Social Goals *1

+ detailed reference: **2 text

https://www.cps.fgv.br/cps/bd/curso/metas_sociais/2BES6_MetasSociais_NeriXerez_Teoria_Curto.pdf

Marcelo Neri – FGV Social

1. Static Models
2. Model with Shocks

*1Social Goals Theory

- **Principal-Agent Model** (based on Neri and Xerez (2003, 2004))

Principal

Government Budget = Y_F

Federal Government

$U_F = G_F + N_{P.}\ v(Y_P)$

T = Government Transfer

Agent

Municipality Budget = Y_M

Municipality

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

Y_P = Poor´s Income Level

Poor

Federal government and municipalities have different degrees of concern about the living conditions of the poor: aversion to poverty

References: Besley (1997), Gelbach and Pritchett (1997), and Azam and Laffont (2001)

Autarchy (A)

$$\max_{Y_P} \; G_M + N_P.\theta \, . \, v(Y_P)$$
$$\text{s.a:} \quad G_M + N_P \, . \, Y_P \leq Y_M$$

FOC:

$$v'(Y_P^A) = \frac{1}{\theta} \longrightarrow \theta_1 > \theta_2 \Rightarrow Y_{P_1} > Y_{P_2}$$

The larger the coefficient of the local government´s aversion to poverty, the larger will be the poor´s income.

Unconditional Transfer (I)

The government does not establish any social target, it transfers unconditionally a fixed amount, T^I.

$$\max_{Y_P} \; G_M + N_P.\theta.v(Y_P)$$
$$\text{s.a:} \quad G_M + N_P.Y_P \leq Y_M + T^I$$

FOC:

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

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

Crowding-out Effect

Poverty Incentives (IP)

The government always helps more the municipalities where the poor are poorer.

Transfer: $T = (K - Y_P).N_P$

$$\begin{array}{l} \text{Max } G_M + N_P.\theta \,.\, v(Y_P) \\ Y_P \\ \text{s.a: } G_M + N_P \,.\, Y_P \le Y_M + (K - Y_P).N_P \end{array}$$

FOC:

$$v'(Y_P^{IP}) = \frac{2}{\theta} \longrightarrow Y_P^{IP} < Y_P^A$$

The smaller the poor´s income, the greater is the income per capita transfer carried out by the government to the municipality =>**poverty incentives**

Social Credit

Transfer Conditional on the Fulfillment of Social Targets (MS)

$$\begin{array}{ll} \text{Max} & Y_F - T^{MS}(Y_P) + N_P.v(Y_P) \\ \{Y_P, T^{MS}\} & \\ \text{s.a:} & (Y_M + T^{MS}(Y_P) - N_P.Y_P) + N_P.\theta.v(Y_P) \ge U(\theta) \quad \text{(RP)} \end{array}$$

FOC:

$$v'(Y_P^{MS}) = \frac{1}{1+\theta} \quad \Rightarrow \quad Y_P^{MS} > Y_P^A$$

Proposition 2: the establishment of a social credit mechanism increases poor´s income.

Furthermore, a social credit contract leverages locally funded social investments.

$$G_M^{MS} < G_M^{A}$$

Static Model

Transference with Social Targets (MS)

Linear Contract :

$$T(Y_P) = a + b.Y_P$$

Statement nº3: The coefficients of a linear contract with social goals are:

$$a = T(Y_P^{MS}) - b.Y_P^{MS} \qquad b = \frac{1}{1+\theta}$$

where

$$T(Y_P^{MS}) = N_P.[(Y_P^{MS} - Y_P^{A}) - \theta.(v(Y_P^{MS}) - v(Y_P^{A}))]$$

Static Model

Favoritism without Transfer (FA)

- **Electoral redout;**
- **The youngest people are not allowed to vote.**

$$\max_{\{Y_{P1}, Y_{P2}\}} \quad G_M + N_{P1} \cdot \theta_1 \cdot v(Y_{P1}) + N_{P2} \cdot \theta_2 \cdot v(Y_{P2})$$

$$\text{s.t:} \quad G_M + N_{P1} \cdot Y_{P1} + N_{P2} \cdot Y_{P2} \leq Y_M$$

FOC:

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

$$\theta_1 > \theta_2 \longrightarrow Y_{P1}^{FA} > Y_{P2}^{FA}$$

Static Model

Favoritism Conditional on the Fulfillment of Social Targets (FMS)

$$\max_{\{Y_{P1}, Y_{P2}\}} \quad G_F + N_{P1}.v(Y_{P1}) + N_{P2}.v(Y_{P2})$$

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

$$G_M + T^{FMS} + N_{P1}.\theta_1.v(Y_{P1}) + N_{P2}.\theta_2.v(Y_{P2}) \geq U_M^{FA} \qquad \text{(RP)}$$

FOC:

$$v'(Y_{P1}^{FMS}) = \frac{1}{1+\theta_1} \quad \text{e} \quad v'(Y_{P2}^{FMS}) = \frac{1}{1+\theta_2} \longrightarrow Y_{P1}^{FMS} > Y_{P1}^{FA} \quad \text{e} \quad Y_{P2}^{FMS} > Y_{P2}^{FA}$$

Static Model

Favoritism Conditional on the Fulfillment of Social Targets (FMS)

Proposition 4: A contract with social targets would reduce the social difference among the groups.

