Opportunities for Evidence Based Policy in Education

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Introduction

- 1. Education and skills are very important
- 2. How to produce skills is not obvious
- 3. Main problem in research on effectiveness of education policy: unobserved selection
- 4. Main solution: design based research
- 5. Opportunities for designing policies that yield knowledge about effectiveness
1. The importance of education and skills

- High returns to education and skills
- Evidence on private returns
  - Financial
  - Non-financial: for instance, health, crime.
- Evidence on social returns
- Skills versus years of education
2. Learning about the production of skills


<table>
<thead>
<tr>
<th>resources</th>
<th>number of estimates</th>
<th>statistically significant (%)</th>
<th>statistically insignificant (%)</th>
<th>unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>positive</td>
<td>negative</td>
<td>positive</td>
</tr>
<tr>
<td>teachers-pupil ratio</td>
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<td>15</td>
<td>13</td>
<td>27</td>
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<tr>
<td>teacher education</td>
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<td>9</td>
<td>5</td>
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<tr>
<td>teacher experience</td>
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<td>29</td>
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<td>teacher salary</td>
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<td>25</td>
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<td>expenditure per pupil</td>
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<td>34</td>
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<td>administrative inputs</td>
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<td>facilities</td>
<td>91</td>
<td>9</td>
<td>5</td>
<td>23</td>
</tr>
</tbody>
</table>
3. Main problem in education research

- Students, parents and schools make decisions
- Researcher cannot observe all factors
- Unobserved selection will bias estimates of effects of policies (endogeneity)
- All estimates can be wrong
- Naïve models often produces estimates with wrong sign
- This explains Hanusheks table
4. Main solution

- Design based research
- Key element: understanding why some individuals are treated with the policy and others not (no unobserved selection)
- Examples
  - Randomized experiments
  - Quasi-experimental designs, for instance based on entry rules or financing rules
    - Some students or schools receive the treatment because of the rules and others do not.

- 1. Introduction of new policies can be exploited for creating evaluation designs!
- 2. Nation wide introduction only yield before and after groups
5. Policy opportunities

- Example 1. Neighborhood schools in Rotterdam
  - Introduced in 2009; target group: multi problem school dropouts aged 16-23
  - Selection based on set of criteria
    - School dropout
    - Multiple problems (financial, health, housing, police, social)
  - Capacity restriction of 200 pupils
  - First 200 pupils assigned to treatment;
  - Next 200 pupils that full filled criteria assigned to control group
5. Policy opportunities

- Example 2. Introduction of grants for training of teachers
5. Policy opportunities

- 1. If you start with pilot schools add control schools
- 2. Timing: start with specific areas or schools and use other areas or schools as control
- 3. Exploit oversubscription of subsidies for creating treated and control group
6. Conclusions

- Introduction of new policies provides opportunities for credible evaluation;
- Finding control groups is often not difficult;
- No high costs
- No high administrative efforts needed.