

# Are Mortgage Regulations Affecting Entrepreneurship?

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# Mortgage Regulation

Using eligibility criteria to exempt from the Ability-to-Repay rule and comparing exempt and non-exempt banks, lending restriction lead to

1. Reduction of share of mortgage lending
2. Reduction of self-employment and new small business employment

Key aspect of Ability-to-Repay is the debt-to-income threshold

# Main Comments

1. Interpretation of the contribution and empirical design
2. Alternative explanations
3. Magnitude of the effect
4. Other minor comments

## Comments: Interpretation of the contribution and empirical design

Lending restrictions after crisis meant to reduce risky mortgage debt origination

**Unintended consequences of mortgage lending for self-employment is the key insight**

- Self employment and small business employment are affected by debt-to-income restriction as their income is harder to verify

## Comments: Empirical Design

**Ideally:** compare the effect of randomly allocated lender “exemption status” on lending, self-employment, small business creation, etc.

**This paper:**

1.  $Loan\ Share\ NonExempt_{cy} = \gamma_c + \alpha_y + \beta_y SelfEmployment_{cy} + \Gamma X_c + \varepsilon_{cy}$
2.  $SelfEmployment_{cy} = g_c + a_{sy} + b_y Exempt\ Proximity_c + \Gamma X_c + \nu_{cy}$

where  $Exempt\ Proximity_c$  : exemption share or closer bank-branch is exempt

**Issues:**

- Is self employment an outcome or dependent variable?
- Why use non-exempt and exempt?

## Suggestions: Empirical Design

A more natural framework is:

1.  $Loan\ Share\ Exempt_{cy} = \gamma_c + \alpha_{sy} + \beta_y Exempt\ Proximity_c + \Gamma_y X_c + \varepsilon_{cy}$
2.  $SelfEmployment_{cy} = g_c + a_{sy} + b_y Exempt\ Proximity_c + \Gamma_y X_c + \nu_{cy}$

**Identifying assumptions are:**

1. Treated and control counties were identically before the regulation (parallel trends)
2. Treatment assignment is uncorrelated to LHS (exogenous treatment)

## Suggestions: Empirical Design

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### Evidence:

1. Summary statistics of observable ex-ante county and bank characteristics.
  - Small banks in a bank holding company (non-exempt) and small banks (exempt) potentially different.
2. Compare regression sample to overall sample to assess external validity

## Suggestions: Empirical Design

Alternatively

$$\text{SelfEmployment}_{cy} = \gamma_c + \alpha_{sy} + \beta_y \text{Loan Share Exempt}_{cy} + \Gamma X_c + \varepsilon_{cy}$$

And have an instrument for *Loan Share Exempt*<sub>cy</sub>

$$\text{FS: Loan Share Exempt}_{cy} = \gamma_c + \alpha_{sy} + \beta_y \text{Exempt Proximity}_c + \Gamma_y X_c + \varepsilon_{cy}$$

**Identifying assumption:**

Exempt proximity only affect self employment through lending

- Harder to satisfy (more in next section)

## Comments: Mechanism and Alternative Explanations

Lending restrictions are affecting self-employment for other reasons

- Exclusion restriction is not satisfied

**Alternative explanation, “demand channel”:** If restrictions

1. Reduce the access to credit and this affected consumption on small business product (lending effect)
2. Reduce house price appreciation affecting also consumption (wealth and collateral effect)

Consistent with the finding, but link to a very different mechanism (De Fusco et al 2017)

## Suggestion: Mechanism and Alternative Explanations

Based on the difference-in-difference strategy

$$SelfEmployment_{cy} = \gamma_c + \alpha_{sy} + \beta_y Exempt Proximity_c + \Gamma_y X_c + \varepsilon_{cy}$$

1. How is the effect on entrepreneurship for industries less affected by local demand ( Adelino et al 2015, Mian and Sufi 2014)
2. What is happening to other LHS: house prices, unemployment rates, other types of lending, application and denial rates
3. Is restriction on credit good or bad in the long run?

### Is the externality economically important?

Comparison of non-exempt county to exempt county leads to **0.6%** decrease in small business employment share

- **From 20% to 19.4% or 3% reduction** ( assuming average rate is 20%)

## Suggestion: Are externalities important?

### **What is the magnitude of the effect?**

Overall the effect seems small (3% reduction)

### **Suggestion:**

1. Benchmark it to other estimates
2. Dedicated section to talk about the magnitude
  - Potentially the message of the paper is: “Externalities of Ability-To-Pay restriction are small”
  - Linked to the key insight of the paper

### **1. Be consistent across specification**

- It is hard to track the tables and figures, summary statistics in table 6, etc.

### **2. Location of evidence about lending behavior changes**

- Validate empirical design, but should come up later

### **3. Generate placebo test to assess validity of the estimates**

- Randomly assign counties and redo the analysis, compare the results to “real” regression

# Conclusion

Interesting paper that aims to answer an important question

Need to re-frame and focus on implications of the results

Looking forward to reading the new version.

Thank you!