

Job Stability, Earnings Dynamics, and Life-Cycle Savings

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Motivation

- Labor markets characterized by large heterogeneity in job stability

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 1. Some workers have stable lifetime jobs

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 2. Other workers trapped in employment-unemployment cycles

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 2. Connects micro behavior to macroeconomic dynamics

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- Unemployment risk important for macro questions
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 1. Average unemployment risk for all workers
 2. Single stochastic earnings process for earnings dynamics

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- Consumption-saving behavior well understood in these models

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- Consumption-saving behavior well understood in these models
- Explore life-cycle consequences of heterogeneity in unemployment risk

Contribution

- Data:

Document relationship between job stability and wealth accumulation

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- Theory:

Develop model to study heterogeneity in unemployment risk and to interpret empirical findings

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1. consumption-saving behavior and wealth accumulation
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- Study consequences of declining of U.S. labor market dynamism

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 2. Robust to controlling for age, education, industry, and occupation

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 - 10% lower income 10 years later and persistent

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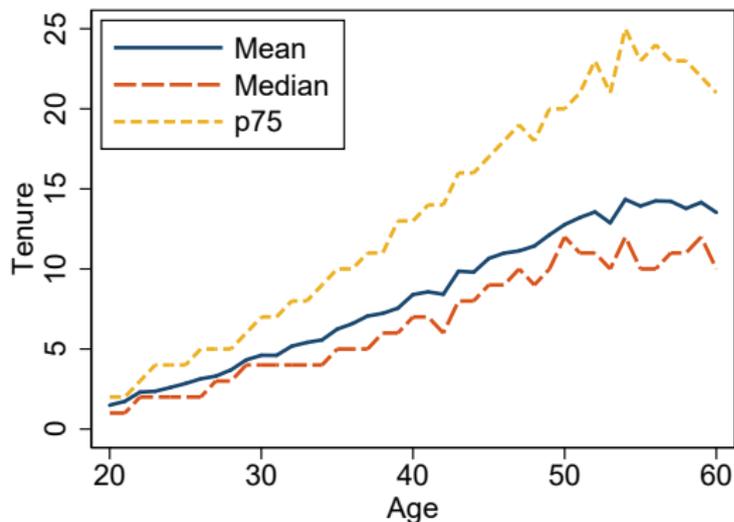
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 - 7-times higher saving rate

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- Large and persistent consequences of differences in separation rates
- Secular decline in labor market mobility implies 1.6% welfare gain for labor market entrants

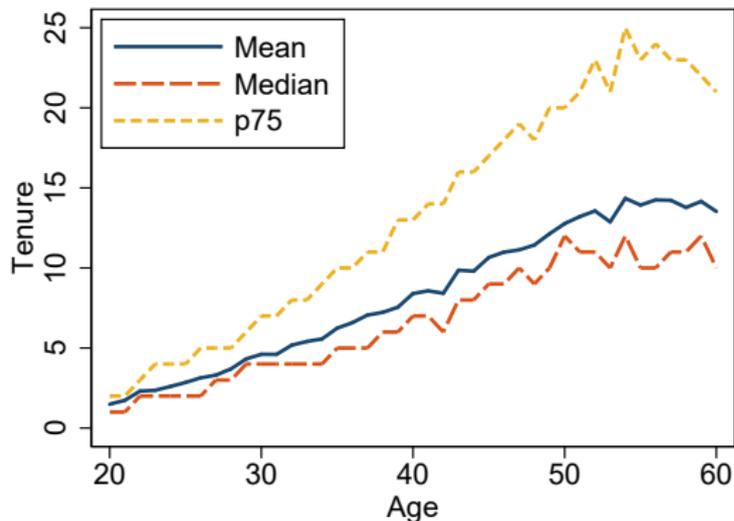
Heterogeneity in separation rates

- Increasing dispersion of job tenure over the life cycle



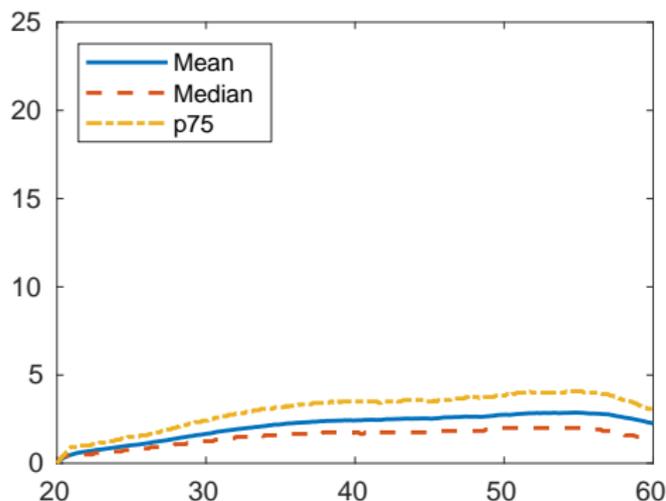
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- At age 40, mean tenure 8 years, median tenure 6 years



