Introduction
This paper examines the impact of bank competition on firms’ access to credit using a large panel of 900 banks matched to almost 60 000 firms across the euro area over period 2010-2016. Economic theory makes conflicting predictions on whether borrowers benefit from competition between lenders.

- The market power hypothesis holds that weak competition leads to lower and more expensive allocation of credit to firms (Pignano, 1993).
- The information hypothesis argues that banks are more likely to form long-term relationships with borrowers when operating in a non-competitive market. Strong competition would hence discourage relationship lending and impair firms’ access to credit (Petersen and Rajan, 1994, 1995).

Key identification issue: disentangling credit supply from credit demand

Identification

Econometric model

Credit constraint f,t = Lerner f,i,t (β1 + β2 f1,t−1 + β3 1, t−1) + γ1 f1,t−1 + γ2 R1,t−1 + γ3C f1,t+ α1,i,t + εf,t (1)

Results

The effect of market power on firms’ credit constraint

<table>
<thead>
<tr>
<th>Dep. variable</th>
<th>Short-term loans f,t</th>
<th>Long-term loans f,t</th>
<th>Trade Credit f,t</th>
<th>Cost of funding f,t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lerner f,i,t</td>
<td>-1.338***</td>
<td>-1.603***</td>
<td>0.359**</td>
<td>0.657***</td>
</tr>
<tr>
<td>Industry × Year FE</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Country controls</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Firm controls</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Bank controls</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Observations</td>
<td>5,772</td>
<td>5,615</td>
<td>7,087</td>
<td>6,214</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.504</td>
<td>0.630</td>
<td>0.718</td>
<td>0.106</td>
</tr>
</tbody>
</table>

Firms whose reference banks enjoy high market power tend to borrow less at all maturities, draw more trade credit and face higher funding cost than firms related to banks with low market power.

Conclusion

- Firms that borrow from banks with high market power obtain less bank credit, rely more on trade credit and suffer from higher funding cost.
- The negative effect of high market power on bank loans is attenuated for firms that borrow from local cooperative or savings banks.

Conclusions

- Firms that borrow from banks with high market power obtain less bank credit, rely more on trade credit and face higher funding costs than firms that borrow from banks with low market power.
- Looking at the cross section of firms, we find that the effect of bank market power on credit availability is especially detrimental precisely where the information hypothesis predicts it should be most beneficial (for small and opaque firms).
- In the cross section of banks, for a given level of market power firms borrowing from banks with a comparative advantage in relationship lending (small, cooperative/savings and locally) are less credit constrained than firms borrowing from larger and non-local commercial banks.

While the last findings are consistent with the information hypothesis, the predominance of medium-large commercial banks in our sample determines that the overall effect of bank market power on credit conditions is unequivocally adverse for most firms.

Empirical strategy

Matched firm-bank data

We match bank data (Obis Bank Focus) with firm data (Amadeus) through a “fuzzy merge” using banks’ names and country locations. Firms are matched to their reference bank. The matched sample contains 335,656 observation (901 banks and 59,023 firms) covering 11 euro area countries for the period 2010-2016.

Lerner index

The Lerner Index measures a bank’s ability to set its price above the marginal cost and is a bank-specific measure of bank market power.

\[ Lerner_{t} = \frac{P_{t}}{MC_{t}} \]

Where \( P_{t} \) is total operating income / total assets and \( MC_{t} \) is the estimated marginal cost derived from a translog function.

Identification

Key identification issue: disentangling credit supply from credit demand

- We use industry-year strategy to sweep out potential heterogeneity in credit demand and information issues related to time varying industry factors (Amiti and Weinstein, 2011)

Econometric model

Credit constraint f,t = Lerner f,i,t (β1 + β2 f1,t−1 + β3 1, t−1) + γ1 f1,t−1 + γ2 R1,t−1 + γ3C f1,t+ α1,i,t + εf,t (1)