Income and Earnings Mobility in U.S. Tax Data

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Research Questions

- Individuals experience a number of events that potentially increase or decrease their income and earnings

1. How much earnings and income mobility is there?

2. Who is upwardly and downwardly mobile, and what life events are likely to result in substantial changes in one's income?

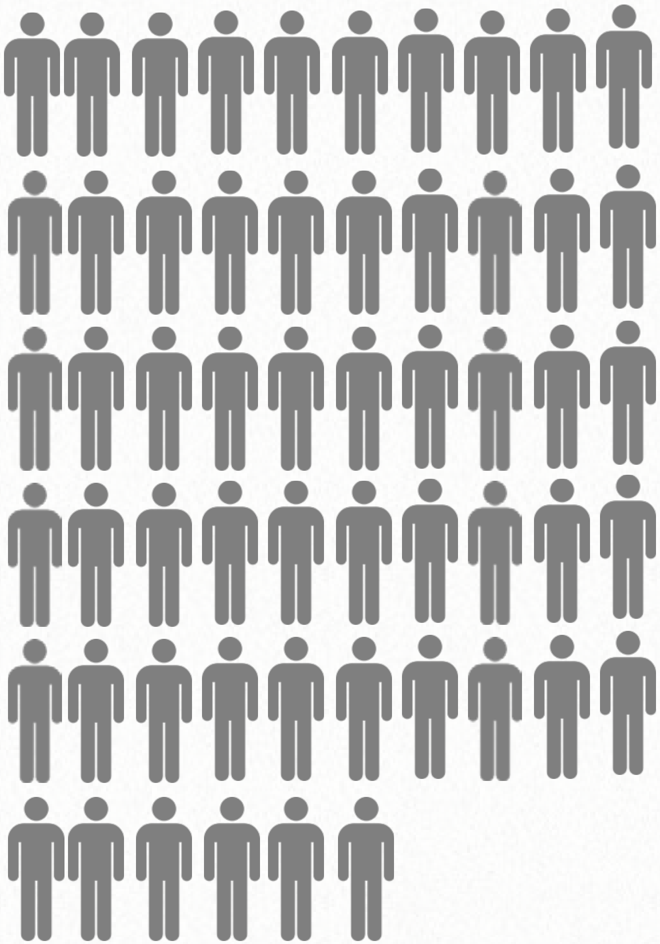
3. To what extent does the tax code, including progressive income taxes and federal income tax credits, alleviate or accentuate both upward and downward mobility?

Data and Methods

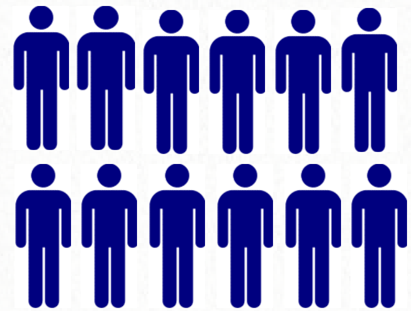
1. 0.1% random sample of IRS tax returns (1040's) from 1999 to 2011
   - Merged with information returns (W-2, 1099 series, etc.), which provide:
     - Non-filer income
     - Employer industry
     - Job changes
2. Examine 2 year mobility patterns (i.e. mobility from 1999 to 2001, etc.)
   - Restrict sample to those age 25+ to limit effect of entry into the workforce
   - Restrict to those with average earnings/income of at least $5,000
3. Definitions
   - Earnings: all individual level earnings, including self-employment income
   - Income: total cash income reported on tax returns excluding capital gains, adjusted for tax-unit size

2-Year *Male* Earnings Mobility

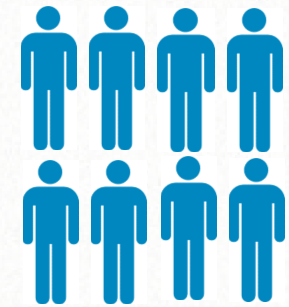
56% have earnings within 25 percent of starting level



12% have earnings growth over 50 pct.

