Opportunities for Evidence Based Policy in Education

Dinand Webbink (Erasmus University Rotterdam)

May 9 2012, The Hague

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

ECSP
Erasmus Centre for Strategic Philanthropy

ERASMUS UNIVERSITEIT ROTTERDAM
ERASMUS SCHOOL OF ECONOMICS

2. Learning about the production of skills

- A famous table: Hanushek (1986, 1997, 2006), 377 estimates from 90 studies

resources	number of estimates	statistically significant (%)		statistically insignificant (%)		
		positive	negative	positive	negative	unknown
teachers-pupil ratio	277	15	13	27	25	20
teacher education	171	9	5	33	27	26
teacher experience	207	29	5	30	24	12
teacher salary	119	20	7	25	20	28
expenditure per pupil	163	27	7	34	19	13
administrative inputs	75	12	5	23	28	32
facilities	91	9	5	23	19	44

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 Hansheks 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
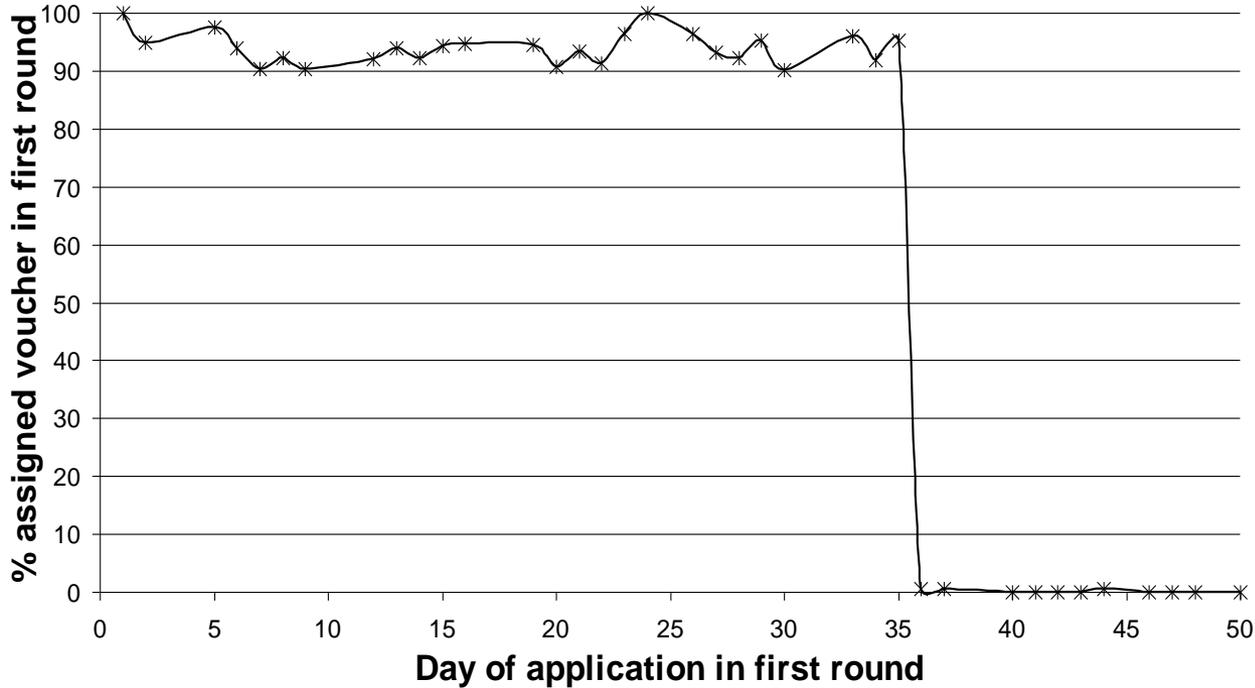
5. Policy opportunities

- 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.