



# Trends in Income Volatility and Risk, 1970-2004

---

Peter Gosselin

The *Los Angeles Times* and the Urban Institute

Seth Zimmerman

The Urban Institute

Presentation at the Federal Reserve Bank of  
Chicago, November 15<sup>th</sup> 2007.



# Background

---

- Traditional ways to look at low-income populations: Poverty rate, income inequality, etc.
- We offer an alternative: income risk.
- We ask: Are risks rising for low-income populations? How do trends in risk to low-income families compare to trends in to families with higher incomes.



# Approach

---

- Income risk has become a frequent subject of political debate.
- Anecdotally, income risk appears to be on the rise.
- Previous research shows an increase in the *volatility* of family income, but volatility and risk are not the same.
- Little research on income risk.
  - Burkhauser and Duncan (1989).



# Goals

---

- Assess trends in income volatility
  - Are trends robust to measurement error?
  - Do trends vary across age, education, and (especially) income subgroups?
  - Explore relationship between volatility and real risk
  - Are increases in volatility the result of voluntary movement in and out of the labor force?
  - Does income risk associated with destabilizing life events show a similar increase?



# Findings

---

- Family income became substantially more volatile between the 1970s and the early 2000s.
- Increases in volatility and risk have been especially pronounced among low-income families.
- Over the same period, people dealing with destabilizing life events became more likely to experience large income drops.

