

# If You Don't Build It...: Mexican Mobility Following the U.S. Housing Bust

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# Disclaimer

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# Migration and the Housing Bust

- Housing bust led to a historic decline in the construction of new homes, a significant component of demand for construction labor.
- Bubble bursting functioned as a severe labor demand shock for lower-skilled workers, especially Mexican-born workers ( $\approx 30$  percent work in construction).
- Large variation in the size of demand shocks across the country.
- Main questions:
  - How did the housing bust affect the geographic distribution of low-skilled workers, both native and Mexican-born?
  - Which reallocation mechanisms were most important?

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## Results Overview

- Mexican-Born population shifts markedly toward states with less severe housing shocks and away from hardest-hit states.
- No mobility response among lower-skilled native-born.
- Reallocation happened primarily through interstate mobility and differential entry rates.
- No evidence of return migration to Mexico. Likely option value (Angelucci, 2010; Lessem, 2011).
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- 2 The Housing Collapse and Descriptives
- 3 Main Results
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# Construction and Employment Data Sources

- Housing Demand Measures
  - Permits Survey
  - Survey of Construction
  - Combine information to construct “new housing units currently under construction.”
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  - Contain data on Employment, Industry, Nativity, and Migration History
  - Limit sample to native and Mexican-born men, 18-64, not in school, without a college degree.

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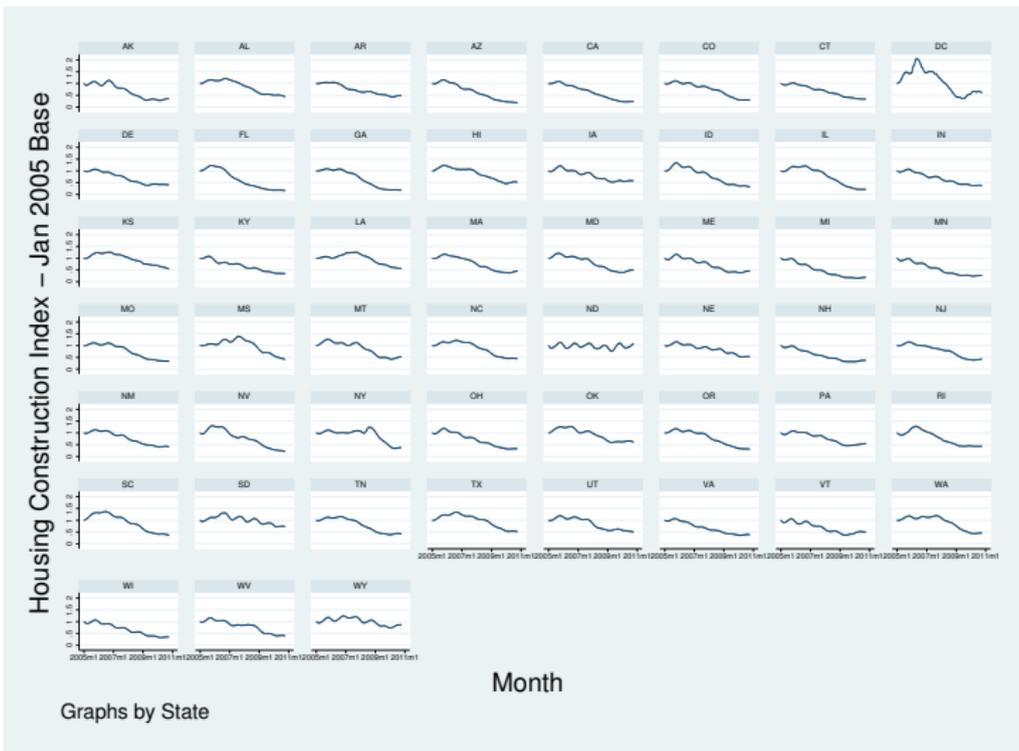
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# Geographic Variation in Housing Declines



