The Welfare Effects of Eviction and Homelessness Policies

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Motivation

- Housing insecurity in the US
  - 3.6M eviction cases filed against renters annually (2000-18, Eviction Lab)
  - 600K people experience homelessness every night (2007-20, HUD)
- Common policy proposals:
  1. Right-to-Counsel: free legal counsel to tenants in eviction cases
  2. Means-tested rental assistance
  3. Eviction moratoria during COVID-19 pandemic
- This paper: **evaluate the welfare effects of these policies**
  - When rents and housing supply adjust in equilibrium
  - With quantitative model of rental markets

Preview of findings

1. **Right-to-Counsel:**
   - Harder to evict tenants who default on rent
   - Higher rents, lower housing supply in equilibrium (less attractive for landlords)
   - Homelessness rises by 15%
   - Ineffective in preventing evictions because default is driven by persistent shocks
   - Welfare lower, poor are main losers

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   - Lowers likelihood that tenants default on rent in the first place
   - Lowers evictions by 75% and homelessness by 45%
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3. **Moratorium following unemployment shock (COVID-19):**
   - Prevents evictions and homelessness along recovery path
   - Used as a temporary measure so has little effect on rents

This paper

- Facts on risk that drives defaults, using eviction data
  - Main risk factors are job loss and divorce
  - Job loss and divorce lead to a persistent drop in income
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- Dynamic equilibrium model of rental markets
  - OLG of heterogeneous households face income and divorce risk
  - Rent houses from investors, can default on rent and risk eviction
  - Rents and housing supply reflect default risk
  - Making it harder to evict raises rents, homelessness can increase

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  - Making it harder to evict raises rents, homelessness can increase
- Model quantified to San Diego County
  - Income process that captures risk that drives defaults
  - Eviction regime parameters identified from court data
  - Estimate model to match data on rents, evictions, homelessness
- Counterfactual analysis: the effect of rental market policies
  - "Right-to-Counsel", rental assistance, eviction moratorium

Literature

- Evictions: Desmond and Shollenberger (2015), Desmond and Kimbro (2015), Collinson, Humphries, Mader, Reed, Tannenbaum, Van-Dijk (2021)
- Rental market policies: Glaeser and Luttmer (2003), Baum-Snow and Marion (2009), Diamond, McQuade, Qian (2019), Imrohoroglu and Zhao (2020), Favilukis, Mabille, Van Nieuwerburgh (2022)
- Right-to-Counsel RCT's: Greiner, Pattanayak, Hennessy (2013), Seron, Van Ryzin, Frankel, Kovath (2014), Judicial Counsel of California (2015, 2019)
- Models of default on mortgage: Jeske, Krueger, Mitman (2013), Corbae, Quintin (2015), Krishnamurthy, McQuade, Guren (2021)
- Housing assignment models: Kaneko (1982), Landvoigt, Piazzesi, Schneider (2015), Nathanson (2021)
- Family economics: Mazzocco (2007), Voena (2015), Blundell, Pistaferri, Saporta-Eksten (2016), Low, Meghir, Pistaferri, Voena (2020)

Outline

- Background - rental contracts and evictions in the US
- Empirics - the risk that drives defaults on rent (brief overview)
- Model of rental markets in a city
- Model quantification
- Counterfactuals

Background - rental contracts and evictions in the US

- Rental contracts set non-contingent monthly rent for duration of lease
  - Tenants pay rent at beginning of each month
  - Landlords allowed to screen and price-discriminate (Fair Housing Act)
- Vast majority of evictions due to default (Desmond 2013, Brescia 2009)
  - Landlords file eviction claims to court
- Key outcomes of eviction cases:
  - Whether tenant is evicted
  - Length of eviction process
  - Amount of rental debt repaid by tenant
- Common policy proposals that address evictions and homelessness:
  1. "Right-to-Counsel"
  2. Means-tested rental assistance programs
  3. Eviction moratoria

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Empirics - the risk that drives defaults on rent (overview)

- Data:
  - MARS survey of renters: reasons for past default and eviction
  - Universe of eviction cases in San Diego (2011):
    tenants & landlord names, address, dates, outcome
  - Moving data (Infutor): address history of individuals, age
  - Census data, PSID and CPS income data

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1. What risk factors drive defaults?
   - Main risk factors are job loss and divorce figure
2. Who faces this risk?
   - Young, low-skilled more exposed to job-loss and divorce figure
   - Also particularly likely to default on rent figure
3. Job-loss and divorce lead to a persistent drop in income figure

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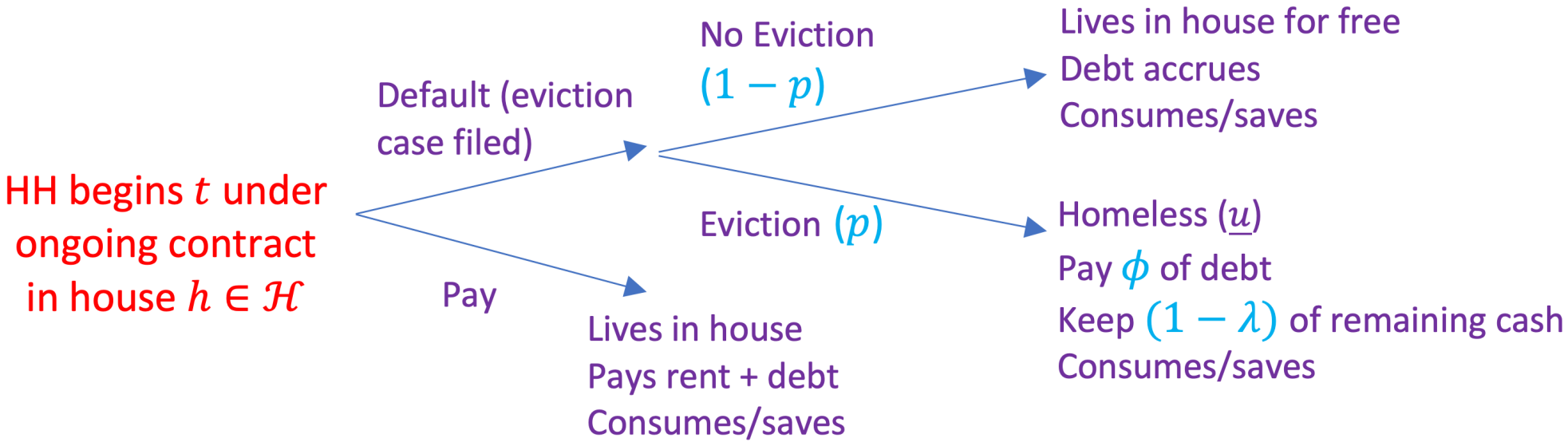
Model of rental markets in a city

- Two goods:
  - Numeraire c, indivisible houses of qualities $h \geq \underline{h}$
- Households:
  - OLG, lifetime utility from c and housing services s
  - $s_t = h$ if rents house h in month t, $s_t = \underline{u}$ if homeless
  - Exogenous endowment, subject to idiosyncratic earnings and divorce risk
  - Save in risk-free asset, borrowing constrained
- Rental Contracts:
  - Households rent from investors through long-term non-contingent contracts
  - Per-period rent set when the contract begins, fixed for contract duration
  - Must pay first month's rent in order to move in, but can later default
  - Ends if household moves, dies, evicted, or if house fully depreciates.

Household Problem

- Household begins each month t either occupying a house or not



Bellman

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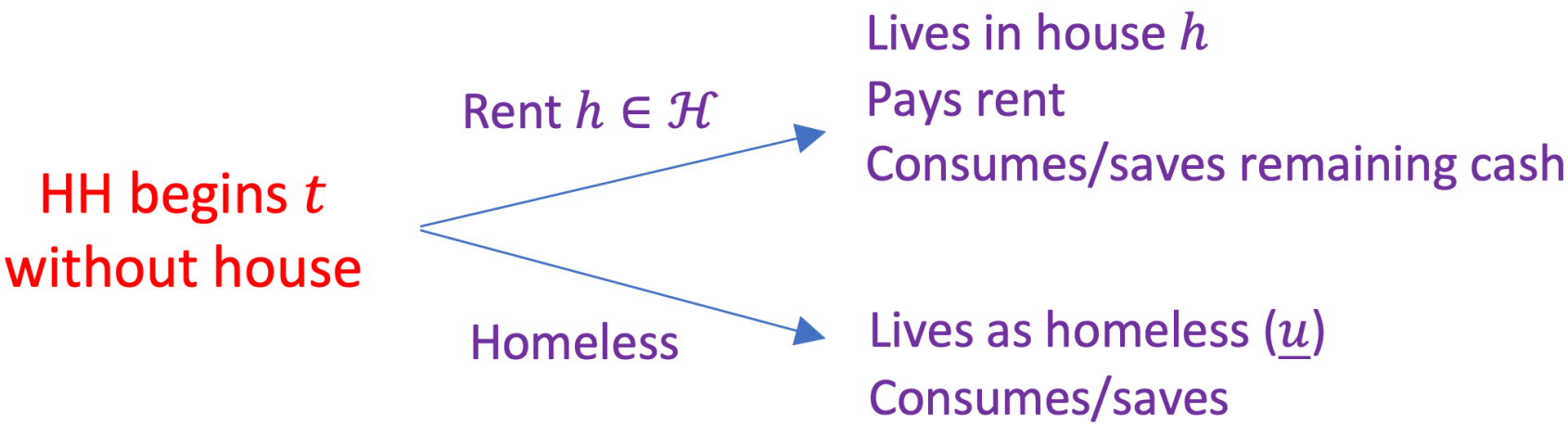

Real estate investors

- Buy houses in housing market, rent them to households
- Deep pocketed: can buy as many houses as needed
- Incur a per-period cost τh as long as rental contract is ongoing
  - Whether or not tenant defaults

  $\longrightarrow$ Rental contracts = long-duration risky assets held by investors
- Rents priced such that investors break even in expectation Bellman
  - Can depend on household characteristics at time contract begins evidence
  - Rent = risk-free rent + default premia example

Housing supply and equilibrium

- Representative landowner for each house quality h
  - Can build houses, chooses how much to supply every period
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  - Finances two costs:
  1. Per-household externality cost of homelessness to city θ
  2. Cost of rental market policies
  - Levies lump-sum tax on investors

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    1. Per-household externality cost of homelessness to city θ
    2. Cost of rental market policies
  - Levies lump-sum tax on investors
- Stationary recursive equilibrium: household, investor, landowner policies; house prices, rents; distribution of individual states:
  - Agents optimize, housing and rental markets clear
  - Distribution of individual states constant when agents use optimal policies

Discussion

- Policies that make it harder to evict delinquent tenants ($p \downarrow$):
  - Protect renters from eviction and homelessness when they default
  - But higher default premia to compensate investors for higher costs of default

  $\Longrightarrow$ More HH can't afford to move into worst house, homelessness can increase
  - Nature of risk that drives defaults is a key feature governing trade-off
  - Less effective if defaults driven by persistent shocks

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  - But imposes costs on the government
- Policies also affect housing supply, house prices and risk-free rents
  - Through their effect on demand for rentals
  - Can affect the entire distribution of households, not only the poor

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Model quantification - overview

- Model quantified to San Diego-Carlsbad MSA
  - Large homeless population
  - Good eviction data
  - Geographically well defined rental market

  1. Income process that captures risk that drives defaults on rent
  2. Identify eviction regime parameters from court data
  3. Remaining parameters set based on direct evidence or estimated (SMM)

- Local quantification of parameters important for policy evaluation

Income process

- Captures risk that leads to defaults on rent in the data
- Deterministic component, persistent and transitory shocks
- Novelty relative to standard income process:
  1. Incorporate divorce and job-loss as sources of income risk
  2. Allow parameters to depend on age, human capital (<HS, HS, college)

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- Novelty relative to standard income process:
  1. Incorporate divorce and job-loss as sources of income risk
  2. Allow parameters to depend on age, human capital (<HS, HS, college)
- Innate human capital $\overline{e}$, each month single ($m_t = 0$) or married ($m_t = 1$)
- Marry at rate $M_{a,\overline{e}}$, divorce at rate $D_{a,\overline{e}}$ (div_t divorce shock indicator)
- During working life ($a_t \leq Ret$):

$$y_t = \begin{cases} f(a_t, \overline{e}, m_t) z_t u_t & z_t > 0 \\ y^{unemp}(a_t, \overline{e}, m_t) & z_t = 0 \end{cases}$$

  - $z_t = 0$ is unemployment state
  - Distribution of shocks: $\pi_{z'/z}(a_t, \overline{e}, m_t, div_t), \pi_u(\overline{e}, m_t, div_t)$
- After retirement ($a_t > Ret$) deterministic income $y^R_{\overline{e},m}$

Eviction regime parameters

- Eviction regime parameters (p, ϕ) identified from court data
  - "Shriver Act" RCT estimates causal effect of legal counsel in SD
  - Analyzed eviction outcome, case length, share of rental debt repaid
  - Assume no legal counsel in baseline quantification
  - Identify (p, ϕ) from moments of control group
    - ★ Data: eviction cases extend for 38 days between default and eviction
    - ★ Model: length (months) of eviction case from default to eviction $= \frac{1}{p}$
    - ★ Data: non-represented tenants who were evicted repaid 71% of debt
    - ★ Model: share of debt paid upon eviction $= \phi$

Other exogenous parameters

- Elasticities of housing supply set to 0.67 (Saiz, 2010)
- Monthly per-household externality cost of homelessness $\theta = \$450$
  - Annual cost of homelessness to San Diego = $\$200M$ (SDTEF, 2015)
  - Homeless population = 37K households (3.3% of population)
  - Classify families as homeless if they live in shelters/streets (ACS, HUD)
  - Or "double up" and cannot afford to rent (<20K annual earnings)

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  - Classify families as homeless if they live in shelters/streets (ACS, HUD)
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- Other parameters:
  - Households enter at age 20, retire at 60, die at 80
  - Moving shock set to match renters median tenure (=2.2 years)
  - Investor cost parameter τ captures 1.25% annual property tax in CA
  - Interest rate set to capture 1% annual rate
  - Destruction shock set to capture 1% annual depreciation rate
  - CRRA felicity: $u(c,s) = \frac{\left[c^{1-\rho} s^{\rho}\right]^{1-\gamma}}{1-\gamma}$ with $\rho = 0.3$, $\gamma = 1.5$
  - Bequest utility: $beq(w) = \overline{\nu}^{b} \frac{w^{1-\gamma}}{1-\gamma}$ with $\overline{\nu}^{b} = 0.5$

