

Unbanked Households: Evidence of Supply-Side Factors

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Outline of the talk

- Motivation
- Identification strategy and data
- Results
- Robustness checks

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■ Results

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The Unbanked Phenomenon

- 10% to 20% of all American households are **unbanked**
 - **40%** among **low income** households
 - **60%** among **low income** and **black** households
- Unbanked households:
 - Are at the mercy of “**fringe banks**”
 - Face **savings deficit**
 - Are more exposed to **behavioral biases**

The Unbanked Phenomenon

“The fact that these families often rely on informal means to manage their financial lives suggests that the formal sector is not meeting their needs”

National Poverty Center, 2008

Competing Reasons for Being Unbanked

■ “Demand-side”

- Cultural determinants
 - Distrust financial institutions
 - Lack “culture of saving”
- Low financial literacy

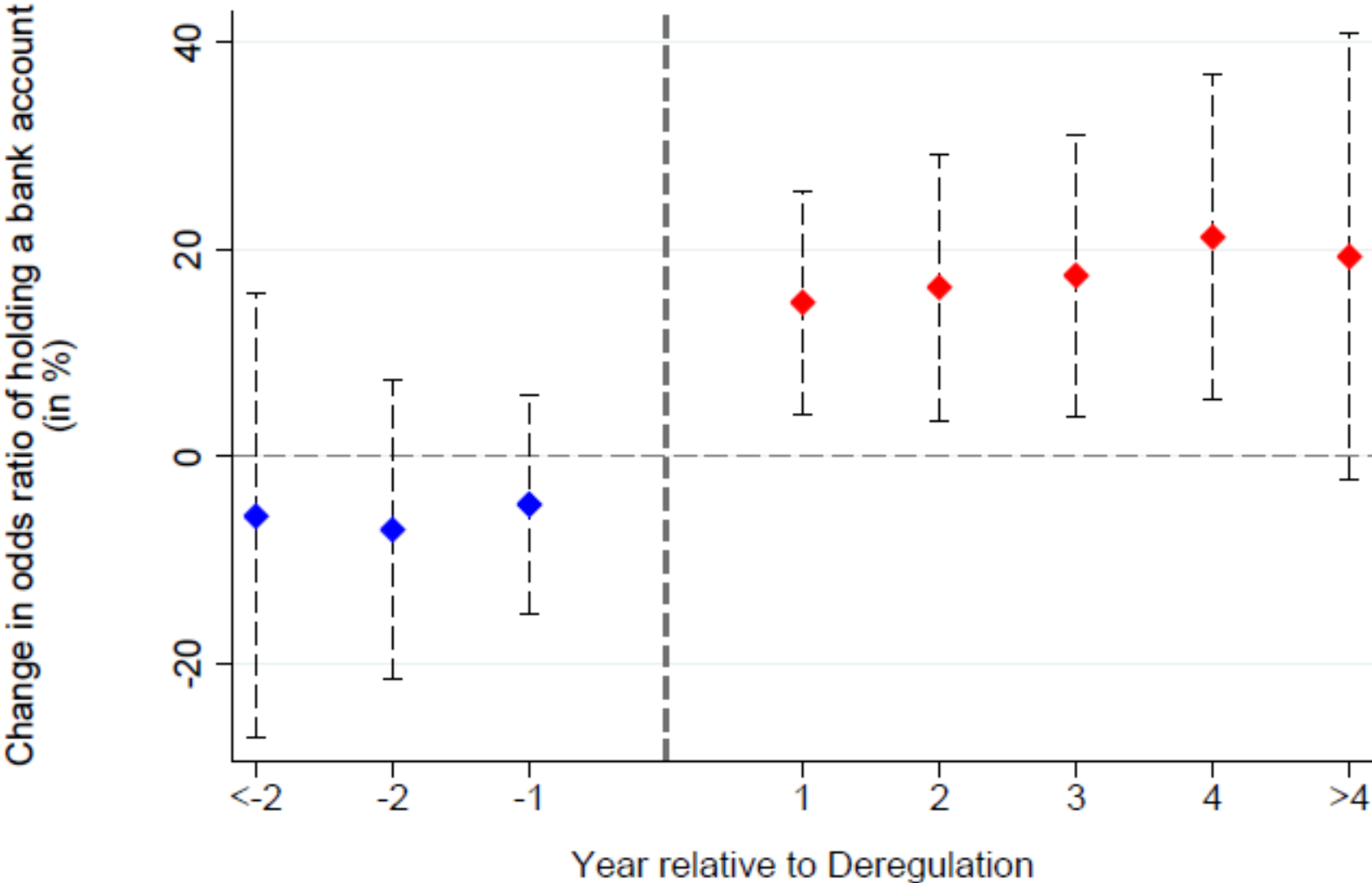
■ “Supply-side” (bank practises)?

