

Competition and Incentives in Mortgage Markets: The Role of Brokers

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Overview

- ▶ **Question:** how does broker-based intermediation influence consumer welfare?
- ▶ **Approach:** IO model of UK mortgage market.
 - Borrower choose between direct channel (search cost) vs. broker.
 - Brokers **endogenously** form network of links with lenders.
- ▶ **Policy:** cap on commissions (if set “just right”) improves consumer welfare.
- ▶ **My Evaluation:**
 - Fantastic technical accomplishment on important question.
 - Strong model assumptions may overstate broker incentive problem.
 - Main suggestion: clarify mechanism, “relax” assumption of fixed broker market shares.

The Intermediation Process

- ▶ Brokers add efficiency by avoiding search cost, reducing lender marginal cost.
 - Planner would send all transactions through brokers.

- ▶ Borrowers who choose intermediation and match with a broker jointly maximize

$$\max_{l \in N_{bt}, j \in J_{lt}} V_{b(i')jlt} = (1 - \theta_b) \underbrace{(\alpha r_{jlt} + \beta X_{jl} + \zeta_{jlt} + \epsilon_{i'jlt})}_{\text{Household's Utility}} + \theta_b \underbrace{(c_{lbt} + \gamma_2 X_{jl} + \zeta_{blt})}_{\text{Broker's Utility}}$$

- ▶ Direct incentive problem: nonzero weight put on broker utility.
- ▶ Bigger, indirect problem: broker has chosen the set of possible lenders N_{bt} .
 - Can greatly amplify effective broker bargaining power.
 - Could distort decision, extract surplus, even with $\theta_b = 0$.

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The Intermediation Process

- ▶ How is N_{bt} determined? Outcome of bargaining process between lenders and brokers.
 - Nash bargaining, lenders have estimated bargaining power 0.19 - 0.72 depending on types.
- ▶ My conjecture: again, **effective** bargaining power of brokers is higher.
 - Outside option of broker: send business somewhere else.
 - Outside option of lender: lose that broker's business.
- ▶ Key modeling feature: probability of matching with a broker is **exogenous** ($\pi_{b(i)t}$).
 - Broker's share of intermediated business does not depend on links.
 - Lender cannot reach broker's captive market without broker.

The Intermediation Process

- ▶ Seems like lenders effectively competing to maximize broker utility $c_{lbt} + \gamma_2 X_{jl} + \zeta_{blt}$.
 - Strong incentives to avoid any links that do not pay **very highest commissions**.
 - Potentially massive distortion of lender choice.
- ▶ Key externality: brokers do not internalize their impact on the entire broker market.
 - Customers are captive, randomly assigned to broker and can't switch.
 - Cost of driving customers to direct sales mostly borne by other brokers.
 - Brokers better off cooperating to increase client utility but can't ("tragedy of the commons").
- ▶ Generates a lot of room for policy improvement, but is this assumption realistic?
 - Paper notes households tend to choose brokers based on recommendation/referral.
 - Brokers competing for market share would have incentives to provide better choices.

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Commission Policy

- ▶ Policy experiment: cap or fix commission.
 - **Increase fees** paid by borrower to keep per-sale broker profit fixed.
- ▶ Effects of decrease in commissions (paper's explanation):
 - Push households from brokers to direct channel (-).
 - Get better deal for households who remain with brokers (+).
- ▶ At intermediate levels, capping commissions improves consumer surplus.
 - Highest consumer surplus gain (10%) attained at $\bar{c} = 0.4\%$.

Commission Policy

- ▶ Why does policy drive customers out of the broker market?
- ▶ Value from broker transaction for each type (ignoring taste shocks)

$$\text{Household : } \alpha(r + f), \quad \text{Broker : } c + f, \quad \text{Lender : } r - mc - c.$$

- ▶ Note: for this problem in isolation, one of (r, c, f) is redundant.
 - Reducing c, r by 1 unit, increasing f by 1 unit leaves everyone indifferent.
- ▶ In policy experiment, reduce c and increase f to offset. Why do borrowers leave brokers?
 - Answer: r does not drop sufficiently.
 - Why? Conjecture due to model assumption that lenders set same rate for direct and broker sales.
- ▶ In principle, lenders could offer different rates for broker transactions.
 - But with exogenous broker probabilities $\pi_{b(i)t}$, incentives to set very high rates (externality).

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Commission Policy

- ▶ So where does the welfare gain come from?
 - Not from borrowers being pushed out of broker market (higher search/marginal costs).
 - Not from intermediated borrowers getting better deal ($r + f$) holding network fixed.
- ▶ Seems like it must be spillovers from rearrangement of broker networks.
 - Kind of a black box, would be great to walk us through if/how this happens.
 - My guess: with commission capped, brokers willing to link to lenders with better outside options.
 - But borrowers are still **leaving** intermediated sector. Competitive pressure on direct lenders?
- ▶ Would this effect survive with endog. broker shares and/or broker-specific rates?
 - Brokers may already have made links with lenders favorable to borrowers.
 - Interpreted as “taste shocks” in the model. Fixed across policy?
 - Might need to jointly restrict commissions and fees to avoid offsetting adjustment in reality.

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Suggestions

1. Make brokers care about customer satisfaction when making links.

- Simple option: broker uses value function: $\hat{\theta}_b(\text{Broker Util.}) + (1 - \hat{\theta}_b)(\text{Borr. Util.})$
- $\hat{\theta}_b < 1$ could be different from θ_b in broker-borrower bargaining.
- With this update, may be “safe” to add broker-specific interest rates.

2. Break down sources of consumer welfare gains/losses.

- Recommended decomp: product allocation, interest rates + fees, other (i.e., taste shocks).
- Distinction between decision utility and experienced utility (e.g., “enjoyment” of bank branches).

3. Elaborate on linking mechanism.

- Great innovation, but not trivial to get intuition.
- How much of linking is explained by fundamentals (c , branches, products) vs. taste shocks?
- Can we test predictions with e.g., entry of new bank to region?

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Conclusion

- ▶ Amazing technical accomplishment modeling and estimating crucial consumer market.
 - Great to see IO techniques applied to mortgage markets.
- ▶ Stark assumptions may exaggerate cost of intermediation, benefits of commission cap.
 - Recommendation: simple update, or convince us not first-order.
- ▶ Many additional interesting questions this model can ask!
 - How do brokers/policies affect regional welfare (branch-rich cities vs. countryside)?
 - How does presence of brokers influence uptake of risky products?
 - Brokers seem key to moving, how do they influence geographic mobility?