

Income Inequality and Minority Labor Market dynamics: medium term effects of the Great Recession

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Research question

- How do local banking market frictions affect income inequality in the US?
- This question is extremely important as income distribution shapes public policy and influence financial sector policies (Demirguc-Kunt and Levine, 2009).
- It also has significant implications for local economic growth and stability as widening income inequality is often associated with economic stagnation and lack of mobility (Dabla-Norris et al. 2015).

Main findings

Using a difference-in-differences model we find:

- Treated MSAs had Gini index 0.45 units higher or about 1% more unequal
- In treated MSAs the 90th percentile took home an additional 38 cents relative to the bottom 20th percentile, or about 7% more
- In treatment MSAs the 20th percentile incomes decline 5.3%
- However, we find the strongest results among low skill workers (high school degree or less)
 - Gini is 1.7 units higher and the income of the 20th percentile is 11.6% lower
- We further analyze the effects at the individual level, we observe that:
 - Blacks see a 10.2% decline in incomes
 - corresponding effect is 9.8% and 5.1% for Hispanics and whites, respectively
 - The effect is 2-3x larger for black and Hispanics in the 20th percentile

Bank Failure

The FDIC declares a bank “failed” when it ceases to exist and operate, and the institution’s charter is terminated.

In 2005-2007 there were 3 failed banks

In 2011-2013 137 failed

In 2008-2010 335 failed

- We exploit the large number of failed banks in the Great Recession periods to identify the effect that exposure to a bank failure has on income inequality
 - Treatment group: takes the value of one if MSA i suffers a bank failure in 2008-2010
 - Control group: No bank failure in 2008-2010

Transmission

- Credit Allocation channel: local communities affected by a bank failure observe changes in small business loans away from poorer and toward wealthier communities. Such changes in credit allocation, in part, drive income inequality.
- Business formation channel: Bank failures lower business formations -> affects employment, wages, and increases lower paid self-employment and minority employment rates, which widens income inequality.

Inequality

Measures are constructed using ACS 1% sample. For individual's age 25-65, in labor force, and non-missing race and education values.

- Gini
- Income 90/20 - income of the 90th percentile divided by the income of the 20th percentile
- Top 10th share of income
- Real income of 90th percentile
- Real income of 20th percentile

Descriptives

Table 1

Selected statistics of treated/control and pre/post treatment

Table reports means and difference in means p-values for selected variables. Pre-treatment period is 2005-2007. Post-treatment period is 2011-2013. Treated counties are those who experienced a bank failure in the 2008-2010 period, control MSAs otherwise. P-values are for difference in means between pre and post-treatment periods.

		Pre-treatment mean	Post-treatment mean	difference	p-value
MSA level	<i>Panel A - Treated</i>				
	Gini	45.75	48.33	2.6	0.00
	Income 90/20	5.57	6.87	1.3	0.00
	Top 10th share of income	33.73	34.59	0.9	0.13
	Real income of 90th percentile	107,319	94,089	-13,230	0.00
MSA level	Real income of 20th percentile	19,225	13,529	-5,696	0.00
	<i>Panel B - Control</i>				
	Gini	43.52	45.37	1.8	0.00
	Income 90/20	5.08	5.83	0.8	0.00
	Top 10th share of income	31.88	32.36	0.5	0.13
	Real income of 90th percentile	90,250	79,843	-10,407	0.00
	Real income of 20th percentile	18,081	13,614	-4,468	0.00

Estimating Strategy

$$\begin{aligned} Inequality_{its} = & \alpha + \alpha_1(Treated)_{its} + \alpha_2(Post - Treatment)_{its} \\ & + \alpha_3(Treated \times Post - Treatment)_{its} + \Theta(Z)_{its} + s_t + \epsilon_{its} \end{aligned} \quad (1)$$

- Individual i , year t , in state s
- *Inequality*: Gini, income of 90th/20th, top 10th, income 90th, income 20th
- Z reflects a vector of 3-year averaged MSA-level controls in the pre- and post-failure periods
 - Control variables: share minority, share male, population, share of population 25-54, population, share of population 25-65 with bachelor's degree, real income per capita, unemployment rate, financial development, and real deposits per capita