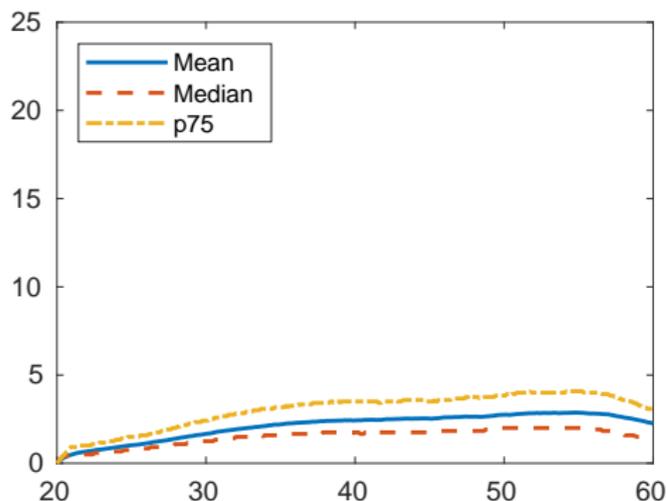
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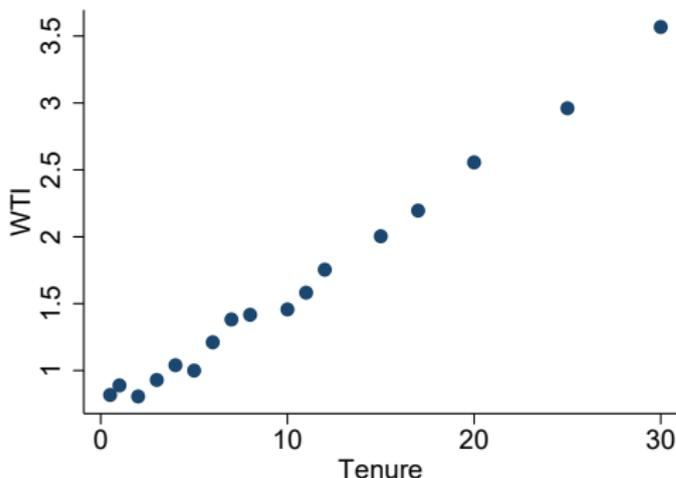
Heterogeneity in separation rates

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- At age 40, mean tenure 8 years, median tenure 6 years
- “Representative worker”: mean tenure 3 years at age 40
- Large differences in job destruction rates across employers (BDS)



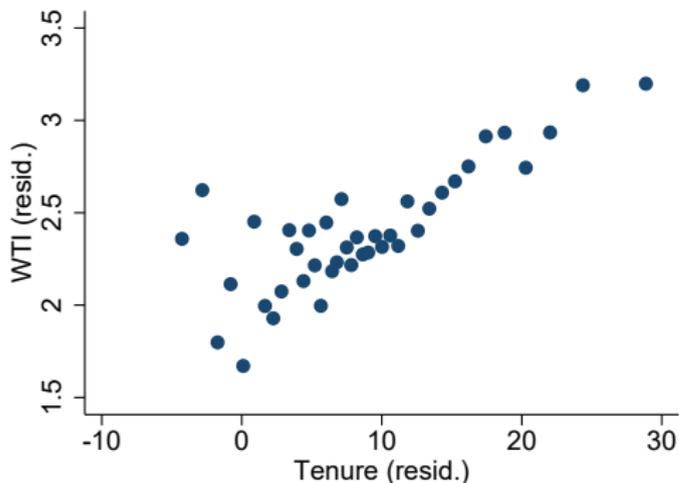
Job stability and wealth accumulation

- Wealth accumulation (wealth-to-income ratio) increasing in employer tenure (job stability)



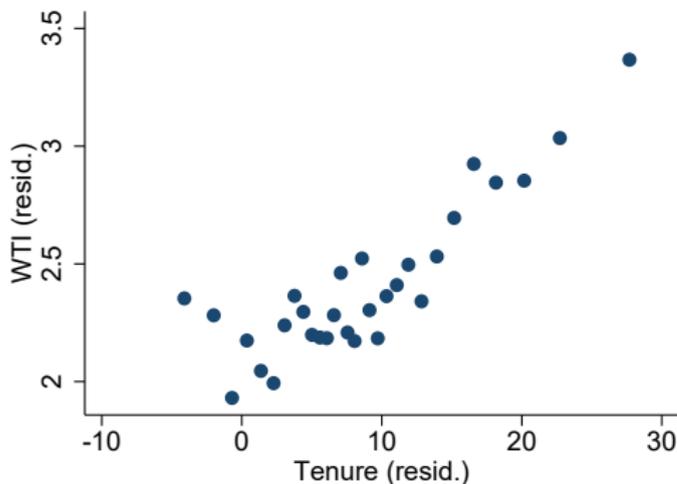
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- Strong positive relation robust after controlling age



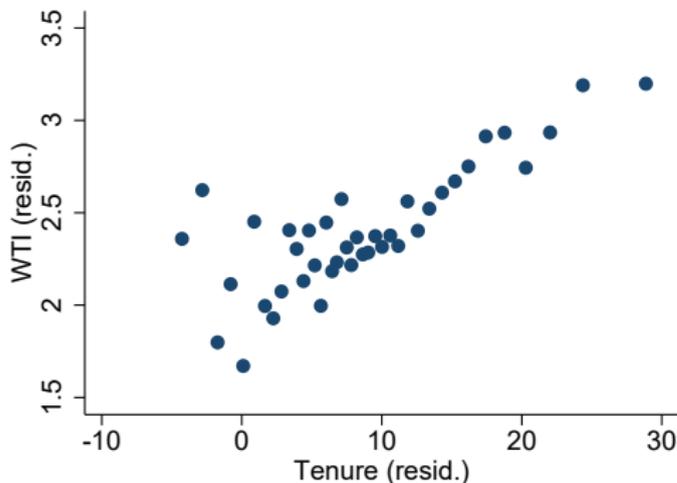
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Job stability and wealth accumulation

- Wealth accumulation (wealth-to-income ratio) increasing in employer tenure (job stability)
- Strong positive relation robust after controlling age
- One year of tenure accounts for one monthly income as wealth



Life-cycle consequences of differences in job stability

- Combine a life-cycle consumption saving model of risk-averse agents with a frictional labor market model

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 3. Random search with exogenous job offer probability

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 3. No human capital accumulation while unemployed

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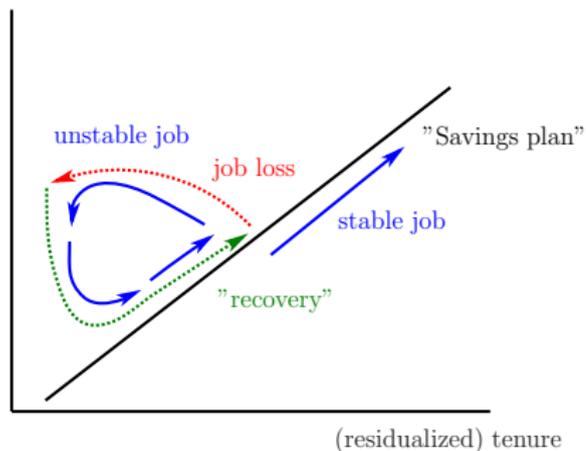
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Life-cycle consequences of differences in job stability