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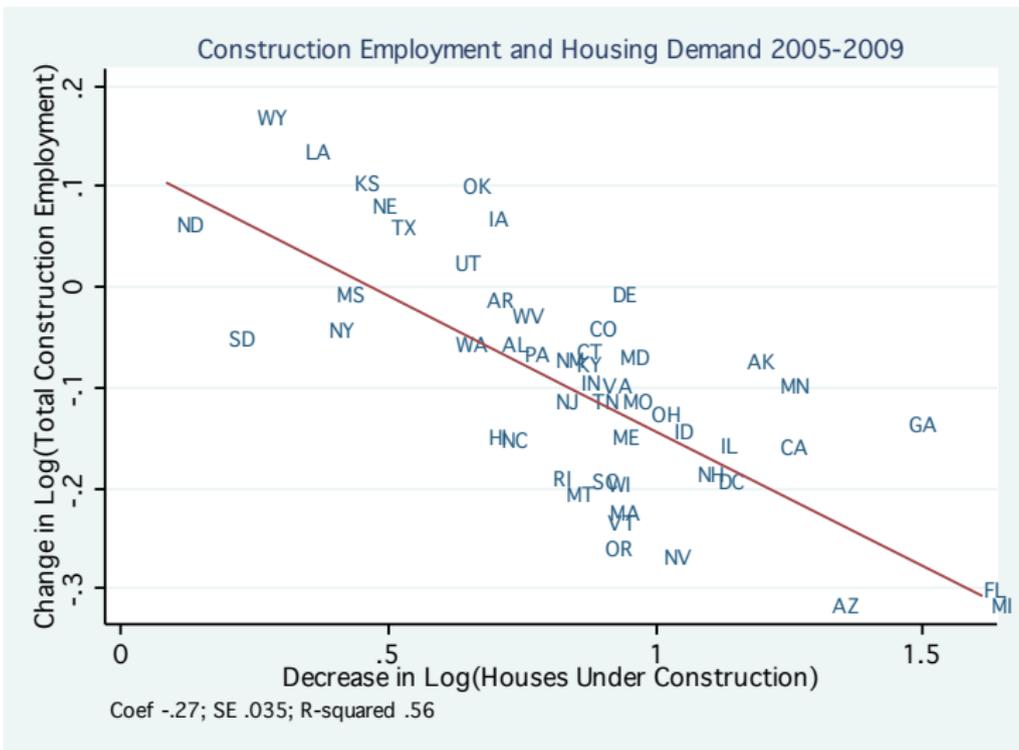
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# Importance of Construction Sector

Construction Employment by Nativity and Gender

	Mexican-Born Sample		Native-Born Sample	
	Men	Women	Men	Women
Percent of Employed Working in Construction	30.8%	1.4%	16.6%	2.1%
Share of Construction Employment	12.0%	0.2%	58.1%	6.2%
Share of Population (18-64 not in school)	3.0%	2.3%	30.4%	30.7%

# Decreases in Demand Explain Declines in Employment



# Variation in Demand Shocks and Employment

- Differential demand shocks likely related to importance of sub-prime lending in local housing demand (Mayer and Pence, 2009).
- Future Extension: verify using Mayer and Pence data.
- Bottom Line: Geographically disparate exogenous local demand shocks created strong incentives to relocate.

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# Mobility Data Sources

- ACS: Annual cross-state mobility and newly arriving immigrants.
- ENOE: Quarterly Mexican data on emigration and return migration.
- EMIF: Survey on U.S.-Mexico border: quantifies return migration.

