

Dynamic Individuals, Static Neighborhoods: Migration and Earnings Changes in Poor Neighborhoods

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Motivation: Why do poor neighborhoods tend to stay poor?

Neighborhood poverty rates are **persistent** over time

- Example: Neighborhoods with 30% poverty rate in 1990 had essentially same poverty rate on average between 2000–2019

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Broad explanations for this persistence:

1. Residents of poor neighborhoods stay put and see little income growth
→ **Static** neighborhoods, **static** individuals
 - ▶ Possibly because of non-income barriers to migration
[e.g., Cutler, Glaeser, and Vigdor, 1999; Christensen and Timmins, 2022; Bergman et al., 2024]
2. People leave poor neighborhoods when their income rises, leaving others behind
→ **Static** neighborhoods, **dynamic** individuals
 - ▶ Consistent with demand for neighborhood quality rising with income
[e.g., Epple and Sieg, 1999; Bayer, Ferreira, and McMillan, 2007; Kuminoff, Smith, and Timmins, 2013; Bilal and Rossi-Hansberg, 2021]

To separate these explanations, we need to understand individual-level patterns

This paper: New evidence using comprehensive administrative data

Admin data with neighborhood location and earnings from Census Bureau

Estimate three sets of parameters that are central to concentrated poverty

1. Migration rates out of poorer vs. richer neighborhoods
2. Earnings growth among people in poorer vs. richer neighborhoods
3. Effect of earnings growth on moves to richer neighborhoods

Examine heterogeneity along many individual-level dimensions

Study implications for neighborhood change

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Key takeaway: Substantial person-level dynamics in migration and earnings

Relationship to prior literature

Understanding migration and earnings in poor neighborhoods

- Use administrative data to extend migration results based on PSID [Gramlich et al. 1992; Quillian 2003] and housing safety net samples [Kling, Liebman, and Katz 2007; Chetty, Hendren, and Katz 2016; Chyn 2018]
- Little prior work on how earnings dynamics vary across neighborhoods

Studies of neighborhood change

[e.g., Rosenthal 2008; Lee and Lin 2018; Malone and Redfearn 2018; Couture and Handbury 2020]

- Describe individual dynamics that drive neighborhood-level patterns
- Complement papers studying individual-level migration in gentrifying neighborhoods [McKinnish, Walsh, and White 2010; Ellen and O'Regan 2011; Brummet and Reed 2021]

Data and Sample

Data sets

Master Address File-Auxiliary Reference File (MAFARF): Housing unit of residence for near-population of US residents [More](#)

- Draws from tax, health, and housing data from federal agency records

American Community Survey (ACS): Individual and household characteristics

- Repeated cross sections of survey responses, about 2% of population in each year

LEHD: Quarterly earnings, employment, employer characteristics

- Extract includes 25 states (roughly representative of the country)

Sample overview

Sampling frame is a subset of respondents to 2005–2013 waves of the ACS

- Age 25+
- Not full-time student, in armed forces, child of household head, or in group quarters
- Not living a tract where 18–25 year-olds are $>20\%$ of population