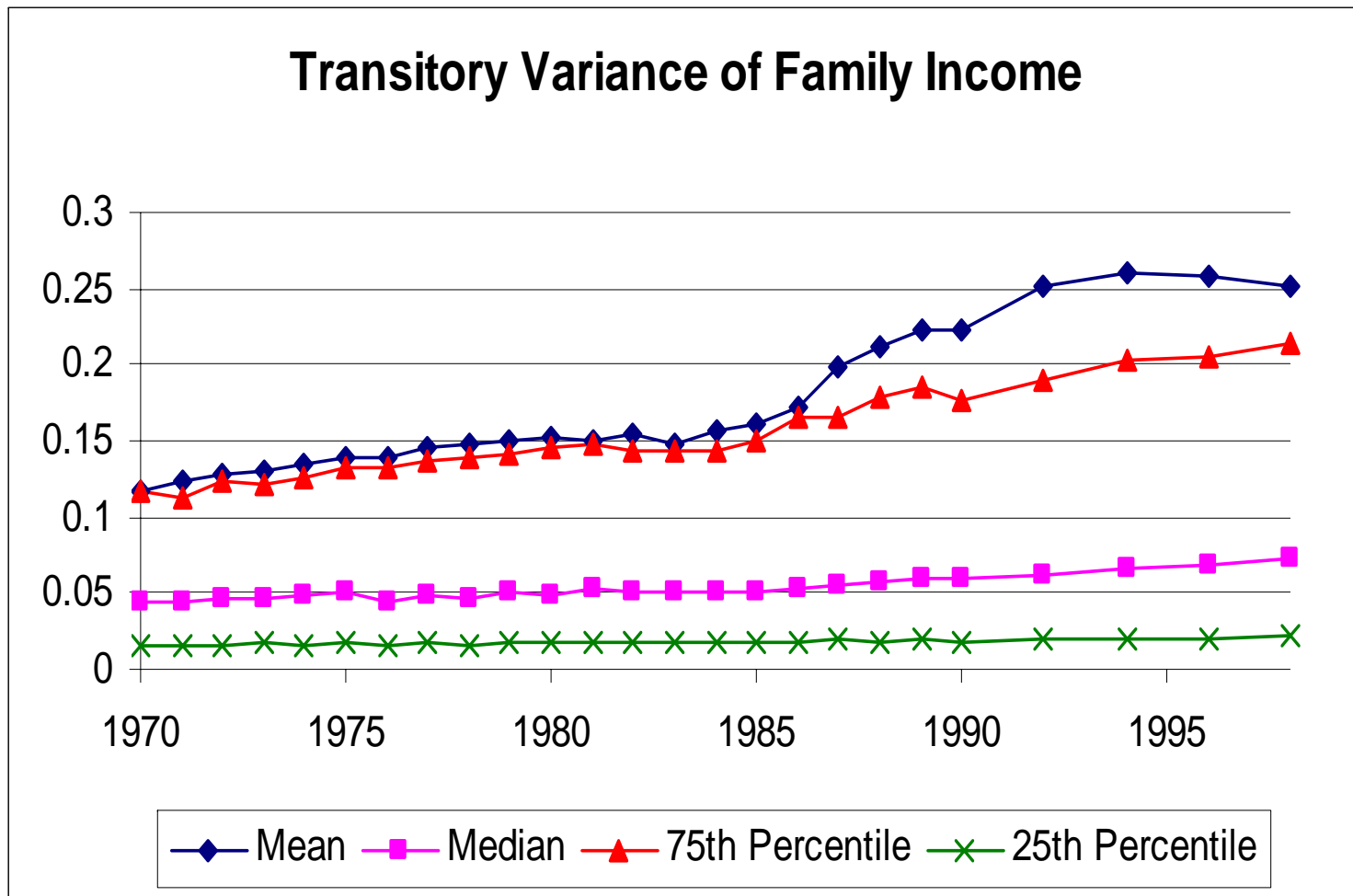


# Data and Methods

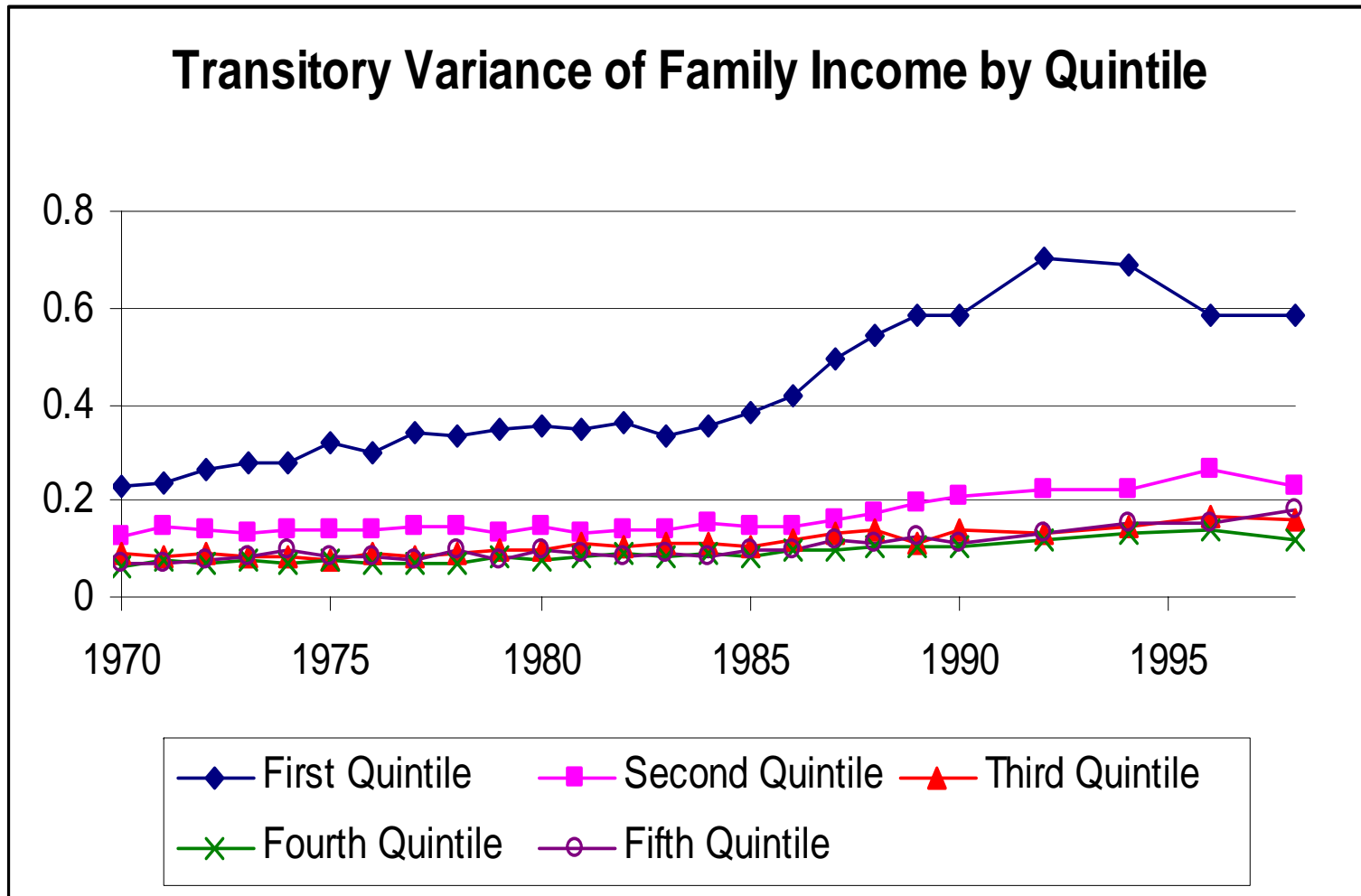
---

- Data
  - PSID panel years 1970-2005.
  - All weighted data.
  - Individuals 25-64 years old w/ at least \$10 in family income (2007 dollars).
- Volatility Methods
  - We focus on total family income less out-transfers.
  - For a given individual, we define volatility in year  $t$  as the variance of age-adjusted income over years  $t$ ,  $t+2$ ,  $t+4$ , and  $t+6$ .
  - We use the average and percentiles of the distribution of individual volatilities as measures of volatility in the population as a whole.
  - This follows Gottschalk and Moffitt (1994).
- Life Events/Income Drops Methods
  - Different trim: top and bottom 2% of distribution of changes.
  - Chances of 50% income drops.
  - Chances of experiencing a destabilizing event.
  - Fraction of destabilizing events associated with 50% income drops.

