and the municipality would obtain political gains. The same analysis is valid in the opposite sense.

Such as Besley (1997), Gelbach and Pritchett (1997), and Azam and Laffont (2001), we assume that the federal government, as well as the local one, has an aversion to poverty, which may be modeled through a utility function, in which the poor’s income is seen as a positive externality for the federal government as well as for the local government. For a matter of simplicity, we assume that the government’s and the municipality’ utility functions are quasi-linear, in the available budget, and strictly concave in the poor’s income. This way, the government and the municipality are concerned with absolute poverty, instead of relative poverty. The desire to help the poor does not depend, however, on the total budget, but only on the poor’s income level.

The utility functions for the federal government , U_F , and for the municipality, U_M , are respectively given by:

$$U_F = G_F + N_P \cdot v(Y_P)$$

$$U_M = G_M + N_P \cdot \theta \cdot v(Y_P)$$

Being that $v(0) = 0$, $v'(Y_P) > 0$, $v''(Y_P) < 0$, $\lim_{Y_P \rightarrow 0} v'(Y_P) = +\infty$ e $\lim_{Y_P \rightarrow +\infty} v'(Y_P) = 0$

Where,

G_F : is the budget available to the federal government. It is considered that the government has a total budget (own) of Y_F . Part of this budget may be transferred, T , to income programs directed towards the poor. The difference $Y_F - T = G_F$. This is the budget the government has for all other necessary expenses. Obviously, the greater the available budget, the larger will be the government’s utility.

G_M : budget available to the municipality. Such as the government, the municipality also has its own budget, Y_M . The available budget, G_M , is what is left after the transfer performed by the municipality to the poor.

θ : is the parameter expressing the aversion to poverty of a local government. Different mayors may present different degrees of aversion to poverty. The absence of the parameter

θ in the government's utility function expresses the normalization that it has a parameter of $\theta = 1$.

N_p : number of poors in a municipality.

We will assume that the local government is the one better aware of the local reality, and therefore more capable than the federal government of identifying who really are the poor within the region. The local government also has better conditions for managing and implementing an income transfer program to its locality. This way, all government transfers will be directly made to the municipality, which will be responsible for transferring it to the poor.

In relation to the poor's utility, U_p , the only consideration undertaken by us will be that it grows in accordance to income: $U_p'(Y_p) \geq 0$. The greater the income, the poor will be better off.

From here on we will sometimes refer to the federal government as the *principal* and to the local government as the *agent*.

3 – Static Model

In this chapter, we divide the analysis in two parts. One refers to the case of complete information, when the principal knows the type θ of the agent. In the other case, there is an information asymmetry, derived from the non-observance type of agent. This asymmetry allows for some agents to attain informational income, which can be seen as a counterpart that the agent charges to reveal its true type.

3.1 – Complete Information

In this case, the government knows the mayor's (municipality's) aversion to poverty. It is an ideal situation, as it is difficult to know this type of information. However, the study in this case is important for some reasons. One of them, is that it allows us to compare the differences in the results of social policies when the government does not know the type of municipality. Besides this, we can obtain some interesting intuitions, which are the key factors in determining the result of social policies.

3.1.1 – Autarchy (A)

The basic situation is that in which the government does not carry out any transfer to the municipality. In this case, the municipality's incentive to transfer income to the poor

is exclusively due to the positive externality that an improvement in the poor's living conditions results to the local government. In this situation, the municipality solves the following problem:

$$\text{Max } G_M + N_P \cdot \theta \cdot v(Y_P)$$

$$Y_P$$

$$\text{s.t: } G_M + N_P \cdot Y_P \leq Y_M$$

The first order condition (FOC) of the above problem is:

$$v'(Y_P^A) = \frac{1}{\theta} \log o$$

$$\theta_1 > \theta_2 \Rightarrow Y_{P_1} > Y_{P_2}$$

However, the poor's income in autarchy, Y_P^A , is determined by the coefficient of the local government's aversion to poverty. The larger this coefficient, the larger will be the poor's income. Governments more concerned with the poor's social situation implement better income transfer policies. It is observed that the poor's income does not depend upon the number of poors nor on the municipality's budget. This is a result of the quasi-linear utility function chosen for the local government.