- Fewer branches in disadvantaged neighborhood
- Minimum account balance to open an account
- High overdraft fees

What We Do

- **Hypothesis:** Bank practices partially account for the high share of unbanked households
- **Identification Strategy:** competitive shock on banks to assess the role of supply
- **Shock:** changes in interstate branching regulation in the U.S. after 1994

Key Finding



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Data

- Survey of Income and Program Participation (SIPP), 1993 -2010
 - 20,000 to 30,000 households per wave, 15 waves
 - 410,678 households residing in 45 states
 - Focus on low income households (< 200% poverty line)
- U.S. Bureau of Economic Analysis : Time varying state controls

Determinants of Being Unbanked

<i>Dependent Variable</i>	<i>=1 if owns a bank account</i>	
<i>Household characteristics</i>		
Black	-0.162***	(0.05)
Married Couple	0.091***	(0.03)
Single Female-Headed	0.035***	(0.03)
Household Size	-0.020***	(0.01)
Age	0.004***	(0.00)
Elementary Education	0.091	(0.080)
High School Education	0.193**	(0.080)
College Education	0.308***	(0.082)
Monthly Household Income	0.00***	(0.00)
Income < Poverty Threshold	-0.059***	(0.005)
Receive Social Security	0.013*	(0.007)
Receive transfer income	-0.139***	(0.007)
Head unemployed	0.012**	(0.004)

The Shock: Interstate Branching Deregulation

- The adoption of the IBBEA in 1994 allowed the entry of out-of-state bank branches
- **BUT** states had the right to erect **4 possible restrictions** to out-of-state entry
- **Deregulation index** = 4 – number of barriers
 - 0 = fully **regulated**
 - 4 = fully **deregulated**
- **57** episodes of deregulation in **43** different states between 1994 and 2005