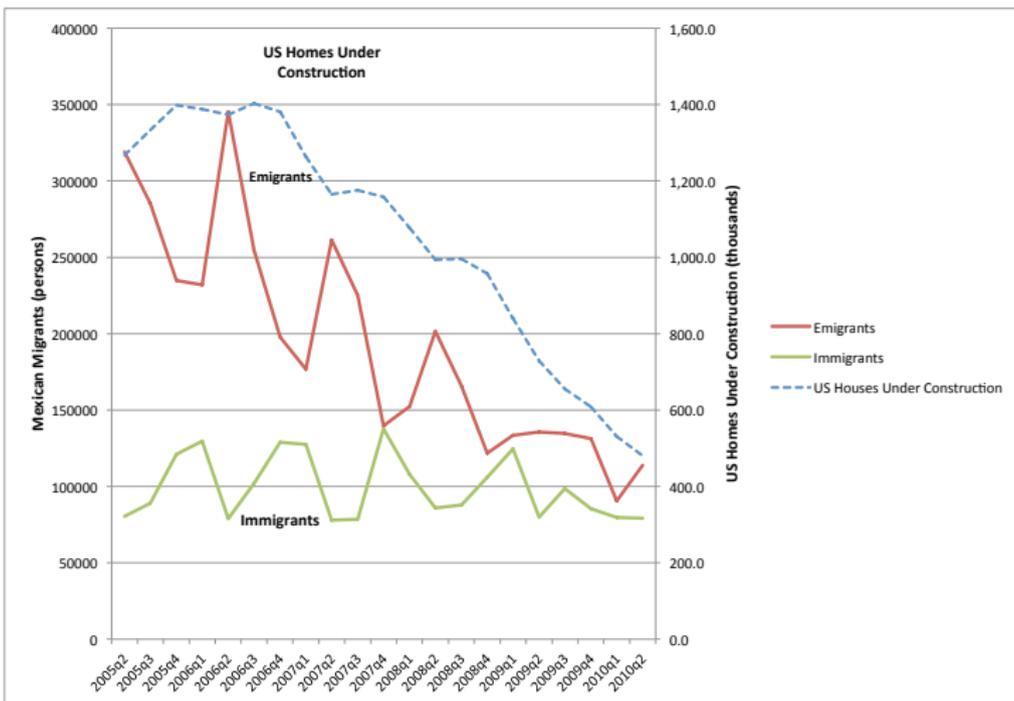
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# International Migration of Mexicans - ENOE



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## Dependent Variable: Change in Log(Population)

- Fraction of Mexican Population living in state  $s$  at time  $t$  is

$$\varphi_{st} \equiv \frac{mex_{st}}{\sum_{s't} mex_{s't}}.$$

with  $mex_{st}$  the Mexican-born population in  $s$  at time  $t$ .

- Taking logs and differencing gives:

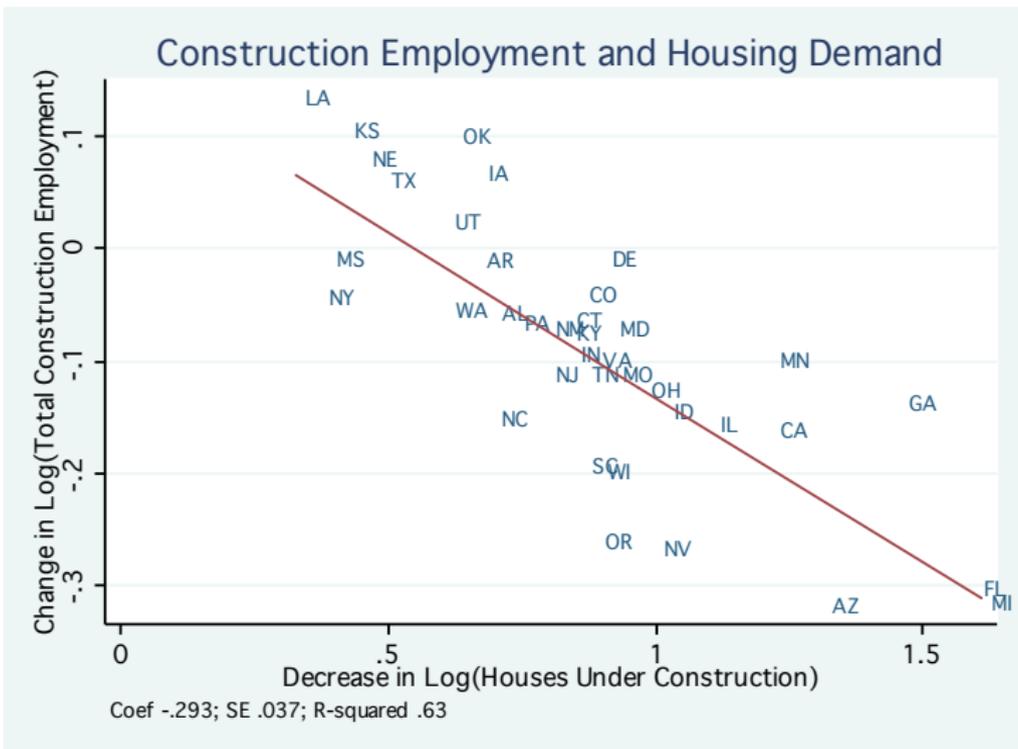
$$\Delta \ln \varphi_s = \Delta \ln mex_s - \Delta \ln \left( \sum_{s't} mex_{s't} \right).$$

- Changes in log(population) can be interpreted as percent changes in share living in state  $s$ .
- Analysis examines changes from 2005-2009.

