

Employing Undocumented Workers: Immigration Enforcement Impacts on Small Businesses And The Role of Bank Monitoring

Christine Zhuowei Huang
UT Dallas

Amit Kumar
SMU

Jiajie Xu
U of I

ABFER 2026

UT Dallas: University of Texas at Dallas

SMU: Singapore Management University

U of I: University of Iowa

Undocumented Immigration in US

Undocumented Immigration in US

Undocumented (unauthorized or illegal) immigrants

- ▶ 2008 population ~12 mn; Grew 4x over 1990–2008 ([Pew Research 2025](#); [Passel and D'Vera Cohn 2009](#);
- ▶ ~8.2 mn employed: mostly in low-skill/nontradable sectors, about 5.4% of national workforce

Undocumented Immigration in US

Undocumented (unauthorized or illegal) immigrants

- ▶ 2008 population ~12 mn; Grew 4x over 1990–2008 ([Pew Research 2025](#); [Passel and D'Vera Cohn 2009](#);)
- ▶ ~8.2 mn employed: mostly in low-skill/nontradable sectors, about 5.4% of national workforce

Deport vs legalize undocumented workers is a long-standing political issue

- ▶ May create jobs (Milton Friedman), or take away jobs, raise crime [Government Accountability Office 1988](#); [US House Subcommittee 2006](#);

Undocumented Immigration in US

Undocumented (unauthorized or illegal) immigrants

- ▶ 2008 population ~12 mn; Grew 4x over 1990–2008 ([Pew Research 2025](#); [Passel and D’Vera Cohn 2009](#);)
- ▶ ~8.2 mn employed: mostly in low-skill/nontradable sectors, about 5.4% of national workforce

Deport vs legalize undocumented workers is a long-standing political issue

- ▶ May create jobs (Milton Friedman), or take away jobs, raise crime [Government Accountability Office 1988](#); [US House Subcommittee 2006](#);

A common policy tool: Enacting stricter laws targeting undocumented workers

- ▶ How do such policies affect small businesses?
- ▶ Can formal data reveal patterns of undocumented worker employment?
- ▶ Do banking relationships influence borrower firms’ employment of undocumented workers?

Why do we focus on small businesses?

Why do we focus on small businesses?

Food truck: A small business \implies

- ▶ Retail- and restaurant-related industries: E.g., grocery, food, furniture, clothing, food services, restaurants, construction.
- ▶ Referred to as Non-tradable in [Mian and Sufi 2014](#), classification 1.



Why do we focus on small businesses?

Food truck: A small business \implies

- ▶ Retail- and restaurant-related industries: E.g., grocery, food, furniture, clothing, food services, restaurants, construction.
- ▶ Referred to as Non-tradable in [Mian and Sufi 2014](#), classification 1.



Small businesses are important: 43% of GDP and 46% of private employment

Why do we focus on small businesses?

Food truck: A small business \implies

- ▶ Retail- and restaurant-related industries: E.g., grocery, food, furniture, clothing, food services, restaurants, construction.
- ▶ Referred to as Non-tradable in [Mian and Sufi 2014](#), classification 1.