Evolution of Deregulation

Number of Deregulation in 1994

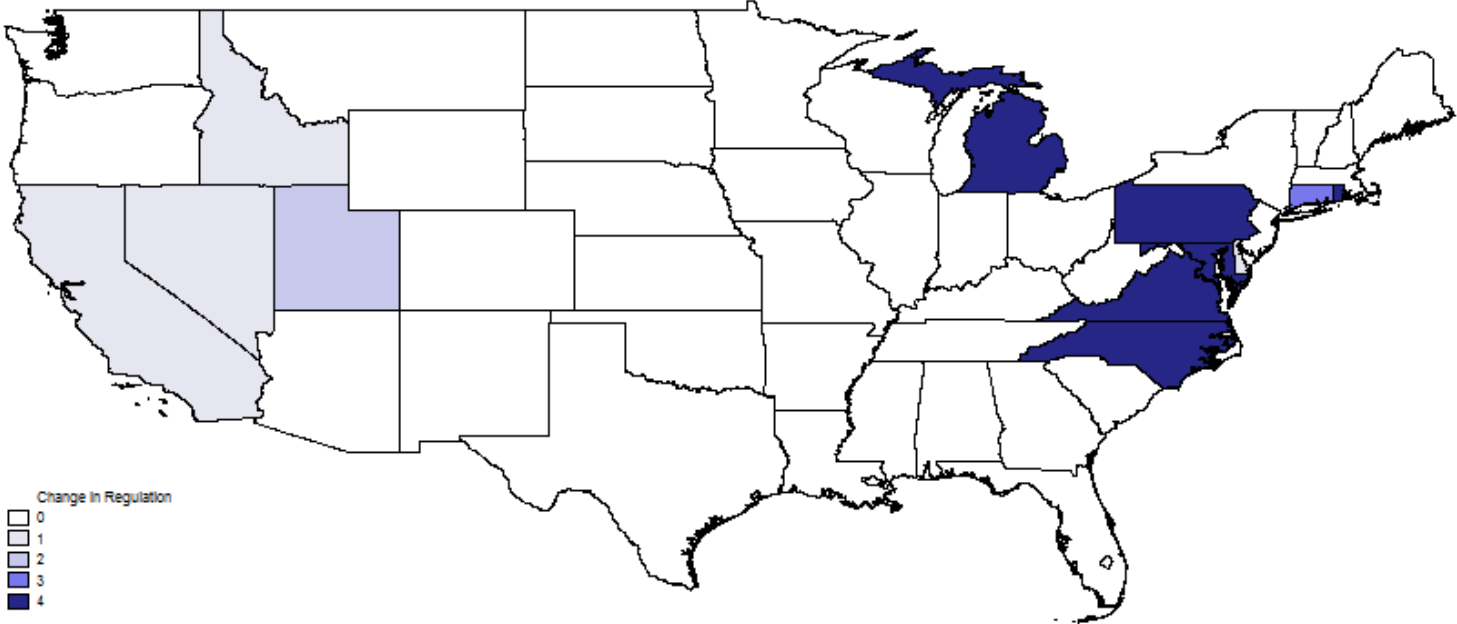


1994



Evolution of Deregulation

Number of Deregulation in 1995



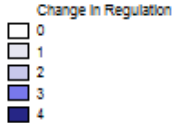
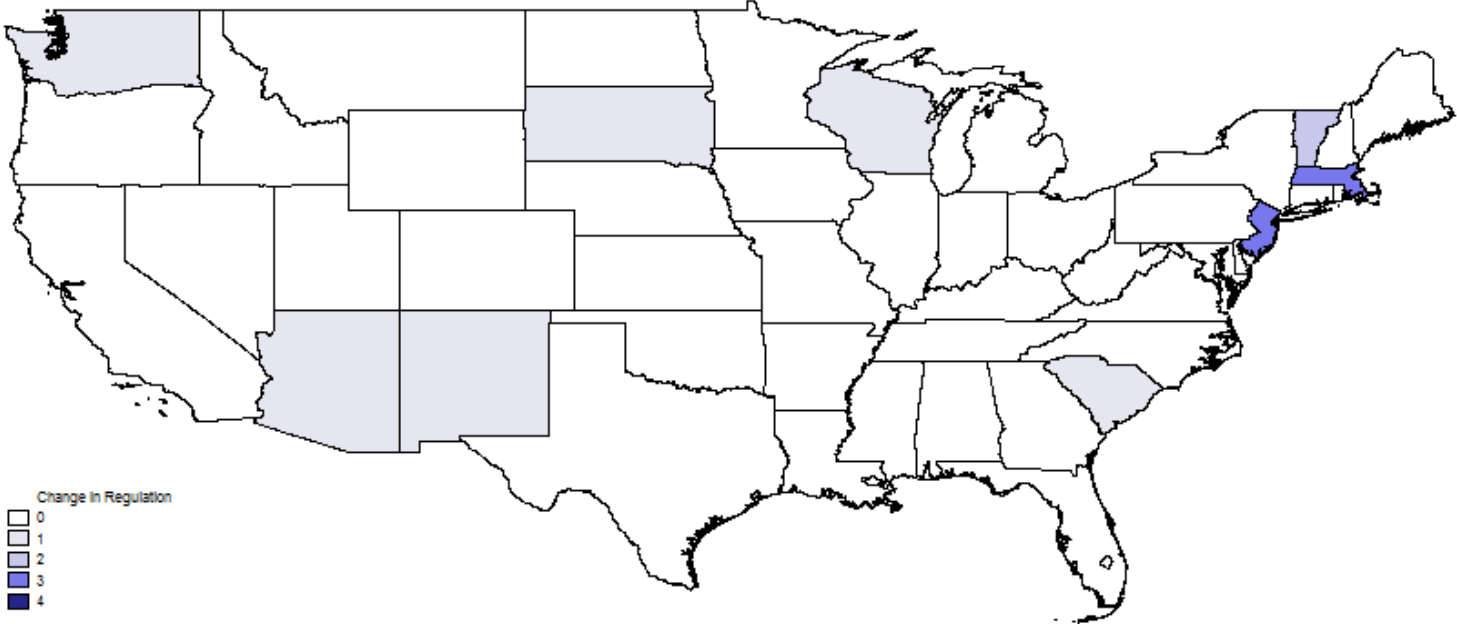
Change in Regulation
0
1
2
3
4