Simulated Method of Moments Estimation

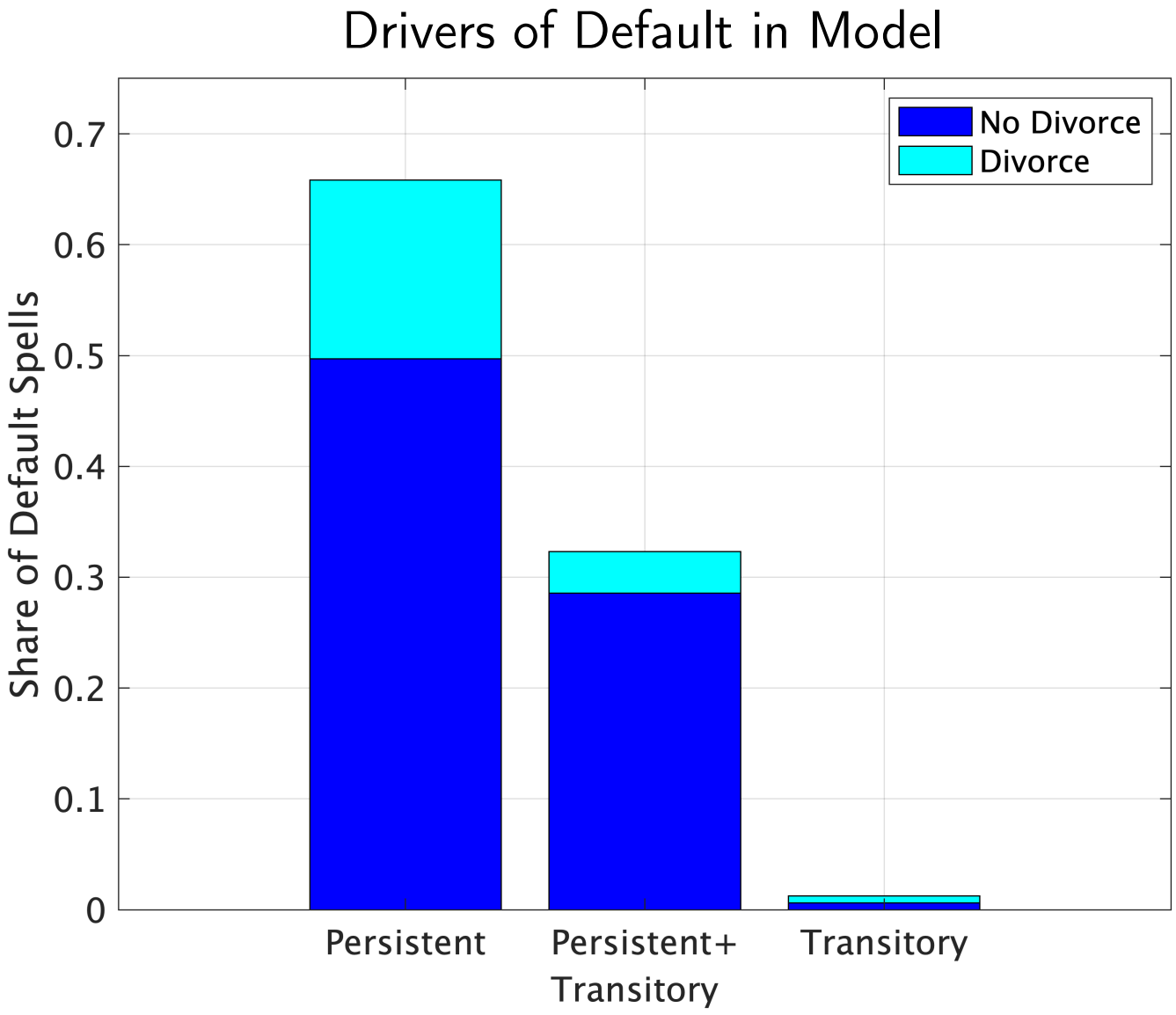
- Jointly estimate parameters with no direct evidence using SMM identification

Parameter	Value	Target	Data=Model
House qualities (h_1, h_2, h_3)	(600,000, 775,000, 1,070,000)	Average rent in 1st quartile, 2nd quartile, top half ACS	($800; $1,200; $1,800)
Eviction penalty on cash-on-hand λ	0.975	Eviction filing rate $\equiv$ share of renters with eviction case filed against them during year	2.0%
Supply scales $(\psi_0^1, \psi_0^2, \psi_0^3)$	$(127, 6.35, 6) \times 10^{-6}$	Average house price in 1st quartile, 2nd quartile, top half	($235,000; $430,000; $700,000)
Discount factor β	0.971	Median wealth - renters	$5,000
Homeless utility $\underline{u}$	75,000	Homelessness rate	3.3%

- Model also fits non-targeted moments age profile of evictions rent burden and income

Why do renters default?

- ***Driver of default*** $\equiv$ type of shock at (initial) period of default spell
- Vast majority of defaults initiated by persistent income shocks



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Right-to-Counsel in eviction cases

- Leverage micro evidence on how counsel changes eviction parameters ("Shriver Act")
- Extends process ($p = 0.79 \Rightarrow \widetilde{p} = 0.6$), lowers debt repaid ($\phi = 0.71 \Rightarrow \widetilde{\phi} = 0.56$)

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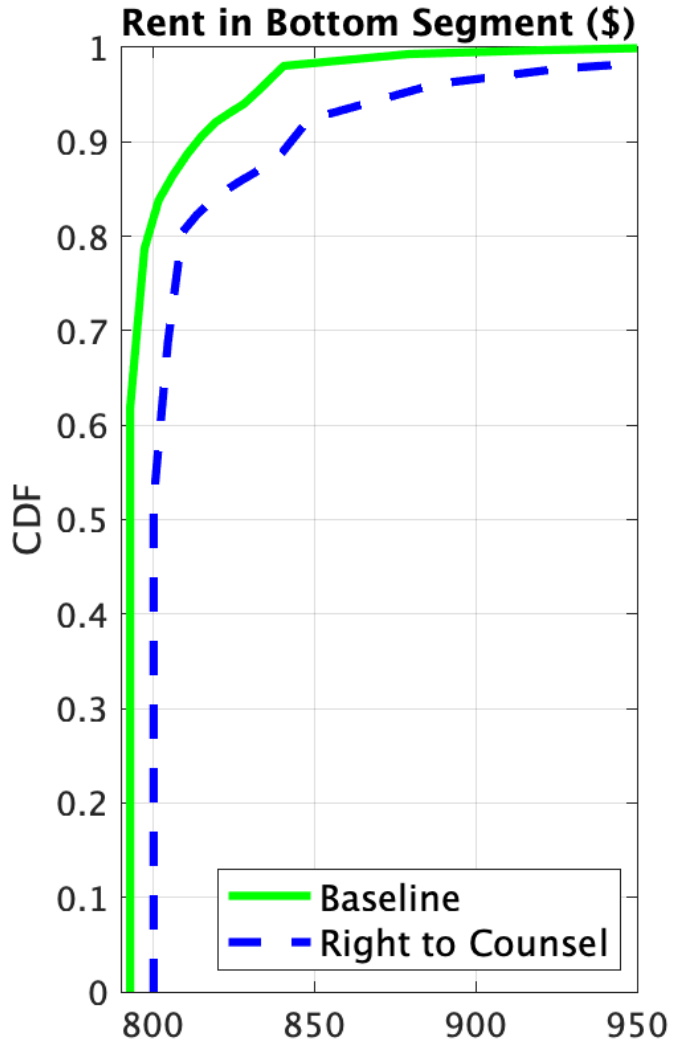
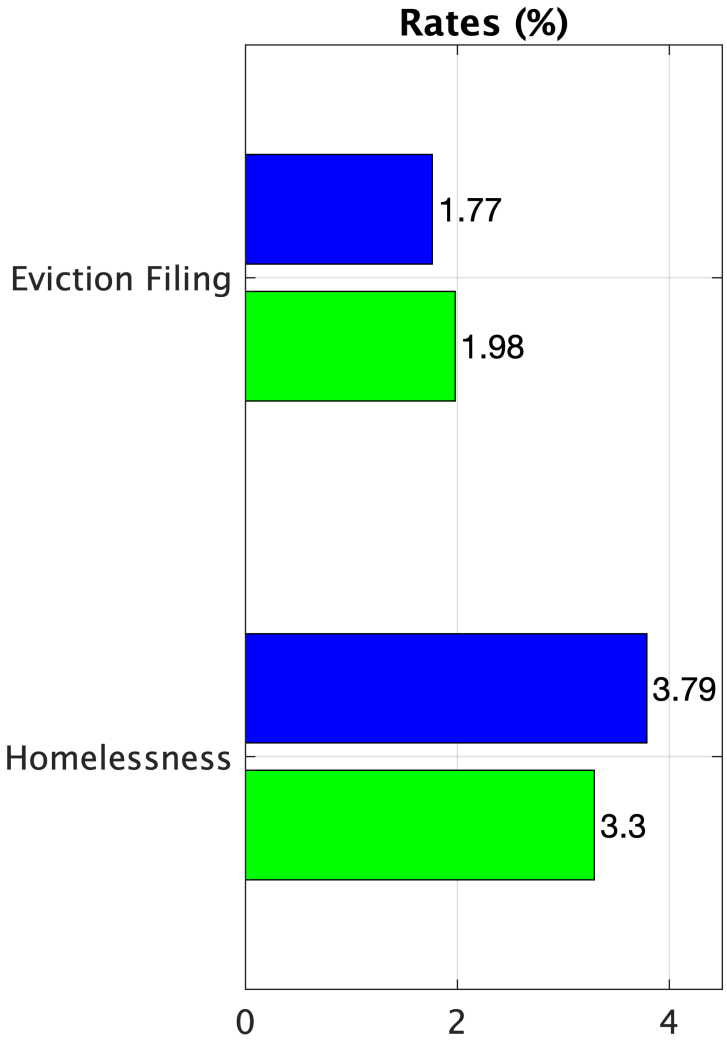
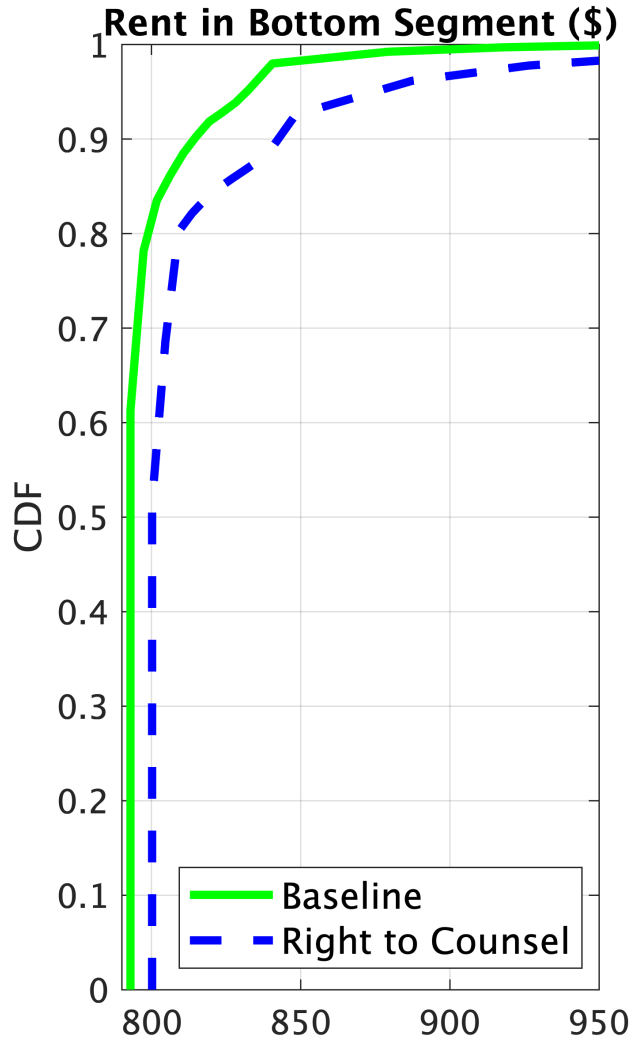
- **Right-to-Counsel increases rents in bottom segment**



Right-to-Counsel in eviction cases

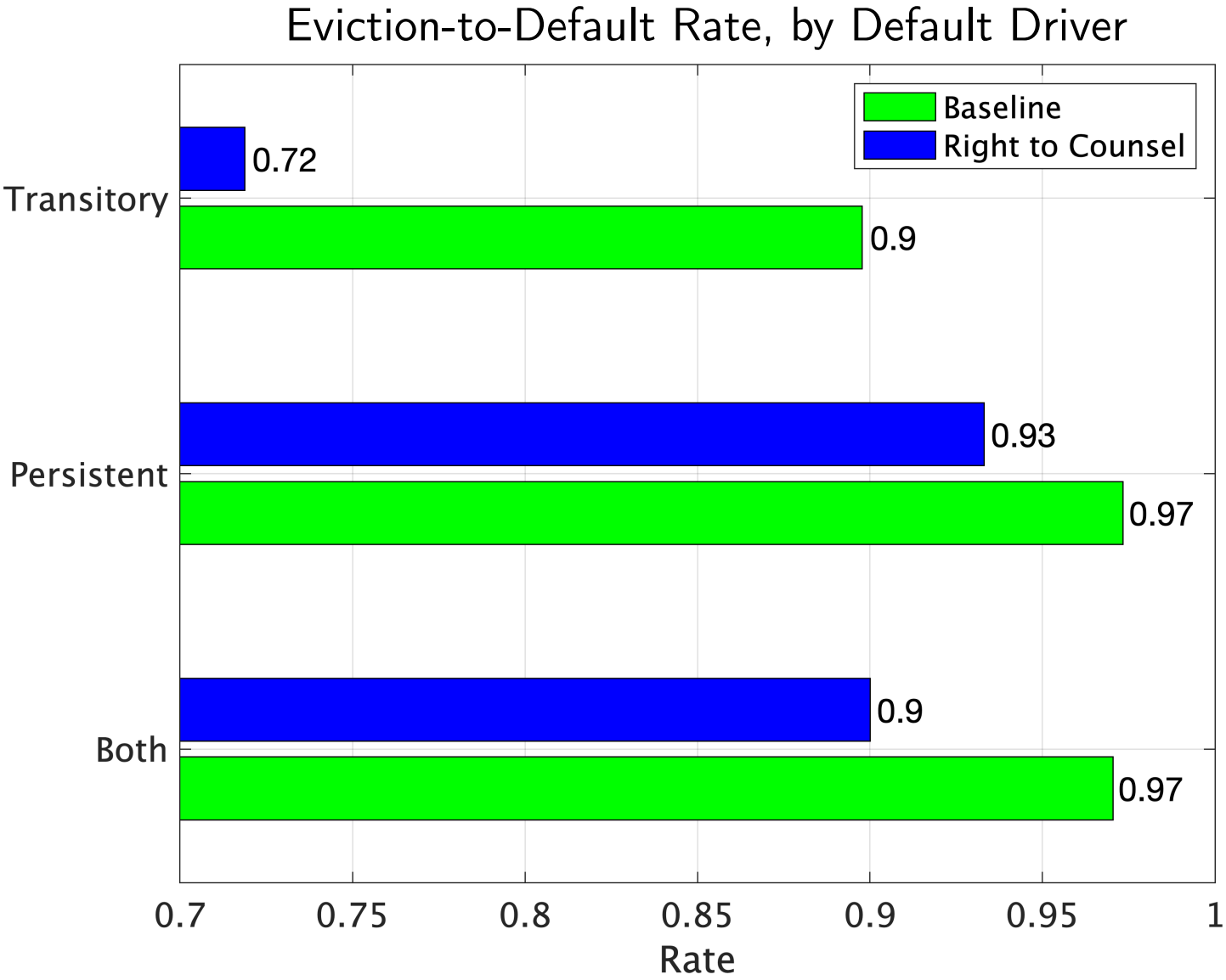
- Homelessness increases, eviction rates lower because risky tenants priced out
- Lawyers don't prevent evictions because defaults driven by persistent shocks





Right-to-Counsel doesn't prevent evictions

- ***Eviction-to-default rate*** $\equiv$ share of default spells ending with eviction
- Legal counsel ineffective since risk that drives defaults is persistent



Welfare and monetary cost

- Right-to-Counsel lowers aggregate welfare
  - Equivalent proportional variation in income $= -0.1$
- Poor main losers: largest increase in default premia, become homeless rents
- Rich renters benefit from fall in demand for rentals
  - Investors pay lower house price, charge lower risk-free rent house prices
- Annual cost = \$33.9M on legal counsel (SFMOHCD) + \$30.2M on homelessness

