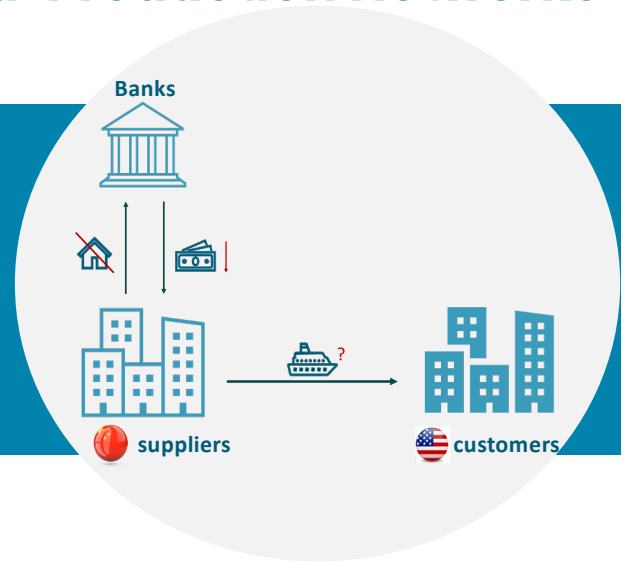


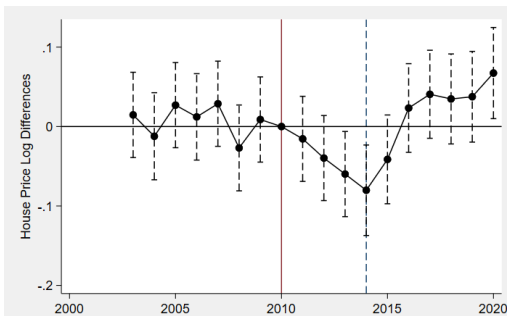
# Collateral Values and Global Production Networks

Xiao Zhao (HKUST)

Fluctuations in **local real estate markets** can affect **global production networks**.



## Price Effects from HPR



- 46 cities adopted Housing Purchase Restrictions (HPR) in 2010 and 2011 in China which generate **collateral shocks** to firms

## Collateral shocks and Financial Constraints

	Short Term Debt	Log(Cash)	Cash/Assets	Log(Dividend)
	(1)	(2)	(3)	(4)
Treated × Post	-0.155* (0.08)	-0.184*** (0.06)	-0.015** (0.01)	-0.212*** (0.08)
Firm-Cohort FE	Yes	Yes	Yes	Yes
Cohort-Year FE	Yes	Yes	Yes	Yes
R-Squared	0.789	0.830	0.739	0.751
Observations	5,396	6,589	6,589	5,682

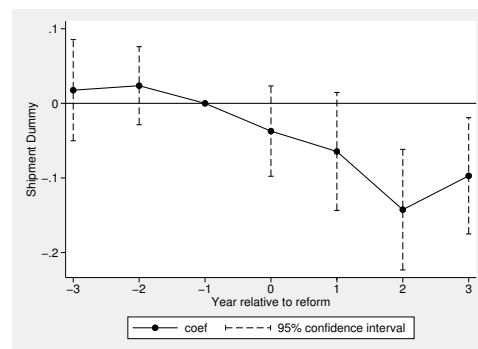
- Firms are more **financially constrained** after collateral shocks

## Collateral Shocks and Product Prices

	Log(Price)	Log(Quantity)
	(1)	(2)
Treated × Post	0.083* (0.05)	-0.272** (0.12)
Firm-Product-Cohort FE	Yes	Yes
Product-Cohort-Year FE	Yes	Yes
R-Squared	0.719	0.738
Observations	22,806	23,002

- Firms **raise product prices** after collateral shocks

## Trade Reduction and Reallocation



- Treated Chinese suppliers **trade less** with US customers
- US customers **reallocate** imports to other suppliers

	Shipment Dummy	Log(1+Shipment)	Log(1+Container)
	(1)	(2)	(3)
Treated Supplier × Post	-0.057*** (0.02)	-0.101*** (0.03)	-0.110*** (0.03)
%Treat × Treat Supp × Post	-0.382*** (0.05)	-0.411*** (0.12)	-0.420*** (0.13)
<b>%Treat × Treat Cust, Control Supp × Post</b>	<b>1.698***</b> <b>(0.55)</b>	<b>2.280**</b> <b>(1.07)</b>	<b>2.510**</b> <b>(1.26)</b>
Pair-Cohort FE	Yes	Yes	Yes
Cohort-Year FE	Yes	Yes	Yes
R-Squared	0.357	0.519	0.509
Observations	64,696	64,696	64,696

## Conclusion

- Real estate shocks affect firms' external financing
- Financially constrained firms raise exporting product prices
- A 6% drop in collateral value leads to an 11% reduction in trade between Chinese suppliers and US customers