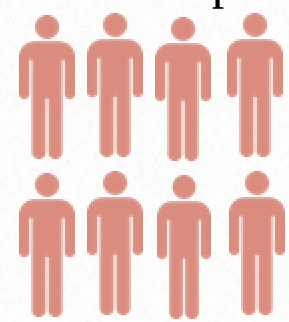


8% have growth of 25-50 pct.

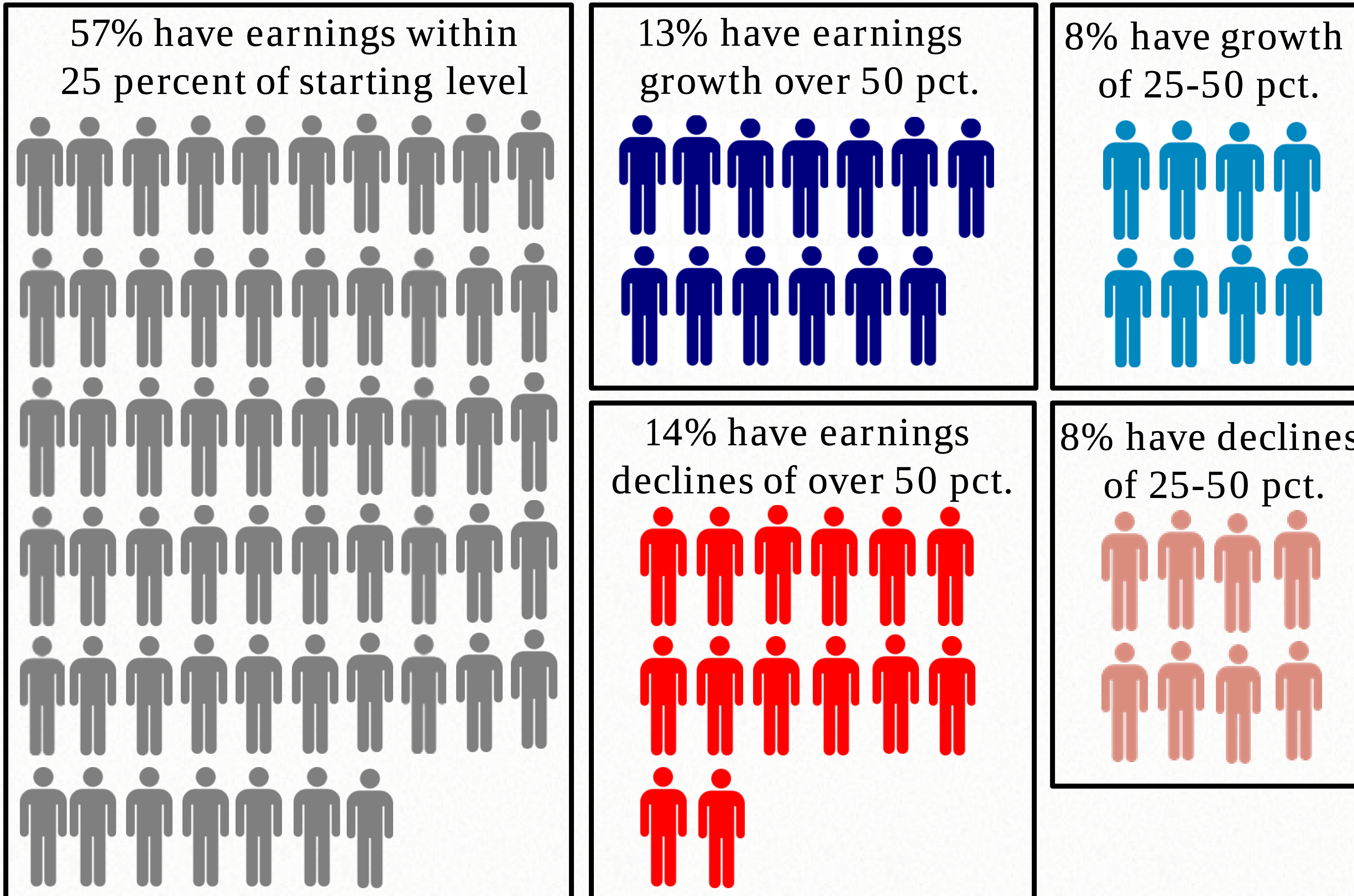


16% have earnings declines of over 50 pct.