1995



Evolution of Deregulation

Number of Deregulation in 1996

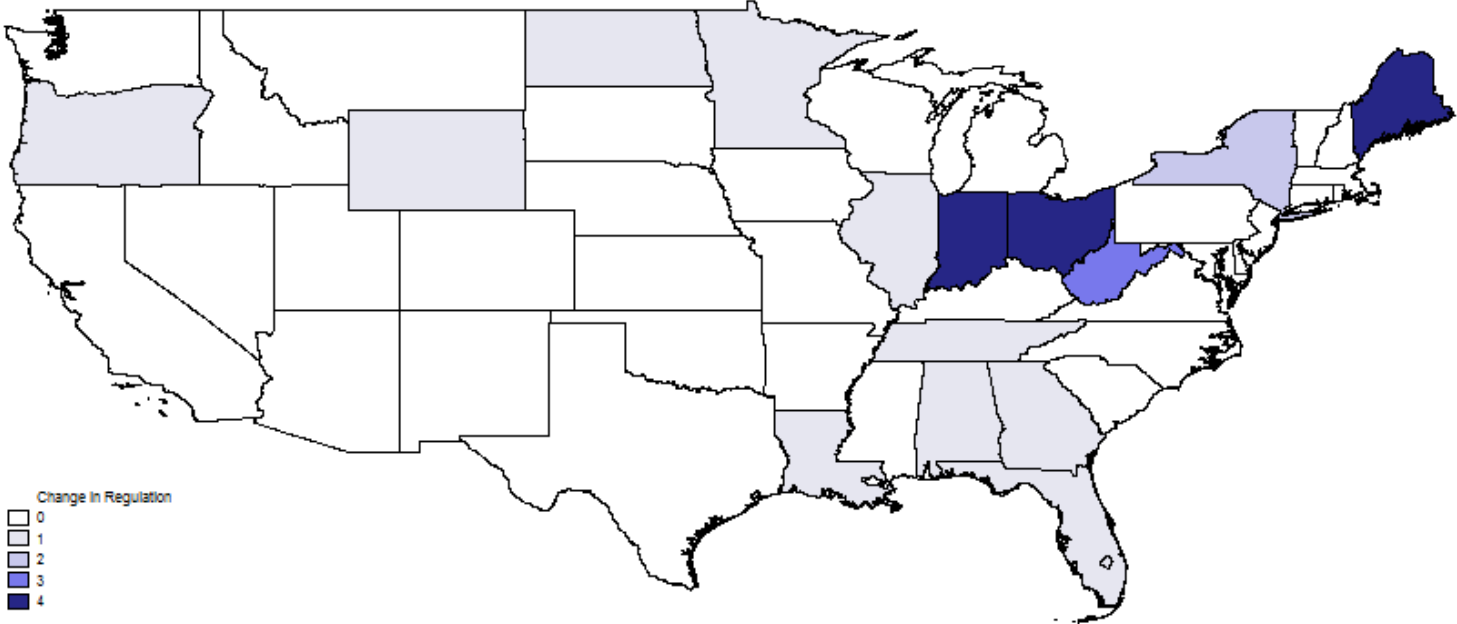


1996



Evolution of Deregulation

Number of Deregulation in 1997



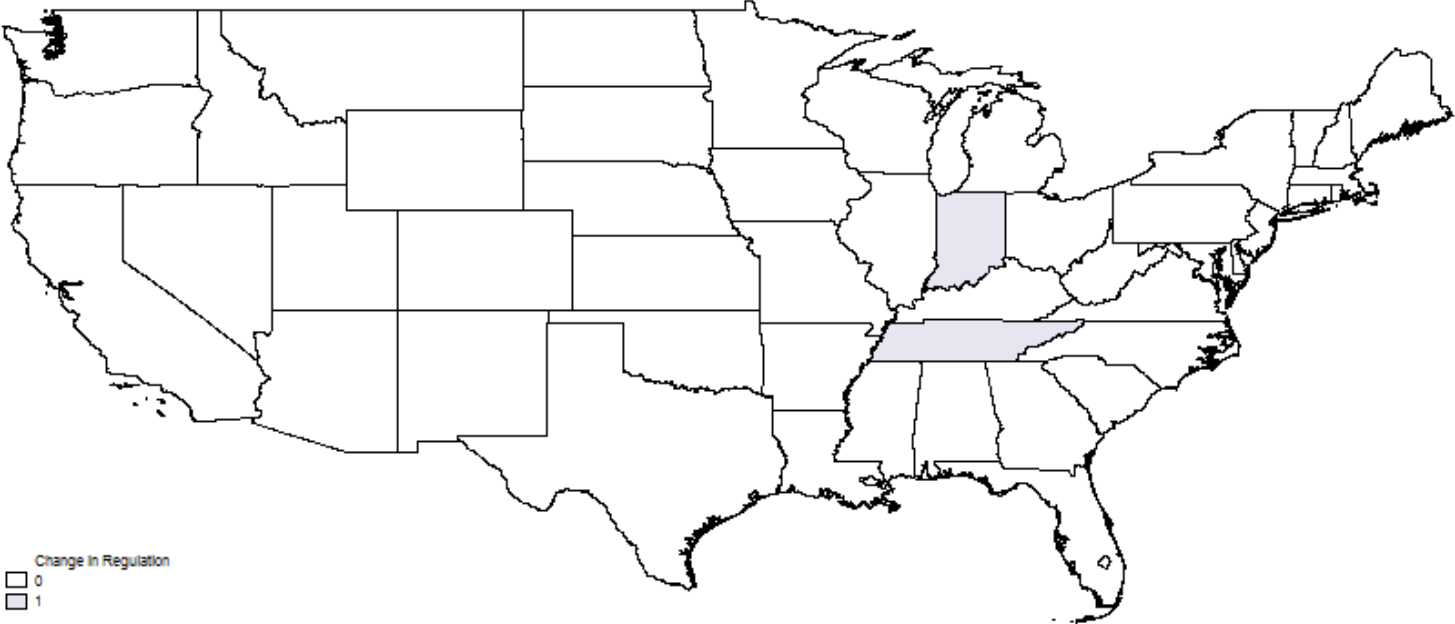
Change in Regulation
0
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4