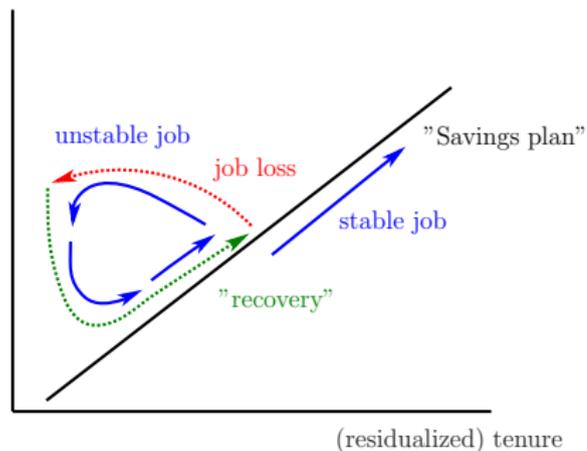
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Consumption-saving decision



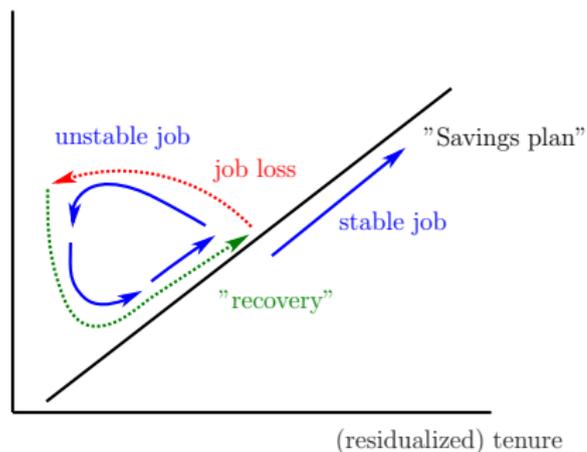
- **Unstable job:** accumulation of precautionary savings

Consumption-saving decision



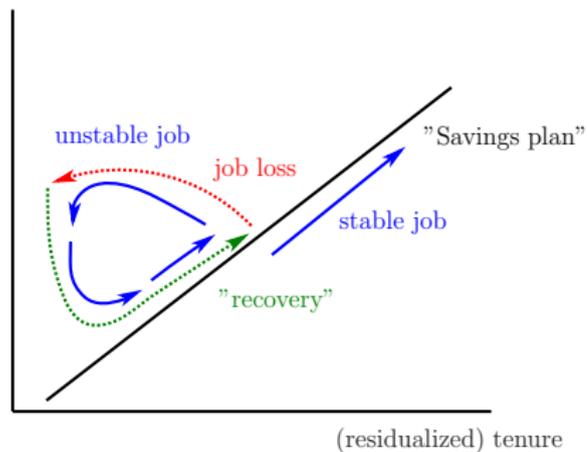
- **Unstable job:** accumulation of precautionary savings, decumulation during unemployment

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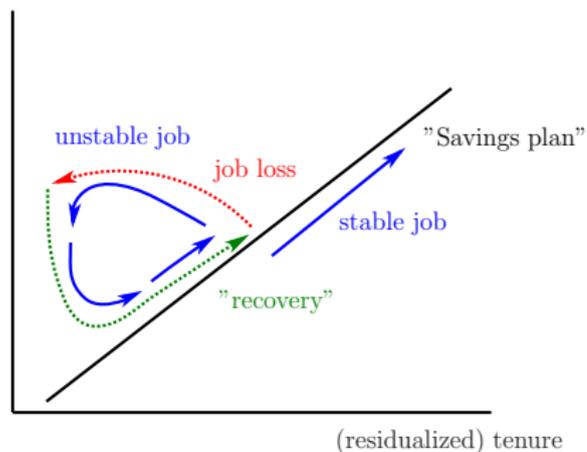
- **Unstable job:** accumulation of precautionary savings, decumulation during unemployment, new accumulation of precautionary savings

Consumption-saving decision



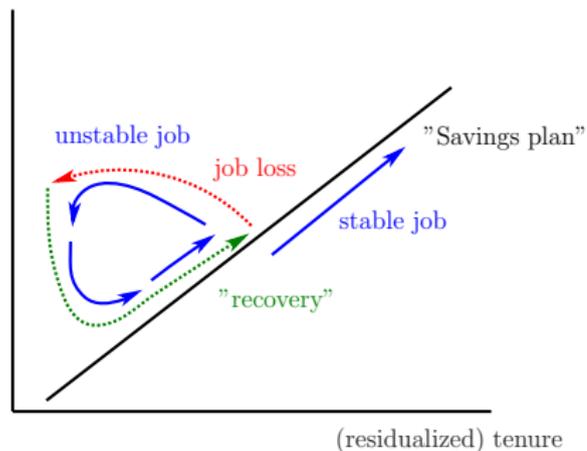
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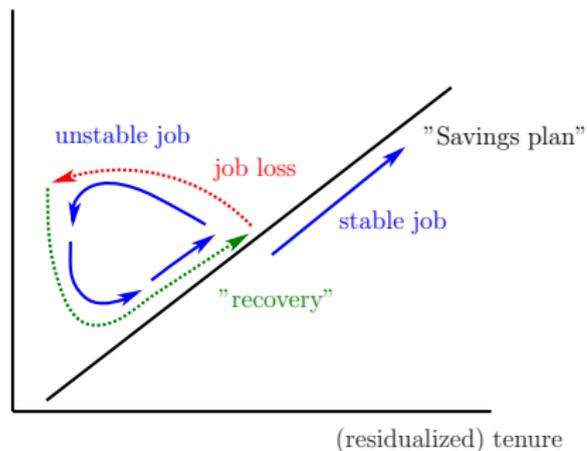
- **Unstable job:** “Sisyphos Cycle”
- **Stable job:** accumulation of life-cycle savings