# Trends in Income Volatility

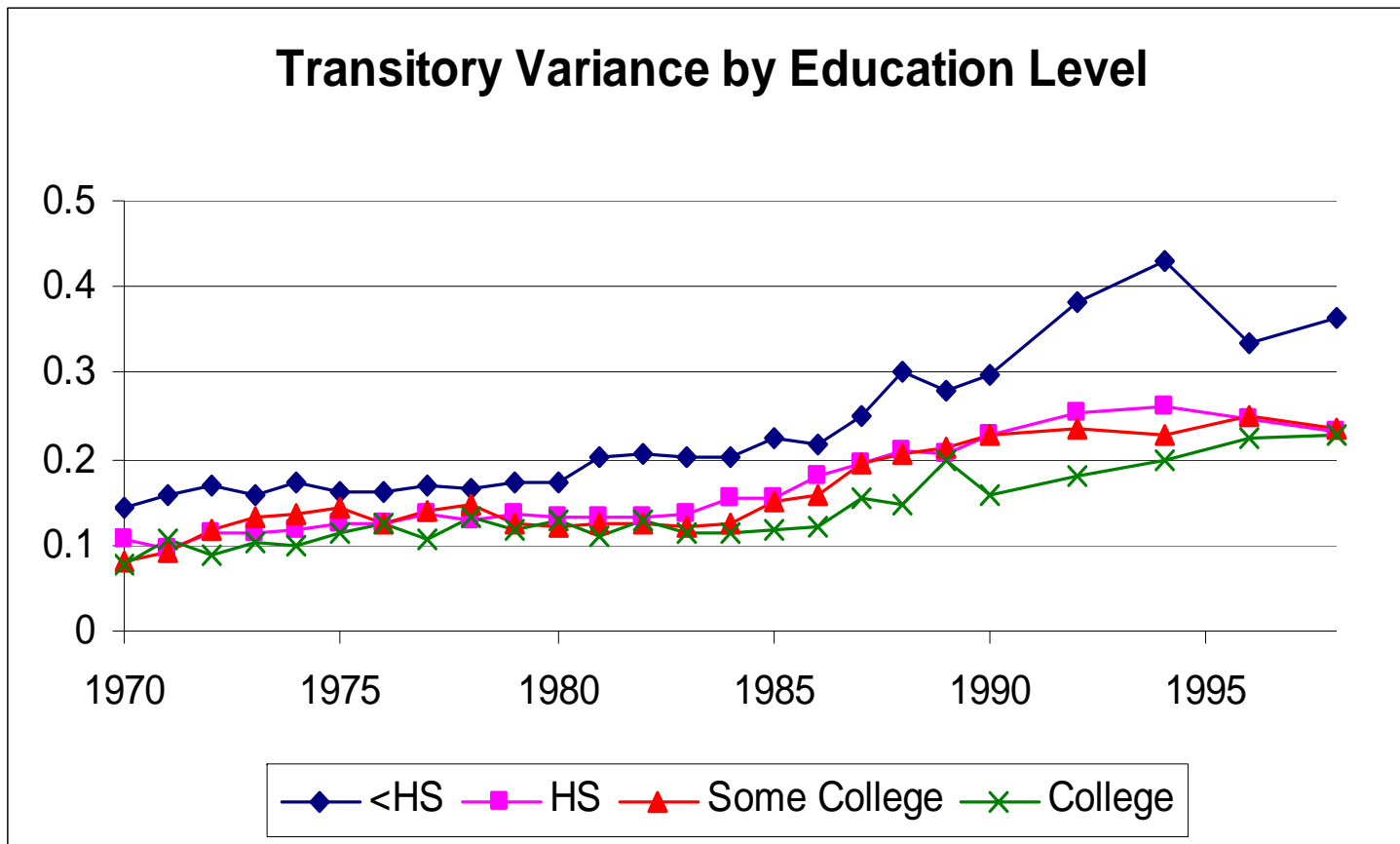


# Volatility by Income Quintile

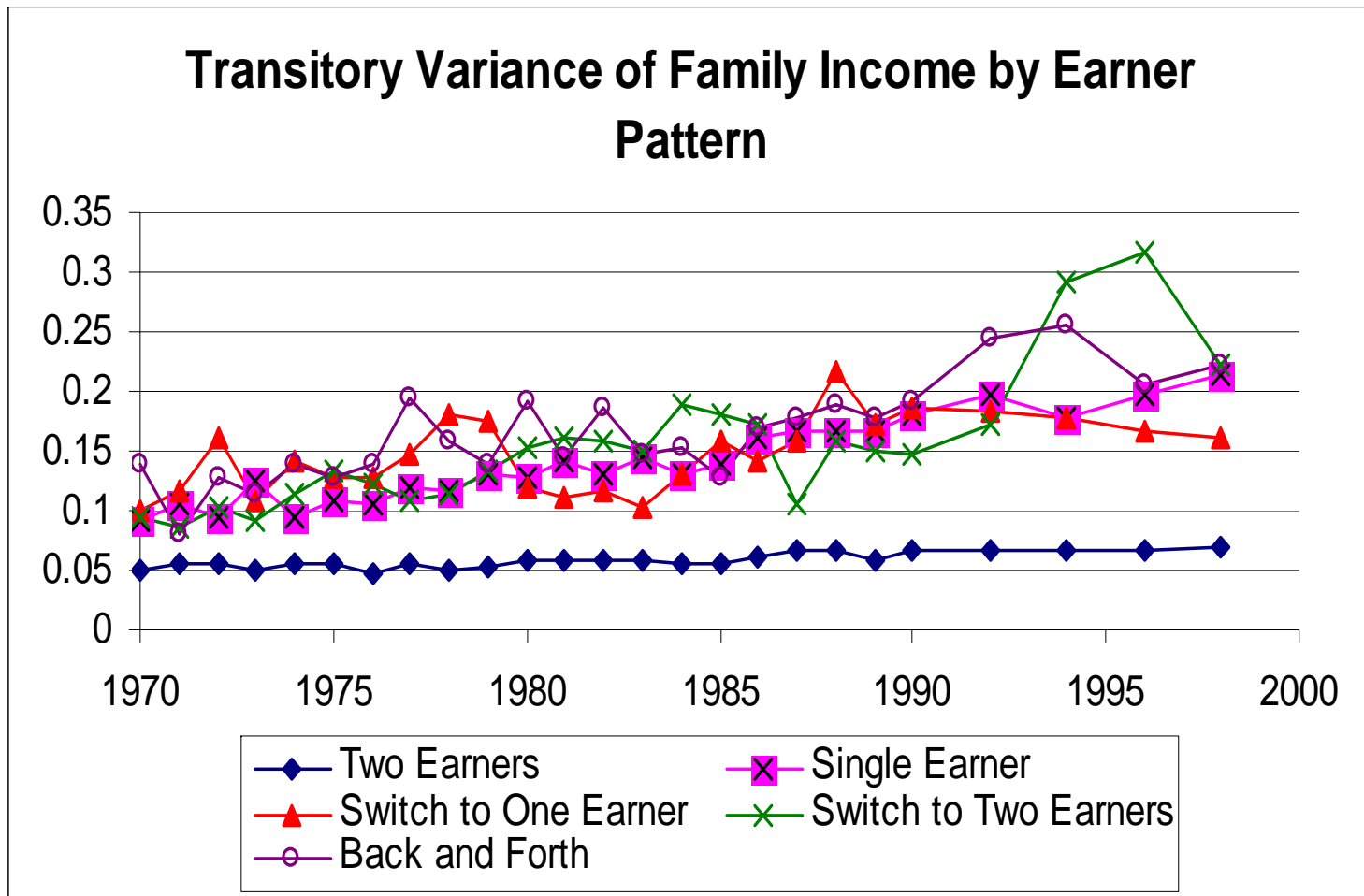




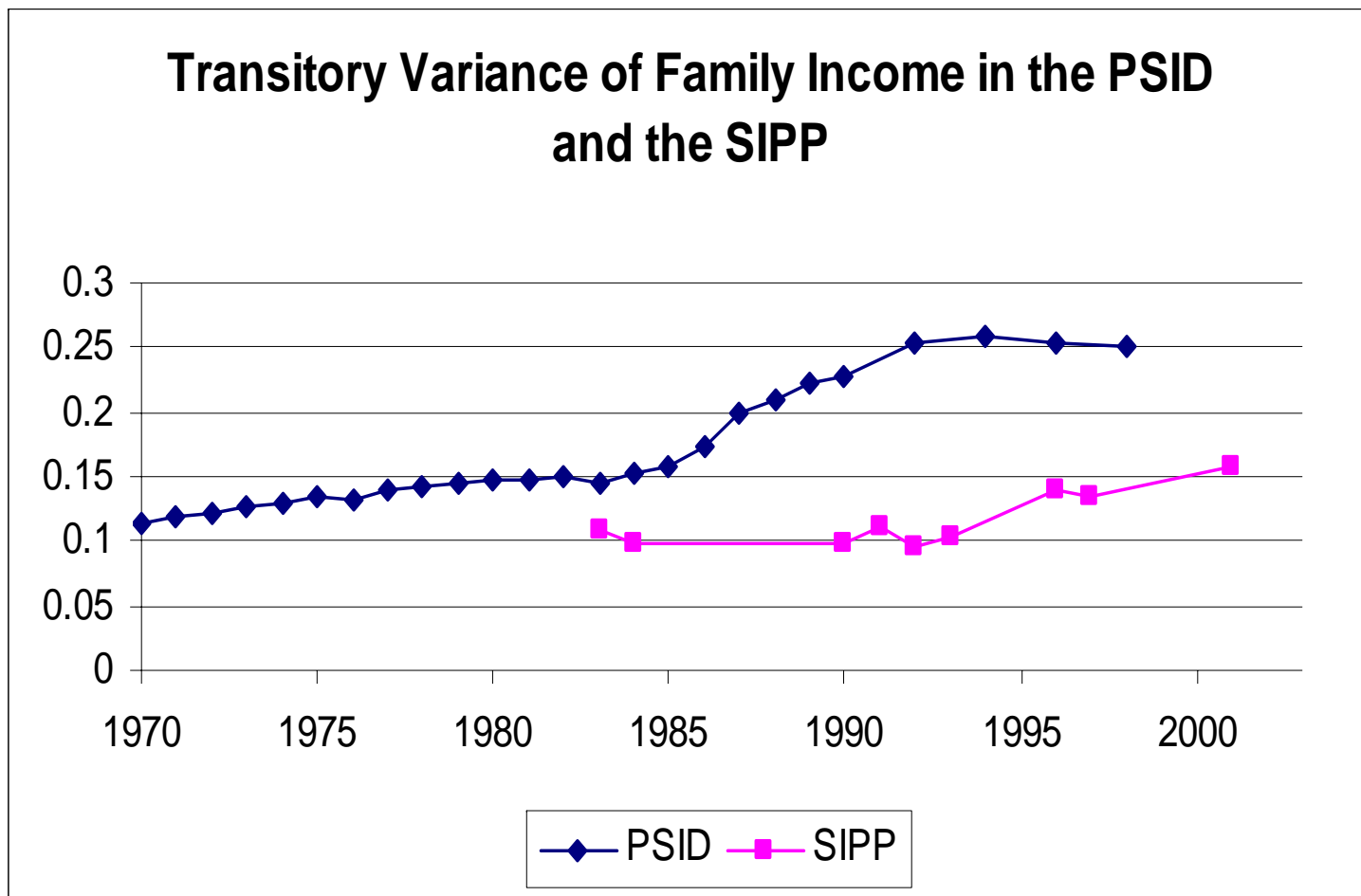
# Volatility by Educational Attainment



# Volatility by Earner Pattern



# Robustness across datasets





# Chances of Large Income Drops

---

## Probability of Income Drops of Various Sizes over Two Years

		Income		Income/Needs	
Time Period	Age Group	at least 25%	at least 50%	at least 25%	at least 50%
1974-1983	25-65 years old	17.13%	4.60%	15.05%	3.63%
	35-55 years old	15.96%	3.95%	12.50%	2.79%
1984-1993	25-65 years old	16.94%	5.71%	15.36%	4.73%
	35-55 years old	15.77%	5.12%	13.38%	4.05%
1994-2003	25-65 years old	19.31%	7.75%	18.49%	6.99%
	35-55 years old	18.07%	7.24%	17.06%	6.61%

# Chances of Destabilizing Life Events

Time Period	Age Group	Divorce/ Sep	Death of Spouse	New Child	Head's retirement or disability	Head's Major Unemployment	Work loss of Head due to illness	Fall in work Hours of Wife	Any of the seven events
<b>1973-1983</b>	25-65 years old	2.87%	0.92%	6.12%	3.49%	6.94%	3.11%	13.97%	<b>30.30%</b>