8% have declines of 25-50 pct.



2-Year *Female* Earnings Mobility



Summary of mobility by starting point and life events

1. Mobility occurs throughout the distribution, but especially at the bottom

Male Earnings Mobility	Decline >50 percent	Decline 25-50 percent	Change less than 25 percent	Increase 25-50 percent	Increase >50 percent
Bottom Quintile	18%	8%	26%	7%	41%
2nd Quintile	23%	9%	45%	10%	13%
3rd Quintile	15%	8%	64%	8%	5%
4th Quintile	12%	7%	71%	7%	3%
Top Quintile	12%	9%	67%	7%	5%

2. Changing jobs increases the odds of large earnings changes, but many who remain in their main job are mobile

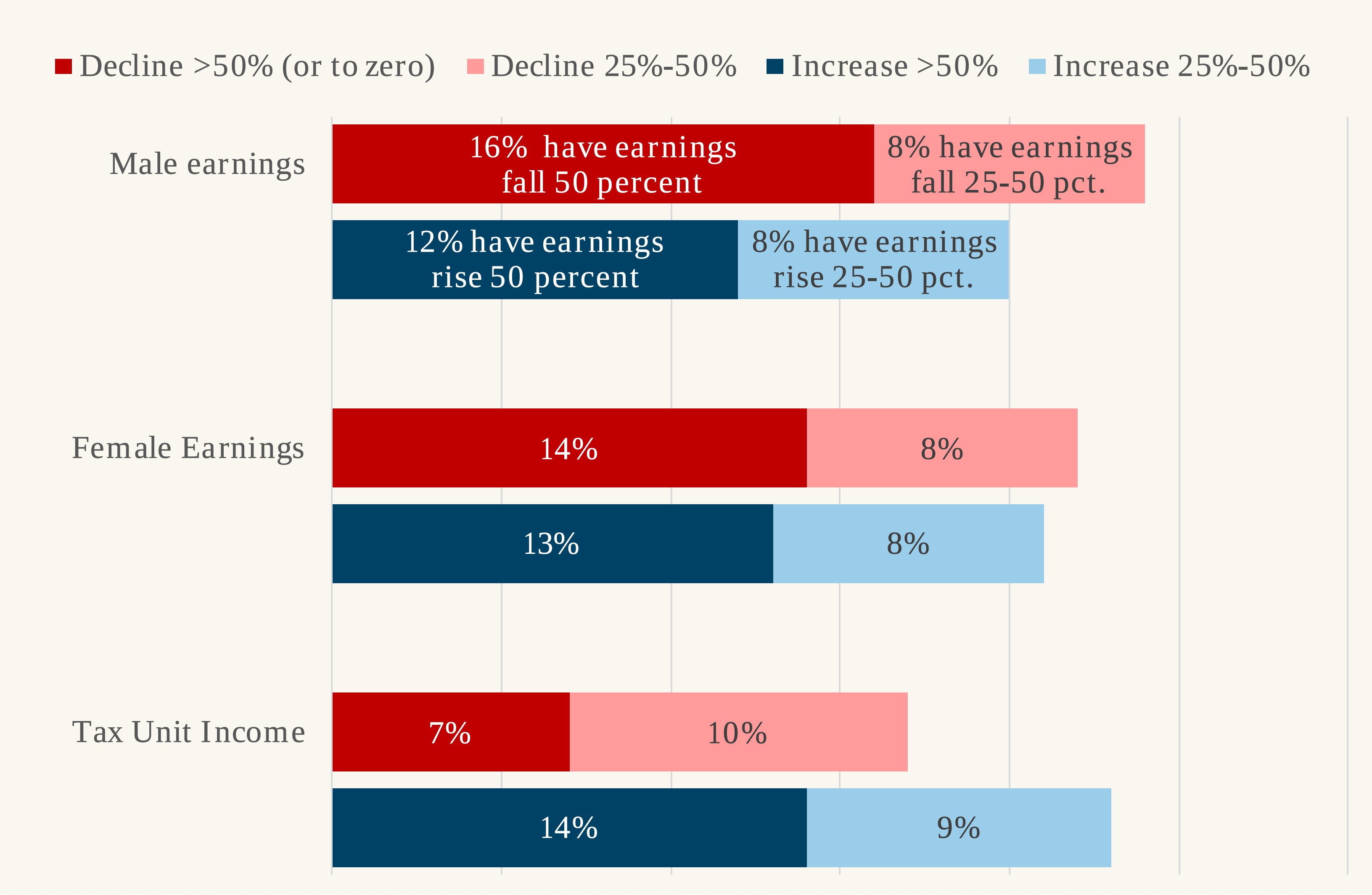
Male Earnings Mobility	Decline >50 percent	Decline 25-50 percent	Change less than 25 percent	Increase 25-50 percent	Increase >50 percent
Stay in Job	8%	7%	68%	8%	10%
Job Change	18%	12%	38%	9%	24%
Industry Change	21%	11%	34%	8%	25%
Change State	21%	10%	40%	9%	19%