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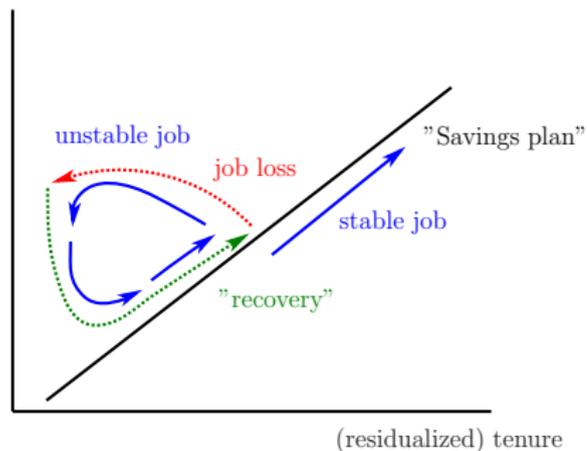
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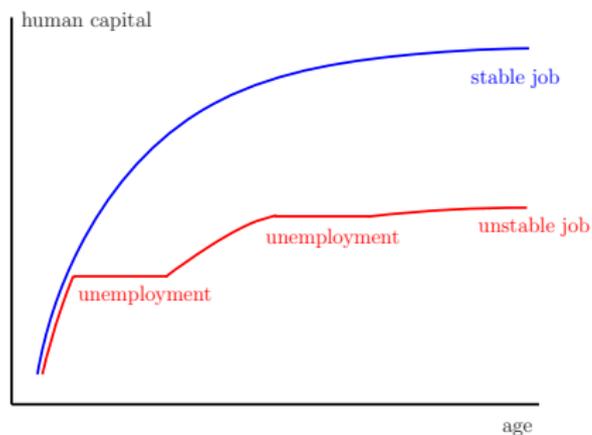
- **Unstable job:** "Sisyphos Cycle"
- **Stable job:** accumulation of life-cycle savings, no decumulation due to unemployment, smoothing of life-cycle profile

Consumption-saving decision



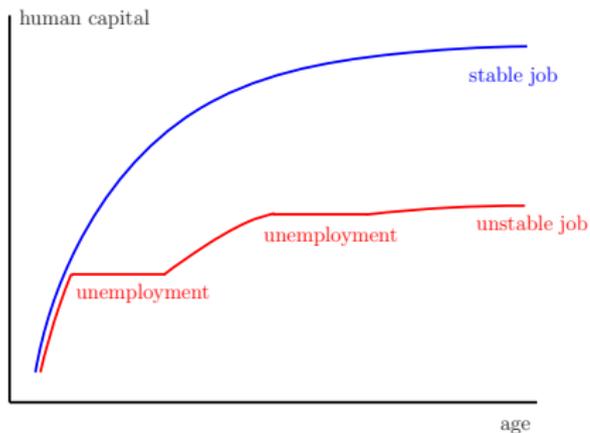
- **Unstable job:** *“Sisyphos Cycle”*
- **Stable job:** *“Modigliani savers”*

Earnings dynamics



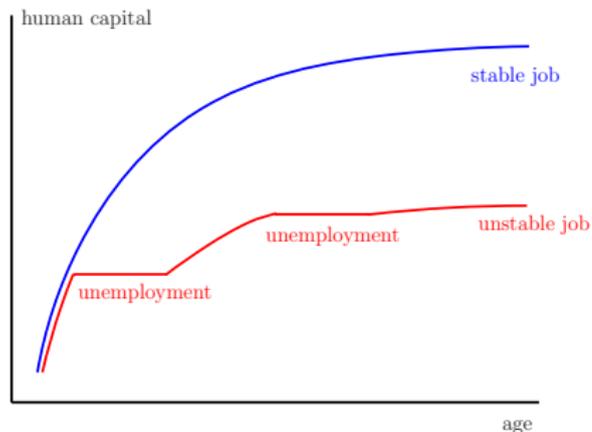
- **Unstable job:** Unemployment prevents human capital accumulation

Earnings dynamics



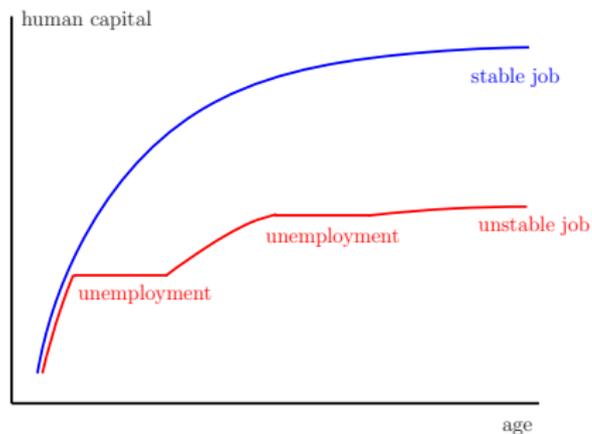
- **Unstable job:** Unemployment prevents human capital accumulation, persistent job instability

Earnings dynamics



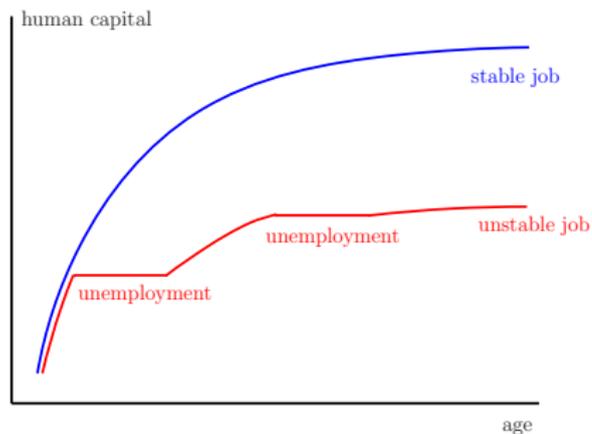
- **Unstable job:** Unemployment prevents human capital accumulation, persistent job instability, less earnings growth

