Fiscal Equalization and Capitalization: Evidence from a Policy Reform

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Grants and place based policy

1. Grants from central to local governments are place based

2. (Spatial) equity considerations play an important role in the distribution of grants and in regional policy
   - **fiscal equalization**: grants take account of differences in spending needs and fiscal capacity
   - **NL**: each municipality should be able to provide the same service level at the same ‘tax effort’
   - *who are the beneficiaries of additional grants to places with high spending needs and small tax base?*
Capitalization

• Capitalization means that house prices rise with the present value of the net benefit to residents
  ➢ of local public goods, services, tax rates, ....
  ➢ support in vast empirical literature

• The underlying mechanism is mobility
  ➢ improved services attract homebuyers who bid up prices until the benefit is exactly offset by higher housing costs
  ➢ in spatial equilibrium they are as well off as elsewhere
Capitalization of central government grants

• Extra freely disposable money allows municipalities to improve service levels or cut tax rates
  ➢ this should make the municipality more attractive
  ➢ the benefit should be offset by a rise in house prices in a spatial equilibrium

• But extra money from the central government usually comes with extra tasks
  ➢ this would not make a municipality more attractive
  ➢ how to disentangle these effects?
The 1997 reform of the grant system

• Driven by a perceived need to better account for differences in socioeconomic composition

• Large change in amounts per capita (sometimes > 100€)

• Gradually implemented and split into 2 stages
  ➢ 2\textsuperscript{nd} stage in 2001 focussed on cost differentials in physical domain (infrastructure etc.)

• This change in grants did not come with additional tasks
Reform for 4 municipalities

Grant per capita in 2010 Euros (1000)

Year
Zoeterwoude
Appingedam
Reusel-De Mierden
Zeevang
The reform benefited low-income municipalities.
Empirical approach

• Construct a (hedonic) municipal house price index 1995 - 2010 on the basis of observed housing transactions

• Regress (log) price index on grants, municipality and year fixed effects and linear time trends

• Use reform-induced change in grants as instrument

• Several robustness checks:
  ➢ placebo: reform of financing school buildings
  ➢ identify on separate stages (1997 and 2001)
## Baseline results

Dependent = $\log($real house price index$)$

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<th>OLS</th>
<th>IV</th>
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<tbody>
<tr>
<td>General grant per capita, 2 years lagged</td>
<td>0.0639* (0.0335)</td>
<td>0.106*** (0.0281)</td>
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<tr>
<td>Municipality-specific trends</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.388</td>
<td>0.357</td>
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<tr>
<td>Kleibergen-Paap F</td>
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<td>698.0</td>
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### First stage

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<tr>
<td>Reforms of 1997 and 2001 jointly, 2 years lagged</td>
<td></td>
<td>0.959*** (0.0363)</td>
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<tr>
<td>R-squared</td>
<td></td>
<td>0.591</td>
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Notes: All specifications include year and municipality fixed effects.
N = 6704, number of municipalities = 419. Statistics are robust to heteroskedasticity and within-municipality correlation. Significance levels: *** p<0.01, ** p<0.05, * p<0.1.
Quantitative interpretation

- A 1€ increase in grants raises house prices by 78€

- An average household of 2.3 persons receives 2.3€ per year

- At a real discount rate of 3%, the present value is 77€

- The results thus point to full capitalization
  - this is consistent with earlier findings in the literature: capitalization of grants in the UK (Hilber et al., 2011) and capitalization of school finance equalization in the US (Barrow and Rouse, 2004)
Implications (1)

• Main beneficiaries were homeowners at the time of reform
  ➢ benefit was priced in for subsequent buyers
  ➢ benefit is likely also priced in for renters in private sector
  ➢ renters in public sector may also have benefited

• This challenges equity as a motivation for fiscal equalization
  ➢ in municipalities with disadvantageous socioeconomic composition service levels may have increased, but residents paid a price in terms of higher housing costs
  ➢ except those who were lucky enough to own a house at the period of reform (and some social renters)
Implications (2)

• Municipalities appear to spend freely disposable money well, at least from the perspective of the marginal homebuyer
  ➢ under (strong) additional assumptions, the result suggests local public spending satisfies the Samuelson condition

• Why limit local tax autonomy if municipalities spend their money so well?