1997



Evolution of Deregulation

Number of Deregulation in 1998



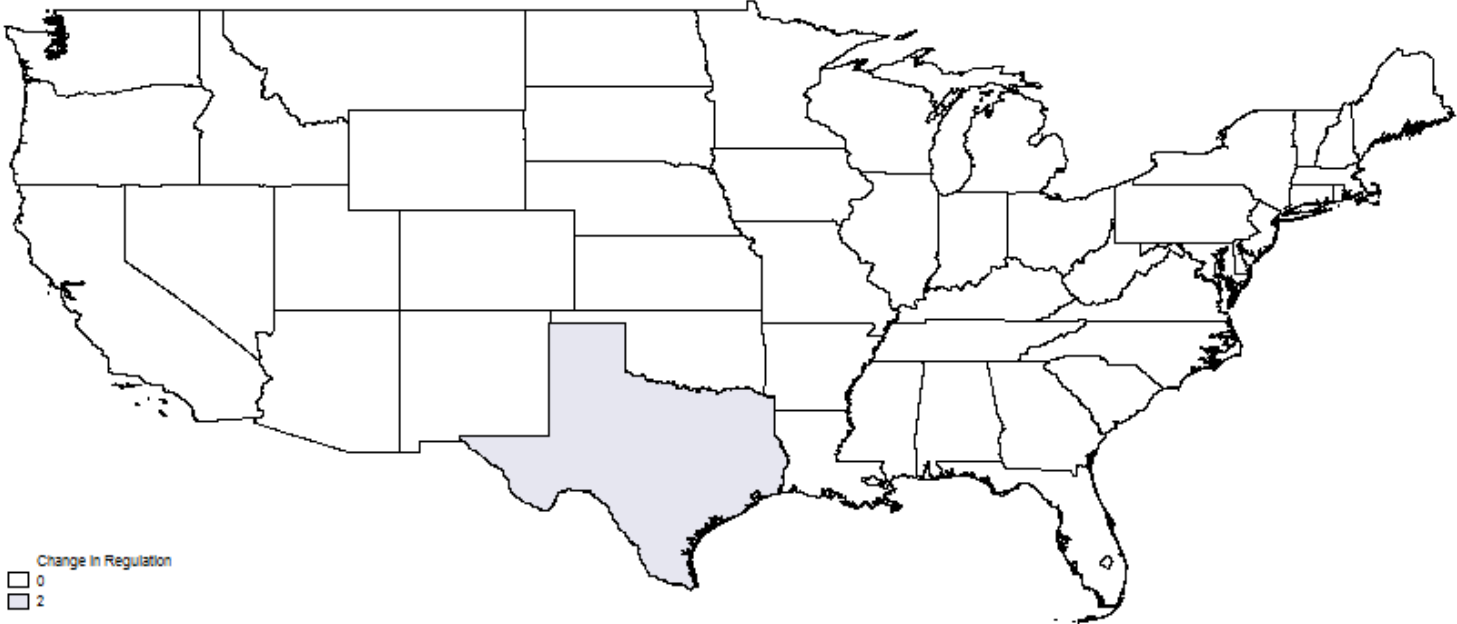
Change in Regulation
0
1

1998



Evolution of Deregulation

Number of Deregulation in 1999



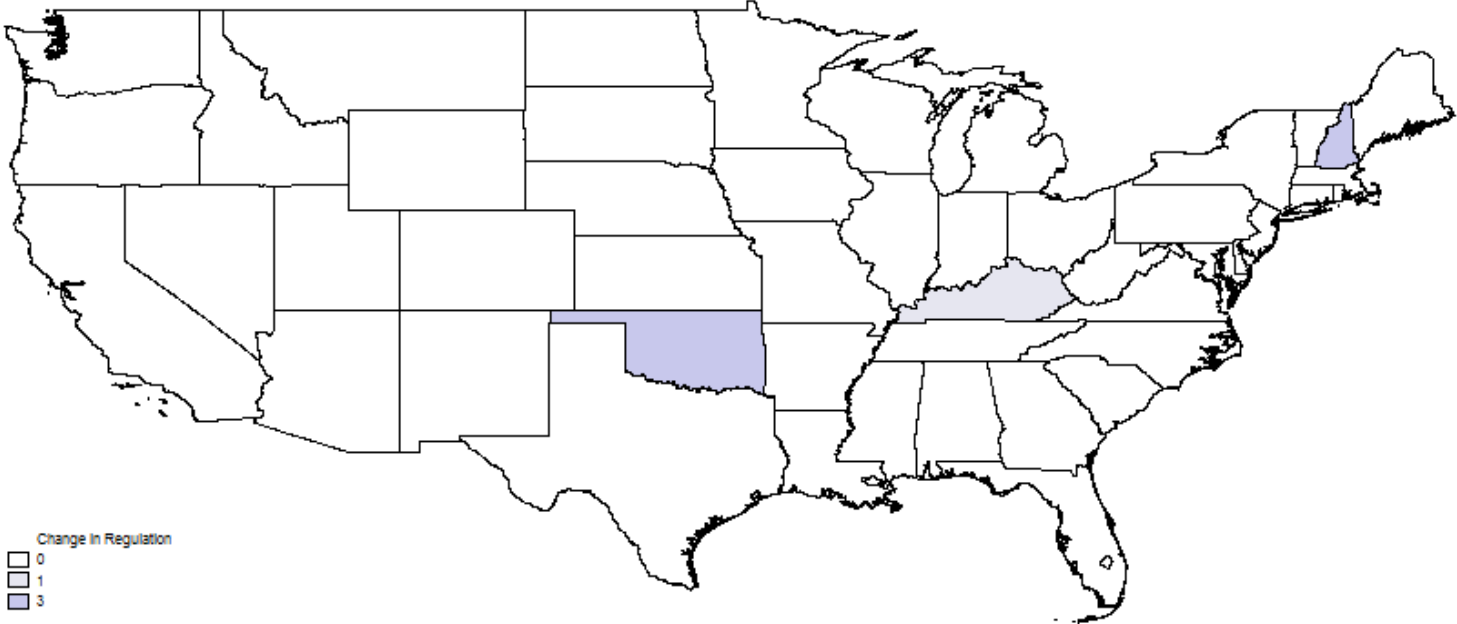
Change in Regulation
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2