Earnings dynamics



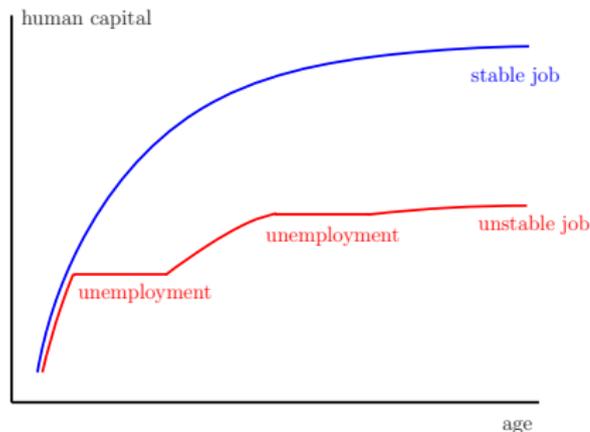
- **Unstable job:** “Dead-end job”

Earnings dynamics



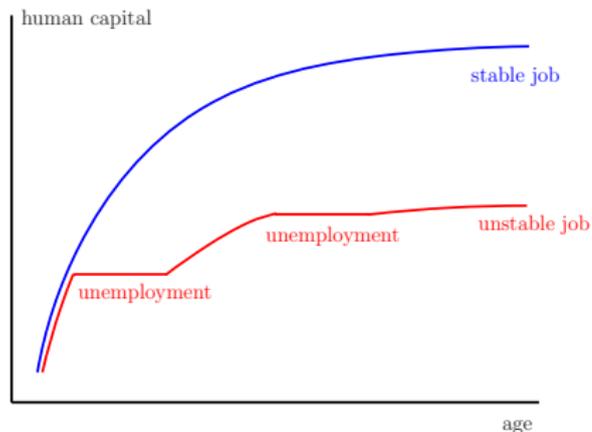
- **Unstable job:** “Dead-end job”
- **Stable job:** Constant human capital accumulation

Earnings dynamics



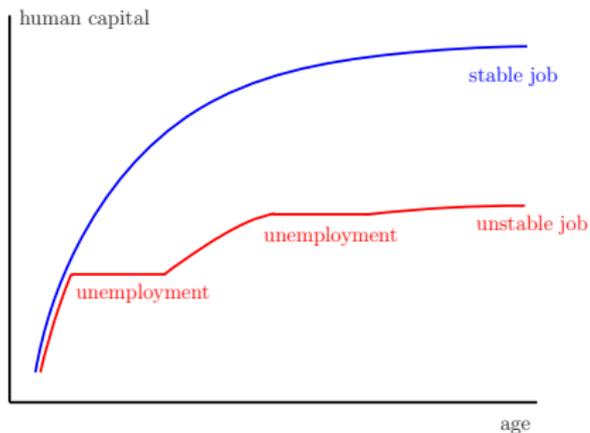
- **Unstable job:** “Dead-end job”
- **Stable job:** Constant human capital accumulation, low unemployment risk

Earnings dynamics



- **Unstable job:** “Dead-end job”
- **Stable job:** Constant human capital accumulation, low unemployment risk, and high earnings growth

Earnings dynamics



- **Unstable job:** “Dead-end job”
- **Stable job:** “Lifetime Job”

Calibration

- Calibrate model to U.S. labor market using CPS and SCF data

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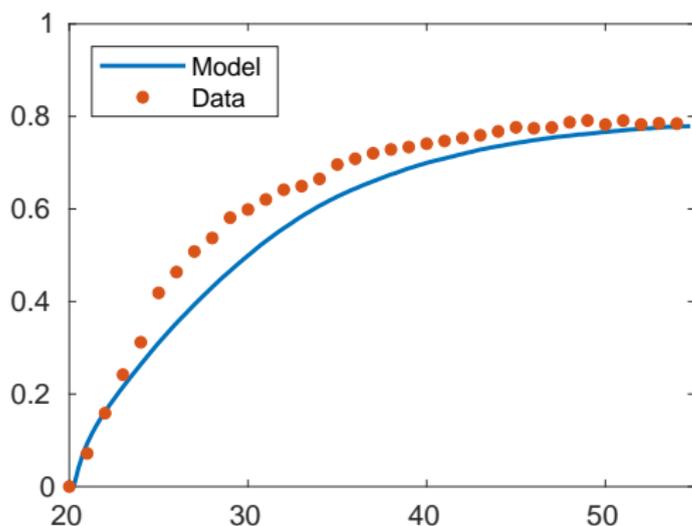
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 4. wealth-to-income ratio
- Relationship of job stability and wealth accumulation not targeted

Earnings and wealth dynamics

- Model matches closely life cycle earnings and wealth dynamics

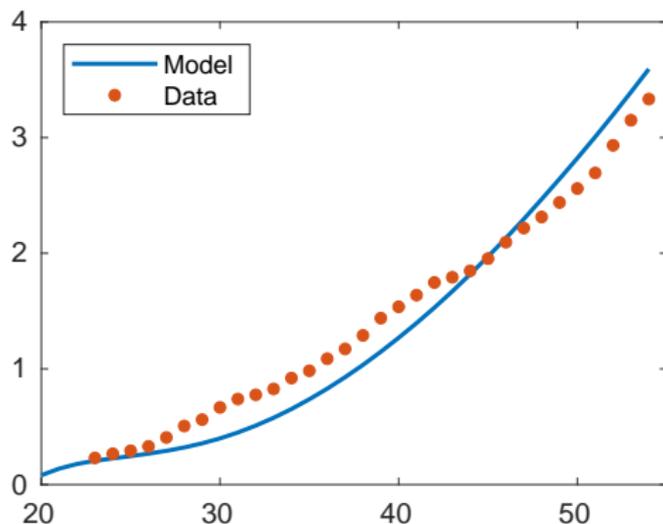
Earnings and wealth dynamics

- Model matches closely life cycle earnings and wealth dynamics
- Life cycle (log) earnings profile