Select Probit results for large earnings changes

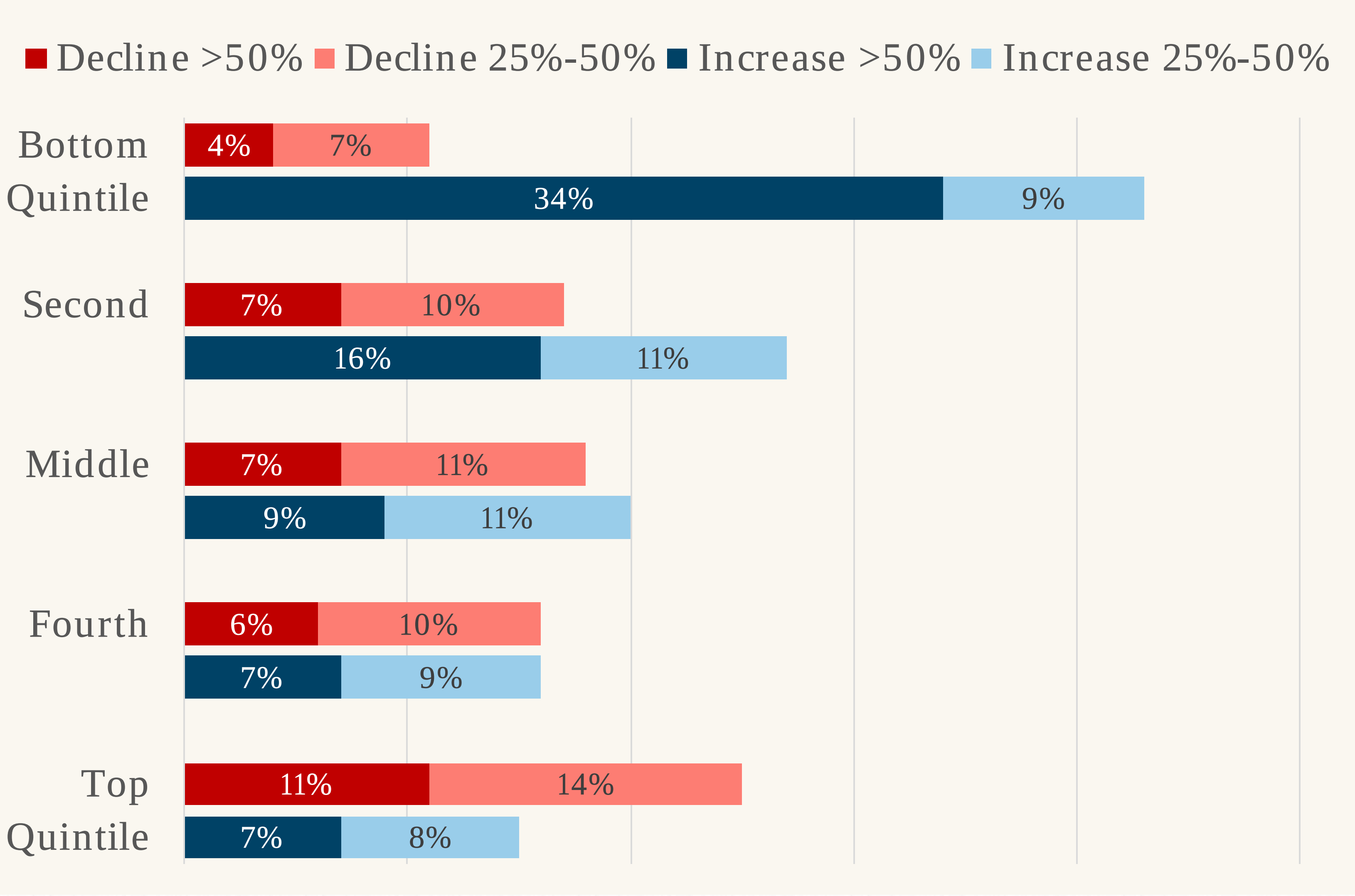
	Men		Women	
	Odds ratio Decrease 25%	Odds ratio Increase 25%	Odds ratio Decrease 25%	Odds ratio Increase 25%
Change in employment/location				
Job change	1.10**	1.66**	1.20**	1.63**
Change of job & industry	1.71**	1.13**	1.61**	1.15**
Move to different state	1.27**	1.26**	1.60**	1.16**
Move to new state & married	1.22**	1.17**	1.47**	0.77**
Industry of initial employment				
Agriculture	0.84**	0.83**	1.01	0.91
Mining and Oil	1.17**	1.14**	0.99	1.21**
Utilities and Construction	0.92**	0.95*	0.91**	1.10**
Finance, Real Estate, & STEM	0.96**	1.23**	0.95**	1.29**
Education & Health	0.75**	1.16**	0.87**	1.19**
Entertainment & Food Services	0.99	0.90**	1.05*	0.93**
Other Services	0.95*	1.01	0.99	1.05*
Public Administration	1.04	1.00	0.99	1.28*
Self-Employed	2.06**	1.11**	2.20**	1.12**