1999



Evolution of Deregulation

Number of Deregulation in 2000



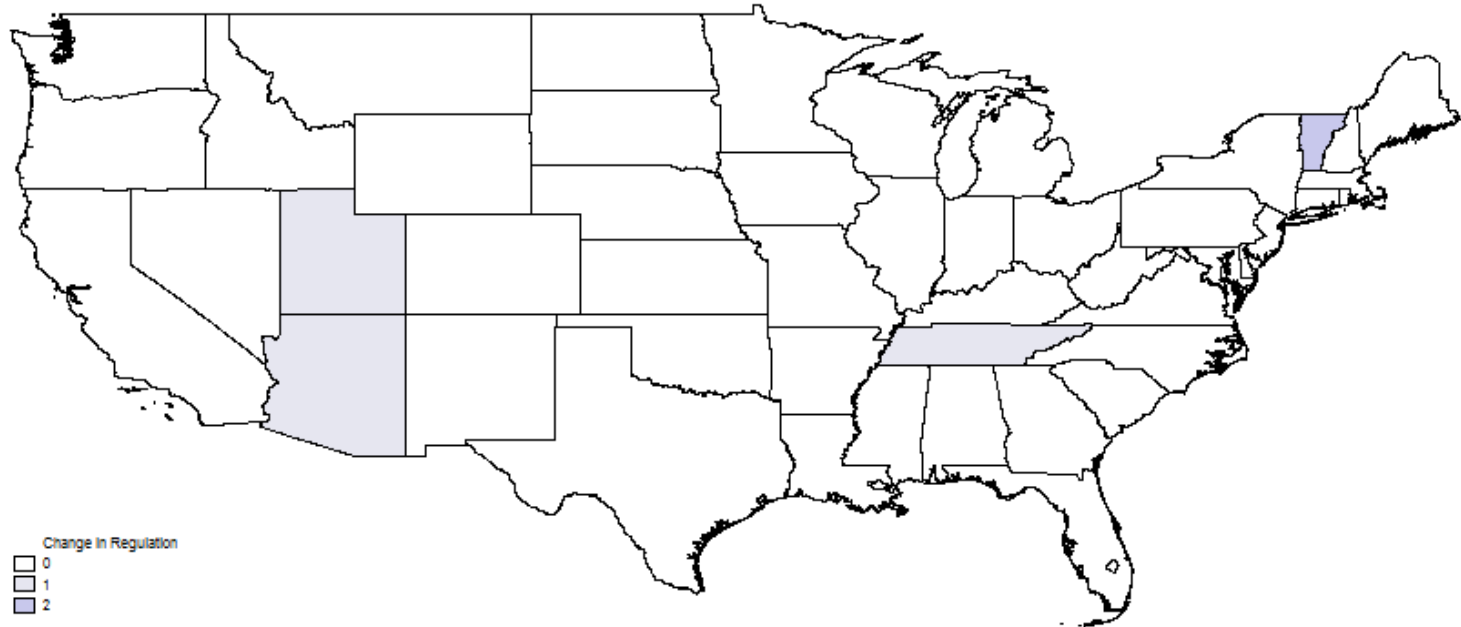
Change in Regulation
0
1
3

2000



Evolution of Deregulation

Number of Deregulation in 2001



Change in Regulation
0
1
2

2001



Evolution of Deregulation

Number of Deregulation in 2002



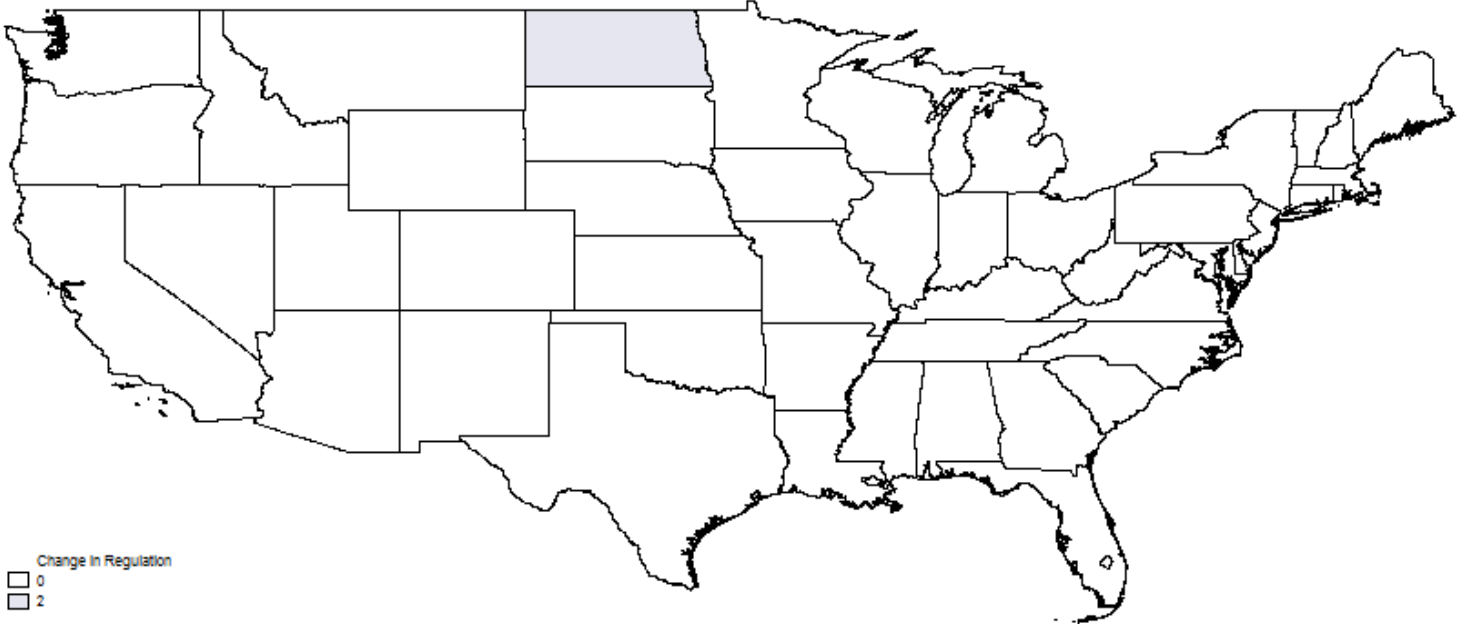
Change in Regulation
0
1

2002



Evolution of Deregulation

Number of Deregulation in 2003