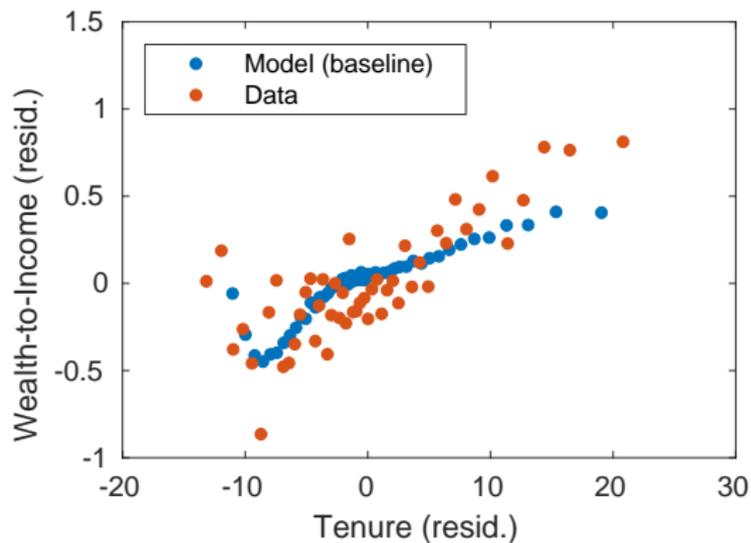
Earnings and wealth dynamics

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- Life cycle wealth-to-income profile



Earnings and wealth dynamics

- Model matches relationship of job stability and wealth accumulation



Consequences of heterogeneity in job stability

- Model matches large heterogeneity in job stability

Consequences of heterogeneity in job stability

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- Model matches life cycle earnings, consumption, and wealth dynamics

Consequences of heterogeneity in job stability

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- Model matches life cycle earnings, consumption, and wealth dynamics
- Laboratory to explore consequences of job stability heterogeneity

Consequences of heterogeneity in job stability

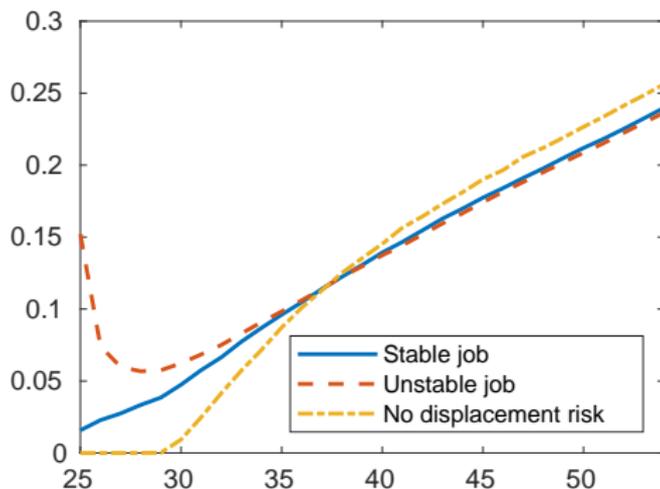
- Model matches large heterogeneity in job stability
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 - **Stable job:** 25th pct of age-specific separation rate distribution (λ_j^{25})

Consequences of heterogeneity in job stability

- Model matches large heterogeneity in job stability
- Model matches life cycle earnings, consumption, and wealth dynamics
- Laboratory to explore consequences of job stability heterogeneity
 - **Stable job:** 25th pct of age-specific separation rate distribution (λ_j^{25})
 - **Unstable job:** 75th pct of age-specific separation rate distribution (λ_j^{75})

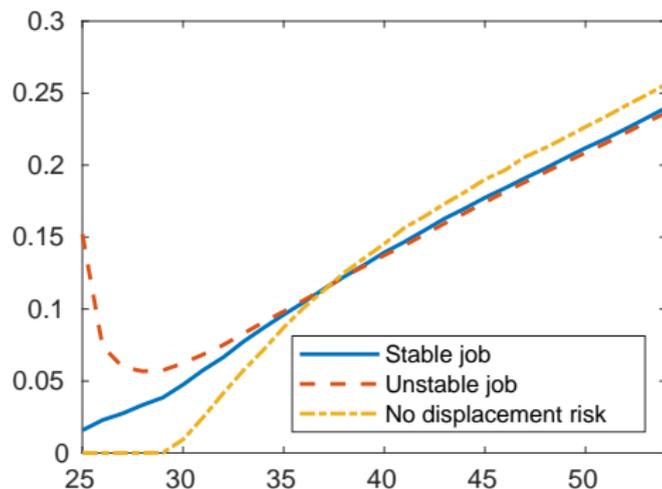
Heterogeneity in job stability and precautionary savings

- Stable jobs allows for better life cycle consumption smoothing



Heterogeneity in job stability and precautionary savings

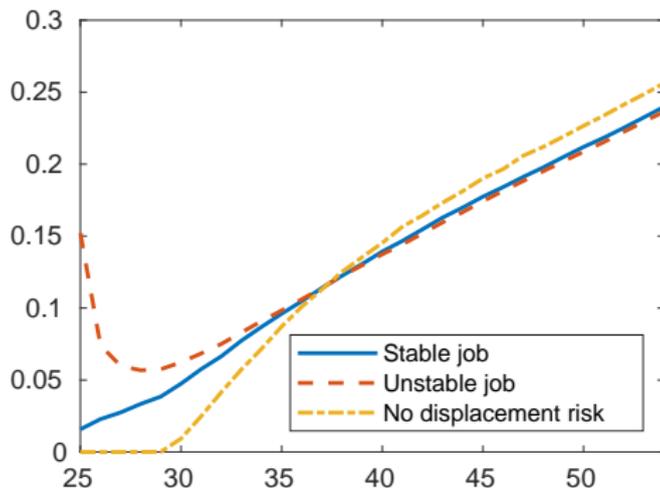
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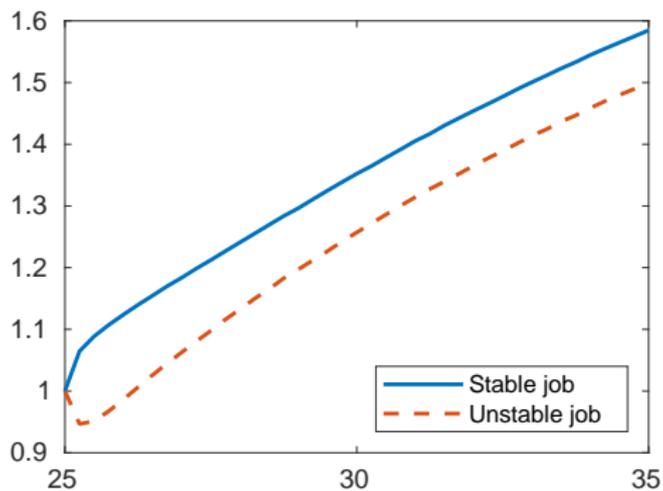
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- 7-times lower saving rates at age 25 in stable job
- Job stability requires less precautionary savings