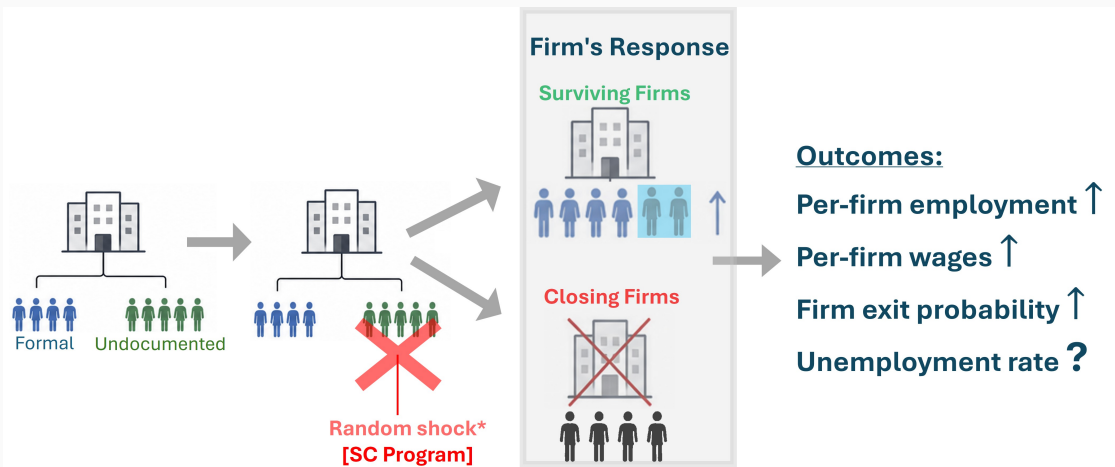


Small businesses are important: 43% of GDP and 46% of private employment

Employing undocumented workers is more feasible for small businesses:

- ▶ Small operation, no formal auditing and minimal reporting
- ▶ No investor monitoring or market feedback, limited reputation risk
- ▶ Only repeat offenses carry penalty: \$3K/worker and/or ≤ 6 m prison ([DOJ n.d.](#)).
- ▶ Rational to hire undocumented workers: **if $MRP \geq \text{wage} + \text{penalty}$**

Conceptual Framework: Stricter Immigration Enforcement and Firm Responses



If the shock only impacts **undocumented workers and is **plausibly exogenous**, equilibrium outcomes reflect their pre-shock employment.*

The Secure Communities (SC) program

The Secure Communities (SC) program

Early 2000's: A major shift in immigration enforcement policies

- ▶ Prior hesitation from involving states was shelved ([Baumer and Xie 2023](#))
- ▶ Heightened **interior enforcement** via local law enforcement agencies

The Secure Communities (SC) program

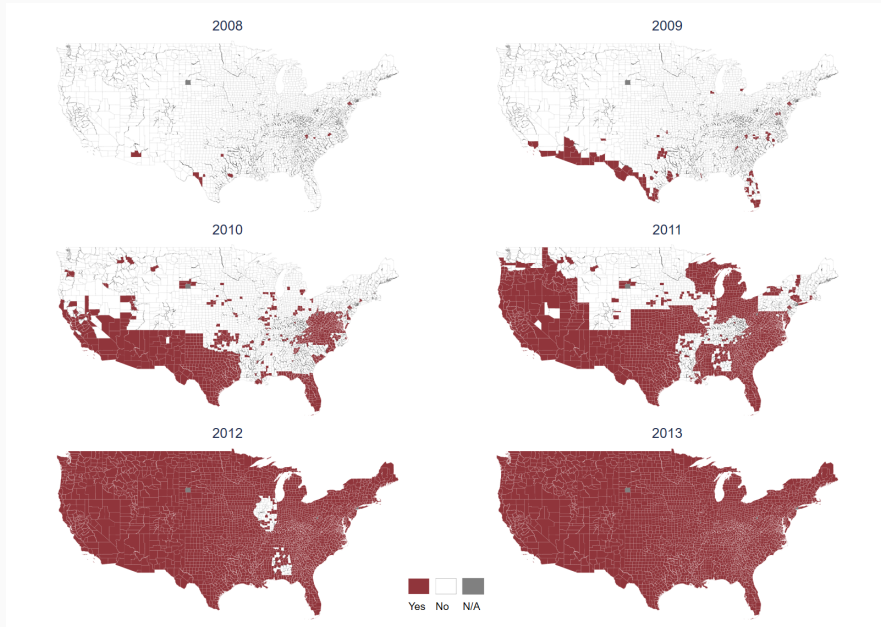
Early 2000's: A major shift in immigration enforcement policies

- ▶ Prior hesitation from involving states was shelved ([Baumer and Xie 2023](#))
- ▶ Heightened **interior enforcement** via local law enforcement agencies

