Inequality shapes the propagation of unethical behaviours:
Cheating responses to tax evasion along the income distribution

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This project:

- Analyze whether people behave conditionally towards others’ tax compliance
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Why:

- Increased salience of tax malpractice calls for uncovering the consequences in terms of propagation of (un)ethical behaviours

- Cooperation
  - Fischbacher et al., 2001; Chaudhuri et al., 2017; Martinangeli, 2021

- Dishonesty
  - Gino et al., 2009; Rauhut, 2013

- Tax evasion
  - Frey and Torgler, 2007
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▶ Analyze whether people behave conditionally towards others’ tax compliance

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Conditional behaviours:
- Cooperation
  Fischbacher et al., 2001; Chaudhuri et al., 2017; Martinangeli, 2021
- Dishonesty
  Gino et al., 2009; Rauhut, 2013;
- Tax evasion
  Frey and Torgler, 2007
Research questions

▶ How do people respond to (information about) different tax evasion rates (low/high)?

- “unethical” behaviour (cheating, dishonesty)
- (norms about) tax evasion

▶ Are there differences according to whether the rich or the poor evade (more) taxes (in % of their incomes)?
- People are more conditionally cooperative towards the “rich”: Martinangeli, 2021; Rockenbach et al., 2021; Martinangeli and Meiske, 2021
- Potential reasons: rich have more financial ability to contribute (to public goods), are less vulnerable to non-cooperation etc.

▶ Do people react differently according to their own income?
- reaction might depend on who they identify with, i.e. “their group” (rich with rich, poor with poor)
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Method

- Survey experiment (Italy)

- $N = 4000$

- Experimental conditions: estimated tax evasion rates at the bottom and top of the income distribution (ad hoc expert survey)

- Behavioural outcome measure: cheating after die roll *Kocher et al.*, 2018;

- Norm elicitation *Krupka and Weber*, 2013
## Experimental conditions

**2x2 information design:**

<table>
<thead>
<tr>
<th>High ev at high incomes</th>
<th>Low ev at high incomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>High ev at low incomes</td>
<td>High ev at low incomes</td>
</tr>
<tr>
<td>Low ev at low incomes</td>
<td>Low ev at low incomes</td>
</tr>
</tbody>
</table>
Estimated tax malpractice rates

- How to get 4 different estimates for tax evasion at the bottom at the top (without deception)?
Estimated tax malpractice rates

- How to get 4 different estimates for tax evasion at the bottom at the top (without deception)?

- “Expert survey” among 500 top economists in Italian institutions according to RePEc (2019)
  - Please provide your best estimate of the share of total/capital/labour income that remains undeclared by the following income categories: (list of all quintiles + top decile + top percentile)
  - Construct 4 groups of “experts” according to their estimates: HH, HL, LH, LL
The estimates

Above/below 50% undeclared income for bottom quintile and top decile:
The estimates

**Above/below 50% undeclared income for bottom quintile and top decile:**

<table>
<thead>
<tr>
<th>Above 50% at high incomes</th>
<th>Below 50% at high incomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above 50% at low incomes</td>
<td>Above 50% at low incomes</td>
</tr>
<tr>
<td>Below 50% at high incomes</td>
<td>Below 50% at high incomes</td>
</tr>
<tr>
<td>Below 50% at low incomes</td>
<td>Below 50% at low incomes</td>
</tr>
</tbody>
</table>
Outcome measures

How to measure conditional behaviours in the tax evasion context?

- Cheating
- Norm elicitation
Cheating

Die rolling video: https://youtu.be/YR_kL2_Nnf4
Cheating

Die rolling video: https://youtu.be/YR_kL2_Nnf4

- 6 videos, 6 outcomes, randomly selected: like an actual die!

- Respondent earns 1/3 of baseline payment if the reported outcome is 6
Cheating

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- 6 videos, 6 outcomes, randomly selected: like an actual die!

- Respondent earns 1/3 of baseline payment if the reported outcome is 6

- Notice: The reports are verifiable!
Norm elicitation

- Elicit perceived social norms: Modified Krupka-Weber method on WVS responses in Italy (incentivized)

In a previous survey study conducted in Italy, a representative sample of the resident population was asked for their opinion about a number of actions. In particular, for each of the following actions they were asked on a scale from 1 to 10 whether they thought it can always be justified (10), never be justified (1), or something in between.

Your task is to guess which answer was provided most frequently in that survey.

Claiming undeserved gov.t benefits
Avoiding a fare on public transport
Cheating on taxes if given a chance
Taking a bribe in course of duty
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Claiming undeserved gov.t benefits  
Avoiding a fare on public transport  
→ Cheating on taxes if given a chance  
Taking a bribe in course of duty
Hypothesis 1 (Conditional behaviour):

*Higher estimated tax evasion induces greater incidence of unethical behaviour.*
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*Higher estimated tax evasion induces greater incidence of unethical behaviour.*

- Cheating will increase when we inform people about greater levels of estimated tax malpractice.
Hypothesis 2 (Asymmetric conditional behaviour):

*High tax evasion by the rich induces stronger conditional responses than by the poor.*
Hypothesis 2 (Asymmetric conditional behaviour):

*High tax evasion by the rich induces stronger conditional responses than by the poor.*