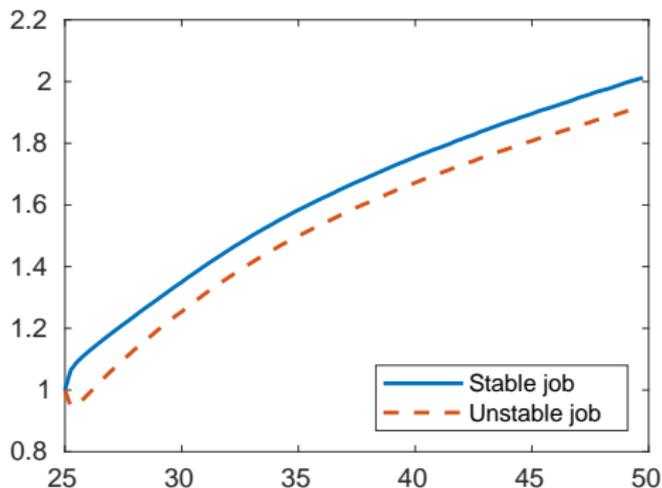
Heterogeneity in job stability and income dynamics

- Unstable job at age 25 implies 10% lower income 10 years later



Heterogeneity in job stability and income dynamics

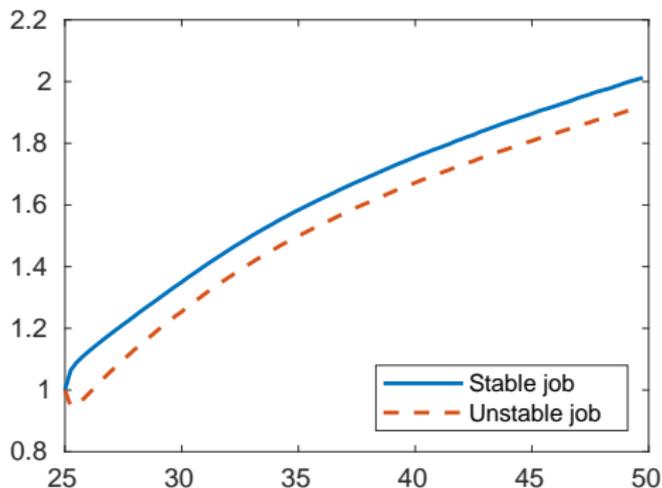
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- Initial differences in job stability translate into persistent life-cycle effects

Heterogeneity in job stability and income dynamics

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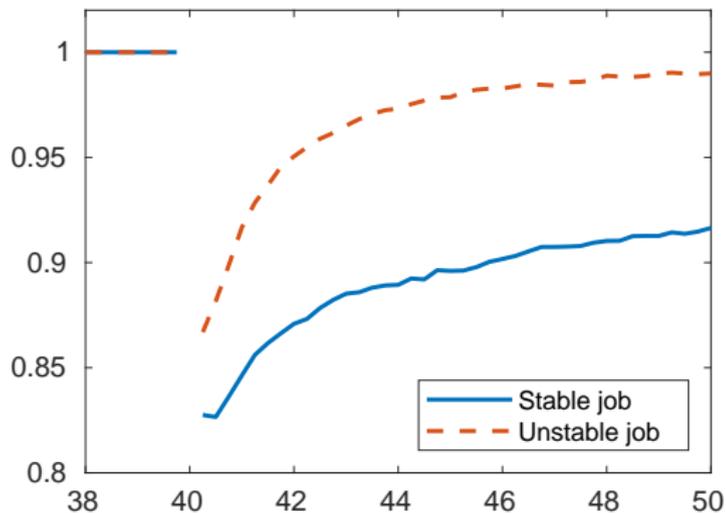
- Initial differences in job stability translate into persistent life-cycle effects
- Job-stability heterogeneity perpetuates short-run search frictions

Heterogeneity in job stability and consequences of job loss

- Unemployment risk key channel for micro-macro interaction

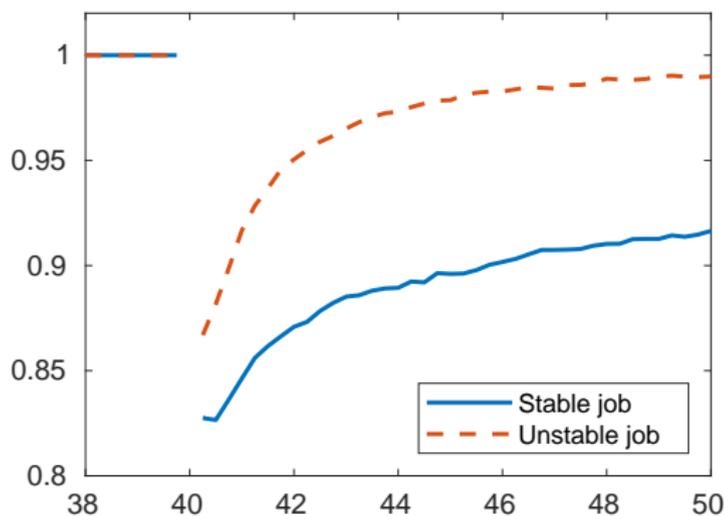
Heterogeneity in job stability and consequences of job loss

- Unemployment risk key channel for micro-macro interaction
- Earnings losses from job loss (job displacement) at the core of interaction