Regression also controls for age, starting centile, initial year, marital status, dependents, and spells of unemployment

2-year Income Mobility



Income mobility by starting quintile



Sources of mobility: Raises and promotions or changes in labor force attachment

1. Families that increase the number of workers are the most likely to have substantial increases or decreases in income …

	Decline >50 percent	Decline 25-50 percent	Change less than 25 percent	Increase 25-50 percent	Increase >50 percent
No change in # of workers	6%	9%	62%	10%	13%
Add Worker	7%	8%	35%	13%	37%
Drop Worker	26%	22%	36%	6%	10%

2. … but they are a small portion of the population so most mobility is from families with no change in the number of workers

	Fraction of all tax units		Fraction of tax units w/ 25% income decline	Fraction of tax units w/ 25% income increase
No change in # of workers	87%		77%	86%
Add Worker	5%		4%	10%
Drop Worker	6%		17%	4%

Income Stabilization from tax policy

1. Thus far focused on pre-tax income changes, but taxes (and other public policies) can mitigate or accentuate income swings

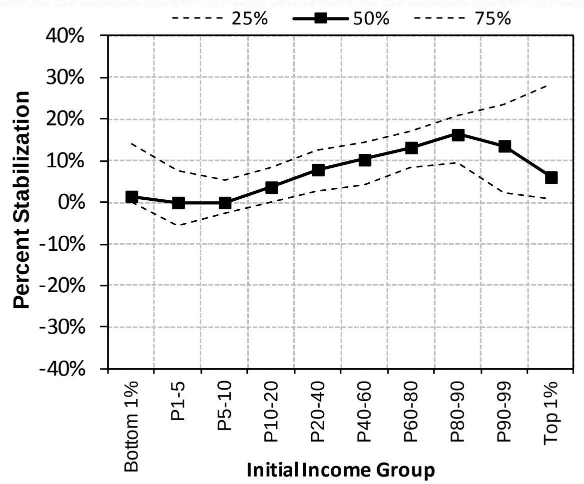
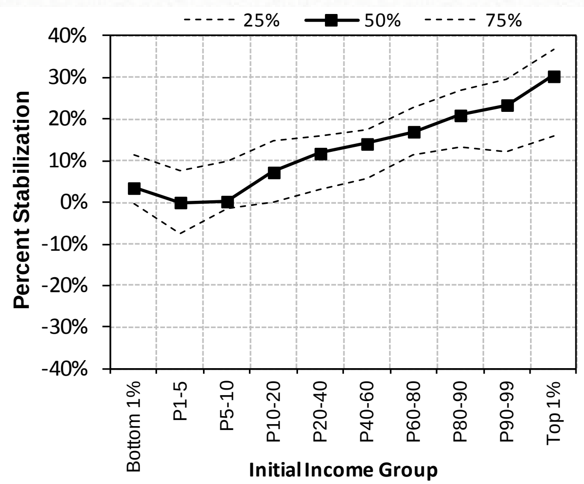
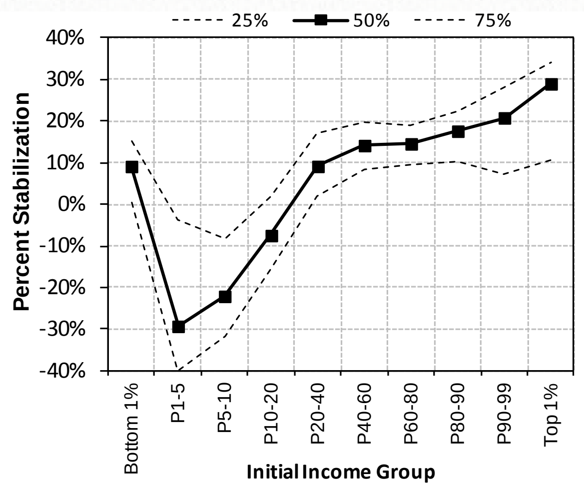