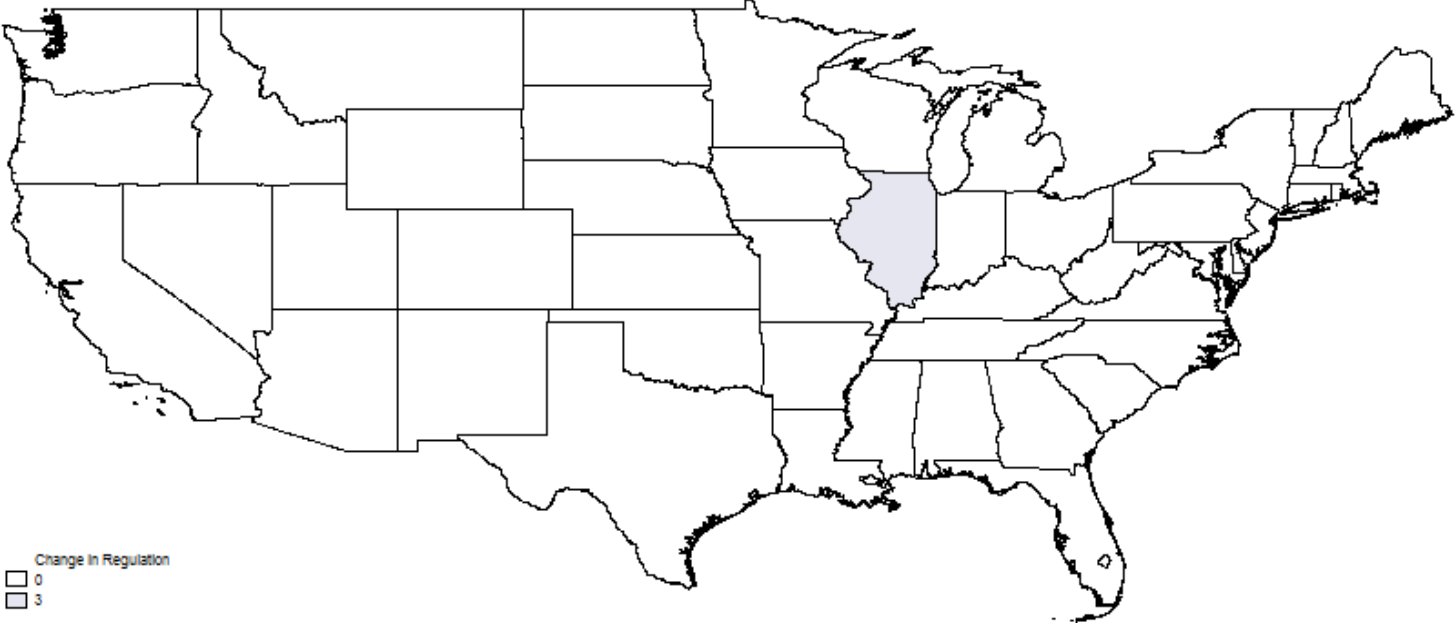


2003



Evolution of Deregulation

Number of Deregulation in 2004



Change in Regulation
0
3

2004



Evolution of Deregulation

Number of Deregulation in 2005

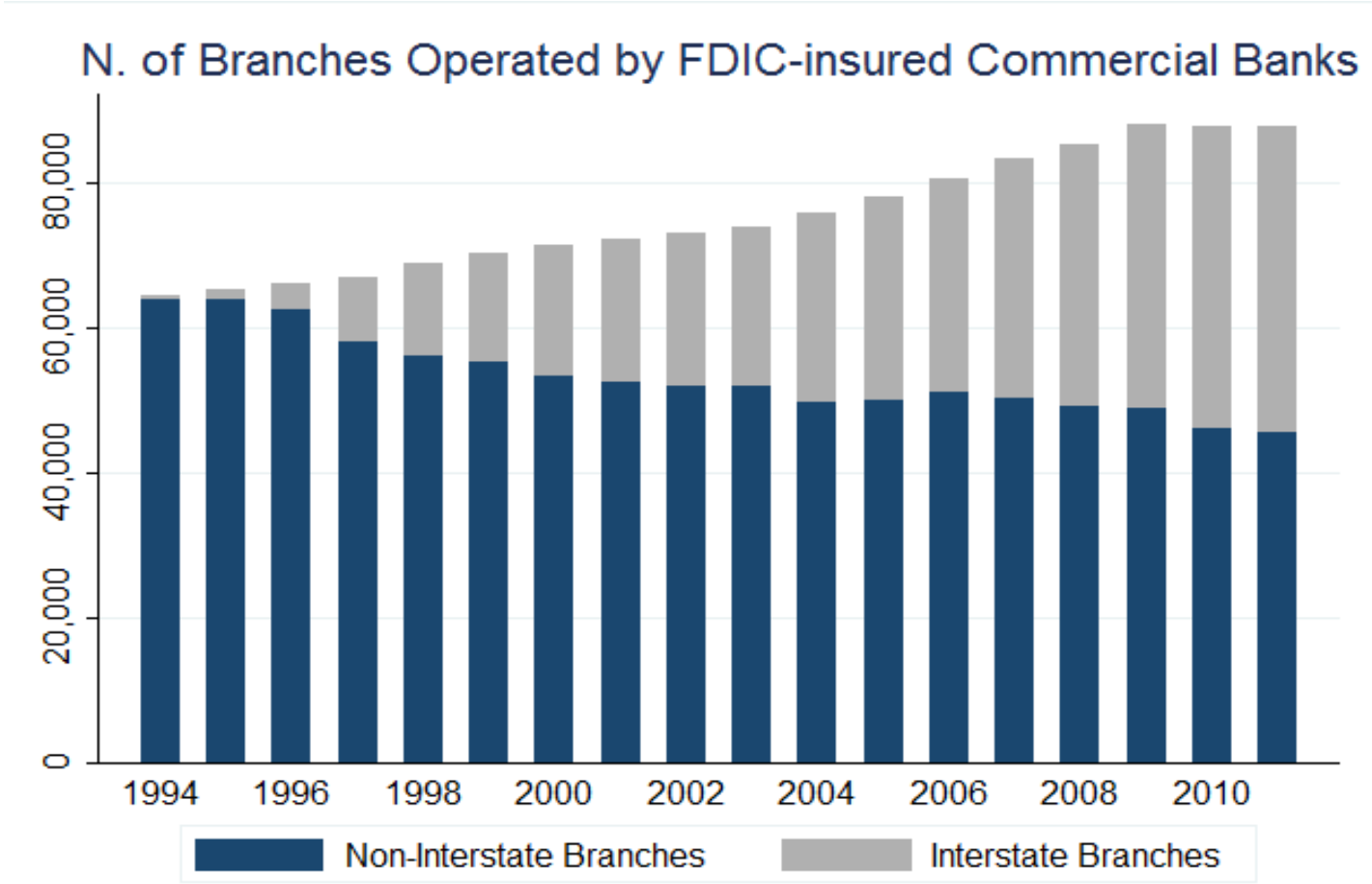


Change in Regulation
0
2

2005



Significant Out-of-State Bank Penetration



Identification Strategy

- Likelihood that a **household i** in **state s** at **year t** holds a bank account