For the municipality of type θ , the utility after the transfer is:

$$U(\theta) = U_M^A = Y_M - N_P \cdot Y_P^A + N_P \cdot \theta \cdot v(Y_P^A)$$

Further ahead, when we deal with the federal-local relation, this equation will be the minimum utility that the municipality will take into consideration to accept the establishment of a contract estimating social targets as a countermeasure to the governmental transfers.

3.1.2 – Unconditional Transfer (T^1)

Suppose the federal government chooses to invest in determined places, transferring funds for the municipality to invest in a social area. As we have previously calculated, in our model we will always suppose that the government transfers funds to the municipality and the local government is the one in charge of implementing the social policies. In this case, let's suppose the government does not establish any condition (i.e., social target) in what refers to the accomplishment of results by the municipality. It only transfers unconditionally a fixed fund of T^1 . For the municipality, the problem to be solved is:

$$\begin{aligned} & \text{Max } G_M + N_p \cdot \theta \cdot v(Y_p) \\ & Y_p \\ \text{s.a : } & G_M + N_p \cdot Y_p \leq Y_M + T^I \end{aligned}$$

Solving the problem, the first order condition obtained is:

$$v'(Y_p^I) = \frac{1}{\theta} \quad \Rightarrow \quad Y_p^I = Y_p^A$$

That is, the poor's income in autarchy or in a situation in which an unconditional transfer occurs is the same.

Proposition 1: If the federal government performs unconditional transfers to the local governments, the poor's situation does not change.

Besides this,

$$U_M^I = Y_M + T^I - N_p \cdot Y_p^I + N_p \cdot \theta \cdot v(Y_p^I) \stackrel{Y_p^I = Y_p^A}{=} Y_M + T^I - N_p \cdot Y_p^A + N_p \cdot \theta \cdot v(Y_p^A)$$

$$U_M^I = U_M^A + T^I \quad \Rightarrow \quad U_M^I > U_M^A$$

and

$$U_F^I = U_F^A - T^I \quad \Rightarrow \quad U_F^I < U_F^A$$

Defining the funds destined, by the municipality, to the social program as being T_M , we have that:

$$T_M^I = N_p \cdot Y_p^I = N_p \cdot Y_p^A = T_M^A$$

What is observed in this type of transfer is that the local government does not use the funds transferred to improve the poor's situation, but starts to include it in its available budget. Another interpretation is to consider that the local government really destines the funds received to the social programs. However, in the same quantity as that received, it stops directing part of its own budget to the social area, accounting for these funds as available budget. It would be a type of crowding-out effect, where the government's investment reduces (misplaces) the municipality's own investments.

In this way, the local government's utility increases, for the poor will be as well off as they would in autarchy, but the available budget increases. The government, on the other hand, will be worse off, for the poor will not have improved, and the available budget will be smaller.

3.1.3 – Perverse Incentive (PI)

Suppose the government decides to help more the municipalities where the poor are poorer, so that the smaller the poor's income, the greater is the income per capita transfer carried out by the government to the municipality. For this, we suppose the government transfers the difference between Y_p , and a basic estimated value, K . Soon, the total transfer that a municipality is entitled to is:

$$T = (K - Y_p) \cdot N_p$$

The municipality, knowing that it will be entitled to this transfer, solves the problem of determining how much it will invest in the social area, that is, what is the income $N_p \cdot Y_p$ that it will transfer to the poor. The better the poor's situation, the less the municipality will received from the government, but on the other hand, the greater is the externality created by the poor's situation. The municipality's problem can be described as:

$$\text{Max } G_M + N_p \cdot \theta \cdot v(Y_p)$$

$$Y_p$$

$$\text{s.t: } G_M + N_p \cdot Y_p \leq Y_M + (K - Y_p) \cdot N_p$$

Solving for this, we have:

$$v'(Y_p^{IA}) = \frac{2}{\theta} \quad \text{such that,}$$

$$Y_p^{IA} < Y_p^A$$

The consequence of establishing a system in which the greater the poverty, the greater the federal government's investment in the region, without any counter-measure regarding the results, is the creation of perverse incentives. This is due to the fact that it stimulates the municipal government to reduce its social investments, so that it can receive more transfers. The final investment ends up being smaller than in the case of autarchy.