Secure Communities: Granted ICE a universal technological presence

- ▶ Requires local agencies to submit fingerprints to ICE
- ▶ Mandatory policy for local agencies, unlike E-Verify or 287(g) arrangements
- ▶ Staggered rollout across counties 2008–2013, as nationwide rollout was infeasible ([East et al. 2023](#))
- ▶ Intended to deport dangerous criminals, however,
 - ▶ 18% had no criminal history;
 - ▶ 49% had misdemeanors (Level 2) or minor crimes (Level 3) with sentences ≤ 1 year;
 - ▶ Chilling effect even on undocumented immigrants without criminal history;

Events: Rollout of the Secured Communities Program



Key Findings

Key Findings

The staggered implementation of the SC Program led to:

- ▶ County-level outcome:
 - ▶ # Firms in non-tradable sector ↓
 - ▶ Per-firm employment and per-firm wages in non-tradable sector ↑
 - ▶ Tradable sector firms do not exhibit these changes
 - ▶ Unemployment rate ↑

Key Findings

The staggered implementation of the SC Program led to:

- ▶ County-level outcome:
 - ▶ # Firms in non-tradable sector ↓
 - ▶ Per-firm employment and per-firm wages in non-tradable sector ↑
 - ▶ Tradable sector firms do not exhibit these changes
 - ▶ Unemployment rate ↑

- ▶ Firm-level outcomes:
 - ▶ Firm employment in non-tradable sector ↑
 - ▶ Firm closure probability in non-tradable sector ↑

Key Findings

The staggered implementation of the SC Program led to:

- ▶ County-level outcome:
 - ▶ # Firms in non-tradable sector ↓
 - ▶ Per-firm employment and per-firm wages in non-tradable sector ↑
 - ▶ Tradable sector firms do not exhibit these changes
 - ▶ Unemployment rate ↑
- ▶ Firm-level outcomes:
 - ▶ Firm employment in non-tradable sector ↑
 - ▶ Firm closure probability in non-tradable sector ↑
- ▶ Banks' economic incentive—default, reputation, and legal risks; soft information; due diligence≡ deputation?
 - ▶ Among ex-ante unbanked firms, employment and exit effects are stronger
 - ▶ Merger-induced branch closures IV confirms these effects
 - ▶ Among ex-ante banked firms, those facing reduced bank monitoring show stronger effects

What is New In This Paper?

What is New In This Paper?

Immigration and finance:

- ▶ Most studies focus on authorized immigration ([Dai et al. 2025](#); [Aobdia et al. 2018](#); [Aobdia et al. 2024](#); [Gupta 2025](#); and [Cookson et al. 2025](#))
- ▶ We examine **unauthorized** immigration
 - ▶ Municipalities ([Cornaggia et al. 2024](#)); ICE raids and stock returns ([Li et al. 2025](#)), housing construction ([Howard et al. 2024](#)).
 - ▶ Labor market ([East et al. 2023](#)): Employment among likely-undocumented declines and the share of U.S.-born workers employed declines.
 - ▶ **We distinctly emphasize a firm-closure channel using small businesses:** Per-firm employment increases, though overall unemployment rate rises.

What is New In This Paper?

Immigration and finance:

- ▶ Most studies focus on authorized immigration (Dai et al. 2025; Aobdia et al. 2018; Aobdia et al. 2024; Gupta 2025; and Cookson et al. 2025)
- ▶ We examine **unauthorized** immigration
 - ▶ Municipalities (Cornaggia et al. 2024); ICE raids and stock returns (Li et al. 2025), housing construction (Howard et al. 2024).
 - ▶ Labor market (East et al. 2023): Employment among likely-undocumented declines and the share of U.S.-born workers employed declines.
 - ▶ **We distinctly emphasize a firm-closure channel using small businesses:** Per-firm employment increases, though overall unemployment rate rises.

Bank lending to small businesses:

- ▶ Banking economic incentive **may exert a deputization effect** and increase compliance of firms with non-financial laws.
- ▶ Soft information in small business lending (Agarwal and Hauswald 2010; Berger et al. 2005; Granja et al. 2022; Petersen and Rajan 2002; Canales and Nanda 2012;).