Link MAFARF & LEHD for period from 3 years before to 10 years after ACS year

Migration and earnings samples

Migration sample: $N=13.2$ million

- Use respondents to 2005–2011 ACS to get 10 years of migration outcomes

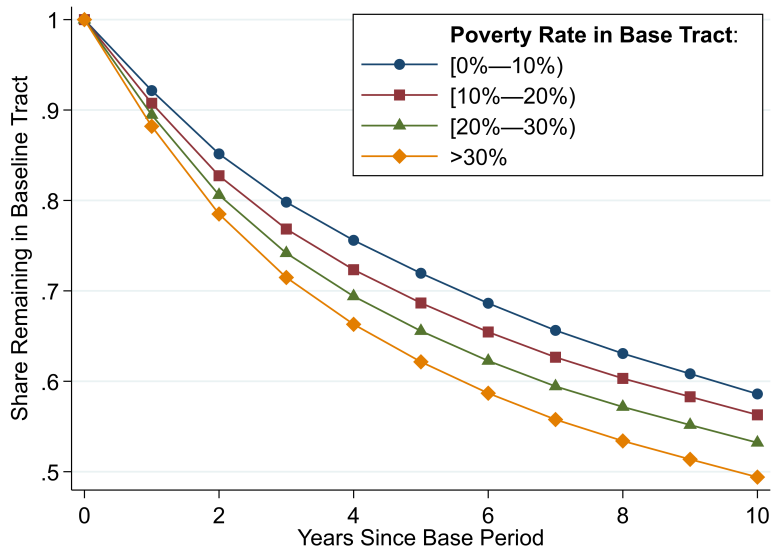
Earnings sample: $N=1.7$ million

- Use respondents to 2005–2013 ACS and restrict to LEHD states
- Apply sample restrictions following earnings dynamics literature:
- Require some labor force attachment: age ≤ 55 and work hours ≥ 1042
- Drop person-year if LEHD annual earnings $< \$4,000$ or $> \$300,000$
- We will disclose results for a broader set of individuals soon

Note: We use 2010 census tract boundaries and focus on time-invariant measures of neighborhood characteristics from 2005–2009 ACS

Migration Across Neighborhoods

Migration rates are higher among people starting in poorer neighborhoods



Overall, 43% of people move to a different tract within 10 years

51% for people in high poverty tract

By income quintile

Most people who leave their high poverty neighborhood move to a richer one

Year t poverty	Year $t + 8$ poverty				Obs.
	0-10	10-20	20-30	30+	
30+	12.7	13.9	9.8	63.5	672,000

36.5% of people in high poverty tract live in a less poor tract 8 years later

81% of people who leave high poverty tract move to a richer one

By income quintile

Exposure to concentrated poverty among initial high poverty residents is bimodal

	Share by years in high poverty tract			Mean tract poverty change among exiters
	≤ 5	6-9	10	
Overall	0.309	0.153	0.538	-23.7%

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Age 25-35	0.502	0.190	0.309	-23.9%
Age 45-65	0.234	0.135	0.630	-23.5%

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Black	0.290	0.173	0.537	-23.8%
Hispanic	0.270	0.141	0.589	-22.5%
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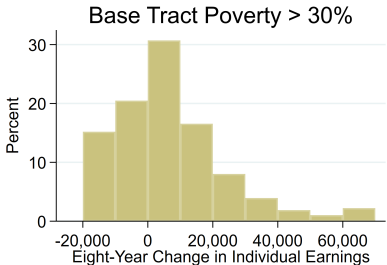
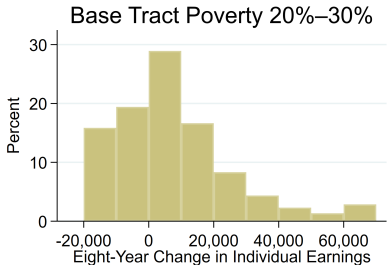
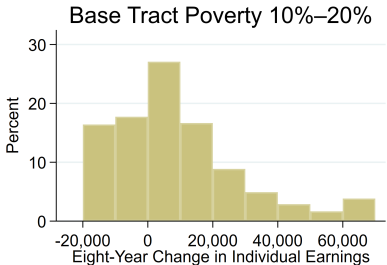
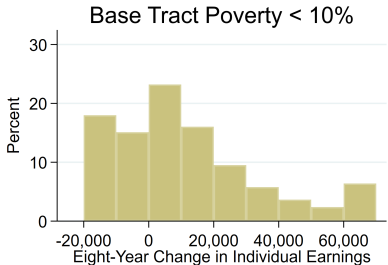
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Owner	0.217	0.124	0.659	-24.5%
Renter	0.405	0.184	0.412	-23.3%

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Owner	0.217	0.124	0.659	-24.5%
Renter	0.405	0.184	0.412	-23.3%
No kids	0.275	0.143	0.582	-24.1%
Has kids	0.352	0.166	0.482	-23.4%
Has kids & age < 40	0.437	0.187	0.376	-23.5%

