Ideb (Index of Basic Education Development)

• The center of a educational target-based system (just as a mobilization tool).

The federal government determines targets for the evolution of the Ideb and then condition part of its education-related transfers to the local governments to the accomplishment of these targets

• Ideb’s form: \[ Ideb = Q \cdot F \]

Q: Students’ average Proficiency
F: Average Passing Rate

EDUCATION QUALITY TARGETS
IDEB 2005 & 2021

<table>
<thead>
<tr>
<th>First Years of Primary Schools</th>
<th>2005</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>3,8</td>
<td>6,0</td>
</tr>
<tr>
<td>Public</td>
<td>3,6</td>
<td>5,8</td>
</tr>
<tr>
<td>Private</td>
<td>5,9</td>
<td>7,5</td>
</tr>
</tbody>
</table>

Source: Saeb 2005 and School Census 2005 - INEP/MEC
Pursuing an ideal educational index

Index’s Weighting

• The equal weight of its two components is an arbitrary choice
• May incentive unbalanced behaviors: local government may choose corner solutions when trying to increase the index, such as (i) to accelerate artificially the promotion of the students or (ii) to increase retention or to motivate the worst students to evade
• We propose an index in the form \( I_{deb} = Q^a F^p \) and suggest that it is important to estimate which would be the optimal weighting

Incorporating out-of-school children

• The low enrollment rate (M) in some age ranges is a problem that has also to be addressed
• The present incentive is for preventing children from failing and evading school, but giving up on them as soon as they abandon school
• Double aim: (a) to make the local managers responsible for non-enrolled school age children, (b) to take into account the process of enrollment expansion in the evolution of the Ideb
• Alternative ways of incorporating this dimension

(1) \( I_{deb} = \hat{Q} F \) (ii) \( I_{deb} = Q^a F^p M^r \)
Utilizing the indicator in a target-based system

Value-Added

- Evaluation should be based on the value-added by the schools to the students rather than on level
- Benefits students from disadvantaged backgrounds
- Incentive for schools to mix students - Increasing diversity in admission choices

Relative Performance Comparison

- The difference in the value-added to the students by each municipality
- In a context of uncertainty: large probability that the municipality fails to reach the target due to aggregate exogenous shocks out of their control
- In the Social Goals part- Mechanisms based on performance comparison => local government investing an optimal amount in education and doing it in a efficient way will receive an optimal transfer: robustness to aggregated shocks
- Contracts based only on the variation, or value-added, are usually pro-cyclical (2 types of poor model)
Integrated Evaluation System

Learning Evaluation System
Added Value Between Exams (D in D)

One possibility is just mobilize the population (weak responsibility). Other is to reward progress (strong responsibility). Examples:

- Família Carioca rewards students with higher or steeper learning curves
- Ceará State distribute its ICMS to municipalities revenues according to performance
- Various States rewards professors according to student grades

How About Equality? (sort of externality)
Alternative to Concentration ratio **What is a pro-poor policy?**

- A pro-poor government policy benefits the poor more than the non-poor.
- This means that, at a fixed cost to the government, pro-poor policy should achieve greater poverty reduction compared to a situation in which everyone also benefits from.
- Policy A will be more pro-poor than policy B if, for a given cost, policy A leads to further poverty reduction than policy B.

**Pro-Poor Policy Index:**

\[
\lambda = \frac{1}{b \eta \theta} \int \frac{\partial P}{\partial x} b(x) f(x) dx
\]

**Example:**

(i) \( \lambda = 1.20 \): a certain program reduces poverty by 20% more compared to a universal targeting policy

(ii) \( \lambda = 0.70 \): a certain program increases poverty by 30% more compared to a universal targeting policy
### Pro Poor Policy Index – Different Education Levels

<table>
<thead>
<tr>
<th>Education PPP Index</th>
<th>Same Weight to Each Poor – $P^1$</th>
<th>+ Pro-Poor – $P^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Childcare</strong></td>
<td>1.08</td>
<td>1.14</td>
</tr>
<tr>
<td><strong>Pre-School</strong></td>
<td>1.46</td>
<td>1.56</td>
</tr>
<tr>
<td><strong>Alphabetization – adults</strong></td>
<td>1.73</td>
<td>1.90</td>
</tr>
<tr>
<td><strong>Elementary Education – regular</strong></td>
<td>1.53</td>
<td>1.57</td>
</tr>
<tr>
<td><strong>Elementary Education – regular public</strong></td>
<td>1.68</td>
<td>1.73</td>
</tr>
<tr>
<td><strong>Elementary Education – regular private</strong></td>
<td>0.27</td>
<td>0.23</td>
</tr>
<tr>
<td><strong>Adult Education – elementary education</strong></td>
<td>1.09</td>
<td>1.04</td>
</tr>
<tr>
<td><strong>Secondary Education – regular</strong></td>
<td>0.73</td>
<td>0.63</td>
</tr>
<tr>
<td><strong>Secondary Education – regular public</strong></td>
<td>0.83</td>
<td>0.72</td>
</tr>
<tr>
<td><strong>Secondary Education – regular private</strong></td>
<td>0.10</td>
<td>0.09</td>
</tr>
<tr>
<td><strong>Adult Education – secondary education</strong></td>
<td>0.52</td>
<td>0.44</td>
</tr>
<tr>
<td><strong>College Entrance Exam (Pré-Vestibular)</strong></td>
<td>0.19</td>
<td>0.15</td>
</tr>
<tr>
<td><strong>Tertiary Education</strong></td>
<td>0.07</td>
<td>0.07</td>
</tr>
<tr>
<td><strong>Tertiary Education – public</strong></td>
<td>0.12</td>
<td>0.10</td>
</tr>
<tr>
<td><strong>Tertiary Education – private</strong></td>
<td>0.05</td>
<td>0.06</td>
</tr>
<tr>
<td><strong>Graduate</strong></td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Source: PNAD / IBGE Microdata

**Brazilian Federal CCT program PPP = 2.5 (good delivery platform)**

Besides Returns other key Characteristic of Education is Targeting. It may be used to construct targets (weights internalize incentives)

---

**Education Goals and Other Policies:**

**Targets** for Improvement Diff in Diff, PPP Weights Include Out of School Children & **Shock protection Bolsa Familia 2.0 platform to reach the poor**

Longer School Hours with Freedom of Choice Talent Attraction, Higher & Professional Education Public-Private Interaction and Productivity Focus

Inform students about **Private Returns** & Proficiency also Listen to the Stakeholders Alignment of Incentives (students, parents, teachers, policy makers)

**Early Childhood Education**