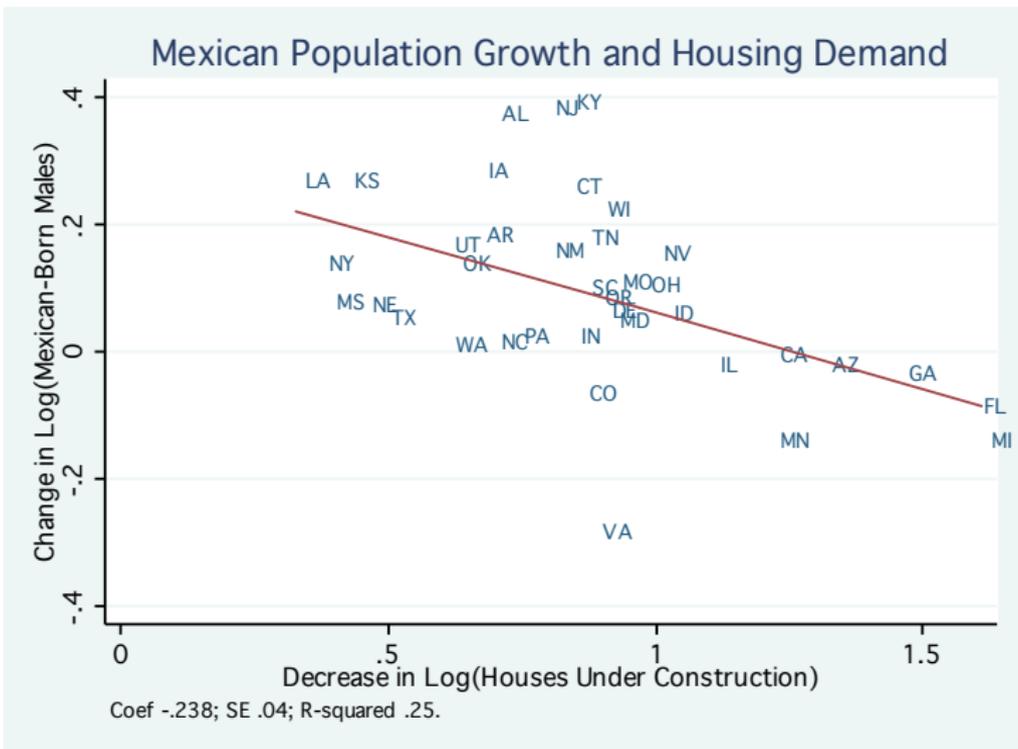
# Eliminate States with Trivial Mexican Population

- State must have at least 30 Mexican-born male ACS observations in 2005 and 2009.
- Criterion eliminates VT, ND, WV, DC, ME, MT, AK, SD HI, NH, RI, WY, and MA.