Earnings Dynamics Across Neighborhoods

Earnings changes are widespread across residents of all types of neighborhoods

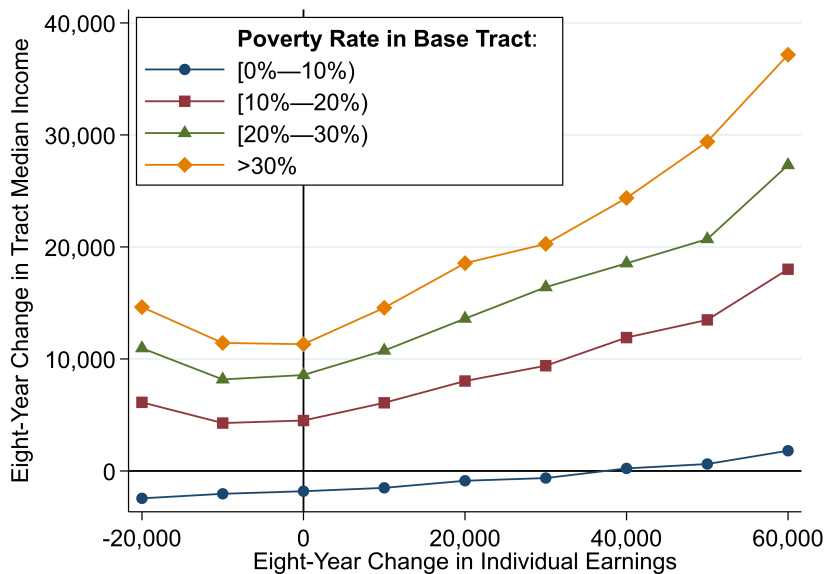


Earnings growth rates are similar among people starting in richer vs. poorer neighborhoods

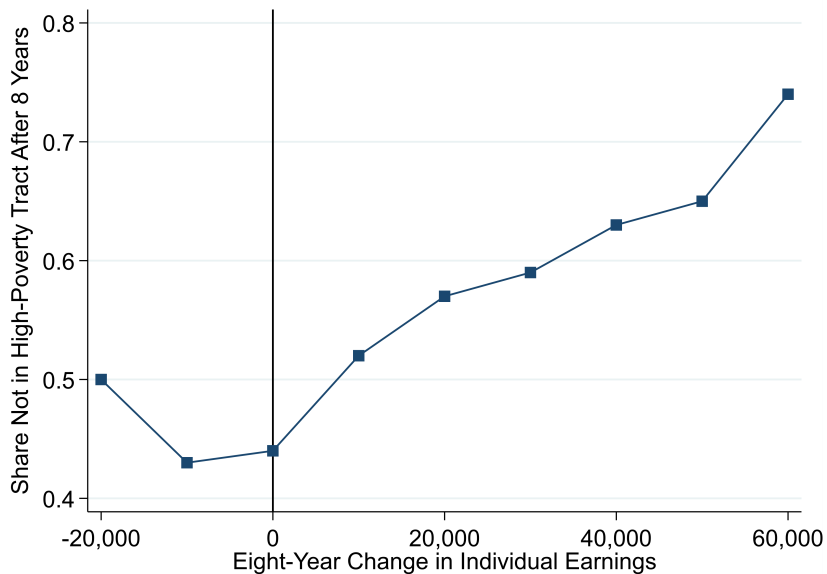
Eight-year change in earnings, arc percent			
	(1)	(2)	(3)
Indicators for baseline neighborhood poverty			
Poverty rate 0–10	-0.003 (0.003)	-0.006 (0.003)	-0.006 (0.003)
Poverty rate 10–20	-0.001 (0.003)	-0.003 (0.003)	-0.006 (0.003)
Poverty rate 20–30	-0.004 (0.003)	-0.005 (0.003)	-0.007 (0.003)
Intercept	0.104 (0.003)	0.107 (0.003)	0.108 (0.003)
CBSA and year FE		X	X
Race, age, education			X