Empirical Research Design

Callaway and Sant'Anna, 2021's CSDID:

$$Y_{ict} = \alpha_0 + \beta \times SC_{ict} + \text{Controls}_{ct} + \delta_i + \gamma_t + \epsilon_{ict}.$$

- ▶ Uses only not-yet-treated units as control: avoids TWFE's bad comparison issue
- ▶ Yields interpretable causal parameters (ATT)
- ▶ Accounts for heterogeneity in treatment timing and effects
- ▶ Avoids bad control problem: uses only pre-treatment levels of co-variates
- ▶ Co-variates: L.ln(county pop), L.ln(Inc. per capita), L.ln(Hispanic pop)
- ▶ SE clustered by county or firms

- ▶ National Establishment Time-Series (NETS)
- ▶ Uniform Commercial Code (UCC) filings: Universal coverage of all secured lending in US.
 - ▶ Precisely identify individual small businesses and their banks.
 - ▶ Limitation: Does not identify contractual terms
- ▶ Socioeconomic indicators from Census Bureau's QCEW.
- ▶ Call reports and Summary of deposits data from FDIC

Was SC Rollout Predictable

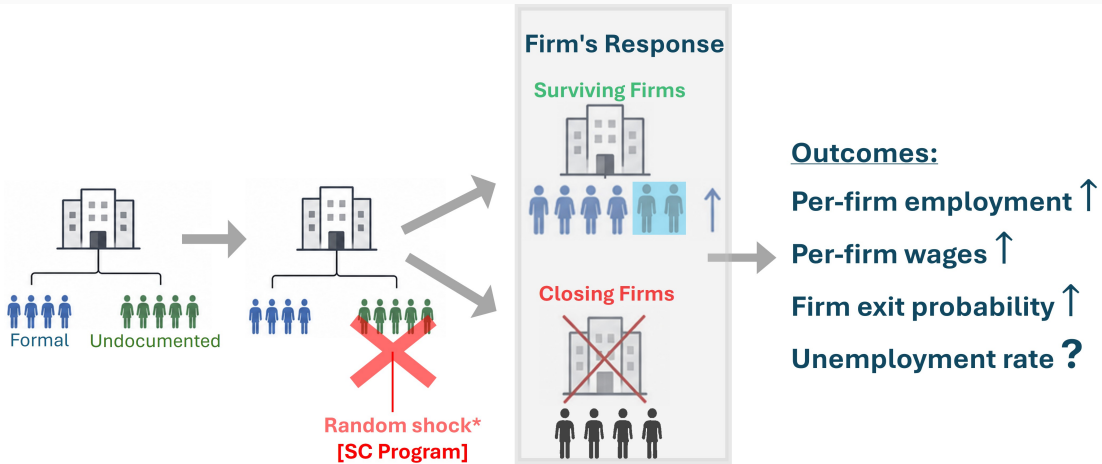
- ▶ Small business related outcomes do not predict SC rollout, but county population and hispanic population have predictive power (Howard et al. 2024; Cox and Miles 2013;).

Outcome: SC Rollout [=1]

	(1)	(2)	(3)	(4)	(5)
L.# Est Growth	-0.565 (0.385)	-0.488 (0.441)	-0.581 (0.442)	-0.472 (0.456)	-0.491 (0.456)
L.Avg Wages Growth	-0.446 (0.292)	0.181 (0.338)	0.211 (0.330)	0.255 (0.334)	0.246 (0.333)
L.Avg Emp Growth	1.058** (0.453)	0.322 (0.533)	0.250 (0.517)	0.223 (0.517)	0.246 (0.514)
L.Ln(County Population)		0.148*** (0.010)	-0.084*** (0.017)	-0.083*** (0.017)	-0.087*** (0.017)
L.Ln(Hispanic Population)			0.194*** (0.012)	0.196*** (0.012)	0.194*** (0.012)
L.Ln(Per Capita Income)				-0.060 (0.052)	-0.071 (0.052)
L.Net Intl. Migration					0.018 (0.021)
FE: Year	Y	Y	Y	Y	Y
Observations	10,764	10,666	10,657	10,657	10,657