# Housing Demand and Employment (Smaller Sample)

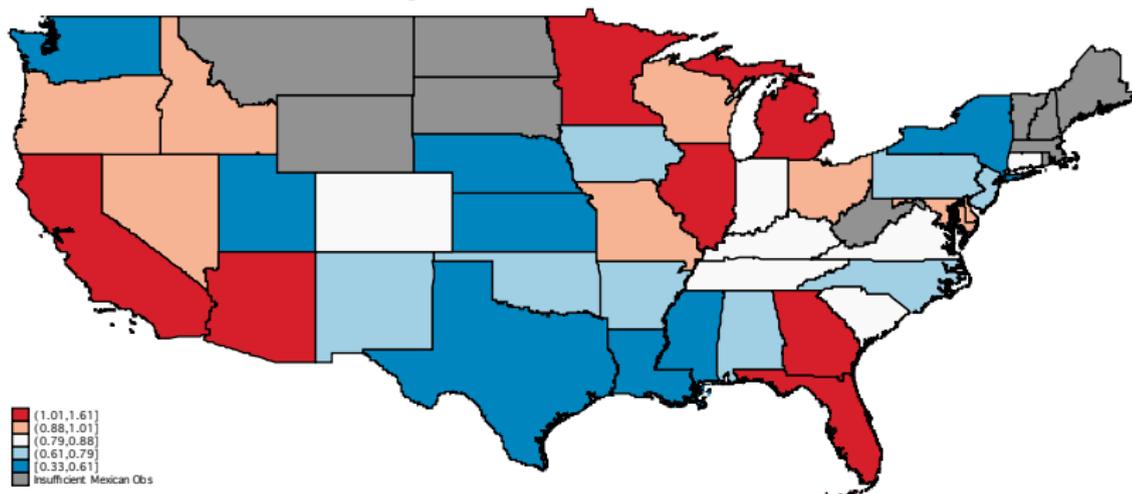


# Mexican Population Shifts Toward Smaller Shocks

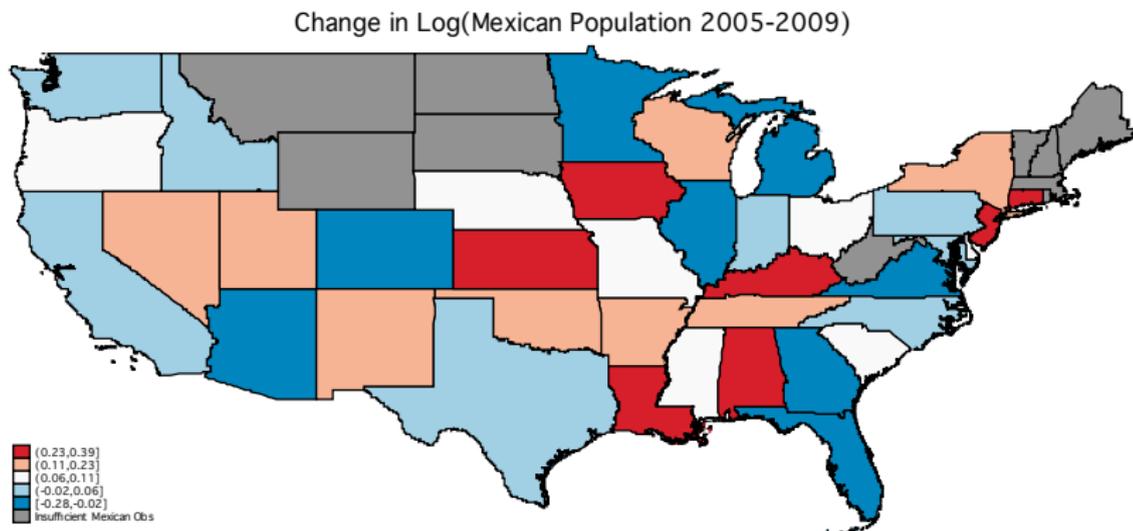


# Decrease in Construction Activity

Decrease in Log(Houses Under Construction 2005-2009)



# Change in Mexican Population





# Potential Threats

- To interpret this reallocation as the causal effect of differential labor demand shocks, need to rule out alternative explanations including:
  - ① A decline in the value/popularity of enclaves
  - ② Simultaneous anti-immigrant local legislation
  - ③ Continuation of ongoing trends based on other unobservables

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# Results Robust to Observable Controls

