#### Does Regulating Developers Democratize Credit and Homeownership?

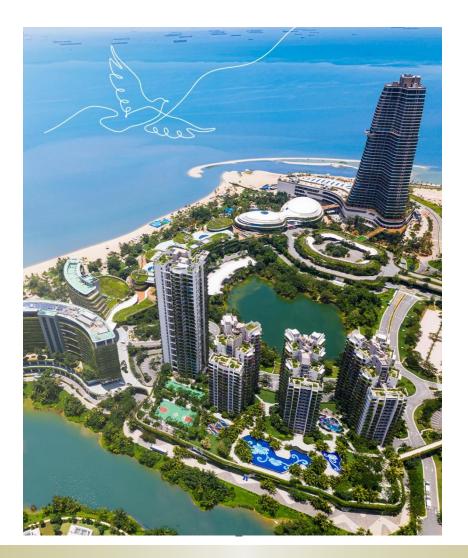
Sumit Agarwal Mingxuan Fan Pulak Ghosh Arkodipta Sarkar Xiaoyu Zhang

TC Lin

**2024 ABFER** 



#### Country Garden Forest City Brochure





## Country Garden Forest City Reality





## Buying real estate projects in India

- \* Entering a forward contract but fully paid:
  - \* Project may delay
  - Project may fail
  - \* Uncertainty of the quality
  - Tunneling and Fraud

Staged payment might mitigate these issues

- \* Less incentives to delay, tunnel, and fraud
- The quality of the finished project is known to mortgage lenders

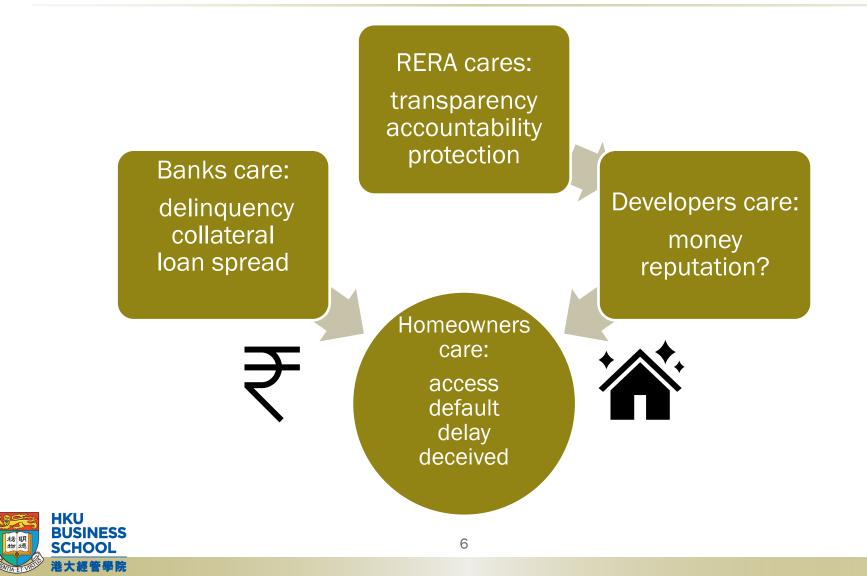


#### **Real Estate (Regulation and Development) Act**

- Mandatory registration of real estate projects and agents
- Detailed project disclosures
- Adherence to project timelines via penalty for delay
- Establishment of escrow accounts to prevent fund diversion



#### **Real estate projects**



#### **Research question**

- Understanding <u>who</u> benefits from the passage of the RERA Act in terms of
  - \* Homeownership
  - Mortgage term
  - \* Project delay
  - Loan default



## The main results I

- Increase in mortgage origination
  - \* First-time borrowers
  - A redistribution of mortgages from metropolitan and Tier 1 cities to Tier 2 and Tier 3 cities
  - Improved mortgage terms for women and marginalized castes
  - Increased availability of mortgages for properties in emerging neighborhoods



# The main results II

- Greater propensity to provide more affordable, relatively smaller houses.
  - Reduction in the availability of luxury housing
  - \* Decrease in the price of affordable homes
  - \* Increase in the price of luxury homes
- Decline in delay of project completion after the implementation of RERA
- Lower delinquency and lower default in mortgage loans.

# The economic mechanisms of RERA

Positive ones:

- Feeling protected by the RERA, individuals' home purchase demand may go up.
- The collateral value and the relevant information for banks improve, leading to better extensive and intensive margin of mortgage.