Results: County-Level Effects

Mechanism Recap

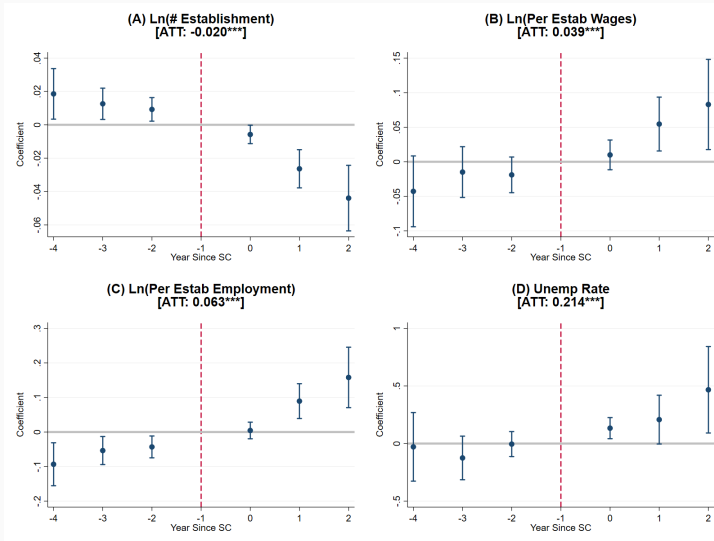


If the shock only impacts **undocumented workers and is **plausibly exogenous**, equilibrium outcomes reflect their pre-shock employment.*

County-Level Outcomes: Event-study Plots

Firms **decreased**

Per-firm employment and wages **increased** alongside unemployment rate



County-Level Outcomes: Regressions

Firms **decreased**

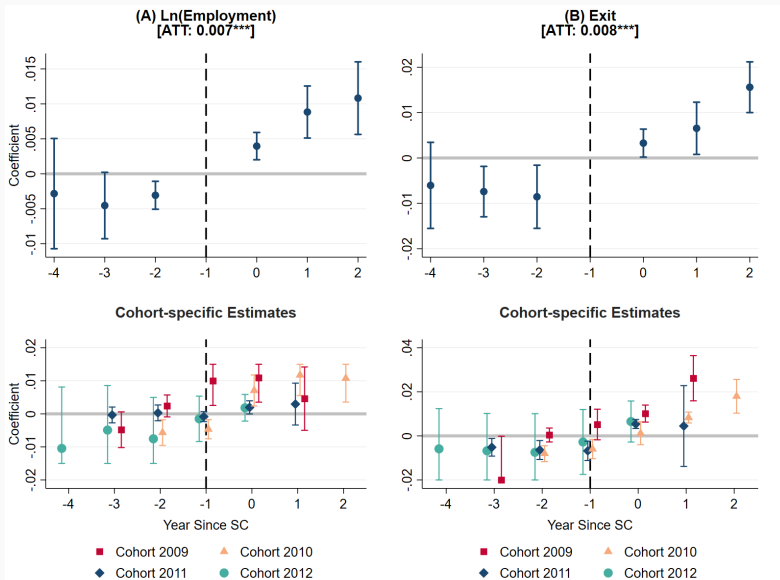
Per-firm employment and wages **increased** alongside unemployment rate

