Costs & benefits of formalization for firms

A mixed-methods study on Mozambique

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Problem statement

• GoM’s goal: formalization of informal sector
  • Backed by ILO, World Bank etc.

• Formalization beneficial for governments

• But: outcomes for firms?
  • Research comes to mixed results
  • Few studies on the topic for Mozambican firms
Research Questions

• What are the costs and benefits of formalization for firms?

  • What are actual outcomes of formalization for firms? (Quant)

  • What effects of formalization do firm owners perceive? (Qual)

  • How do firms experience bureaucratic procedures? (Qual)
Literature

• Definition of (in)formality

• Panel datasets, matched DD approach (e.g. Rand&Torm, 2012)
  • Benefits outweigh costs

• Formalization experiments (Mc Kenzie et al, several years)
  • Firms benefit, but costs often outweigh benefits

• Qual: formalization outcomes heterogeneous
  • Local authorities beneficial, national authorities less relevant
  • Informal practices of formal firms
Conceptual framework

(1) Full Informality: Firm does not comply with regulatory requirements

(2) License (In)formality: Firm holds license from local authority (e.g. municipality, district administration)

(3) Tax (In)formality: Firm holds license & tax code (NUII) & registered with INSS

(4) Full Formality: Firm holds license, (tax code) & registered with INSS
## Methodology

<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>DATA COLLECTION</strong></td>
<td><strong>ANALYSIS &amp; INTEGRATION OF PHASES</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>Quantitative data collection &amp; Observations</strong></td>
<td><strong>Qualitative interviews with government officials &amp; experts</strong></td>
<td><strong>Drafting of study: Costs &amp; benefits of firm formalization in Mozambique</strong></td>
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<tr>
<td></td>
<td><strong>Qualitative interviews with firm owners &amp; Participant observation during formalization procedure</strong></td>
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**LITERATURE REVIEW**
*(primary and secondary sources)*
Quant dataset and analysis

- 516 firms for both years
- First two (in)formality degrees are analysed as one
  - Due to missing questions on local licenses in survey
- Mixed DD approach compared with FE estimates
  - Impact of formalization on intermediate outcomes
# Transition of (in)formality degrees

<table>
<thead>
<tr>
<th>2012</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1&amp;2</td>
</tr>
<tr>
<td>1&amp;2</td>
<td>Fully informal or license (in)formal</td>
</tr>
<tr>
<td>1&amp;2</td>
<td>Fully informal or license (in)formal</td>
</tr>
<tr>
<td>3</td>
<td>NUI (in)formal</td>
</tr>
<tr>
<td>4</td>
<td>INSS (in)formal</td>
</tr>
<tr>
<td>Observations</td>
<td>165 (31.97)</td>
</tr>
</tbody>
</table>

- 83 firms **formalized** to (3) or (4) from (1&2) or (3)
- 104 firms **informalized** to (1&2) from (3) or (4)
Qual dataset and analysis

- 16 experts and government officials
  - legal situation of firms
  - costs and benefits of formalization that may exist in Mozambique
- 16 firms from four different (in)formality degrees (strata)
  - Firms that were enquired during quantitative data collection
  - Semi-structured interviews with firm owners
  - Participant observation
- Qual distinguishes between four (in)formality degrees
Quant results (i)

- Formalization to (4) leads to:
  - Significantly higher likelihood to do business with formal companies
    => benefit
  - Significantly higher likelihood to provide formal work contracts
    => cost or benefit?
  - No statistical significance for other intermediate outcomes

Table 1: Intermediate outcomes and full formality (4), matched DD estimates

<table>
<thead>
<tr>
<th></th>
<th>Investments</th>
<th>Formal accounts</th>
<th>Credit</th>
<th>Inspections</th>
<th>Sales to state enterprises</th>
<th>Casual labor</th>
<th>Formal contracts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A: Levels specification – firm-specific controls only</strong></td>
<td>0.104 (1.15)</td>
<td>0.133 (1.60)</td>
<td>0.143* (1.86)</td>
<td>0.210** (2.05)</td>
<td>0.343*** (4.65)</td>
<td>-0.54 (-1.61)</td>
<td>0.369*** (3.47)</td>
</tr>
<tr>
<td><strong>B: Levels specification – full set</strong></td>
<td>0.047 (0.50)</td>
<td>0.149* (1.82)</td>
<td>0.096 (1.41)</td>
<td>0.163 (1.53)</td>
<td>0.341*** (4.61)</td>
<td>-0.232** (-2.19)</td>
<td>0.314*** (3.01)</td>
</tr>
<tr>
<td><strong>C: Difference and levels specification</strong></td>
<td>-0.0899 (-0.95)</td>
<td>0.093 (1.14)</td>
<td>0.098 (1.52)</td>
<td>0.168 (1.63)</td>
<td>0.298*** (4.40)</td>
<td>-0.124 (-1.44)</td>
<td>0.397*** (3.54)</td>
</tr>
<tr>
<td>Total observations</td>
<td>308</td>
<td>308</td>
<td>308</td>
<td>308</td>
<td>308</td>
<td>308</td>
<td>299</td>
</tr>
<tr>
<td>Treated observations</td>
<td>54</td>
<td>54</td>
<td>54</td>
<td>54</td>
<td>54</td>
<td>54</td>
<td>45</td>
</tr>
</tbody>
</table>
Quant results (ii)