$$\Pr\{BankAccount_{ist}\} = \beta Deregulation_{st} + \theta X_{ist} + \delta StateControls_{st} + \gamma_s + \eta_t + \varepsilon_{ist}$$

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Competition Increases the Share of Banked Households

<i>Dependent variable</i>	=1 if the household holds a bank account			
	(1)	(2)	(3)	(4)
Deregulation Index	0.012*** (0.004)	0.012*** (0.004)	0.012*** (0.004)	
Deregulation ($\leq t-4$)				-0.012 (0.016)
Deregulation (t-3,t-1)				-0.012 (0.012)
Deregulation (t+1,t+3)				0.033*** (0.012)
Deregulation ($\geq t+4$)				0.037** (0.017)
Household Controls	-	Yes	Yes	Yes
State-Year Controls	-	-	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
State Fixed Effects	Yes	Yes	Yes	Yes
Observations	136,176	136,176	136,176	136,176

Is the Effect stronger for Households that are More Likely to be Rationed?

- Black households in states with a history of discrimination
 - Four proxies for black discrimination preferences
- Poor households
- Households living in rural areas
- Educated households

Competition Reduces Racial Discrimination in States with Preferences for Discrimination

<i>Dependent Variable</i>	=1 if the household holds a bank account				
<i>Discrimination Dummy</i>	-	Former Slave State	Antimiscegenation Law	No Fair Housing Law	Share of interracial marriage
	(1)	(2)	(3)	(4)	(5)
Deregulation Index	0.010** (0.004)	0.014** (0.005)	0.012*** (0.005)	0.014** (0.005)	0.013*** (0.005)
Index x Black	0.009 (0.006)	-0.002 (0.008)	0.003 (0.008)	-0.005 (0.007)	-0.001 (0.006)
Index x Black x Discr.		0.024** (0.010)	0.018* (0.009)	0.028*** (0.009)	0.023*** (0.008)
Household Controls	Yes	Yes	Yes	Yes	Yes
State-Year Controls	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
State Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	136,176	135,934	136,176	136,176	136,176

Heterogenous Effect of Deregulation Across Household Types

<i>Dependent Variable</i>	=1 if the household holds a bank account						
<i>Sample</i>	Income Group			Residence		Education	
	Poor (1)	Low (2)	Middle (3)	Rural (4)	Urban (5)	High (6)	Low (7)
Deregulation Index	0.016*** (0.004)	0.010** (0.004)	0.003 (0.003)	0.018*** (0.007)	0.010* (0.005)	0.012** (0.005)	0.007 (0.006)
Household Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State-Year Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	52,470	83,706	48,343	37,550	98,626	97,873	38,303

Consequences for Households?

- Asset accumulation
- Debt?

Effect of Bank Deregulation on Household Asset Accumulation

<i>Dependent variable</i>	=1 if the household holds						
	Checking Account	Savings Account	Checking Account		Savings Account		Savings in o. Institutions
<i>Sample</i>	All	All	Poor	Low Inc.	Poor	Low Inc.	All
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Deregulation Index	0.007** (0.003)	0.006*** (0.002)	0.014*** (0.003)	0.008* (0.005)	0.004 (0.003)	0.009*** (0.003)	0.094*** (0.038)
Household Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State-Year Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	135,524	135,524	38,620	46,115	52,250	83,274	135,340

Effect of Bank Deregulation on Household Debt

<i>Dependent variable</i>	=1 if the household holds			Debt-to-Inc. R.
<i>Sample</i>	Debt	Bank Account		All
	Banked HH	Debt-free HH	In debt HH	
	(1)	(2)	(3)	(4)
Deregulation Index	0.001 (0.002)	0.014*** (0.005)	0.007** (0.003)	0.013 (0.020)
Household Controls	Yes	Yes	Yes	Yes
State-Year Controls	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
State Fixed Effects	Yes	Yes	Yes	Yes
Observations	84,089	63,039	72,660	135,699

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Alternative story: demand effect?

- Deregulation fosters growth and employment: participation could be a “**collateral benefit**”
- **BUT:**
 - **Control** for a lot of socio-economic and macro variables
 - Does not appear fully consistent with results in **cross section** of households (education)
 - Add **finer macro economics variables** specific to black and poor households
 - Find no difference between households who are **more or less likely to be unemployed**

Other Robustness

- Test endogeneity

- Other robustness:

 - Periods

 - States

 - Placebo

Take Away

- Supply-side factors contribute to the unbanked phenomenon
- Increase in banking competition
 - **Eases access** to banking services for low income households
 - Particularly for **black households** in states with a history of discrimination
 - Which improves **asset accumulation**
 - And does **not** appear to be driven by **increased demand**
- **Policy Implication:** Can "demand intervention" (financial literacy program) be enough? → How to modify banks' incentives?

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Thank You!