

A Regional Look at Single Moms and Upward Mobility

Technical Appendix to the June 4 Issue Brief

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Overview

This technical appendix explains the methodology and statistical results that supports the research that went into the June 4 issue brief titled “A Regional Look at Single Moms and Upward Mobility.” This methodology provides the two regression models employed to parse the data from the recent work by Harvard economists Raj Chetty and Nathaniel Hendren and University of California, Berkeley economists Emmanuel Saez and Patrick Kline that finds differences in family structure are strongly associated with differences in economic mobility.¹

The data from their Equality of Opportunity Project contain three preferred measures of mobility. These measures include:

- **Absolute mobility** is the average income rank for people born in the bottom quarter of the income distribution.
- **Mobility gap** is the gap in income ranking between people born to the highest-earning households and those born to the lowest earning households.
- **Bottom-to-top mobility** is the share of people born into the bottom quintile of the income distribution who make it to the top income quintile.

This technical appendix provides more details on these and other measure of economic mobility.

Our regression models

To test the effect of family-friendly laws, I compared two regression models for each of the mobility measures:

(1) $Mobility = \alpha + \beta \cdot Single\ Mother\ Share + \epsilon$

$$(2) \text{ Mobility} = \alpha + \beta_1 \cdot \text{Single Mother Share} + \beta_2 \cdot \text{Family - Friendly Laws} + \varepsilon$$

The Single Mother Share is the “cs_fam_wkidsinglemom” variable from the Equality of Opportunity Project’s data set.² The Family-Friendly Laws is an indicator variable from research by Columbia University School of Social Work professor Jane Wadfogel.³ The regression was population weighted using the population from each commuting zone. Both the mobility and single-mother share variables were standardized for the regression.

The results for each mobility measure are in the tables below.

Mobility Gap

	Baseline	Regression with family-friendly laws
Intercept	-0.08430	0.15168
Share of single mothers	0.61385	0.49321
p-value	<2e-16	<2e-16
Family-friendly laws	--	-0.65892
p-value	--	<2e-16
Adjusted R ²	0.2368	0.3488

Absolute Mobility

	Baseline	Regression with family-friendly laws
Intercept	-0.23578	-0.30524
Share of single mothers	-0.52625	-0.49074
p-value	<2e-16	<2e-16
Family-friendly laws	--	0.19394
p-value	--	8.26e-7
Adjusted R ²	0.3763	0.3966

Bottom-to-Top Mobility

	Baseline	Regression with family-friendly laws
Intercept	-0.23000	-0.31902
Share of single mothers	-0.42620	-0.38077
p-value	<2e-16	<2e-16
Family-friendly laws	--	0.24873
p-value	--	4.62e-13
Adjusted R ²	0.3312	0.3769

Source: Author’s calculations and author’s calculations based on Raj Chetty et al., *Where Is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States*, Working Paper (Cambridge, MA: National Bureau of Economic Research, January 2014), <http://www.nber.org/papers/w19843>.

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For each of these mobility measures, the coefficient for the family friendly laws variable is statistically different from zero well beyond the standard 5 percent threshold (or even 0.0005 percent threshold).

Conclusion

The presence of family-friendly laws provides a strong, statistically significant indication

that a community will have higher mobility, but there is a substantial amount of unexplained variance in each case. Thus, a substantial variance remains to be attributed to the economic, social, and family factors explored in by economists Chetty, Hendren, Saez, and Klein or other factors that remain to be considered.

Endnotes

- 1 Raj Chetty et al., *Where Is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States*, Working Paper (Cambridge, MA: National Bureau of Economic Research, January 2014), <http://www.nber.org/papers/w19843>.
- 2 Ibid.
- 3 Waldfogel, Jane. 1999. "Family Leave Coverage in the 1990s." *Monthly Labor Review* 10 (October): 13–21.

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