- Informalization to (1&2) leads to:
  - Significantly lower likelihood to do business with formal companies
    => losing benefit of formality
  - Significantly lower likelihood to be inspected
    => saving cost of formality
  - No statistical significance for other intermediate outcomes

Table 2: Intermediate outcomes and informalization to (1&2), matched DD estimates

<table>
<thead>
<tr>
<th></th>
<th>Investments</th>
<th>Formal accounts</th>
<th>Credit</th>
<th>Inspections</th>
<th>Sales to state enterprises</th>
<th>Casual labor</th>
<th>Formal contracts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A: Levels specification – firm-specific controls only</strong></td>
<td>-0.085 (-0.91)</td>
<td>0.018 (0.30)</td>
<td>-0.053 (-0.89)</td>
<td>-0.223** (-2.27)</td>
<td>-0.263*** (-4.65)</td>
<td>0.152 (0.97)</td>
<td>-0.241** (-2.88)</td>
</tr>
<tr>
<td><strong>B: Levels specification – full set</strong></td>
<td>-0.034 (-0.39)</td>
<td>-0.001 (-0.02)</td>
<td>-0.134** (-2.28)</td>
<td>-0.182** (-2.02)</td>
<td>-0.337*** (-6.33)</td>
<td>0.170 (1.13)</td>
<td>-0.289*** (-3.88)</td>
</tr>
<tr>
<td><strong>C: Difference and levels specification</strong></td>
<td>0.057 (0.62)</td>
<td>0.010 (0.18)</td>
<td>-0.114** (-2.12)</td>
<td>-0.116 (-1.20)</td>
<td>-0.252*** (-4.44)</td>
<td>0.066 (0.47)</td>
<td>-0.247*** (-2.99)</td>
</tr>
<tr>
<td>Total observations</td>
<td>402</td>
<td>402</td>
<td>402</td>
<td>402</td>
<td>402</td>
<td>402</td>
<td>389</td>
</tr>
<tr>
<td>Treated observations</td>
<td>87</td>
<td>87</td>
<td>87</td>
<td>87</td>
<td>87</td>
<td>87</td>
<td>74</td>
</tr>
</tbody>
</table>
Qual results (i)

- Costs and benefits of formalization depend on (in)formality degree

- Valid for all degrees:
  - Benefit: legal recognition
  - High costs: time and money
  - Non-existent benefit: Access to credit

- Costs and time of initial registration impossible to assess previously
  - *De facto* practices differ from *de jure* regulations
  - More informal firms do not have necessary financial reserves/connections to register
Qual results (ii)

• Fully informal firms (1)
  • Lack of information
  • Lack of regular cash inflows
  • Few perceived benefits, many perceived costs
  • Won’t benefit from formalization

• License (in)formal firms (2)
  • Heterogeneous group; some similar to (1)
  • Lack of information on how to implement perceived benefits
  • Lack of information about potential costs of formalization (inspections)
  • Some have potential to benefit by selling to state enterprises
  • Generally, too few benefits
Qual results (iii)

- Tax (in)formal firms (3)
  - Save costs of full formalization by employing casual labour => reason for survival (?)
  - Benefit from doing business with formal firms
  - Rational trade off benefits against costs

- Fully formal firms (4)
  - Impossible to avoid full formality due to high public visibility
  - High inspection and labor costs
  - Informal practices: hiring of casual labor
  - Few benefits, high (but bearable) costs
Conclusion

• Only few benefits of formalization existing in Mozambique
  • Some have necessary conditions to benefit
  • Lack of information impedes firms to benefit

• High costs of formalization
  • Difficult for survivalist entrepreneurs to bear these costs
  • High inspection costs for bigger firms

• Different policies necessary
  • Increasing of benefits not enough => dissemination of information/education important
  • Fight against corruption
Thank you!