Earnings Changes and Migration

People move to richer neighborhoods as their earnings rise



People are more likely to leave high poverty neighborhoods as their earnings rise



Quasi-experimental variation in earnings changes

Exploit earnings changes due to idiosyncratic firm-level shocks

[Kousta 2018; Ganong et al. 2020; Rose and Shem-Tov 2023]

Construct leave-out firm pay shock for each person in the ACS (2005–2013)

- Mean percent change among coworkers who aren't in ACS
- Measured over 4 quarter period, starting from time in ACS
- Limit to coworkers who stay at firm, require at least 25 coworkers

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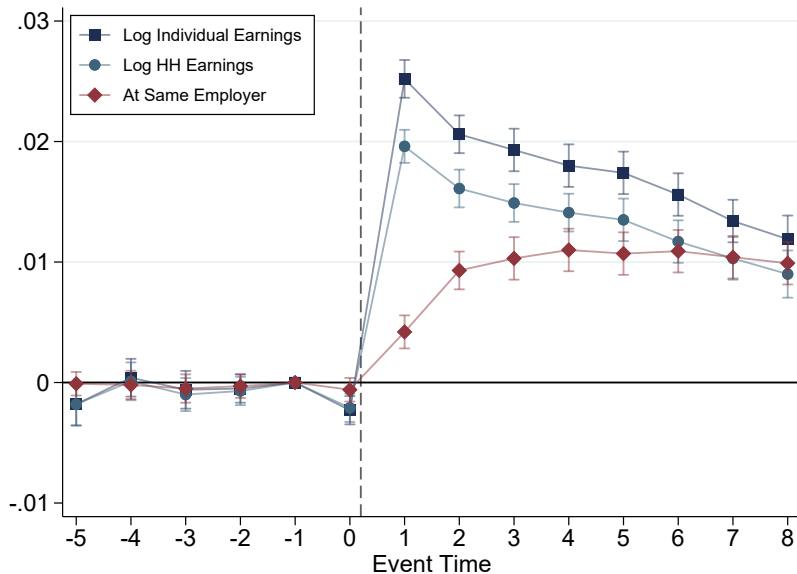
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Controls to get observationally similar people and firms

- Observed variables interacted with time fixed effects allow for flexible trends
 - ▶ Individual: initial wage, 2005–09 median income of the ACS tract of residence, age, sex, race, ethnicity, education
 - ▶ Firm: log firm employment, mean pay, median pay, average separation rates, average new worker accession rates, average separations into non-employment
- Fixed effects: Individual, baseline industry-time, baseline CBSA-time Eq

Impacts of 10% increase in coworker earnings on labor market outcomes

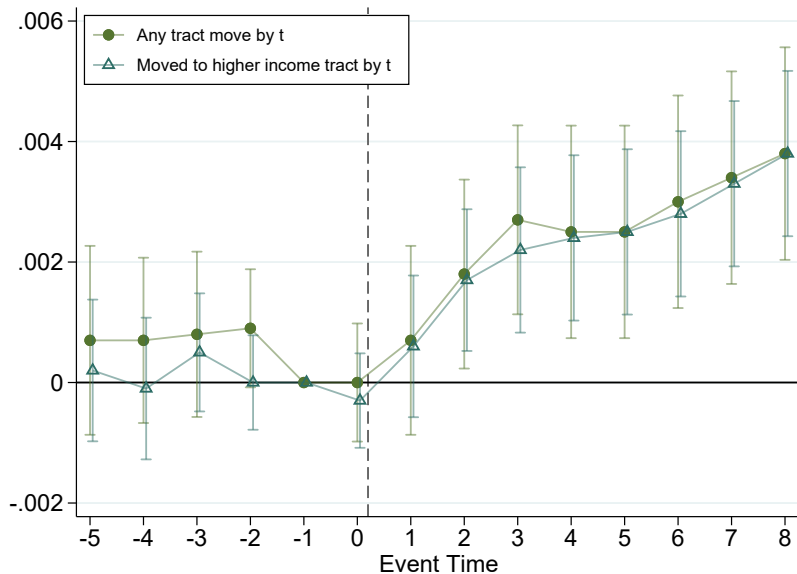


10% increase in coworker earnings leads to 2.5% increase in own earnings on impact, with effects that attenuate but persist