3.1.4 – Transfer Conditional on the Fulfillment of Social Targets (T^c)

Until now we have studied cases in which the government either undertook no transfers of any kind to social programs, or it did so without establishing any type of social target that could serve as a condition for the municipality to receive funds. Let's now study how the establishment of social targets can increase efficiency in the use of public money.

Let's suppose that the principal offers a contract to the agent under which a transfer conditioned upon the achievement of a pre-determined income social target, Y_p is estimated. The principal's problem is defining a contract, $(T^C(\theta), Y_p(\theta))$, under which the agreement with the agent's type θ is established in its target, Y_p , and the transfer, T_C , corresponds to the target's accomplishment. For this, it is necessary to guarantee that, in accepting the contract, the agent will obtain at least the same utility it would have in autarchy—this is the well-known Restriction of Participation (RP). This way, the principal's problem is:

$$\begin{aligned} & \text{Max}_{\{Y_p, T^C\}} Y_F - T^C(Y_p) + N_p \cdot v(Y_p) \\ \text{s.a: } & (Y_M + T^C(Y_p) - N_p \cdot Y_p) + N_p \cdot \theta \cdot v(Y_p) \geq U(\theta) \quad (\text{RP}) \end{aligned}$$

From RP we have that:

$$T^C(Y_p) = U(\theta) - Y_M + N_p \cdot Y_p - N_p \cdot \theta \cdot v(Y_p)$$

Soon, the government's problem can be described as:

$$\text{Max}_{\{Y_p\}} Y_F - (U(\theta) - Y_M + N_p \cdot Y_p - N_p \cdot \theta \cdot v(Y_p)) + N_p \cdot v(Y_p)$$

A first order condition is that:

$$v'(Y_p^C) = \frac{1}{1 + \theta} \Rightarrow Y_p^C > Y_p^A$$

That is, with the transfer of funds from the federal government to the municipality being conditioned to the attainment of a specific social target—in our case the target being an increase in the poor's income—we see that the final income of the poor is greater than it would have been had there not been the establishment of targets. Without these, we see that the municipality ends up investing the same value with or without the government's transfer in the social area. All transfers made the increase in the available budget for the municipality's expenses in activities other than in the social realm redundant, although the government would have liked to witness an increase in these. The government would transfer resources for the municipality to use in the social area, and the municipality would decrease in the equivalent proportion its own resources for that area. With the establishment of targets, this ceases to happen.

Proposition 2: the establishment of social targets increases the efficiency in the use of public money transferred to municipalities so that they can employ it in the social area, providing the attainment of social results better than without targets.

Aside from this, in relation to the funds directed from the municipality to the social area, we have that:

$$\begin{aligned}
 U_M^{TC} &= U_M^A \\
 \Rightarrow G_M^{TC} + N_p \cdot \theta \cdot v(Y_p^{TC}) &= G_M^A + N_p \cdot \theta \cdot v(Y_p^A) \\
 \Rightarrow G_M^{TC} &= G_M^A - N_p \cdot \theta \cdot [v(Y_p^{TC}) - v(Y_p^A)] \\
 \Rightarrow G_M^{TC} &> G_M^A
 \end{aligned}$$

Therefore, when a contract is made with social targets, the municipality, aside from directing the resources received from government to the social area, it also increases the volume of resources that normally it would spend if there had not been any type of contract with the government. It is important to observe that when there weren't any targets, if the government had transferred T resources to the municipality, it would have decreased by T amount its own resources in the social area. Now, aside from not reducing any, it also increases the quantity of its own resources to invested in the social area.