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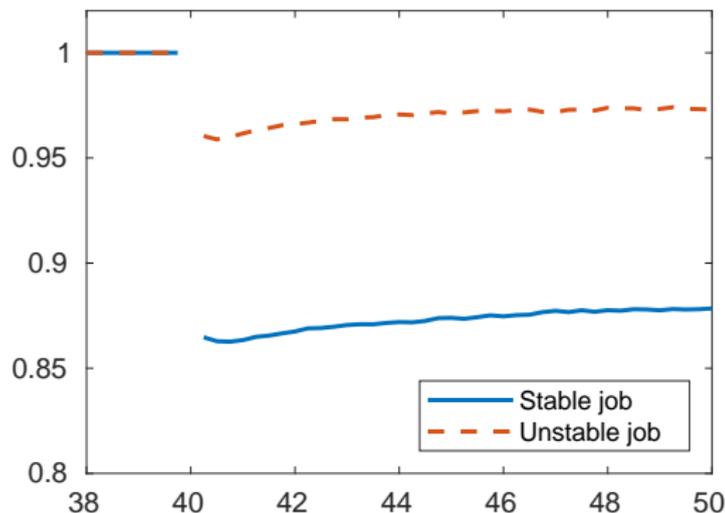
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- Large and persistent earnings shock only after losing stable job

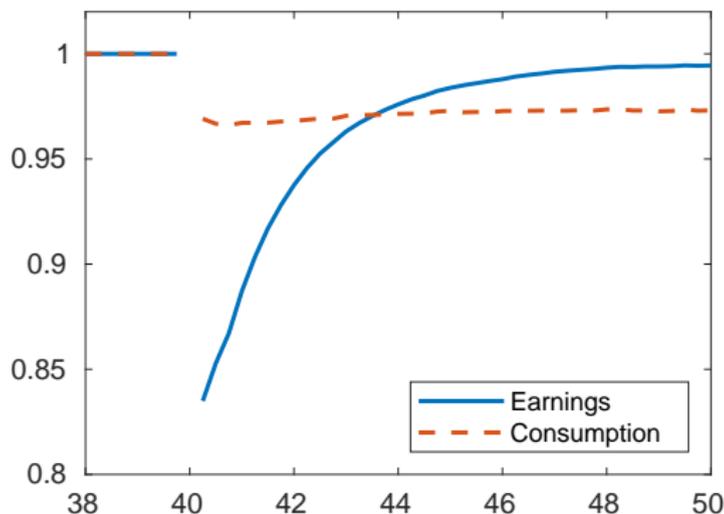
Heterogeneity in job stability and job loss

- Consumption response anticipates and smooths present value of earnings shock
- Large and persistent consumption decline after losing stable job



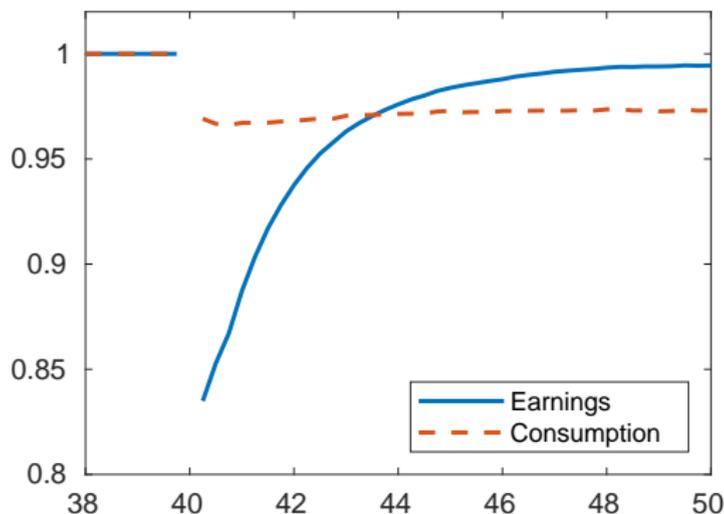
Job loss with *representative worker*

- Earnings losses from job loss in “representative worker” model similar to loss of unstable job with small consumption drop



Job loss with *representative worker*

- Earnings losses from job loss in “representative worker” model similar to loss of unstable job with small consumption drop



- Homogeneous job stability implies strong mean reversion

Consequences of declining labor market mobility

- Ongoing debate about reasons for declining U.S. *labor market dynamism*

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- Secular decline in separation and job-to-job rates in the United States (Fujita, 2018)

Consequences of declining labor market mobility

- Ongoing debate about reasons for declining U.S. *labor market dynamism*
- Secular decline in separation and job-to-job rates in the United States (Fujita, 2018)
- Median tenure remained constant over time (Molloy et al., 2020)

Consequences of declining labor market mobility

- Ongoing debate about reasons for declining U.S. *labor market dynamism*
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- Job-stability heterogeneity perpetuates consequences of short-run search outcomes

Job Stability, Earnings Dynamics, and Life Cycle Savings

Virtual ECONtribute Macro Workshop

July 3, 2020

Related Literature

- **Heterogeneity in job stability:** Pinheiro and Visschers (2015), Jung and Kuhn (2018), Jarosch (2015), Huckfeldt (2016), Krolkowski (2017)
- **Consumption-saving and labor market mobility:** Low et al. (2010), Krusell et al. (2010), Lise (2011), Michelacci and Ruffo (2015), Herkenhoff (2016) Hubmer (2018), Larkin (2019)
- **Earnings dynamics and earnings dispersion:** Hornstein et al. (2010), Karahan and Ozkan (2013), Guvenen et al. (2015)
- **Life-cycle labor market dynamics:** Menzio et al.(2016), Cheron et al.(2013), Esteban-Pretel and Fujimoto (2014)

Data

- Explore and combine data from four data sources

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 - (1) Survey of Consumer Finances (1992 - 2016)

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 - Heterogeneity in job stability across employers

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 - (2) Business Dynamics Statistics (2003 - 2014)
 - (3) Current Population Survey (1980 - 2007)

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 - Individual wealth dynamics