Slightly smaller increase in household earnings

Shock also increases retention at same employer

Impacts of 10% increase in coworker earnings on migration outcomes



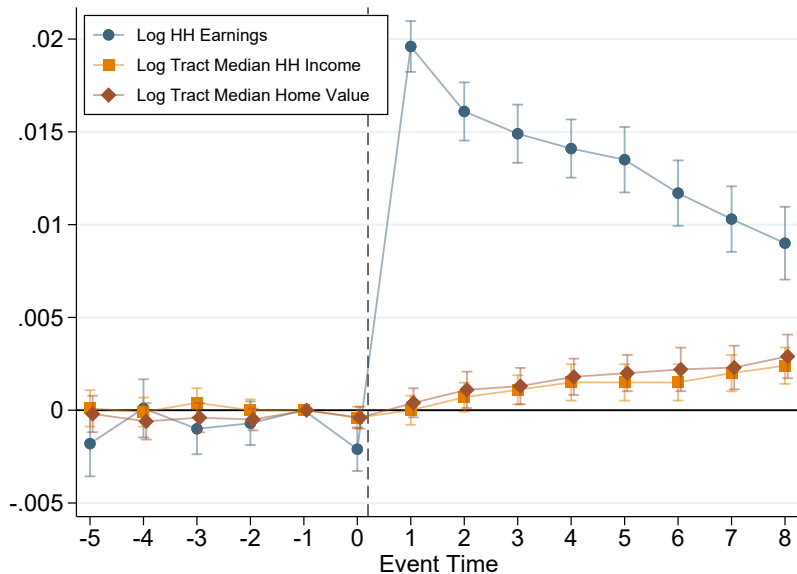
Effect on migration grows over time

Nearly all moves are to richer neighborhoods

0.4 p.p. (1%) increase in out-migration by year 8

Household income is 1% higher by year 8 $\rightarrow$ elasticity ~ 1

Impacts of 10% increase in coworker earnings on neighborhood choice



People move to richer neighborhoods after coworker earnings shock

Average effect on household earnings is 1.4 log points

Impact on neighborhood income is 0.24 log points in year 8

Elasticity of neighborhood income w.r.t. household earnings ~ 0.2 , though timing is nuanced

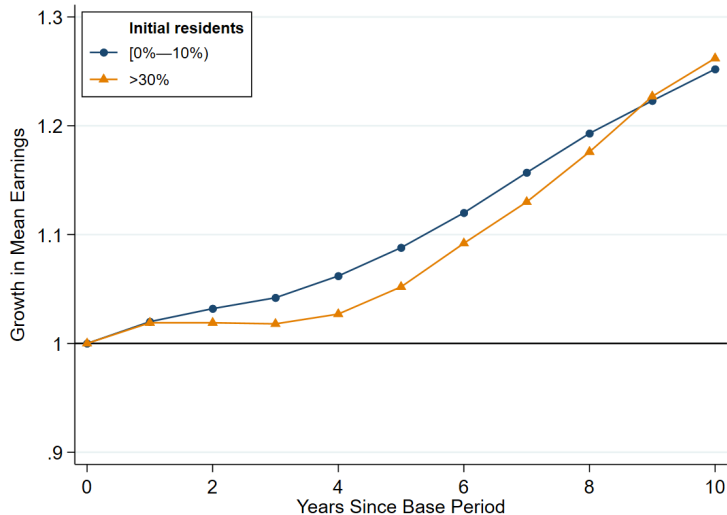
Implications for Neighborhood Change and Place-Based Policy

Why do poor neighborhoods stay poor?