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

Non Deterministic Models (shocks)

1. Idiosyncratic Shocks → Insurance Provision.
2. Aggregate Shocks → Performance Comparison (ex: rankings).

Why use **SDGs** as numeraire in targets?

- **Exogenous for a Given Country (credibility)**
  - **Coordinate actions across different government levels from different political parties**
- **Long-Lasting**
  - **Smooth transitions between different political mandates.**

Other Pratical Issues:

- Not use the value of the indicator at a given date but its discounted present value along its path.
- 1st MDG should be based on P^2 (squared poverty gap) and not on the proportion of poor (P^0)).

Points

1. **Autarchy (A)**
2. **Unconditional Transfer (I)**
3. **Poverty Incentives (IP)**
4. **Social Targets (MS)**
5. **Political Favoritism without Transfer (FA)**
6. **Favoritism with Social Credit (FSC)**
7. **Non Deterministic Models (shocks)**
8. Opportunities opened by SDGs & Care with contracts

Conclusions

- Unconditional Transfer does not change poor´s situation;
- The smaller the poor´s income, the greater is the income per capita transfer carried out by the government to the municipality =>poverty incentives;
- Social Targets increase the efficiency in the use of public money and help to reduce the social difference among the different groups;
- Idiosyncratic Shocks lead to Insurance Provision & Systemic risk to Performance Comparison (rankings).
- Care with contracts and Opportunities opened by SDGs

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 trough 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**

Social Goals Problem Set: Answer Sheet

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Make a comment, totally agreeing, partially or not. If applicable, justify the following propositions in three or four lines: (if possible, present a formula, or chart in capsular form to illustrate your answer):

1) The consequence of establishing a system in which the greater the poverty, the greater the social investment of the federal government in a region, without any kind of counterpart in terms of results: the final local investment ends up being the same as the case of autarchy. **Answer: False.** The municipal government spends less in the social area than in non-social spending, it includes additional money in its non-social spending, but additionally reduces its social spending, leveraging the crowding-out effect.
2) The fact that young people are underrepresented in the electoral market makes social spending for this age group less attractive to politicians. **Answer: True**. Since young people do not vote, the budget of politicians assigned to them is smaller because the short-term return is low and does not generate votes.
3) After the introduction of incomplete information, the poor under the government of the type that is most averse to poverty are as well as they would be with complete information. However, the poor under the government less concerned with the social issue are worse off. **Answer: True**. Theorem proved in The Design of Social Goals.
4) If the federal government makes unconditional transfers to the municipal government, the situation of the poor does not change, regardless of the utility functions assumed for the federal government and the municipalities. **Answer: False**, this is true in the case of quasi-linear functions in the budget available and strictly concave in the income of the poor, but we cannot generalize to other cases. Suppose, for example, a case in which the utility function of the municipality is such that its level of utility corresponds to the minimum between the municipality's expenditure and the income of the poor. It is easy to see that, given an unconditional federal transfer, the municipality will allocate additional resources to both general expenses and the poor population.
5) Decentralization of social spending is essential to finance social actions where they are most needed and resources are scarce. **Answer: True**, The decentralization of federal social spending allows agents who are better informed about the characteristics and needs of the population to be responsible for managing the budget, enabling more effective investments. In the case of the relationship between federal and municipal governments, it is believed that there is asymmetric information, with the latter holding greater knowledge than the former.
6) Conditioning social budget to the assessment of social advances tends to be regressive due to the greater inefficiency of the poor. **Answer: False,** Progress assessment is one of the few instances where the potential outcomes of the poorest outweigh those of others.
7) A system of social goals *a posteriori* is indicated in the presence of aggregate shocks. **Answer: True**, the performance comparison allows accounting for pure aggregate shocks.
8) Even in a situation where the municipality does not have its own money to deal with its social problems, a system of Social Goals can be implemented. **Answer: True**, a system of Social Goals allows municipalities to allocate resources from other budgets (in this case, from the federal government), regardless of the existence of a sufficient budget for such actions.
9) The structure of incentives provided by social goals contracts is antagonistic with conditional cash transfer programs such as Bolsa-Escola. **Answer: False**, the structures are similar, since both condition payment to reaching pre-established goals. In the case of social goals, the goals are related to the average income of the poor, while Bolsa-Escola (or Bolsa-Familia) conditions variables such as school attendance and children's vaccination.
10) If we adopt the social goal based on the poverty indicator known as the Average Poverty Gap (P1), we have implicitly assumed that priority is given first to the poorest of the poor. **Answer: False,** The poverty indicator that prioritizes the poorest of the poor is $P^2 = \frac{1}{n}\sum_{i=1}^{q}\left(\frac{Z - y_i}{Z}\right)^2$. **While** $P^1 = \frac{q}{n}\frac{\left(Z - \bar{Y}_p\right)}{Z}$ takes into account the verage income of the poor, or rather, the deviation of that income in relation to the poverty line, it does not capture the distributive effects of income among the poor. On the other hand, P2 differentiates the very poor from the little poor.