- Cheating will be higher when estimated tax evasion rates are higher at the top of the income distribution compared to the bottom.
Results
<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Probability of misreporting given roll $\neq 6$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline: HL</td>
<td></td>
</tr>
<tr>
<td>HH</td>
<td>-0.103**</td>
</tr>
<tr>
<td></td>
<td>(0.052)</td>
</tr>
<tr>
<td>LH</td>
<td>-0.082</td>
</tr>
<tr>
<td></td>
<td>(0.057)</td>
</tr>
<tr>
<td>LL</td>
<td>-0.068</td>
</tr>
<tr>
<td></td>
<td>(0.087)</td>
</tr>
<tr>
<td>Constant</td>
<td>-0.320***</td>
</tr>
<tr>
<td></td>
<td>(0.121)</td>
</tr>
<tr>
<td>Controls</td>
<td>✓</td>
</tr>
<tr>
<td>Observations</td>
<td>2,843</td>
</tr>
</tbody>
</table>

Robust standard errors, clustered at region level, in parentheses:

*** $p<0.01$, ** $p<0.05$, * $p<0.1$
## Cheating

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Low income</th>
<th>High income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline: HL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HH</td>
<td>0.043</td>
<td>-0.264***</td>
</tr>
<tr>
<td></td>
<td>(0.106)</td>
<td>(0.078)</td>
</tr>
<tr>
<td>LH</td>
<td>0.076</td>
<td>-0.250***</td>
</tr>
<tr>
<td></td>
<td>(0.106)</td>
<td>(0.083)</td>
</tr>
<tr>
<td>LL</td>
<td>0.064</td>
<td>-0.192**</td>
</tr>
<tr>
<td></td>
<td>(0.135)</td>
<td>(0.077)</td>
</tr>
<tr>
<td>Constant</td>
<td>-0.379***</td>
<td>-0.726***</td>
</tr>
<tr>
<td></td>
<td>(0.138)</td>
<td>(0.148)</td>
</tr>
</tbody>
</table>

Controls ✓ ✓
Observations 1,501 1,339

Robust standard errors, clustered at region level, in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Cheating

- Hypotheses 1 and 2 not confirmed over the full sample
Cheating

- Hypotheses 1 and 2 not confirmed over the full sample

- But Hypothesis 2 is confirmed for high income respondents.
Cheating

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- **High income respondents cheat more in condition HL compared to any other condition.**
Cheating

- Hypotheses 1 and 2 not confirmed over the full sample

- But Hypothesis 2 is confirmed for high income respondents.

- High income respondents cheat more in condition HL compared to any other condition.

- IV estimation: \( pr(Cheating) = f(\hat{post}_r, \hat{post}_p) \)
  Only belief updates about tax evasion by high income individuals drive cheating probability among high income respondents
## Tax compliance norm

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Perceived norm of tax compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline: HL</td>
<td></td>
</tr>
<tr>
<td>HH</td>
<td>0.071 (0.155)</td>
</tr>
<tr>
<td>LH</td>
<td>0.369*** (0.093)</td>
</tr>
<tr>
<td>LL</td>
<td>-0.004 (0.125)</td>
</tr>
<tr>
<td>Constant</td>
<td>3.756*** (0.231)</td>
</tr>
</tbody>
</table>

Controls ✓

Observations: 3,421
R-squared: 0.020

Robust standard errors, clustered at region level, in parentheses

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<tr>
<td>HH</td>
<td>0.473**</td>
<td>-0.346</td>
</tr>
<tr>
<td></td>
<td>(0.207)</td>
<td>(0.215)</td>
</tr>
<tr>
<td>LH</td>
<td>0.510***</td>
<td>0.249</td>
</tr>
<tr>
<td></td>
<td>(0.152)</td>
<td>(0.147)</td>
</tr>
<tr>
<td>LL</td>
<td>0.396*</td>
<td>-0.430**</td>
</tr>
<tr>
<td></td>
<td>(0.192)</td>
<td>(0.195)</td>
</tr>
<tr>
<td>Constant</td>
<td>3.622***</td>
<td>3.650***</td>
</tr>
<tr>
<td></td>
<td>(0.178)</td>
<td>(0.490)</td>
</tr>
</tbody>
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Controls: ✓ ✓

Observations: 1,787 1,634

R-squared: 0.038 0.026

Robust standard errors, clustered at region level, in parentheses

*** p<0.01, ** p<0.05, * p<0.1
Tax compliance norm

- Over the full sample, the perceived norm of tax compliance is stronger in condition HL compared to LH
Tax compliance norm

- Over the full sample, the perceived norm of tax compliance is stronger in condition HL compared to LH
- For low income respondents, the perceived norm of tax compliance is stronger in condition HL compared to any other condition

- Low income respondents think that tax evasion is less socially accepted when informed that poor people evade less taxes than rich.
- The tax compliance norm seems to be determined by how much (little) the poor evade compared to the rich.
- IV estimation: Only belief updates about tax evasion by low income individuals drive norm perception among low income respondents.
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- Propensity to cheat increases when tax evasion is presented as more severe among high income than low income individuals
  - Driven by high income respondents
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  - Driven by high income respondents

- Norm about tax compliance is stronger when tax evasion is presented as less severe among low income than high income individuals
  - Driven by low income respondents

- Income segments seem to matter:
  - High income more sensitive in a behavioural way
  - Low income more sensitive in their perception of the norm
- Conditional behaviours matter: news focus on tax malpractice of high income respondents (Pandora papers, Paradise papers, Panama papers,...)
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  - “Small scale tax evasion” → 4 articles