Jane Jacobs, *The Death and Life of Great American Cities* (1961):

Once a slum has formed, the pattern of immigration that made it is apt to continue...Successful people, including those who achieve very modest gains indeed, keep moving out...they are quickly replaced by others who currently have little economic choice.

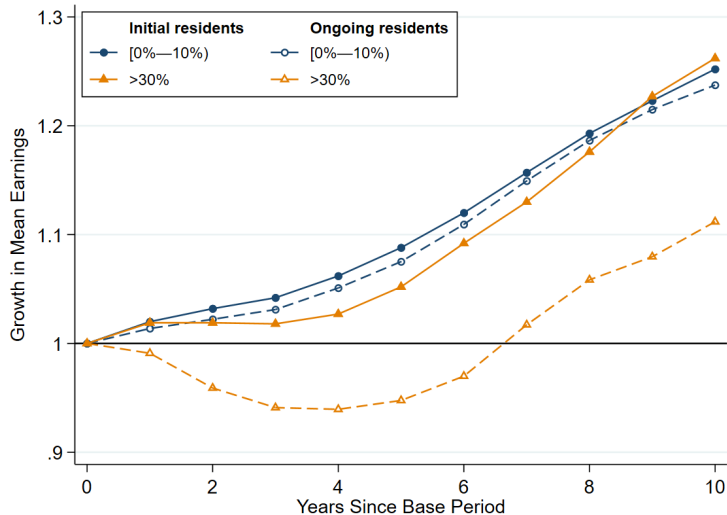
Poor neighborhoods stay poor partly because people leave when their earnings rise



Note: Sample limited to 1965–1980 birth cohorts

Mean earnings grew by a comparable amount for **initial residents** of richer vs. poorer neighborhoods

Poor neighborhoods stay poor partly because people leave when their earnings rise



Note: Sample limited to 1965–1980 birth cohorts

Mean earnings grew by a comparable amount for **initial residents** of richer vs. poorer neighborhoods

Mean earnings of **ongoing residents** of poor neighborhoods is much lower

Implications for place-based policy

Don't equate current residence in a poor neighborhood with future residence in a poor neighborhood

- E.g. Several guaranteed income pilots are limited to residents of poor neighborhoods

Policies that improve labor market outcomes for residents of a poor neighborhood may not increase that neighborhood's income

- E.g. Impacts of Empowerment Zones could spill over across metro area

Retaining residents with positive income growth might be effective way to increase neighborhood income [Jacobs 1961]

- Though welfare consequences for these individuals is not clear
- And improvement in neighborhood quality might lead to higher housing costs

Conclusion

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Main results:

- High migration rates out of poor neighborhoods, typically to richer neighborhoods
- Many residents of poor neighborhoods experience significant earnings growth
- Higher earnings generates moves to richer neighborhoods

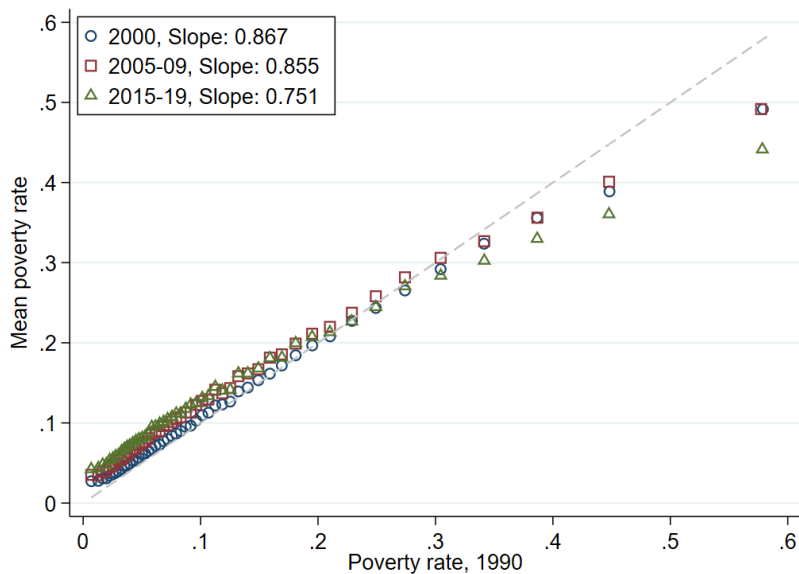
Evidence suggests that most residents of poor neighborhoods are not “stuck”