## Mexican-Born Population Growth and Change in Housing Demand

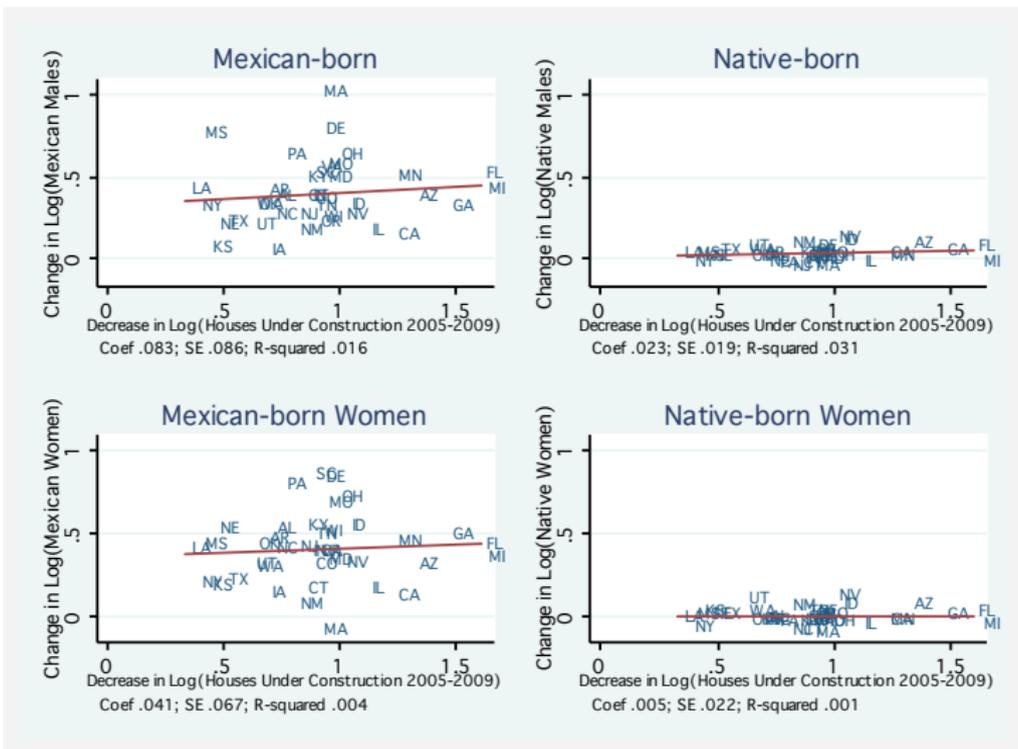
	(1)	(2)	(3)
Decrease in Log(Houses Under Construction) 2005-2009	-0.238*** (0.0403)	-0.230*** (0.0433)	-0.232*** (0.0441)
Mexican-Born Share of State Population (2005)		-0.502 (0.588)	-0.558 (0.645)
Constant	0.298*** (0.0455)	0.303*** (0.0473)	0.306*** (0.0491)
Includes Arizona	YES	YES	NO
Observations	38	38	37
R-squared	0.252	0.261	0.249

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# Reallocation Not a Continuation of Previous Trends



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# Potential Channels of Adjustment

- Five potential channels of adjustment
  - C1: Inter-state movement of Mexicans who were already residing in the country.
  - C2: Mexicans arriving from abroad
  - C3: Previously resident Mexicans leaving the country
  - C4: Resident Mexicans who age into or out of the sample
  - C5: Resident Mexicans who enter or leave the sample due to a change in schooling status

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# Decomposition

- With a slight adjustment to the dependent variable, a set of regressions can determine the importance of each channel.

$$\Delta \ln mex_s \approx \frac{\Delta mex_s}{mex_{s0}}$$

- Because the channels are mutually exclusive and exhaustive

$$\frac{\Delta mex_s}{mex_{s0}} = \frac{C1_s}{mex_{s0}} + \frac{C2_s}{mex_{s0}} + \frac{C3_s}{mex_{s0}} + \frac{C4_s}{mex_{s0}} + \frac{C5_s}{mex_{s0}}.$$

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## Quantifying Each Channel

- Interstate Mobility (C1), Differential Entry (C2), and Aging in/out of sample (C4) can be estimated using ACS.
- Return migration (C3) not observable through ACS, but can be measured using the EMIF.
- Construct a residual for portion not explained by (C1), (C2), (C3), and (C4).

# Decomposition Results

Decomposition of State-Level Mexican-Born Population Growth Rates 2005-2009

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
				Decomposition Results			
	Change in log Mexicans	Growth Rate of Mexican Population	C1 Inter-state Migration	C2 New Immigrants	C3 Return Migrants	C4 Net Aging In	Residual
Decrease in log Houses Under Construction	-0.238*** (0.0403)	-0.255*** (0.0458)	-0.112** (0.0452)	-0.0769** (0.0338)	0.00129 (0.0324)	0.00562 (0.00641)	-0.0734 (0.0644)
Constant	0.298*** (0.0455)	0.330*** (0.0533)	0.129*** (0.0465)	0.219*** (0.0358)	-0.114*** (0.0316)	-0.0183*** (0.00651)	0.114* (0.0628)
Observations (States)	38	38	38	38	38	38	38
R-squared	0.252	0.233	0.211	0.075	0.000	0.016	0.023

Robust standard errors in parentheses

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

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- Native mobility was unrelated to changes in demand.
- Adjustment occurred primarily through internal mobility and differential immigration rates; no evidence for return migration.

- Implications

- Mobility among immigrants helps ameliorate/diffuse negative labor market consequences of recession.
- Lack of return migration suggests current “secure border first” immigration policy reduces incentives to leave during economic downturn.
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