Estimating taxpayer responses to top tax reforms

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Summary

• New top brackets introduced in Canada, 2013-16
• Administrative tax return data, 2008-16
  • about 400,000 high-income taxpayers per year
• New instrument to deal with endogeneity
  • average of Gruber-Saez simulated tax change in taxpayer’s census tract
• IV regression using grouped-data at tract level
• A new DD estimator of elasticity of taxable income, based on census tract–year grouped panel data
• Identifies a policy-relevant local average ETI
• Large responses (EBI = 0.8; ETI = 1.0) to 2016 reforms
Intention-to-treat effect of the 2016 reform

Figure: Tract-level mean log income and take-home rate changes, 2013-16
Comments

• Switch age axes on intent-to-treat graph
• Use multiple instruments and test for overidentification
• Standard errors
• Show whether IV correlated with other covariates
• Weighting
Annual estimates for the tract instrument match pattern of actual reforms

Table: Tract-level estimates of elasticity of taxable income, by year

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<tbody>
<tr>
<td>ETI</td>
<td>-0.08</td>
<td>-0.50</td>
<td>0.62</td>
<td>2.33</td>
<td>0.96</td>
<td>0.95</td>
<td>0.79</td>
<td>-0.15</td>
<td>0.79 ***</td>
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<td></td>
<td>(0.41)</td>
<td>(0.34)</td>
<td>(0.88)</td>
<td>(1.27)</td>
<td>(0.87)</td>
<td>(0.43)</td>
<td>(0.28)</td>
<td>(0.37)</td>
<td>(0.24)</td>
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<td>First stage:</td>
<td></td>
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<td>F statistic</td>
<td>186.8</td>
<td>275.4</td>
<td>291.2</td>
<td>159.2</td>
<td>274.8</td>
<td>325.6</td>
<td>704.2</td>
<td>367.3</td>
<td>1342.1</td>
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<td>partial R2</td>
<td>0.14</td>
<td>0.18</td>
<td>0.17</td>
<td>0.13</td>
<td>0.16</td>
<td>0.21</td>
<td>0.40</td>
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<td>Observations</td>
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<td>2,200</td>
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<td>2,300</td>
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Robust standard errors in parentheses. All specifications include fixed effects in gender, language, family status, and
* p<0.05, ** p<0.01, *** p<0.001