Counterfactual analysis - overview

1. Right-to-Counsel:
   - Lawyers make it harder to evict, but unable to prevent evictions
   - Higher rents lead to a 15% increase in homelessness
   - Welfare lower, annual monetary costs $= \$37M$
2. Means–tested rental assistance
   - Lowers likelihood of default, evictions drop by 75%, homelessness by 45%
   - Total welfare higher, poor benefit, rich worse off (pay higher risk-free rent)
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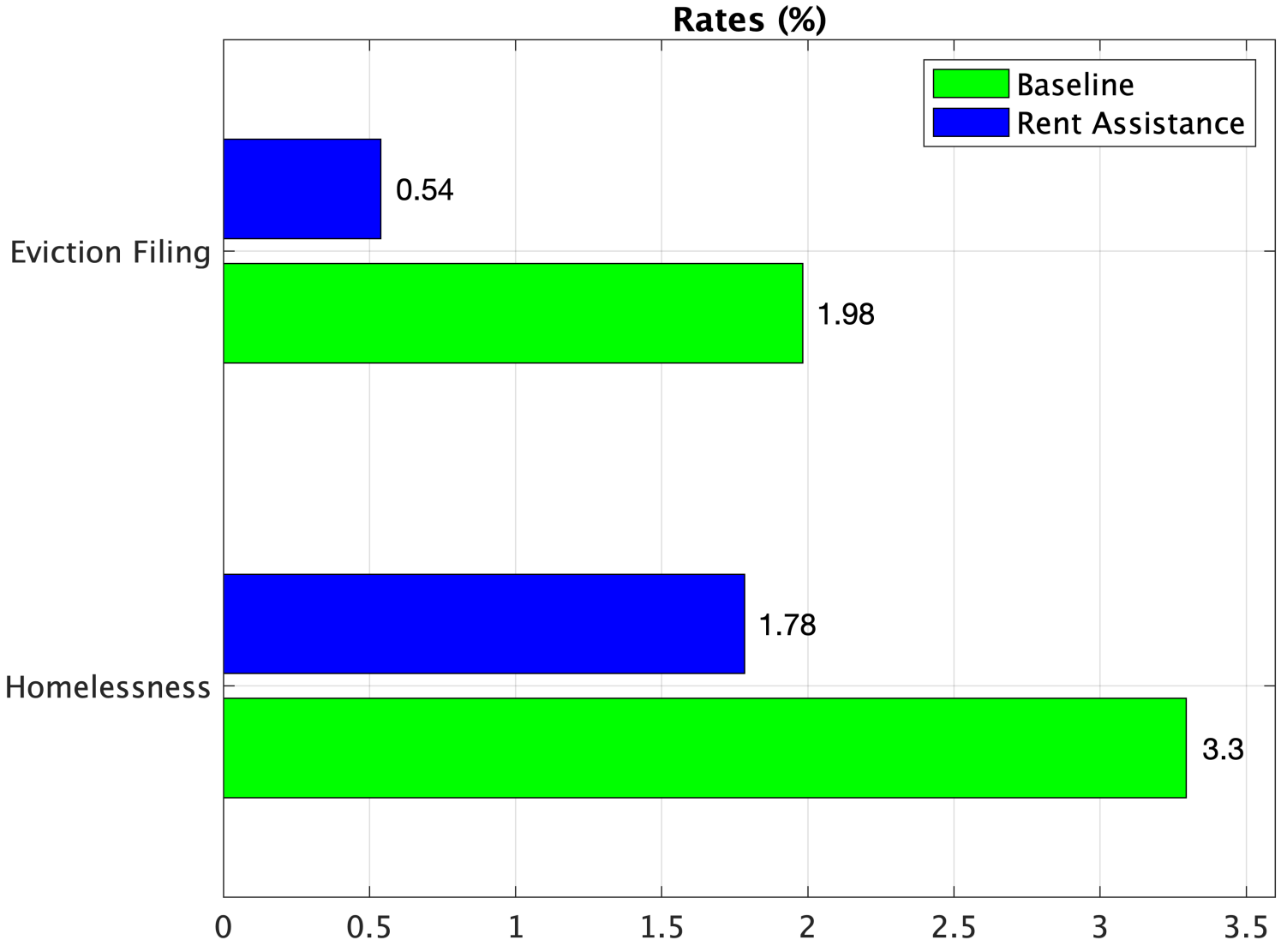
3. Eviction moratorium following unemployment shock (COVID-19)
   - Prevents evictions and homelessness along recovery path
   - Used as unexpected and temporary measure so has little effect on rents

Means-tested rental assistance

- Subsidize \$400 of rent for households with cash $< \$1,000$, in bottom segment

Means-tested rental assistance

- Subsidize \$400 of rent for households with cash $< \$1,000$, in bottom segment
  - Less homelessness, eviction rate lower because default risk eliminated rents



Welfare and monetary cost

- Rental assistance increases aggregate welfare
  - Equivalent proportional variation in income $= 0.69$
- Poor households main winners: eligible for assistance, able to rent rents
- Rich renters worse off due to rise in demand for rentals
  - Rise in demand increases house price and risk-free rent house prices
- Policy pays for itself:
  - Cost $\$85.8M$ to finance, but $\$91.9M$ saved on homelessness

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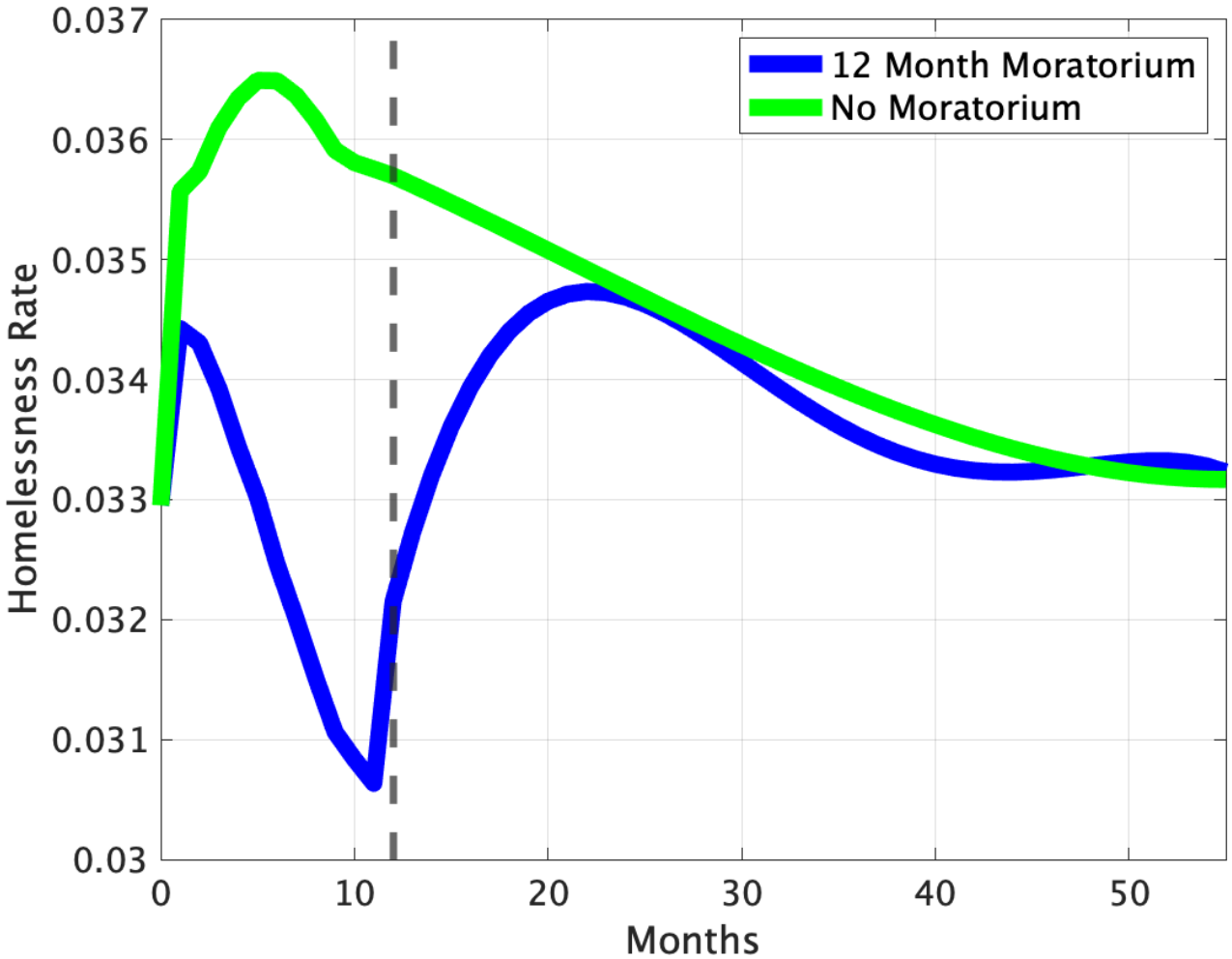
3. Eviction moratorium following unemployment shock (COVID-19)
   - Prevents evictions and homelessness along recovery path (not just delays)
   - Used as temporary measure so has little effect on rents

Eviction moratorium

- Simulate the unemployment shock observed in US at onset of COVID-19
- Compute transition dynamics with and without a 12-month moratorium ($p = 0$)
- Moratorium prevents homelessness (not only delays)
- Moratorium is temporary and unexpected: only small increase in rents



eviction to defaults

Conclusion

- What are the welfare effects of eviction and homelessness policies?
- Dynamic general equilibrium model of rental markets
  - Key new feature: tenants can default on rent
- Model quantified to match local data on evictions, homelessness, risk

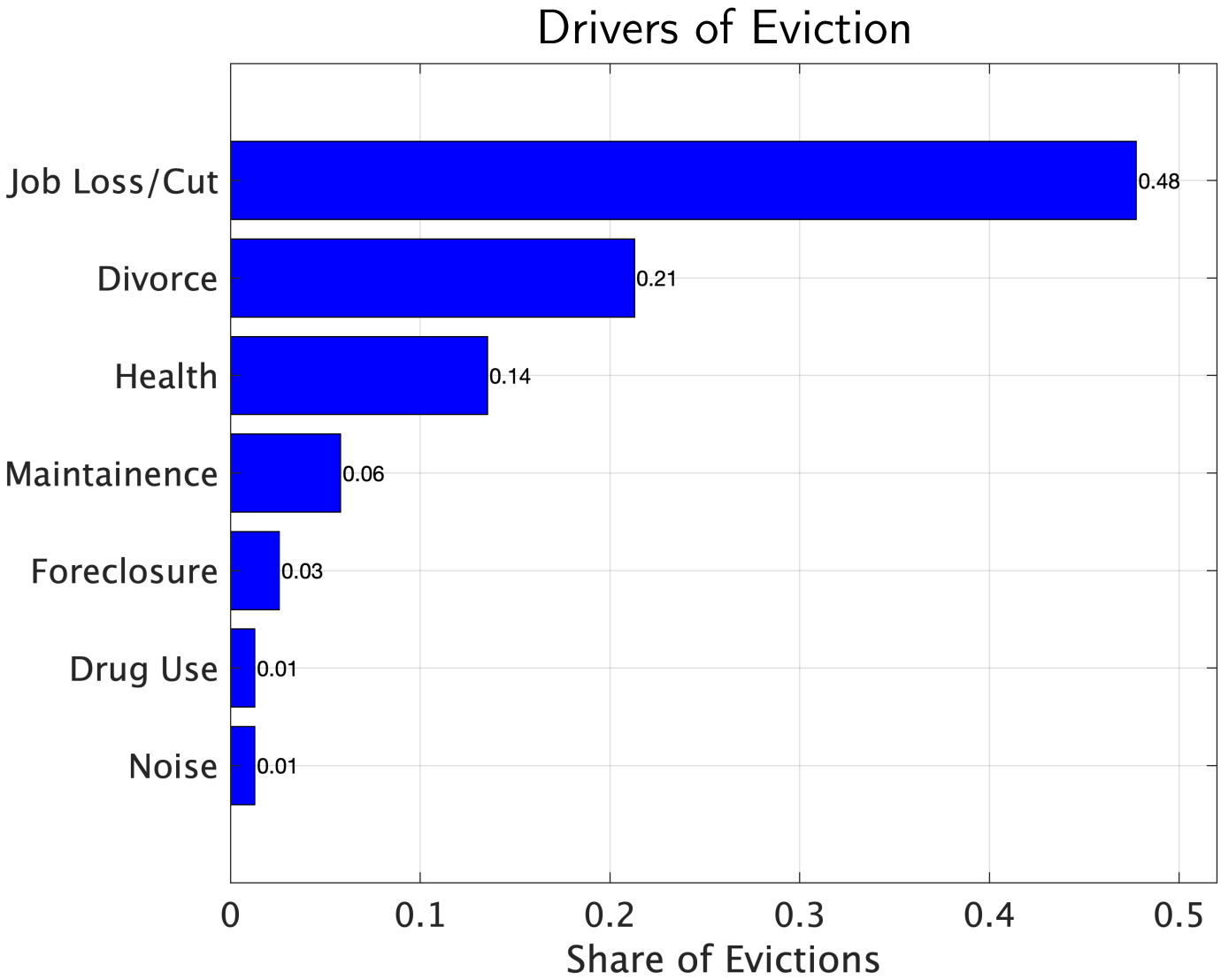
1. Right-to-Counsel increases homelessness, lowers welfare
2. Rental assistance lowers homelessness and evictions, increases welfare
3. Moratorium after unemployment shock prevents evictions, homelessness

Thank You!

For paper and slides, please visit my website:

Appendix

Job loss and divorce are main drivers of evictions



- MARS asks respondents who were evicted in past, "why were you evicted?"

Back

Job loss and divorce risk higher for young and low-skilled

- CPS monthly data (2000-16), unit of observation = household
- **Divorce** = head is single in t, was married/cohabited in $t-1$
- Household unemployed = both head and spouse (if present) unemployed
- **Job loss** = someone in household was employed in $t-1$, no one is employed in t