- But there is substantial heterogeneity

Dynamic process of people moving to richer neighborhoods when their income rises is a key reason why poor neighborhoods stay poor

Extra Slides

Persistence of neighborhood poverty rates



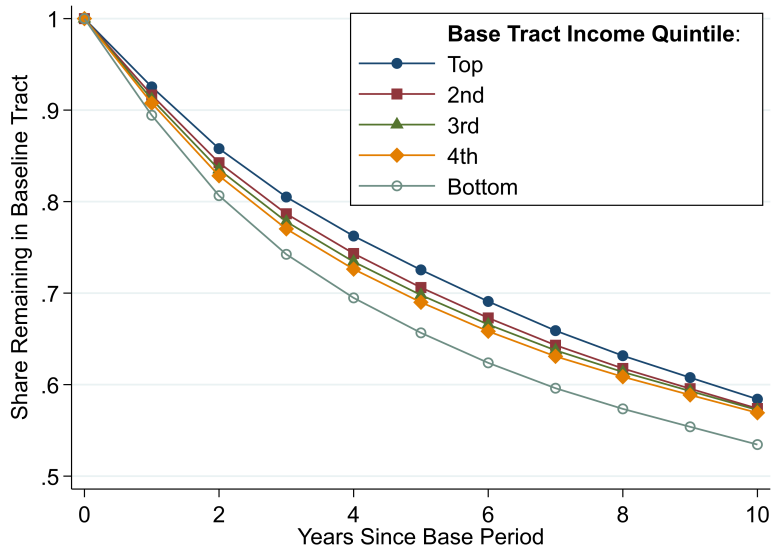
Combines IRS 1040 and 1099 files, Selective Service and Medicare Enrollment, Indian Health Services, HUD program enrollment, USPS Change of Address

Data set has 90–95% as many observations as population and can be matched to 94% of 2012 ACS

- Does not cover those without SSNs
- Will miss most people without connection to formal economy or safety net

MAFARF does a good job of capturing migration, including among lower-income individuals and residents of poor neighborhoods

Tract exit rate by tract income quintile [Back](#)



43% of people move to a different tract within 10 years

Higher migration rates out of poorer neighborhoods

45% for people in bottom income quintile

Eight-year transitions across tract income quintiles [Back](#)

Year t	Year $t + 8$ income quintile					Obs.
	1	2	3	4	5	
1	71.8	10.4	8.2	6.1	3.5	2,070,000
2	7.8	70.3	9.2	7.7	5	2,610,000
3	5.1	7.5	70.6	9.5	7.3	2,780,000
4	3.2	5.3	7.8	72.5	11.2	2,820,000
5	1.8	3.1	5.2	9.1	80.9	2,950,000

28.2% of those starting in bottom quintile live in a richer tract 8 years later

$$Y_{i,t,k} = \mu_i + \sum_{k=-5, k \neq -1}^8 \beta_k \text{PayShock}_{i,t} + \theta_{k \times t_q} + \omega_{n(i) \times s(i) \times t_y \times k} + \lambda_{c(i) \times t_y \times k} + X_i' \alpha_{t,k} + \epsilon_{i,t,k}$$

- $Y_{i,t,k}$: outcome for person i , observed in ACS at time t , k years later
- $\text{PayShock}_{i,t}$: coworker earnings shock
- $\theta_{t_q \times k}$: interaction between the ACS quarter of observation and relative year of observation
- $\omega_{n(i) \times s(i) \times t_y \times k}$: interaction between industry, baseline state of residence, ACS year, and time of outcome
- $\lambda_{c(i) \times t_y \times k}$: interaction between baseline CBSA of residence, ACS year, time outcome
- X_i : individual and firm-level controls, interacted with ACS year and outcome year