<i>A: All Counties</i>							
Industry Type:	Non-Trda & Cons.			Tradable			All
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Outcome:	Ln(# Est)	Ln(Avg Wages)	Ln(Avg Emp)	Ln(# Est)	Ln(Avg Wages)	Ln(Avg Emp)	Unemp Rate %
SC	-0.017*** (0.003)	0.031** (0.014)	0.037** (0.016)	0.010 (0.007)	0.005 (0.070)	0.003 (0.060)	0.112** (0.054)
FE: Year, County	Y	Y	Y	Y	Y	Y	Y
Observations	11,878	11,575	11,575	11,732	7,494	7,494	11,853
<i>B: Metropolitan Counties</i>							
Industry Type:	Non-Trda & Cons.			Tradable			All
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Outcome:	Ln(# Est)	Ln(Avg Wages)	Ln(Avg Emp)	Ln(# Est)	Ln(Avg Wages)	Ln(Avg Emp)	Unemp Rate %
SC	-0.020*** (0.005)	0.039*** (0.014)	0.063*** (0.019)	-0.006 (0.011)	0.182 (0.162)	0.136 (0.140)	0.214*** (0.081)
FE: Year, County	Y	Y	Y	Y	Y	Y	Y
Observations	3,420	3,413	3,413	3,419	2,878	2,878	3,399
<i>C: Non-Metropolitan Counties</i>							
Industry Type:	Non-Trda & Cons.			Tradable			All
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Outcome:	Ln(# Est)	Ln(Avg Wages)	Ln(Avg Emp)	Ln(# Est)	Ln(Avg Wages)	Ln(Avg Emp)	Unemp Rate %
SC	-0.015*** (0.004)	0.025 (0.019)	0.020 (0.020)	0.015 (0.009)	-0.089 (0.059)	-0.064 (0.051)	0.071 (0.068)
FE: Year, County	Y	Y	Y	Y	Y	Y	Y
Observations	8,458	8,162	8,162	8,313	4,616	4,616	8,454

Firm-level Effects

Effect on Small Businesses: I

Both employment and closure **increase**.



Effect on Small Businesses: II

Both firm employment and closure rates **increased**.

Counties:	All				Metropolitan				Non-Metropolitan			
Outcome:	(1) Ln(Emp)	(2) Exit	(3) Ln(Emp)	(4) Exit	(5) Ln(Emp)	(6) Exit	(7) Ln(Emp)	(8) Exit	(9) Ln(Emp)	(10) Exit	(11) Ln(Emp)	(12) Exit
SC	0.005*** (0.001)	0.009*** (0.001)	0.006*** (0.001)	0.007*** (0.001)	0.005*** (0.001)	0.008*** (0.001)	0.007*** (0.001)	0.008*** (0.001)	0.003*** (0.001)	0.006*** (0.001)	0.003*** (0.001)	0.006*** (0.001)
Controls	N	N	Y	Y	N	N	Y	Y	N	N	Y	Y
FE: Year	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
FE: Firm	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Observations	16,871,835	16,871,835	16,702,474	16,702,474	12,936,376	12,936,376	12,834,037	12,834,037	3,935,459	3,935,459	3,868,437	3,868,437

The Role of Banking Relationships

Effect Heterogeneity by Ex-ante Banking Relationship I

Employment/closure effects stronger among firms **without** ex-ante banking relationship.

Ex-Ante Bank Relation:	No Secured Loan		Secured Loan	
	(1)	(2)	(3)	(4)
Outcome:	Ln(Emp)	Exit	Ln(Emp)	Exit
SC	0.008*** (0.001)	0.005** (0.002)	0.004 (0.003)	0.000 (0.001)
Controls	Y	Y	Y	Y
FE: Year	Y	Y	Y	Y
FE: Firm	Y	Y	Y	Y
Observations	11,176,146	11,176,146	726,685	726,685

- ▶ Employment increase is inconsistent with credit-availability effect.
- ▶ Evidence is associational, as we cannot rule out bank monitoring/deterrence from selection.

Effect Heterogeneity by Ex-ante Banking Relationship II: Using IV

Large bank-merger as IV to predict branch closures.