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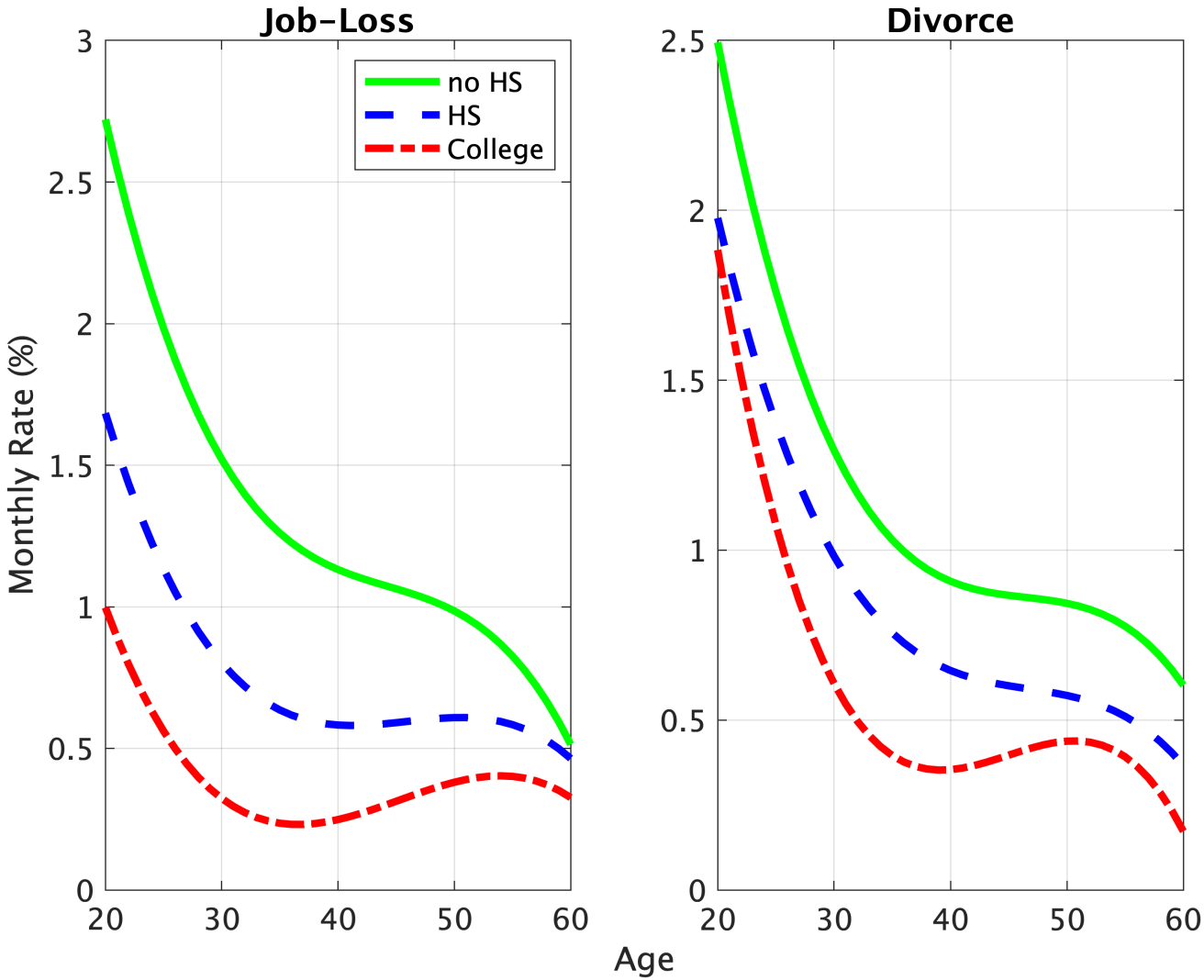
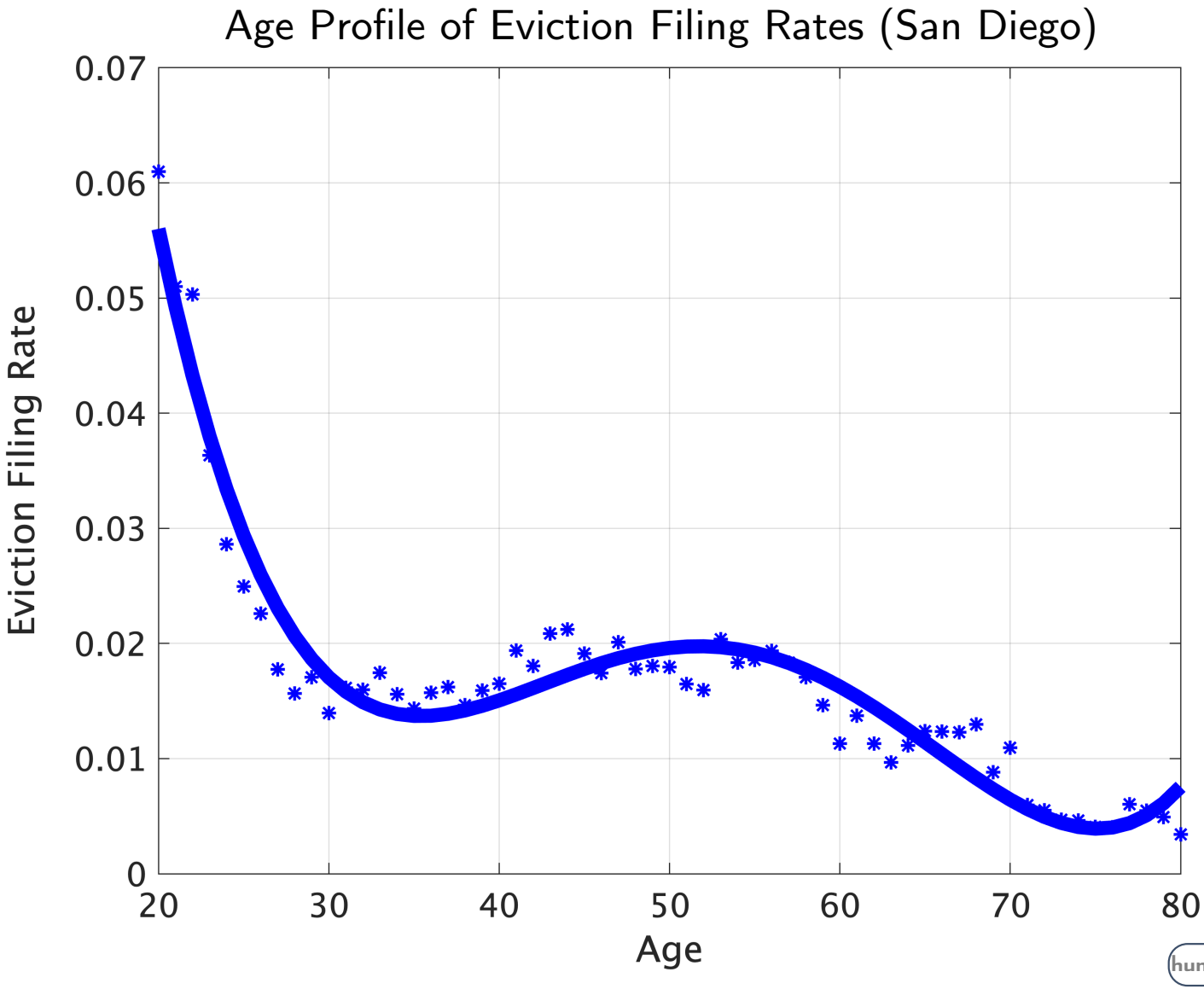


Back

Young and low-skilled face higher risk of eviction

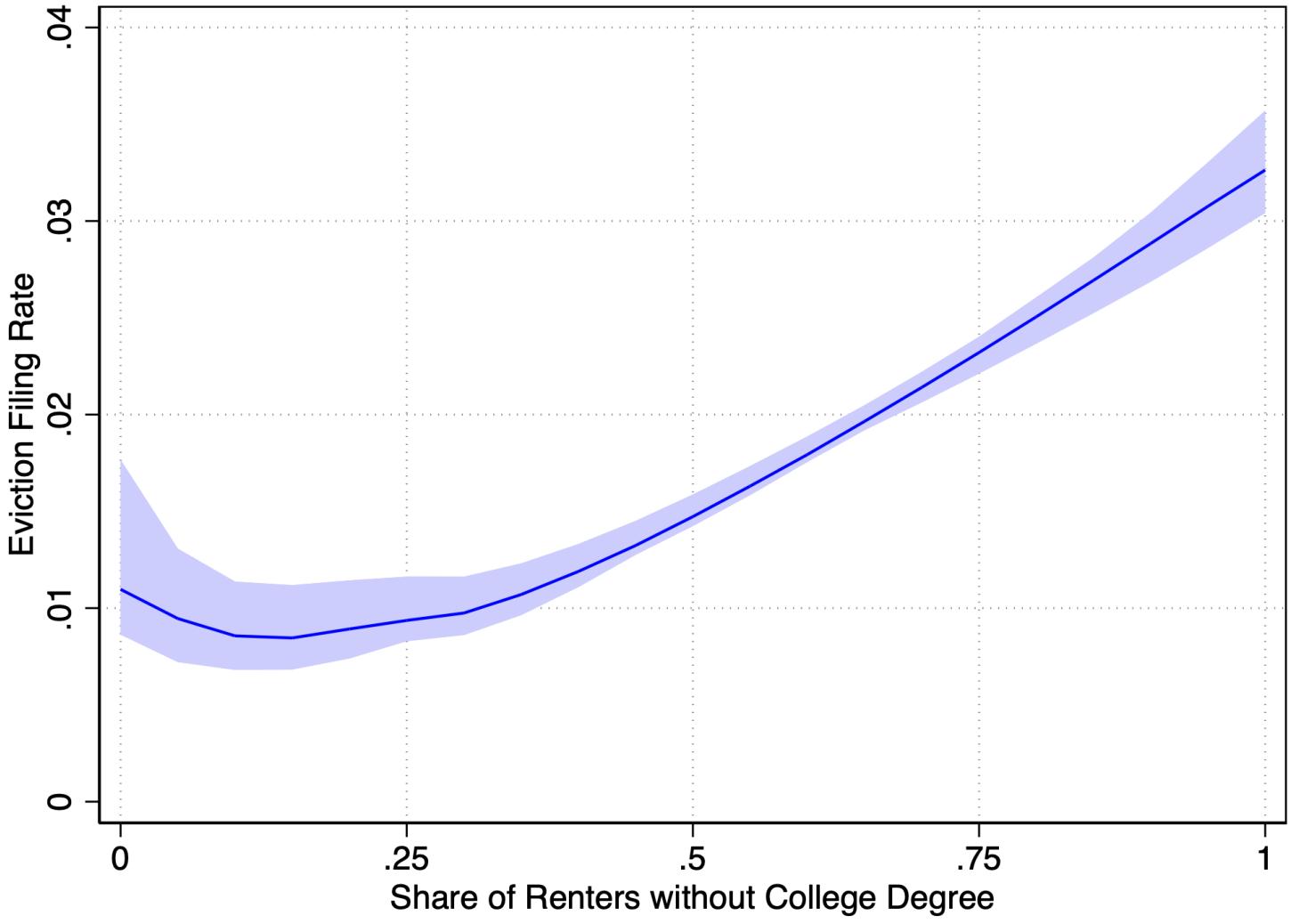


human capital Back

- Eviction filing rate = share of renter households facing eviction case during year

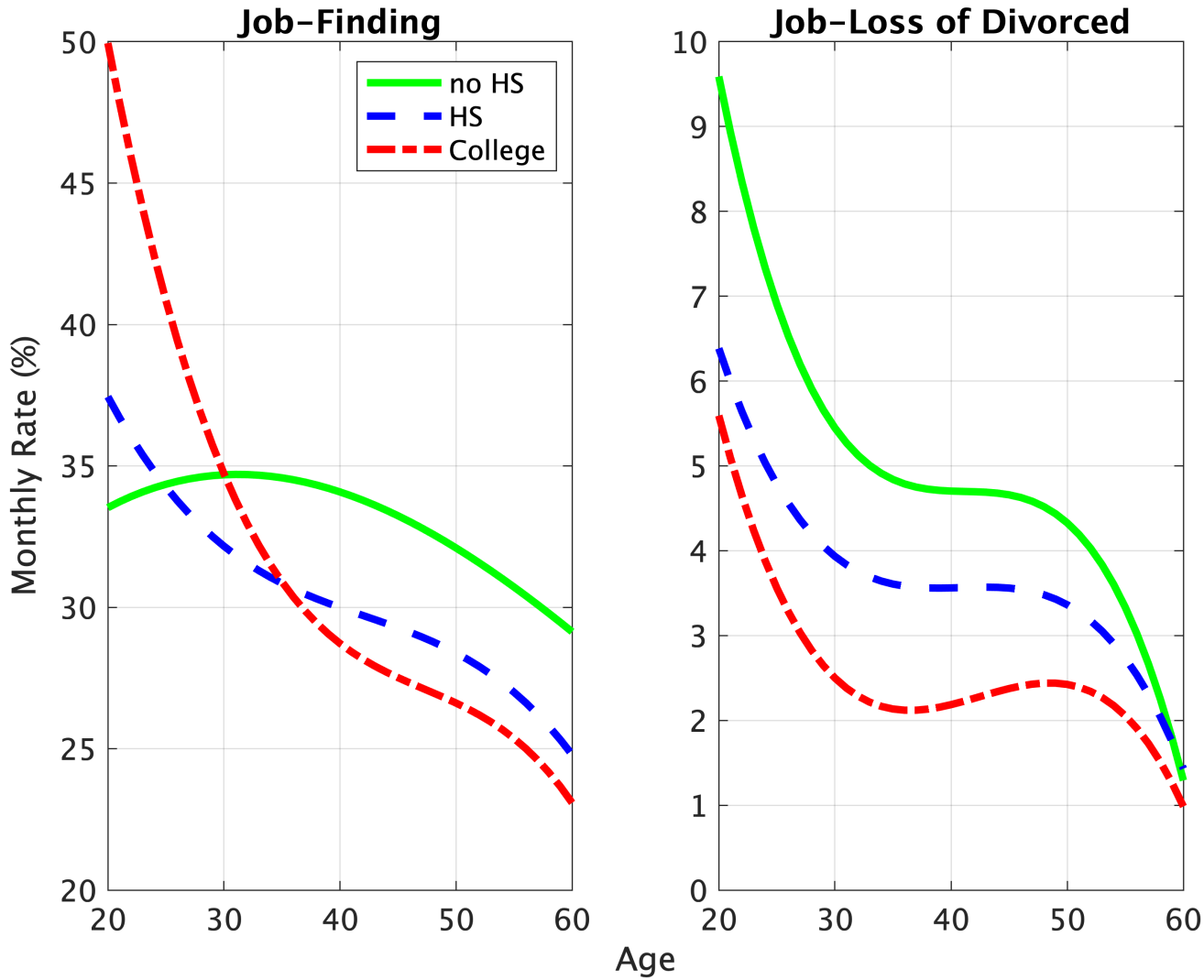
Human capital and evictions

- Tract level regression of eviction filing rate on share of renters without college degree



Back

Job-loss and divorce lead to persistent income drops



- Finding a job takes time
- Divorce is associated with job-loss risk Back

Non-occupier Bellman Equation

- Observes rents, chooses whether to rent and what house to rent
- Conditional on no moving, death, depreciation:

$$V_t^{out}(a_t, y_t, z_t, w_t, m_t, \overline{e}) =$$

$$\max_{s_t, c_t, b_t} \begin{cases} U(c_t, \underline{u}) + \beta \mathbb{E}\left[V_{t+1}^{out}\left(a_t + 1, y_{t+1}, z_{t+1}, w_{t+1}, m_{t+1}, \overline{e}\right)\right] & s_t = \underline{u} \\ U(c_t, s_t) + \beta \mathbb{E}\left[V_{t+1}^{occ}\left(a_t + 1, z_{t+1}, w_{t+1}, m_{t+1}, \overline{e}, h, q, 0\right)\right] & s_t = h \in \mathcal{H} \end{cases}$$

$$s.t. \quad c_t + b_t = \begin{cases} w_t - q & s_t = h \in \mathcal{H} \\ w_t & s_t = \underline{u} \end{cases},$$

$$q = q_t^h(a_t, y_t, w_t),$$

$$w_{t+1} = (1 + r)b_t + y_{t+1},$$

$$c_t \geq 0, \; b_t \geq 0,$$

Back

Occupier Bellman Equation

- Chooses whether to default and face eviction risk, or pay rent + debt
- Conditional on no moving, death, depreciation:

$$V_t^{occ}(a_t, z_t, w_t, m_t, \overline{e}, h, q, k_t) =$$

$$\max_{d_t, c_t, b_t} \begin{cases} U(c_t, h) + \beta \mathbb{E}\left[V_{t+1}^{occ}(a_t + 1, z_{t+1}, w_{t+1}, m_{t+1}, \overline{e}, h, q, 0)\right] & d_t = 0 \\ (1-p)\left(U(c_t, h) + \beta \mathbb{E}\left[V_{t+1}^{occ}(a_t + 1, z_{t+1}, w_{t+1}, m_{t+1}, \overline{e}, h, q, k_{t+1})\right]\right) & d_t = 1 \\ + p V_t^{evicted} & \end{cases}$$

$$s.t. \quad c_t + b_t = \begin{cases} w_t - q - k_t & d_t = 0 \\ w_t & d_t = 1 \end{cases},$$

$$w_{t+1} = (1+r)b_t + y_{t+1},$$

$$c_t \geq 0, \; b_t \geq 0,$$

$$k_{t+1} = (1+r)(k_t + q)$$

Back

Evicted Bellman Equation

- Is homeless, pays share ϕ of debt, penalty λ on remaining wealth

$$V_t^{evict}(a_t, z_t, w_t, m_t, \bar{e}, k_t) =$$

$$\max_{c_t, b_t} \left\{ U(c_t, \underline{u}) + \beta \mathbb{E}_{\Gamma_{t+1}} \left[V_{t+1}^{out}(a_t + 1, y_{t+1}, z_{t+1} w_{t+1}, m_{t+1}, \bar{e}) \right] \right\}$$

$$s.t. \quad c_t + b_t \leq (1 - \lambda)(w_t - \min\{\phi k_t, w_t\}),$$

$$w_{t+1} = (1 + r) b_t + y_{t+1},$$

$$c_t \geq 0, \; b_t \geq 0$$

Back

Investor zero-profit condition

- Exogenous move rate $= \sigma$, destruction rate $= \delta$.