Results

Table 2
Effect of bank failures on alternative measures of inequality

	Gini	Income 90/20	Top 10th share of in- come	Log real income of 90th percentile	Log real income of 20th percentile
	(1)	(2)	(3)	(4)	(5)
<i>Panel A - all</i>					
Treated X Post Treatment Period	0.451* (0.241)	0.381*** (0.110)	0.321 (0.202)	-0.013 (0.008)	-0.055*** (0.016)
<i>Panel B - high skill</i>					
Treated X Post Treatment Period	0.277 (0.205)	0.380*** (0.080)	0.013 (0.188)	-0.002 (0.009)	-0.055*** (0.012)
<i>Panel C - low skill</i>					
Treated X Post Treatment Period	1.739*** (0.491)	1.587*** (0.415)	0.934** (0.413)	0.028* (0.015)	-0.134*** (0.034)

Individuals' labor market dynamics

To provide a better understanding of our findings we present results at the individuals' level for blacks, Hispanics and whites.

income

weekly hours worked

probability of being in the labor force

- We pool individuals' into two groups, pre- and post- failure, for years 2005-2007 and 2011-2013 (ACS 1%)
- For individuals in the LF age 25-65

Individuals' labor market dynamics - Results

Table 3
Effect of bank failures on individuals

	Log real income				Weekly hours worked				In labor force			
	All	20th percentile	50th percentile	80th percentile	All	20th percentile	50th percentile	80th percentile	All	high school degree or less	some college or associate's degree	bachelor's degree or higher
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Panel A - Black												
Treated X Post Treatment Period	-0.108*** (0.037)	-0.273*** (0.091)	-0.180*** (0.044)	-0.027** (0.012)	-0.173 (0.119)	-0.475* (0.283)	-0.178 (0.146)	-0.404 (0.394)	-0.002 (0.004)	0.003 (0.009)	-0.006 (0.006)	-0.011** (0.005)
N	478659	130373	298786	51506	450022	101736	270149	51506	669814	243608	262893	163313
R-sq	0.096	0.081	0.061	0.234	0.049	0.039	0.030	0.041	0.134	0.109	0.063	0.051
Panel B - Hispanic												
Treated X Post Treatment Period	-0.103*** (0.035)	-0.339*** (0.110)	-0.113** (0.048)	-0.026* (0.013)	-0.408** (0.188)	-1.073*** (0.388)	-0.482** (0.210)	0.498* (0.298)	0.006 (0.006)	0.007 (0.009)	-0.002 (0.007)	0.003 (0.007)
N	678727	188972	453126	67455	653435	163680	427834	67455	909224	500476	247700	161048
R-sq	0.073	0.076	0.036	0.254	0.073	0.097	0.068	0.037	0.115	0.141	0.046	0.047
Panel C - White												
Treated X Post Treatment Period	-0.052*** (0.013)	-0.132*** (0.047)	-0.114*** (0.023)	-0.022*** (0.008)	-0.048 (0.054)	-0.028 (0.130)	-0.222*** (0.085)	-0.025 (0.078)	0.002 (0.002)	-0.011** (0.005)	-0.002 (0.003)	-0.003 (0.002)
N	3279134	544797	1386181	873672	3213373	479036	1320420	873672	4176072	842648	1463916	1869508
R-sq	0.099	0.074	0.041	0.240	0.086	0.080	0.066	0.030	0.102	0.119	0.063	0.071

Summary

- We find that bank failures lead to worsening income distribution. This is because
 - Incomes of the lowest earners go down more so relative to high earners
 - Only Hispanics show markedly declines in hours worked
 - This indicates that black and white income declines are mostly driven by lower hourly pay
- Our findings suggests that local episodes of bank failure carry significant social consequences
- We speculate that changes to credit allocation and business dynamics are the mechanisms driving our results

Thank You
&
Happy New Year!