	35-55 years old	2.18%	0.80%	1.32%	2.19%	7.03%	3.29%	13.01%	<b>25.56%</b>
<b>1983-1993</b>	25-65 years old	3.22%	0.86%	6.59%	3.64%	6.94%	2.39%	15.70%	<b>31.43%</b>
	35-55 years old	3.10%	0.69%	1.92%	2.11%	6.30%	2.69%	14.70%	<b>26.05%</b>
<b>1993-2003</b>	25-65 years old	3.11%	0.73%	6.13%	2.78%	5.06%	2.08%	16.41%	<b>28.91%</b>
	35-55 years old	3.02%	0.69%	2.33%	1.95%	5.12%	2.07%	14.90%	<b>24.91%</b>

# Percentage of Destabilizing Events Associated with 50% Income Drops

Time Period	Age Group	Divorce/ Sep	Death of Spouse	New Child	Head's retirement or disability	Head's Major Unemployment	Work loss of Head due to illness	Fall in work Hours of Wife	Any of the seven events
<b>1973-1983</b>	25-65 years old	29.57%	25.09%	7.24%	25.19%	17.27%	14.91%	8.47%	14.25%
	35-55 years old	31.72%	22.56%	6.44%	28.81%	16.04%	14.90%	7.13%	14.15%
<b>1983-1993</b>	25-65 years old	29.32%	30.01%	8.07%	30.94%	21.79%	16.39%	9.30%	16.86%
	35-55 years old	32.59%	32.04%	10.10%	29.26%	21.90%	13.38%	9.53%	17.18%
<b>1993-2003</b>	25-65 years old	36.17%	39.56%	9.53%	34.91%	25.53%	19.29%	12.21%	20.15%
	35-55 years old	35.88%	36.54%	7.18%	33.19%	24.67%	19.86%	11.43%	20.23%



# Summary

---

- Income volatility has increased since the early 1970s.
  - This trend persists across age, education, and (especially) income subgroups.
  - It cannot be fully explained by data error or decisions about work labor force participation.
- Destabilizing life events were more often accompanied by large income drops in the 1990s and early 2000s than in the 1970s and 1980s.
- These trends are especially pronounced amongst low-income families, but are certainly not limited to that group.



# Conclusions

---

- Along with other recent research, our work confirms a general increase in the volatility of family income.
- This increase cannot easily be written off as the product of voluntary decisions about labor force participation.
- More direct measures of risk also seem to have risen.
- The evidence so far suggests that worries about income risk may be justified.
  - But it is possible that increasing access to credit allows people to smooth consumption over low-income years
- Destabilizing forces that affect low-income families also affect higher-income families. Might this impact prospects for upward mobility?