$$0 = -Q_t^h + q_t^h(a_t, y_t, w_t) - \tau h + \frac{(1-\delta)\sigma}{1+r} Q_{t+1}^h + \frac{(1-\sigma)(1-\delta)}{1+r} \times \mathbb{E}\left[\Pi_{t+1}^{occ}\right]$$

- Value of ongoing lease:

$$\Pi_t^{occ}(a_t, z_t, w_t, m_t, \overline{e}, h, q, k_t) =$$

$$\begin{cases} q + k_t - \tau h + & d_t^{occ} = 0 \\ \frac{(1-\sigma)(1-\delta)}{1+r} \mathbb{E}\left[\Pi_{t+1}^{occ}(a_t + 1, z_{t+1}, w_{t+1}, m_{t+1}, \overline{e}, h, q, 0)\right] + \frac{(1-\delta)\sigma}{1+r} Q_{t+1}^h & \\ (1-p) \times \left\{ -\tau h + \frac{(1-\sigma)(1-\delta)}{1+r} \mathbb{E}\left[\Pi_{t+1}^{occ}(a_t + 1, z_{t+1}, w_{t+1}, m_{t+1}, \overline{e}, h, q, k_{t+1})\right] + \right. & d_t^{occ} = 1 \\ \left. \frac{(1-\delta)\sigma}{1+r} \left(\mathbb{E}\left[\min\left\{\phi k_{t+1}, w_{t+1}\right\}\right] + Q_{t+1}^h\right) + \frac{\delta}{1+r} \mathbb{E}\left[\min\left\{\phi k_{t+1}, w_{t+1}\right\}\right] \right\} + & \\ p \times \left(\min\{\phi k_t, w_t\} + \frac{(1-\delta)\sigma}{1+r} Q_{t+1}^h\right) & \end{cases}$$

$$s.t. \quad k_{t+1} = (1+r)(k_t + q)$$

Back

Rent = risk-free + default premia

- Focus on stationary equilibrium
- Rent for contract starting with household of age $A-1$:

$$q^h(A-1,y,w) = \left(1+\frac{\alpha}{1+r}\left[1-\mathbb{E}(d^{occ})\times(1-\phi(1-p))\right]\right)^{-1}\times \left[Q^h\left(1-\frac{(1-\delta)\sigma}{1+r}-\frac{\alpha}{1+r}\frac{(1-\delta)}{1+r}\right)+ \tau h\left(1+\frac{\alpha}{1+r}(1-\mathbb{E}(d^{occ})p)\right)\right]$$

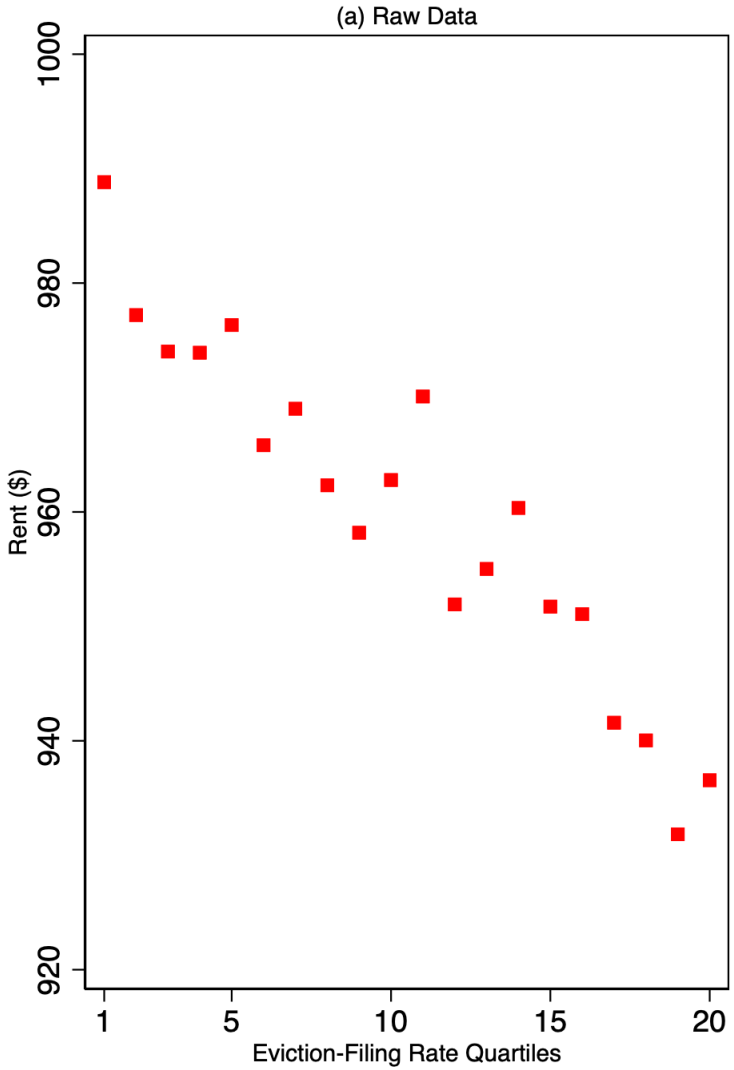
- Risk-free rent ($\mathbb{E}(d^{occ})=0$) increasing with Q^h:

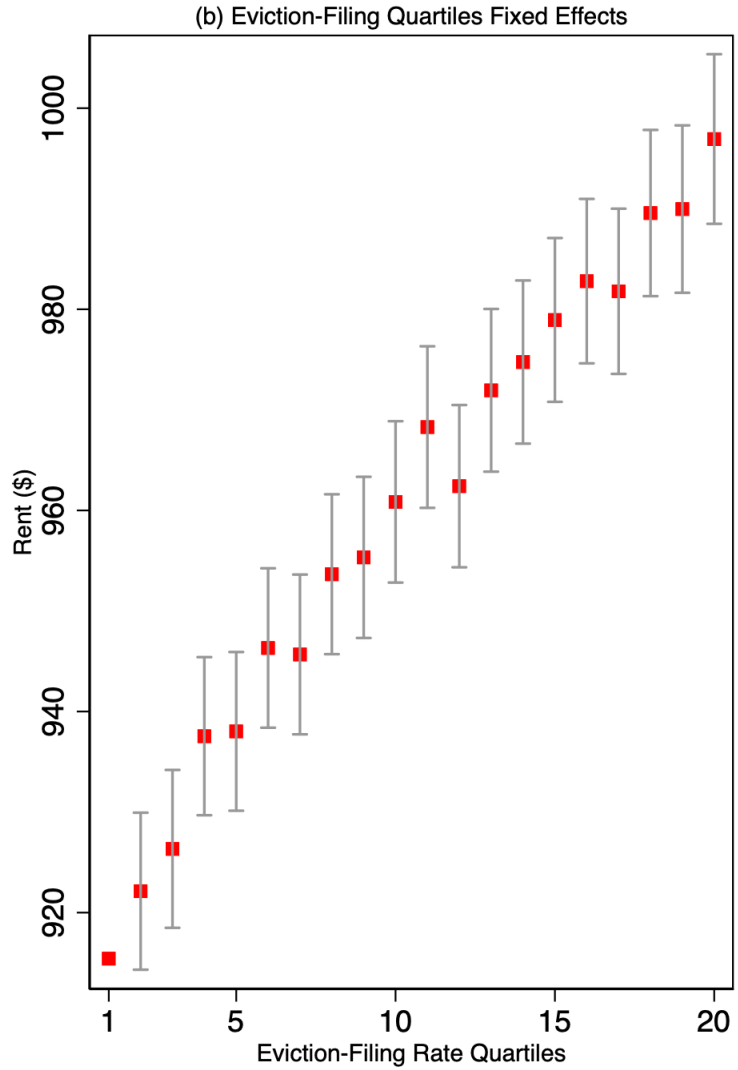
$$q^h_{RF} = \tau h + g(\delta,\sigma,r)\times Q^h$$

- Default premia = $q^h(A-1,y,w) - q^h_{RF}$: increasing with $p,\phi,\mathbb{E}(d^{occ})$

Back

Rent and default risk across neighborhoods





- Data: 2005, 2010, 2015 five-year ACS, Eviction Lab
- Panel (b) controls for tract quality (HH income, house size, etc.), county + year f.e

Back

Income process

- Innate human capital $\overline{e}$, each month single ($m_t = 0$) or married ($m_t = 1$)
- Marry at rate $M_{a,\overline{e}}$, divorce at rate $D_{a,\overline{e}}$ (div_t divorce shock indicator)
- During working life ($a_t \leq Ret$):

$$y_t = \begin{cases} f(a_t, \overline{e}, m_t) z_t u_t & z_t > 0 \\ y^{unemp}(a_t, \overline{e}, m_t) & z_t = 0 \end{cases}$$

- $z_t = 0$ is unemployment state
- Job loss and job finding rates: $JL(a_t, \overline{e}, m_t, div_t)$, $JF(a_t, \overline{e}, m_t, div_t)$
- While employed:

$$\log z_t^i = \rho(\overline{e}, m_t, div_t) \times \log z_{t-1}^i + \varepsilon_t^i$$
$$\varepsilon_t^i \sim N\left(0, \sigma_\varepsilon^2(\overline{e}, m_t, div_t)\right)$$
$$u_t^i \sim N\left(0, \sigma_u^2(\overline{e}, m_t, div_t)\right)$$

- After retirement ($a_t > Ret$) deterministic income $y^R_{\overline{e},m}$

income process

Income process estimation

- Marriage/divorce rates $M_{a,\overline{e}}$ and $D_{a,\overline{e}}$ from CPS figure
- Job-loss/find rates $JL(a_t, \overline{e}, m_t, div_t)$, $JF(a_t, \overline{e}, m_t, div_t)$ from CPS figure
- Unemployment benefits $y^{unemp}(a_t, \overline{e}, m_t)$ from PSID based on EDD tabulation
- Retirement age Ret is 60, retirement income $y^R_{\overline{e},m}$ from PSID

Remaining parameters of *monthly* process estimated to match *annual* moments

- $f(a_t, \overline{e}, m_t)$, $\rho(\overline{e}, m_t, div_t)$, $\sigma^2_\varepsilon(\overline{e}, m_t, div_t)$, $\sigma^2_u(\overline{e}, m_t, div_t)$
- Simulate N *monthly* histories of income and marital status from age 20 to 60
  - Using calibrated marriage, divorce, job-loss/find rates
  - Regime switching AR(1) and transitory shock discretized via Rouwenhorst
  - Construct simulated *annual* panel of marital status and income
- Compute annual moments as in data:
  - Regress log earnings on age by m and $\overline{e}$. Denote dummies $\widetilde{d}_{a,\overline{e},m}$
  - Compute s.d. of earnings growth $\widetilde{\triangle}^i_k(\overline{e}, m, m_{-k})$ for $k = 1, 2, 3$
- Estimate parameters to match $\hat{d}_{a,\overline{e},m}$ and $\triangle^i_k(\overline{e}, m, m_{-k})$ from PSID data

estimation summary

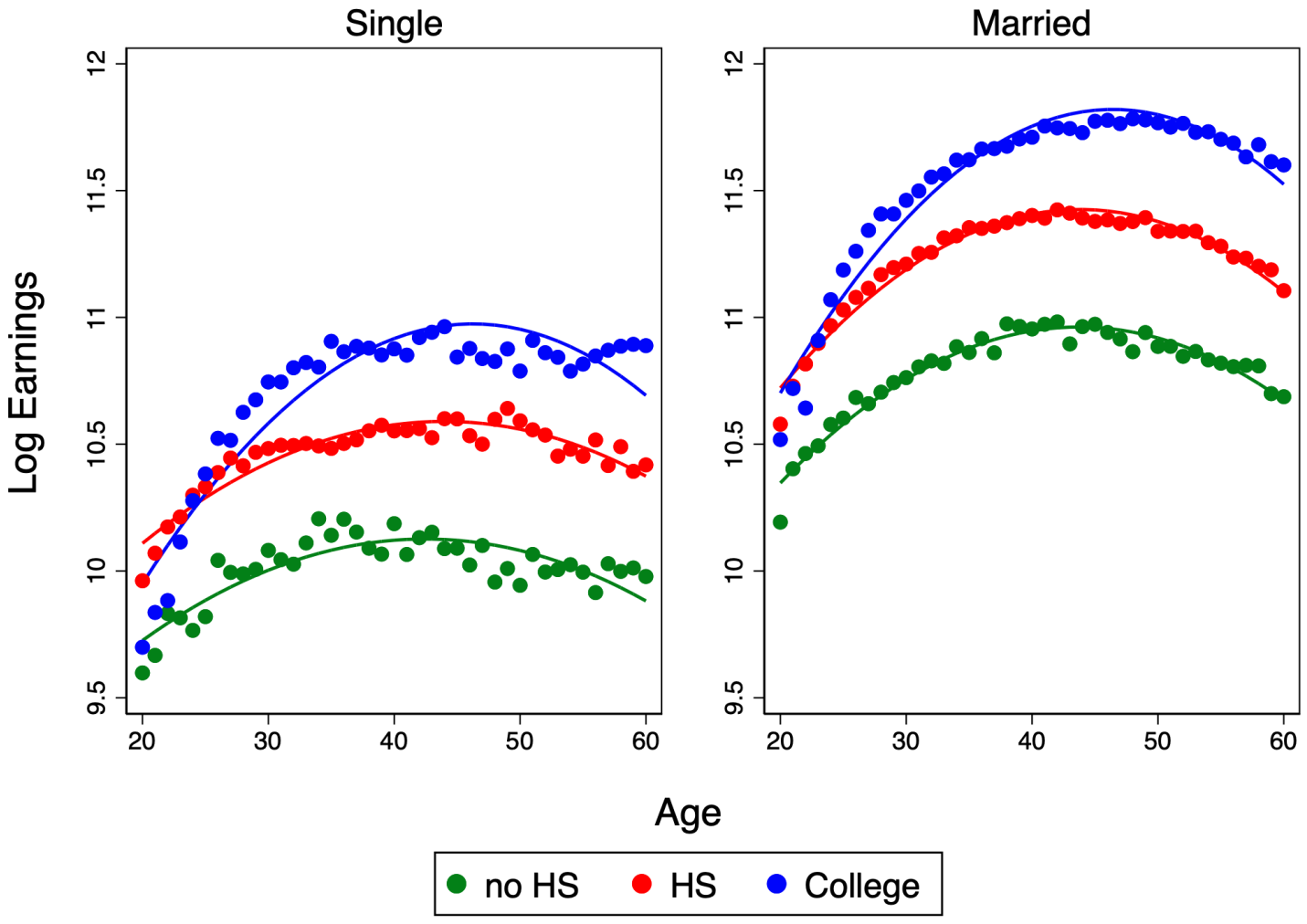
Income dynamics

- PSID: 1970-2017, CA urban areas
  - HH income = labor income + social security + transfers
  - For both head and spouse if present
  - Heads, age 20-60, ≥ 10 periods with positive non-extreme income
  - Human capital groups: no high-school, high-school, college
- Average life-cycle profile, by human capital and marital status:
  - Low-skilled and single earn less and face lower growth rates figure
- Standard deviation of earnings growth (e.g. Guvenen et al. 2015):
  - Low-skilled, single, especially recently divorced face more risk figure
- CPS: 2000-16, heads, age 20-60
- Unemployment risk:
  - Job-loss rate higher for young, low-skilled, single, divorced figure

who gets evicted eviction risk factors income process

Age profile

- Regress log-earnings on age, cohort dummies, controls
  - By skill and marital status. Second-degree polynomial fit to age dummies:



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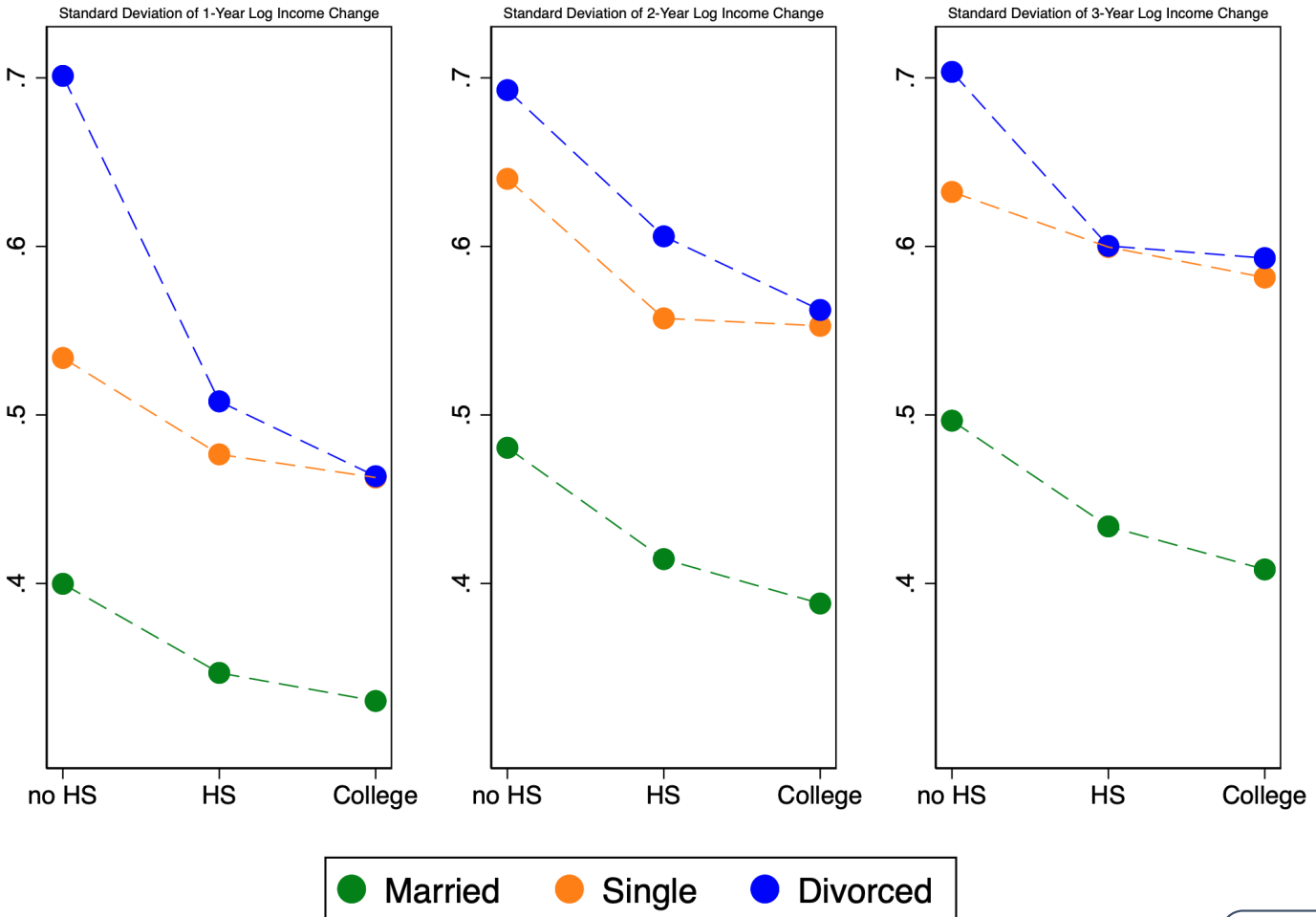
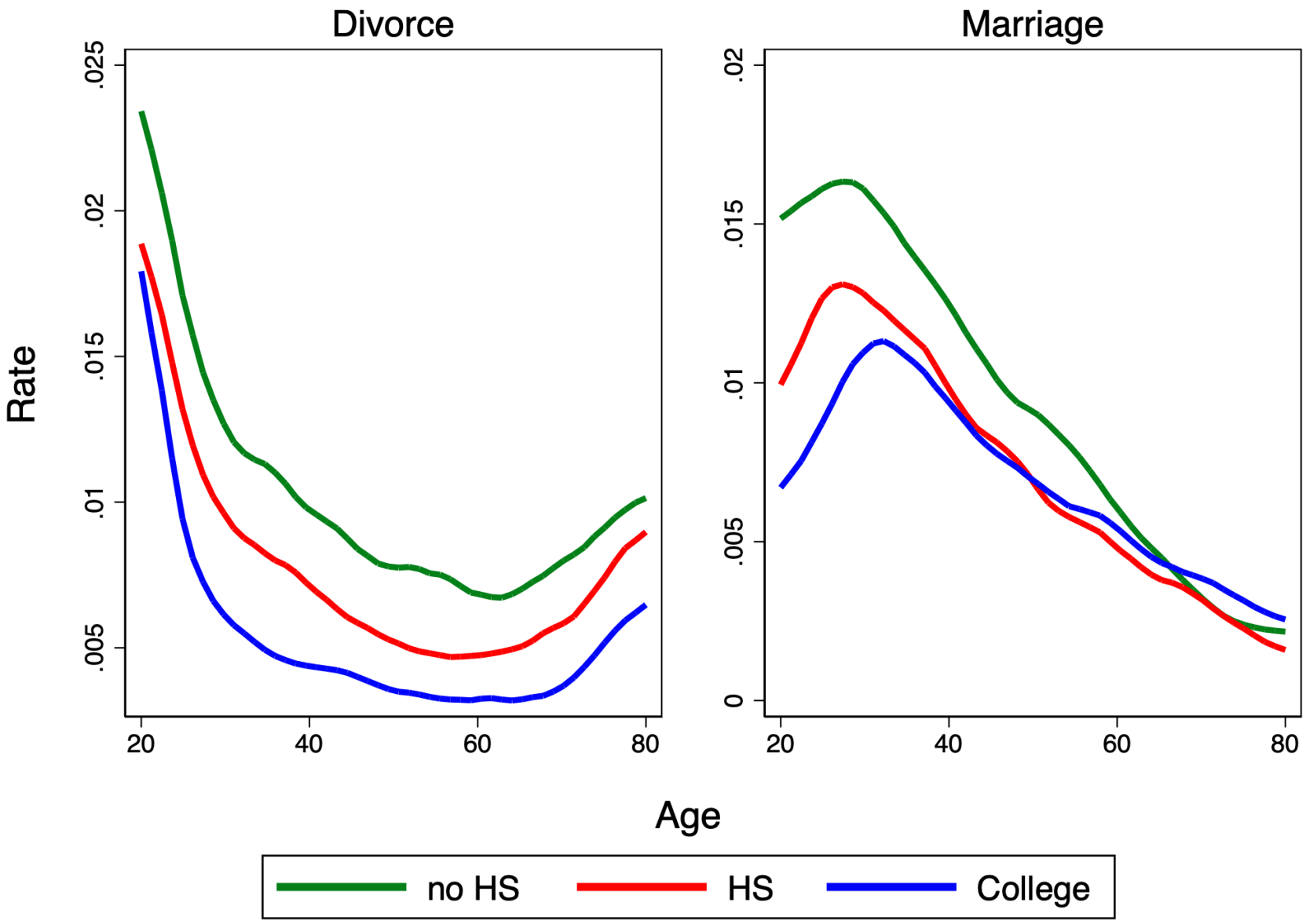
Standard deviation of earnings growth

- Regress log-earnings $y^i_{t,a,\bar{e},m}$ on age a and controls, by $(\bar{e}, m)$. Denote age dummies $\hat{d}_{a,\bar{e},m}$
- "k-year log income change": $\triangle^i_k = \left(y^i_{t,a,\bar{e},m} - \hat{d}_{a,\bar{e},m}\right) - \left(y^i_{t-k,a-k,\bar{e},m_{-k}} - \hat{d}_{a-k,\bar{e},m_{-k}}\right)$
- For each k, group observations by $(\bar{e}, m, m_{-k})$ and compute standard error of $\triangle^i_k$



who defaults income facts

Marriage and divorce rates



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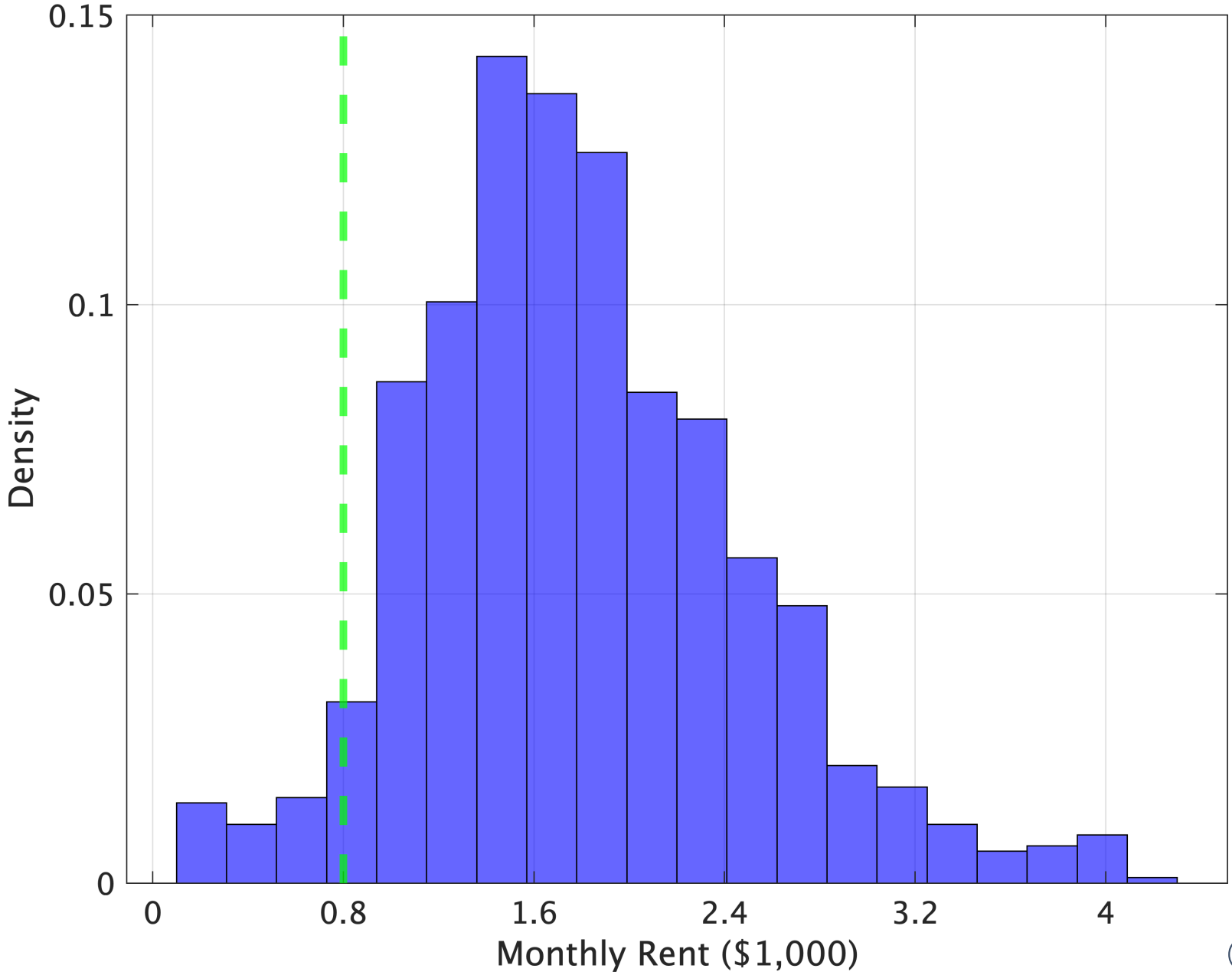
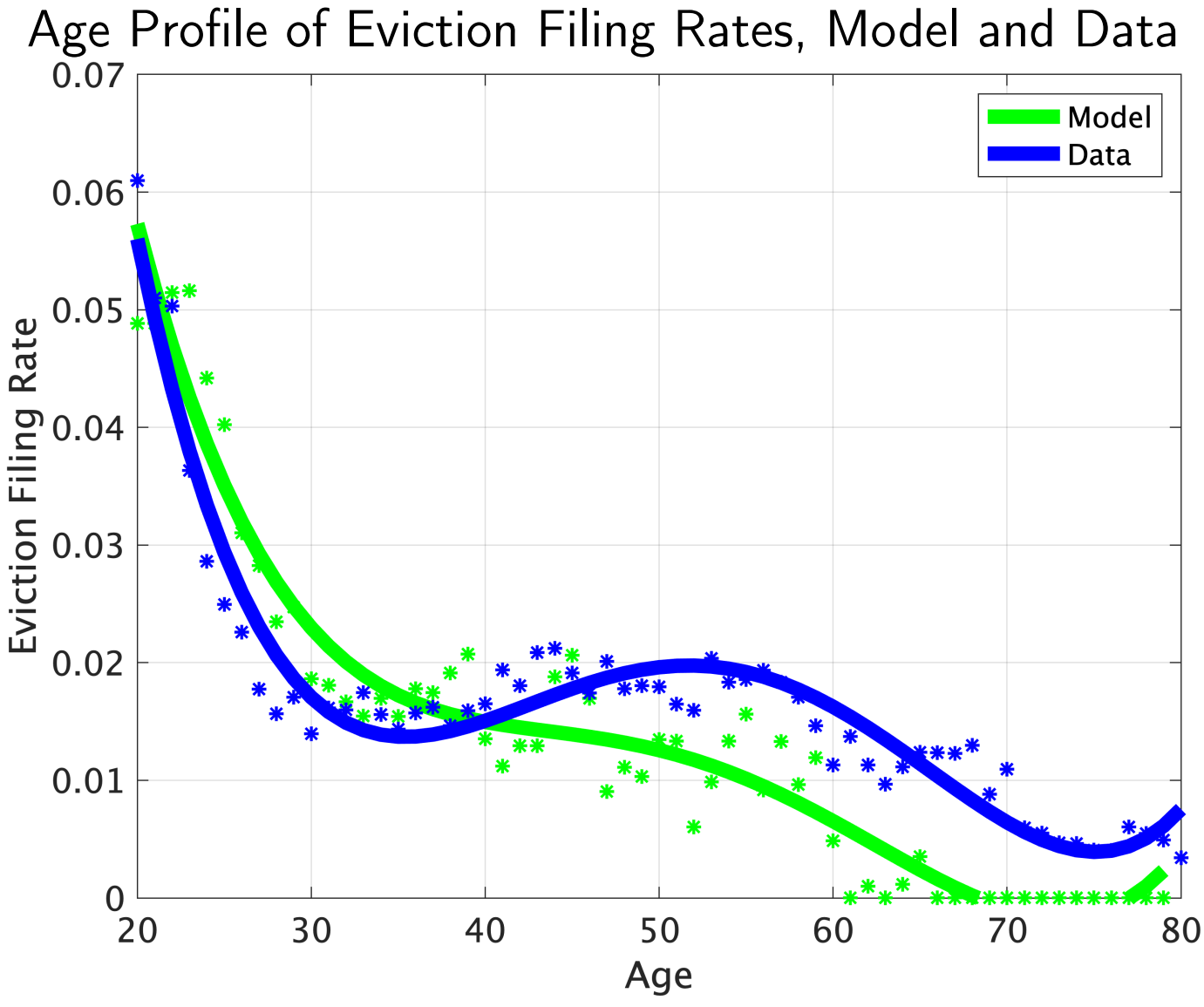
Rents in San Diego