Negative one:

 Increased <u>regulatory costs</u>, which may lead to a reduced supply of <u>low-quality</u> estate projects.



## Questions

- What happens when overall demand goes up (mechanism 1) and overall supply goes down (mechanism 3), ceteris paribus?
  - $\rightarrow$  Equilibrium P goes up
  - $\rightarrow$  Equilibrium Q depends on which one shifts more
- Q goes up, but do we also observe a higher housing price in the treated area?
- Who are the new marginal home buyers under the RERA?



#### Questions

- \* We see
  - More mortgage origination (democratization)
  - Lower delinquency in mortgage loans
  - Lower default in mortgage loans
- \* But how could these all happen together?
  - \* Developers' operating efficiency improves?
  - Reduction in project delay reduces extra costs for homeowners associated with the delay such that they could pay mortgage?



## Questions

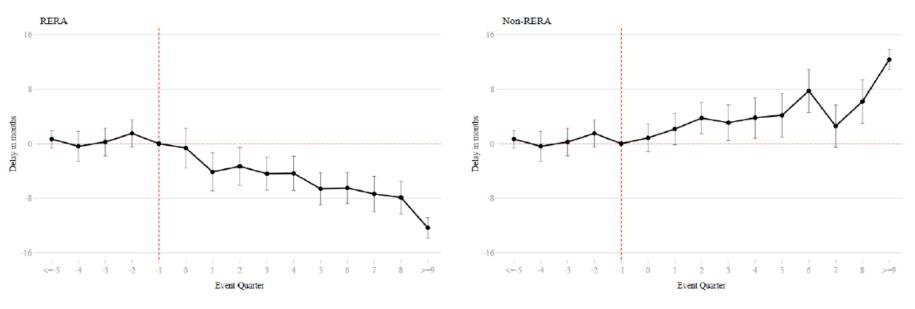
- Low-quality developers who only survive by deceiving and delaying should be crowded out after the implementation of RERA
- \* Who then serves the weaker homebuyers?
- Will branches allocate mortgage funds to the treated areas such that the weaker homebuyers in the control areas face an even harder time accessing mortgages?

#### • Overall, what is the catch of RERA?



#### What is the catch of RERA?

#### Figure 7 Panel b



(b) Delay



# Substitution in loan allocation among Tiers 1 and 3 cities?

Table 4: Effect of RERA on Mortgage Lending – Geographic Disparity

	(1)	(2)	(3)	(4)
Dep. Var.	Binary loan = 1	Amount of Loan	Number of Loan	Number of New Borrowers
Post*Tier 3	0.008***	0.157***	0.039***	0.024***
	(0.002)	(0.036)	(0.010)	(0.008)
Post*Tier 2	0.002	0.032	0.012	0.009
	(0.004)	(0.087)	(0.026)	(0.023)
Post*Tier 1	-0.006**	-0.129**	-0.037**	-0.020
	(0.002)	(0.049)	(0.015)	(0.012)
Observations	3,003,748	3,003,748	3,003,748	3,003,748
R-squared	0.375	0.387	0.434	0.416
Branch*Pin FE	Yes	Yes	Yes	Yes
Branch*YQ FE	Yes	Yes	Yes	Yes



#### The role of developers' reputation

- Does the amount of mortgage a home buyer can borrow from a bank depend on the developer's reputation?
  - The market value of an under-construction (presale) property should depend on the track record of a developer.
  - The access to the mortgage and the terms should adjust accordingly.



#### Presale vs. resale housing

- RERA is about regulating the developers.
- The resale housing market and its mortgage should not be directly affected
- Might be interesting to see how loan decisions to resale housing are affected



#### Reduction in the availability of luxury housing and Increase in the price of luxury homes, why?

- Is it because the luxury projects are too costly and thus make the decentralized project-level constraints more binding?
- The size and price per sqft of luxury projects go up.
- The quality score and delay both worsen
- The information asymmetry in luxury projects should be lower and thus less affected by the RERA.

# Overall

- Topic is important, and data sets are amazing
- The empirical results are quite comprehensive
  - \* 7 tables, 7 figures, 2 IA figures, and 9 IA tables.
  - \* High dimensional fixed effects
  - \* Heterogenous treatment effect in staggered DiD
  - Count and count-like data
  - \* Using only Border Districts
  - Placebo tests
- Recommend it to everyone!



#### Tse-Chun Lin 林則君 <u>tsechunlin@hku.hk</u>