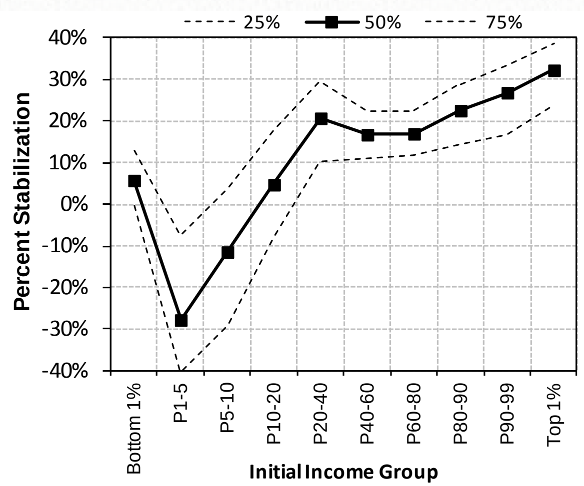
2. Measure stabilization from taxes as:

$$\% \text{ Stabilization} = \frac{\Delta Income_{Pre-Tax} - \Delta IncomePost_{Post-Tax}}{\Delta Income_{Pre-Tax}}$$

3. Generally taxes will stabilize incomes, since tax liabilities decrease as income falls (or increase as income rises)

4. *But* phase-ins and phase-outs of tax credits can mean that post-tax income is *more* volatile than pre-tax income (destabilization)

Tax stabilization by parental status

	Income falls 50%+	Income fall 25-50%
No Children		
Parents		

What have we learned?

1. Over 40% of workers experience earnings swings of 25 percent or more over a two-year period, and this volatility occurs throughout the earnings distribution

2. Job and industry changes are associated with greater earnings mobility for men and women.

3. The likelihood of upward mobility varies by industry with STEM, Finance, Education, and Healthcare exhibiting the highest likelihood of upward mobility

4. Sharing resources within tax units mitigates a portion of volatility

5. Progressive income taxes generally stabilize incomes, *but* this is not the case for many low-income households for whom post-tax income is more volatile than pre-tax income