Identification

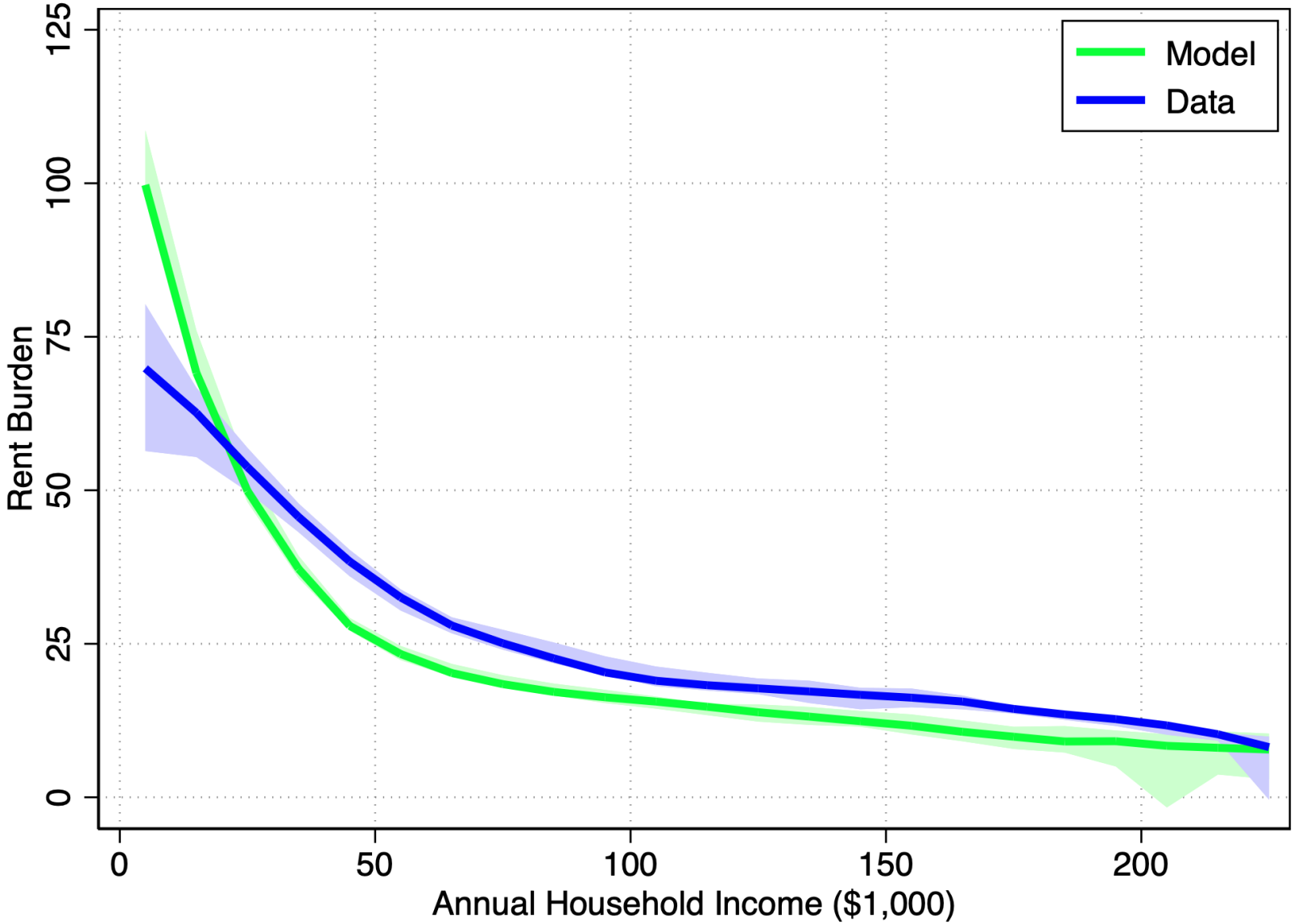
- For each segment, house price and average rent identify quality h
  - Rent = risk free rent + default premia
  - Average rent $\approx$ risk free rent (default premia small on average)
  - Risk free rent = $g(Q^h, \tau h)$, $\tau = 0.001$ to match depreciation rate
- Eviction filing rate identifies eviction penalty λ
  - When eviction is worse, less renters default and face an eviction case
- Homelessness rate identifies (dis)utility from homelessness $\underline{u}$
  - When homelessness is worse, less households choose homelessness
  - HH in h_1 requires 140% increase in consumption to agree to be homeless
- λ and $\underline{u}$ are separately identified
  - Homelessness worse: less homeless and less eviction cases
  - Eviction worse: more homelessness and less eviction cases
- Given demand for houses, house price Q^h identifies supply scale ψ_0^h

Model fit to non-targeted moments



- Model: 20% of eviction filings driven by divorce. Data: 21.3% (MARS) Back

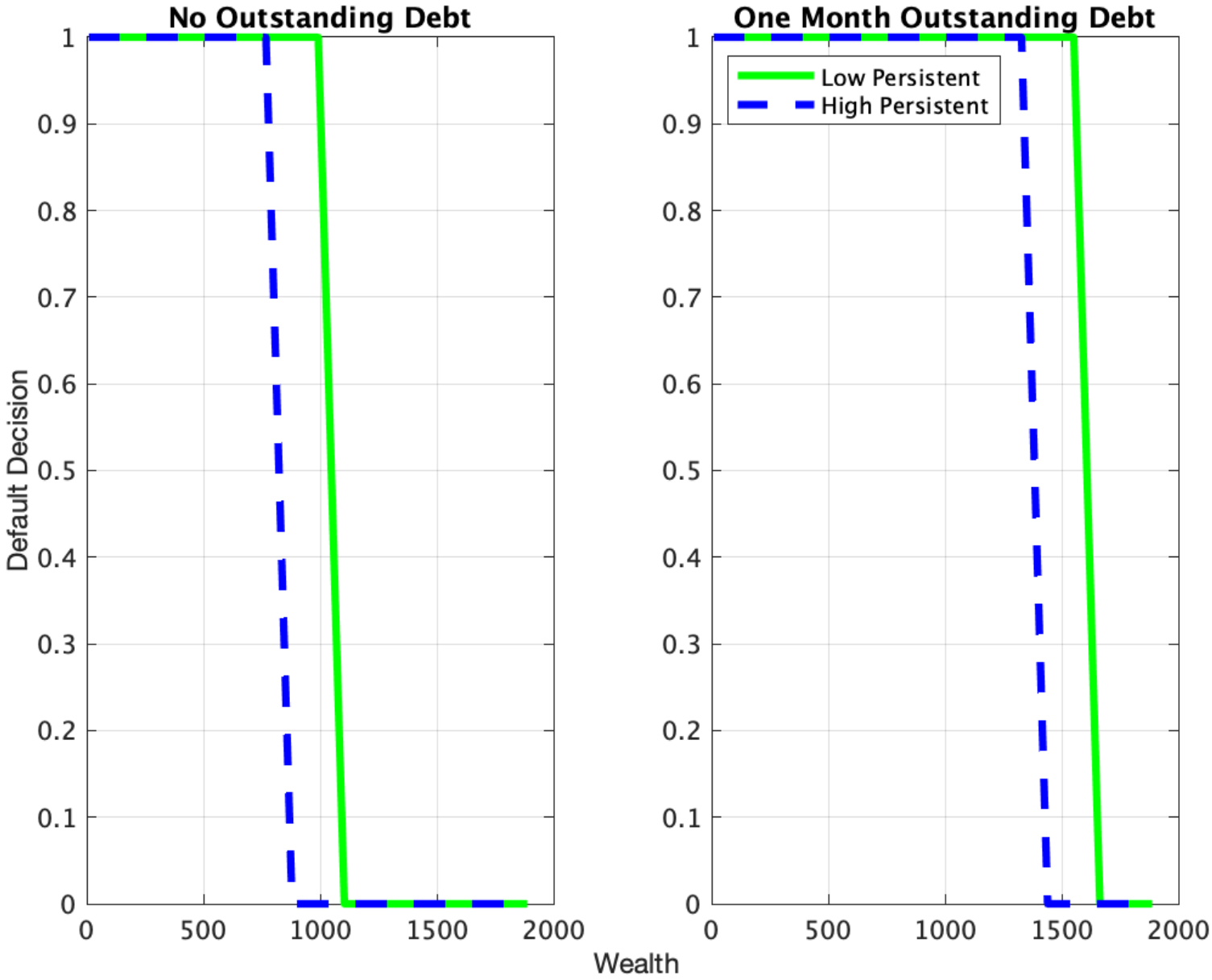
Rent burden and income - model and data



- Model matches data because of house size constraints Back

Default policy function

- Households more likely to default if shock is persistent



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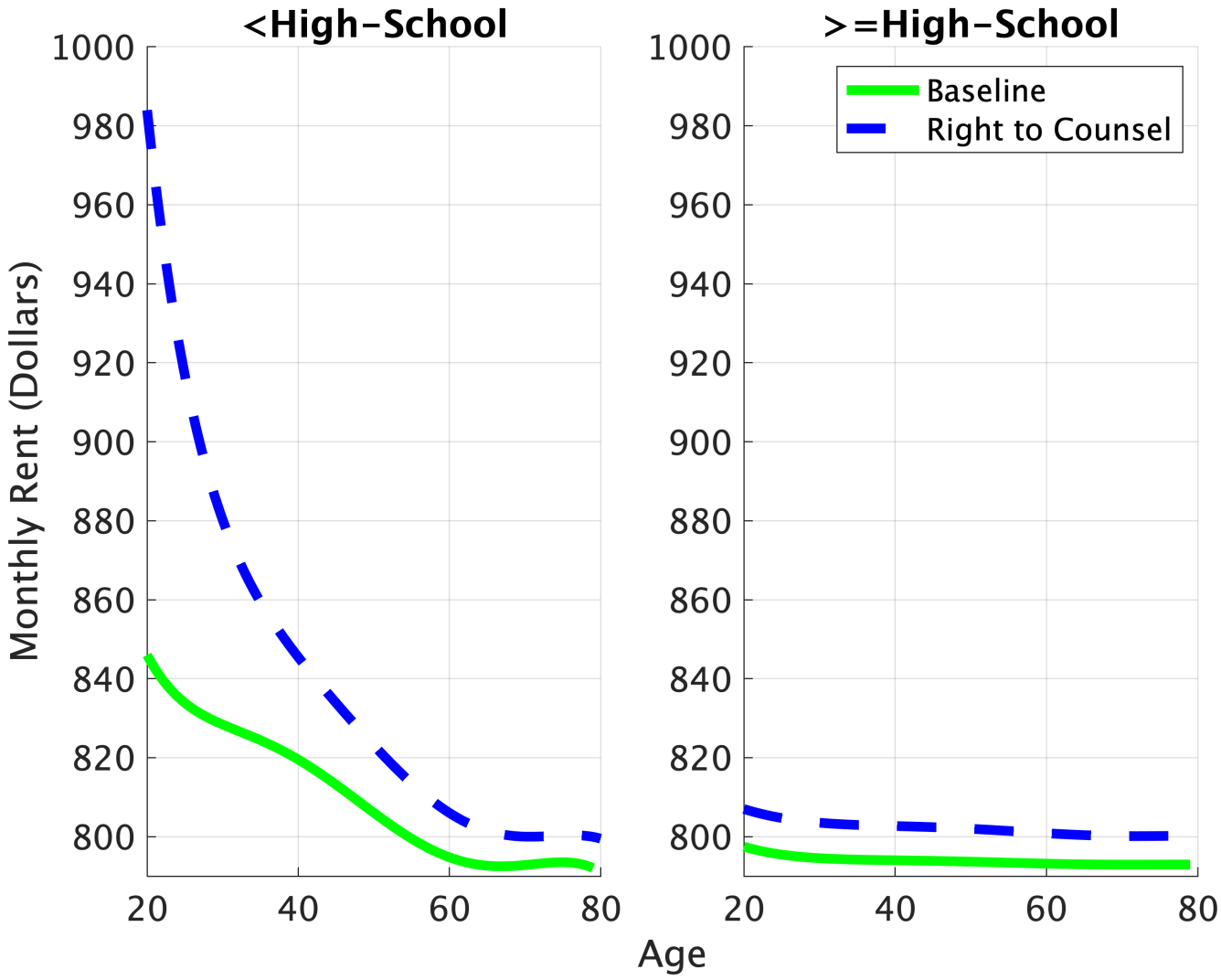
Right-to-Counsel

- Leverage micro evidence on how counsel changes eviction parameters
- "Shriver Act" RCT (JCCA) estimates causal effect of legal counsel:
  1. Extends the eviction process: 50 vs. 38 days:

     Baseline p identified from length of process in control group: $p^{-1} = \frac{38}{30}$
     Right-to-Counsel: $p_{RC}^{-1} = \frac{50}{30}$
  2. Lowers share of debt that evicted tenants pay: 56% vs. 71%:

     Baseline ϕ identified from share of debt repaid by non-represented tenants: $\phi = 0.71$
     Right-to-Counsel: $\phi_{RC} = 0.56$.
- Evaluate effects by computing equilibrium under (p_{RC}, ϕ_{RC})

Average rent in bottom segment



- Households at higher default risk see larger rent increases
- Increase in default premia amplified by increase in risk free rent

House prices

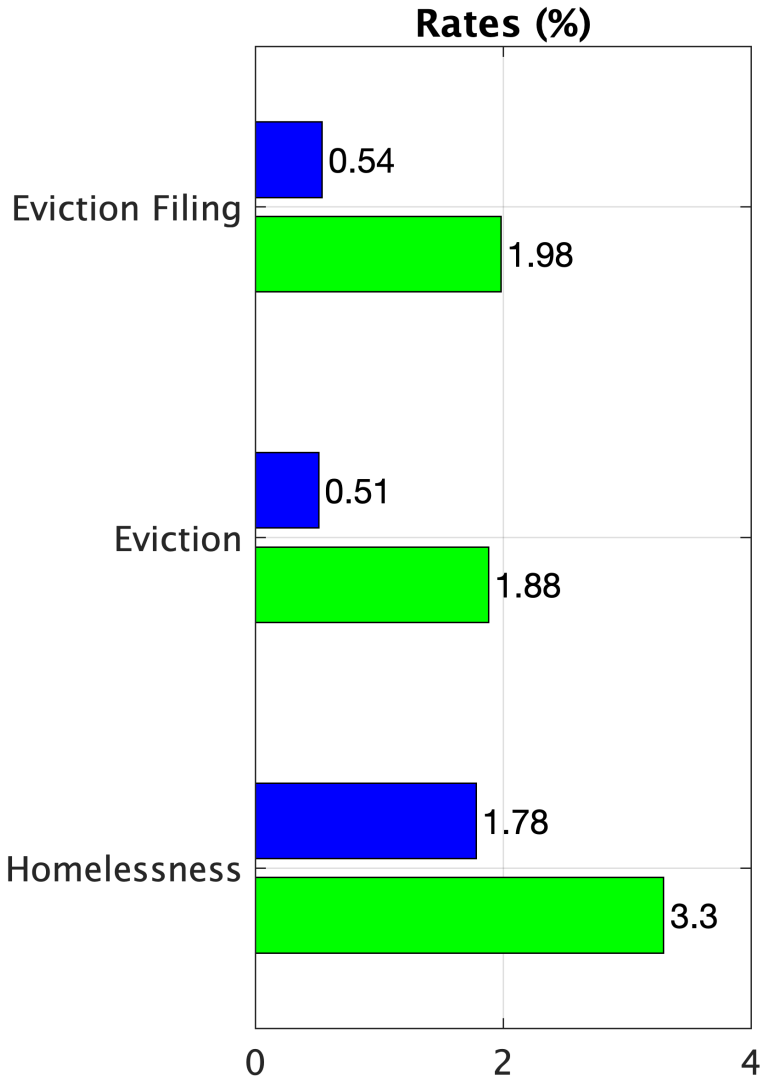
- Higher default premia forces middle-income renters to downsize
- Price (and risk-free rent) decreases in upper segments
- Price increases in bottom segment, amplifies increase in default premia
- Effect on house price depends on elasticity of housing supply