- ▶ High ex-ante $\widehat{closure}$ → Reduced bank monitoring → More undocumented workers
→ Stronger effects of SC

$$Close_{c\{t:t+24\}} = \beta \times Expose_{ct} + Controls + \kappa_c + \phi_t + \omega_{ct}$$

IV:	Whether M&A?				% M&A Deposit			
	High		Low		High		Low	
Predicted Closure:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Outcome:	Ln(Emp)	Exit	Ln(Emp)	Exit	Ln(Emp)	Exit	Ln(Emp)	Exit
SC	0.010*** (0.002)	0.006* (0.003)	0.002 (0.002)	0.004 (0.004)	0.010*** (0.002)	0.006* (0.003)	0.003 (0.002)	0.004 (0.004)
Controls	Y	Y	Y	Y	Y	Y	Y	Y
FE: Year	Y	Y	Y	Y	Y	Y	Y	Y
FE: Firm	Y	Y	Y	Y	Y	Y	Y	Y
Observations	9,600,987	9,600,987	3,232,640	3,232,640	9,408,815	9,408,815	3,424,812	3,424,812

- ▶ IV confirms prior associational evidence
- ▶ Employment increase in high closure areas is incompatible with credit availability effect, since firms without credit access would not have increased employment more than those with access.

Effect Heterogeneity by Banking Relationship: Separating Credit-availability Effect

Separate credit-availability effect from deputization effect:

- ▶ Focus on firms that had continued access to banking relationship, but some experienced closure of branches of their lenders, while others did not
- ▶ Under deputization effect of banks, the former should exhibit stronger effect after SC.

	Ex-Ante Branch Closure: Yes		No	
	(1)	(2)	(3)	(4)
Outcome:	Ln(Emp)	Exit	Ln(Emp)	Exit
SC	0.007** (0.003)	0.003* (0.002)	-0.003 (0.006)	0.001 (0.001)
Controls	Y	Y	Y	Y
FE: Year	Y	Y	Y	Y
FE: Firm	Y	Y	Y	Y
Observations	76,188	76,188	237,740	237,740

Conclusion

First paper to formally document patterns consistent with undocumented worker employment by small businesses

- ▶ Stronger immigration enforcement leads to heightened per-firm employment and closures, alongside higher unemployment
- ▶ Effects are stronger in non-tradable and construction industries

Banking relationship appears to have a **deputization effect** in deterring borrowers from employing undocumented workers

- ▶ Novel link: **bank screening/monitoring and labor market informality**
- ▶ Banks may prompt borrowers to comply even with non-financial laws

Thank You

Questions, suggestions, comments, or criticisms?

Amit Kumar

Email: amitkumar@smu.edu.sg

Group-specific Wages and Employment: ACS

Industry Type:	Non-Tradable & Construction				Tradable				All
Labor Type:	LEFB		LEUB		LEFB		LEUB		All
Outcome:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Ln(Emp)	R.Wages	Ln(Emp)	R.Wages	Ln(Emp)	R.Wages	Ln(Emp)	R.Wages	Formal Emp/1K
SC	-0.103**	0.025	-0.048**	0.063*	-0.076	0.007	0.030	0.001	-35.635**
	(0.043)	(0.135)	(0.021)	(0.033)	(0.046)	(0.040)	(0.030)	(0.011)	(18.195)
FE: Year, County	Y	Y	Y	Y	Y	Y	Y	Y	Y
Observations	1,222	1,143	1,334	1,318	1,172	1,100	1,323	1,318	1,334

Official Statistics Miss Likely-Undocumented Immigrants

Outcome:	Ln(# Emp)					
Dataset:	ACS		QCEW		NETS	
	(1)	(2)	(3)	(4)	(5)	(6)
Industry:	Non-Trd	Trd	Non-Trd	Trd	Non-Trd	Trd
Ln(LEFB)	0.028*	0.100	-0.041	0.108	-0.033	0.021
	(0.02)	(0.07)	(0.04)	(0.12)	(0.03)	(0.06)
Ln(LEUB)	0.316***	0.593***	0.228***	0.664***	0.122***	0.170*
	(0.05)	(0.10)	(0.06)	(0.23)	(0.04)	(0.09)
Ln(High Educated)	0.625***	0.504***	0.118	0.354	0.035	0.291**
	(0.04)	(0.15)	(0.08)	(0.26)	(0.05)	(0.13)
Controls	Y	Y	Y	Y	Y	Y
FE: State, Year	Y	Y	Y	Y	Y	Y
Observations	1,692	1,692	1,692	1,691	1,692	1,692