If on the one hand, the municipality loses utility from having less available funds to its “non-social” expenses, in return it gains from the externality of improvement in the poorest’s well-being, proportional to the investment made with the federal and municipal funds. Adam and O’Connell (1999) also found this type of result, in which the budget destined to the poor by the agent is greater than the funds received from the principal.

It is possible to state that a contract with social targets is capable of raising social investments. While in the contract with no targets, the volume of resources reaching the poor was the same with or without transfers, in this case, the one reaching the poor is greater than the sum of the government transferred funds and those desired by the municipality in conditions without the establishment of targets.

Impact of social targets: based on the CPO, it is possible to have an intuition about the degree of improvement that the social targets can bring on the poor’s income. Let’s remember that in the definition of our model, we normalized the government’s aversion to poverty as being equal to one ($\theta_F = 1$). As a result of this, in the equation

$v'(Y_p^{TC}) = 1/(1 + \theta)$, the number 1 in the denominator is the government's θ_F . If we had written the government's utility function as $U_F = G_F + N_p \cdot \theta_F \cdot v(Y_p)$, we would have found as a first order condition:

$$v'(Y_p^{TC}) = \frac{1}{\theta_F + \theta}, \text{ where } \theta, \text{ is the local aversion to poverty.}$$

Linear Contract

A way of inducing the municipality of reaching the projected targets is to offer a contract of the type:

$$T(Y_p) = a + b \cdot Y_p$$

In this contract, the municipality has a guaranteed fixed value. It is worth observing that this value may be positive as well as negative, implying in this last case that there is a penalty to be paid by the municipality in case the social results are very low. We also have a variable part. The higher the reached income, the greater the transfer. The coefficient "b," establishing the value of the variable part, is known for having an incentive power, for the greater its value, the greater is the municipality's incentive to reach even higher social results.

Proposition 3: The coefficients belonging to a linear contract of social targets are:

$$a = T(Y_p^{TC}) - b \cdot Y_p^{TC}, \text{ onde } T(Y_p^{TC}) = N_p \cdot [(Y_p^{TC} - Y_p^A) - \theta \cdot (v(Y_p^{TC}) - v(Y_p^A))]$$

$$b = \frac{1}{1 + \theta}$$

For proof, refer to Appendix I.

3.1.5 – Favoritism without Transfer (F)

Until now, we have considered that the local government had an aversion to poverty coefficient equal to that of all N_p poor. However, there commonly exists a preference for certain types, in detriment of others.

Empirical studies have shown that a large portion of poverty is spread among children and teenagers. 45% of the extreme poor in Brazil have 15 years or less of age against 30% of their share in the whole population, similar discrepancies are observed worldwide. Neri and Costa (2001) argue that the age distribution of poverty may be influenced by the fact that the youngest are not allowed to vote. In other words, the fact the

youth is underrepresented in the electoral market makes social expenses on children less palatable to politicians. It is not a coincidence that family of many children and often headed by one female would be less subject to social spending. In modern democracies, the rule that each individual gets one vote does not apply, the rule is one adult, one vote ^{4 5}..

Our objective is to model this type of political favoritism in relation to the determined group and comprehend in which form it impacts the distribution of resources driven towards the social area. In the future, we will show that the manner of establishing social targets can be of use to diminish the problem.

Let's make the assumption that there are two types of poor, whose populations are N_{P1} and N_{P2} for which the municipality's aversion to poverty coefficients are θ_1 and θ_2 , respectively.

Not having any type of transfer coming from the government, the municipality's problem can be described as:

$$\begin{aligned} \text{Max} \quad & G_M + N_{P1} \cdot \theta_1 \cdot v(Y_{P1}) + N_{P2} \cdot \theta_2 \cdot v(Y_{P2}) \\ & \{Y_{P1}, Y_{P2}\} \\ \text{s.t:} \quad & G_M + N_{P1} \cdot Y_{P1} + N_{P2} \cdot Y_{P2} \leq Y_M \end{aligned}$$

The first order conditions are:

$$v'(Y_{P1}^F) = \frac{1}{\theta_1} \quad \text{e} \quad v'(Y_{P2}^F) = \frac{1}{\theta_2}$$

Supposing the poor of type θ_1 are preferred, that is, $\theta_1 > \theta_2$, we have $Y_{P1} > Y_{P2}$. That is, the preferred group receives an aid greater than the surpassed group.

3.1.6 – Favoritism Conditional on the Fulfillment of Social Targets (FC)

Let us now suppose that the main government does not have a preference for either types of poor in a determined municipality, and that it is willing to establish with the municipality a contract estimating a transfer of resources, T^{FC} , linked to the attainment of certain results in the social realm. In this case, the government's problem is:

⁴ Another explanation for the preference of some poor individuals is the matter of electoral region. Many politicians know they have a greater acceptance rate in a region rather than the rest, and thus they prefer to favor the place where it is easier to attain votes and support. The same occurs in relation to certain professional categories, which tend to be preferred by some politicians.

⁵ More generally, the sub-representation of the poor in electoral terms, would explain why fiscal spending frequently does not favor the poorest.

$$\text{Max}_{\{Y_{P1}, Y_{P2}\}} G_F + N_{P1} \cdot v(Y_{P1}) + N_{P2} \cdot v(Y_{P2})$$

$$\text{s.a : } G_F + T^{FC} \leq Y_F$$

$$G_M + T^{FC} + N_{P1} \cdot \theta_1 \cdot v(Y_{P1}) + N_{P2} \cdot \theta_2 \cdot v(Y_{P2}) \geq U_M^F \quad (\text{RP})$$

The first order conditions are:

$$v'(Y_{P1}^{FC}) = \frac{1}{1 + \theta_1}$$

$$v'(Y_{P2}^{FC}) = \frac{1}{1 + \theta_2}$$

Where we conclude that:

$$\begin{aligned} Y_{P1}^{FC} &> Y_{P1}^F \\ &e \\ Y_{P2}^{FC} &> Y_{P2}^F \end{aligned}$$

Again, the use of a contract between the government and municipality, linking the resource transfer to the accomplishment of social targets, causes a result better than that attained without the targets. This improvement in the poor's living conditions occurs for both types of poor.

However, when we compare the solution attained when we had favoritism without the existence of a contract with social targets to the situation in which there are targets, we can verify that if type θ_2 is favored for the local administration, we have that:

$$\frac{v'(Y_{P1}^F)}{v'(Y_{P2}^F)} = \frac{1/\theta_1}{1/\theta_2} = \frac{\theta_2}{\theta_1} > \frac{1 + \theta_2}{1 + \theta_1} = \frac{1/(1 + \theta_1)}{1/(1 + \theta_2)} = \frac{v'(Y_{P1}^{FC})}{v'(Y_{P2}^{FC})}$$

Proposition 4: a contract with social targets would reduce the social difference among the group less favored and the group more favored by the municipality's social policies.

Observe the simple establishment of a contact with social targets does not guarantee that the differences between the groups are eliminated, although they serve to soften the discrimination problem felt by a specific group of poor. Eventually, for the two groups to have the same results, it would be necessary for the government to consider in its utility function the groups of poor in differentiated manners, given priority to those left behind by the municipality.

5 – Conclusion

This paper discussed the economic rationality of a system of social targets based on international Millenium Development Goals (MDGs), as a way for the federal government to increase efficiency in the use of its social budget transferred to municipalities. The paper developed extensions of a standard principal-agent framework in various directions. The results of the static models show that the use of the focalization criteria where the poorest municipalities get more resources may lead to adverse incentives to poverty eradication. We also show that unconditional transfers from the federal government totally crowd-out local social expenditures. The paper argues in favor of the use of contracts where the greater the improvement in relevant social indicators, the more resources each municipality would receive. The introduction of imperfect information basically generates a penalty to the poor segments in areas where local governments are less averse to poverty.

An advantage of this type of contract is also to reduce the problem of political favoritism when certain social groups receive greater, or smaller, attention from specific governments. With the establishment of social targets it becomes possible to generate proper incentives so that social spending is distributed more equitably between groups.

6 –References

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