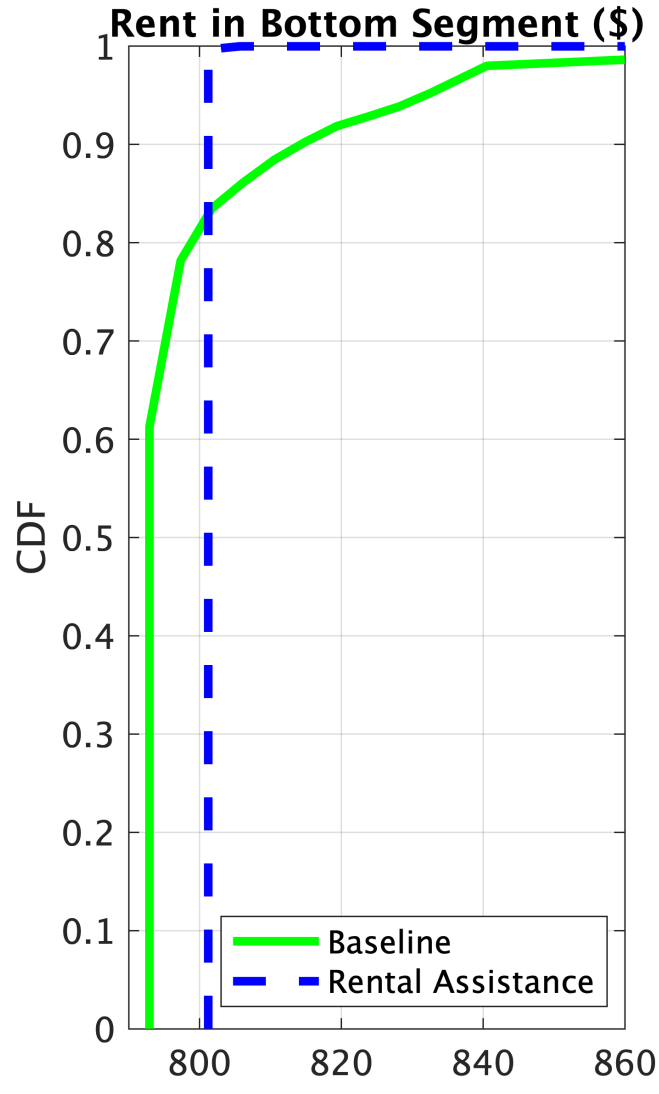
House Price Q^h (Dollars)	**Baseline**	**Right-to-Counsel**
Bottom Segment	235,000	243,750
Middle Segment	430,000	422,250
Top Segment	700,000	662,500

welfare

Means-tested rental assistance

- No longer tenants paying high rents, because default risk eliminated
  - Risk-free rate higher due to increased demand





back

House prices - rental assistance

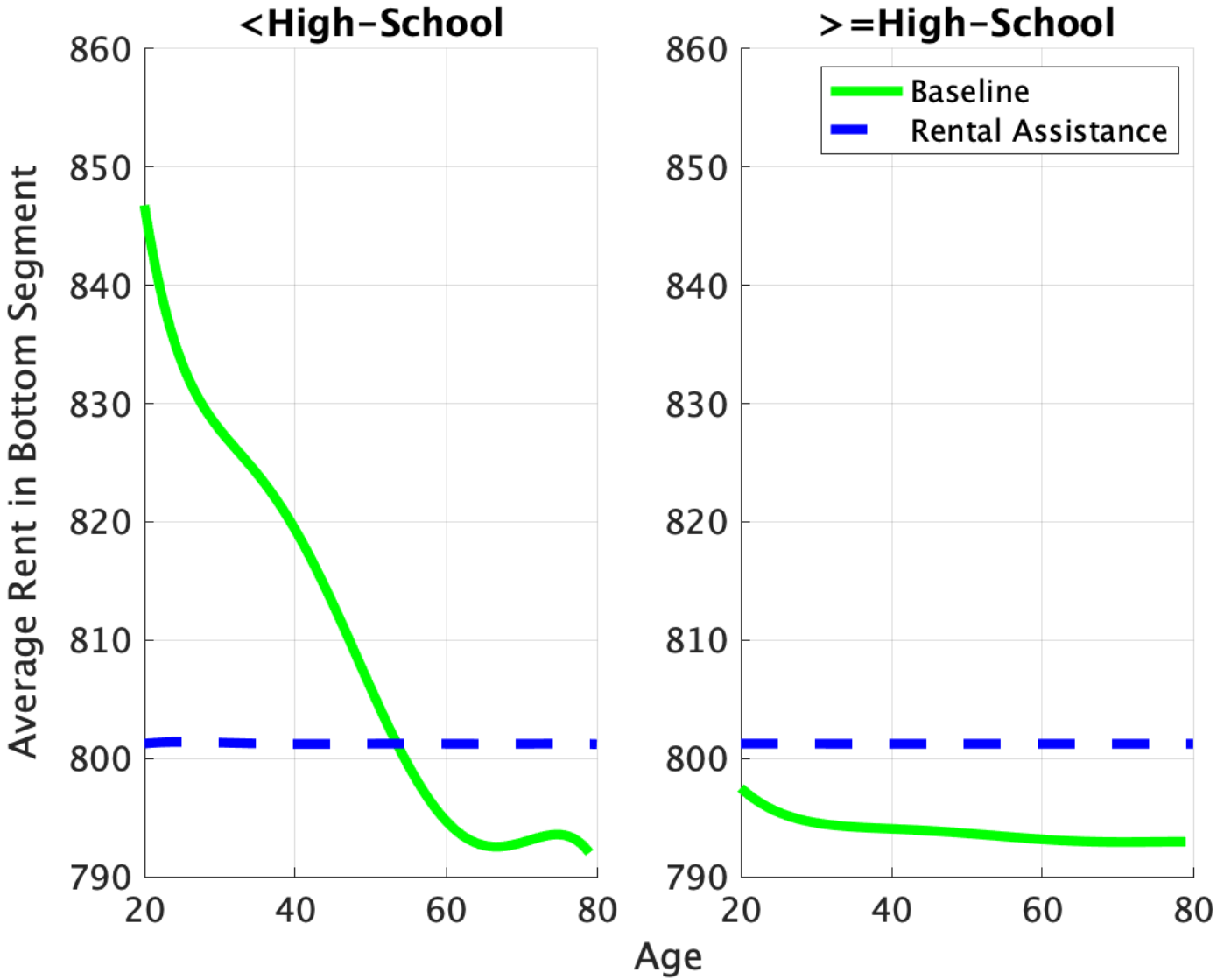
- Higher demand in bottom segment from the previously homeless

House Price Q^h (Dollars)	Baseline	Rental Assistance
Bottom Segment	235,000	245,000
Middle Segment	430,000	430,000
Top Segment	700,000	700,000

Back

Rents in bottom segment - rental assistance

- Lower default premia for poor households
- Higher risk free rent due to demand and house price increase



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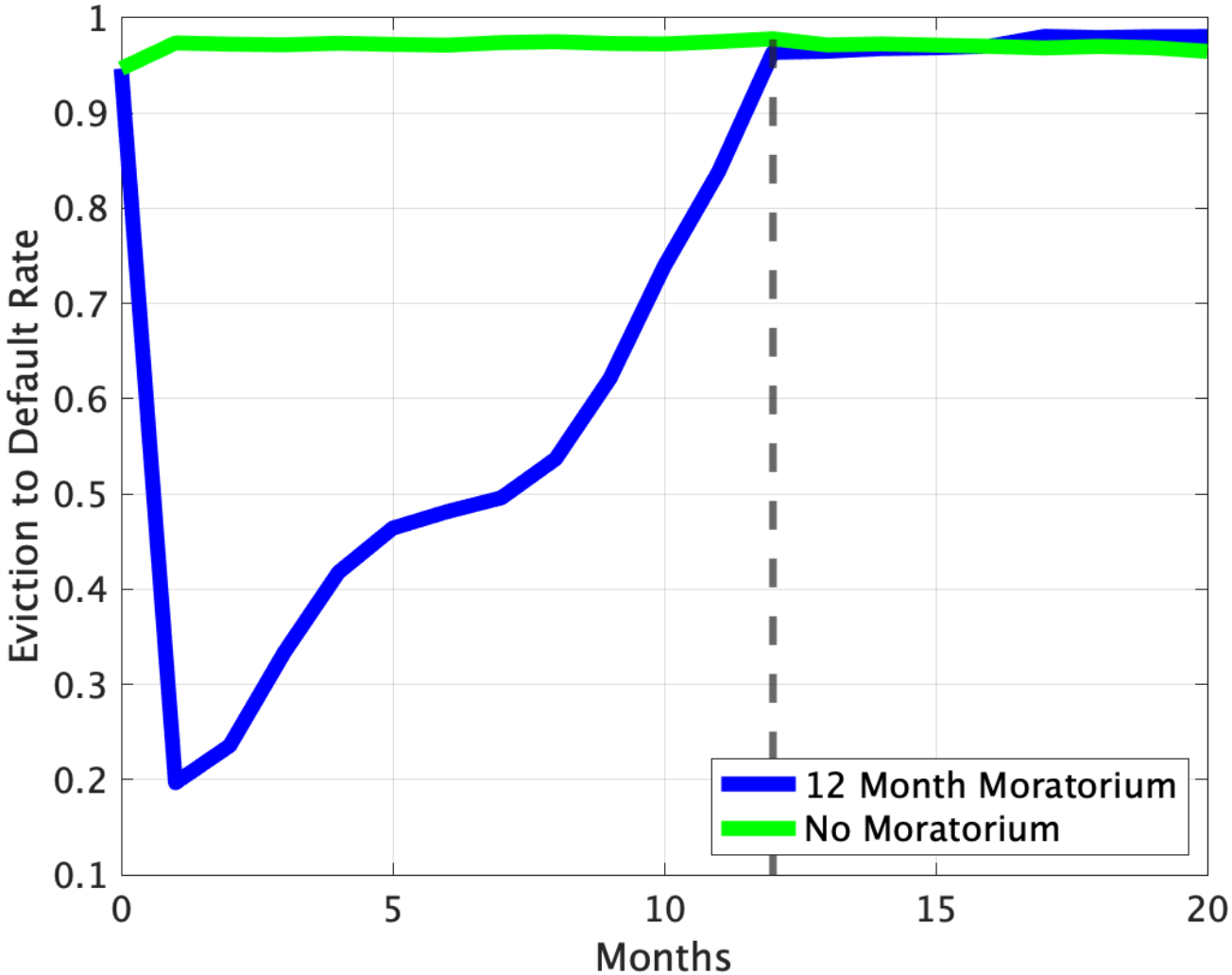
Eviction-to-default rates

- Moratorium prevents evictions of delinquent tenants
- Moratorium is temporary: only small increase in rents of new leases
  - Right-to-Counsel is permanent shift of eviction regime



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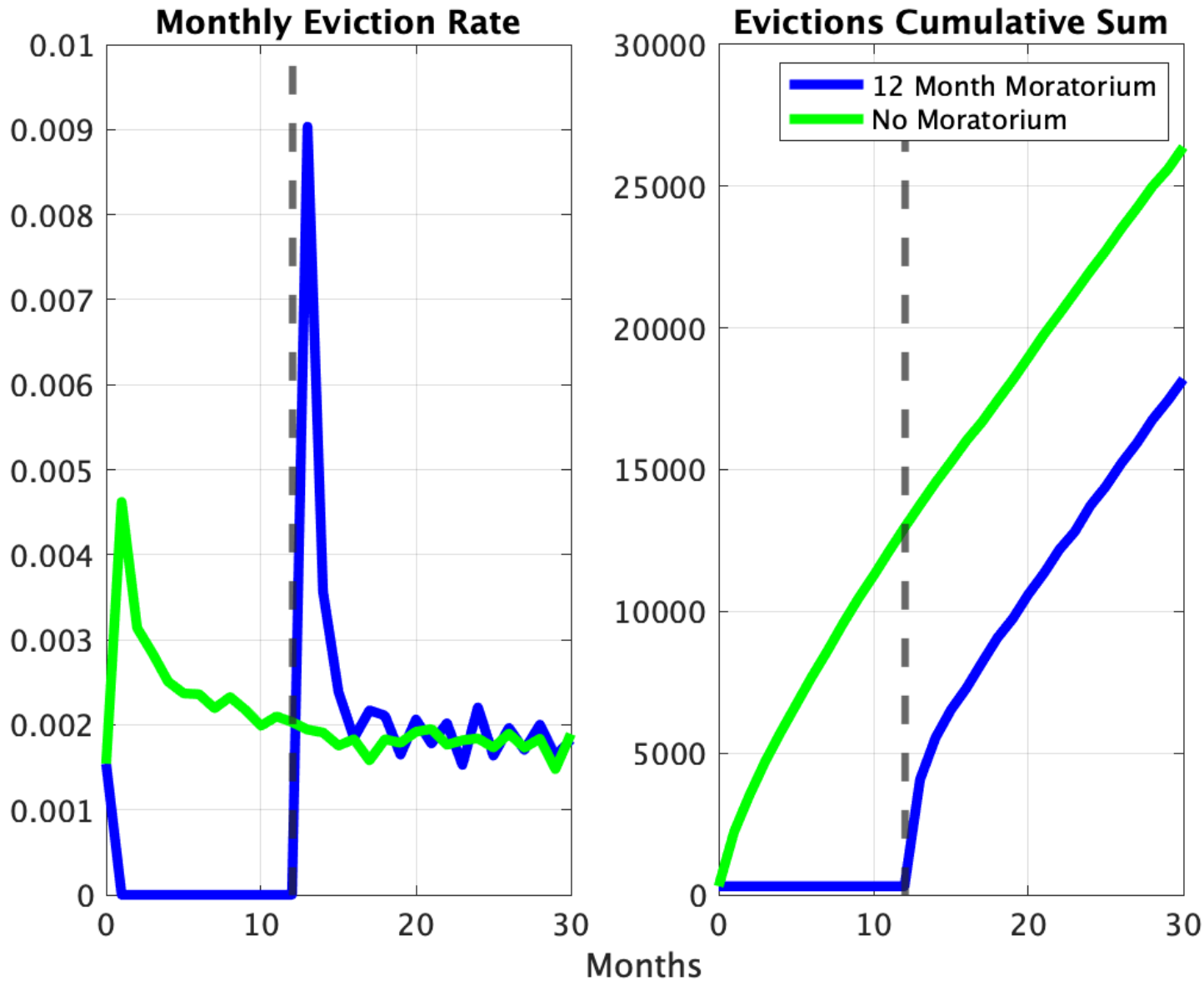
Evictions with and without a moratorium

- Moratorium prevents evictions (despite spike when lifted)



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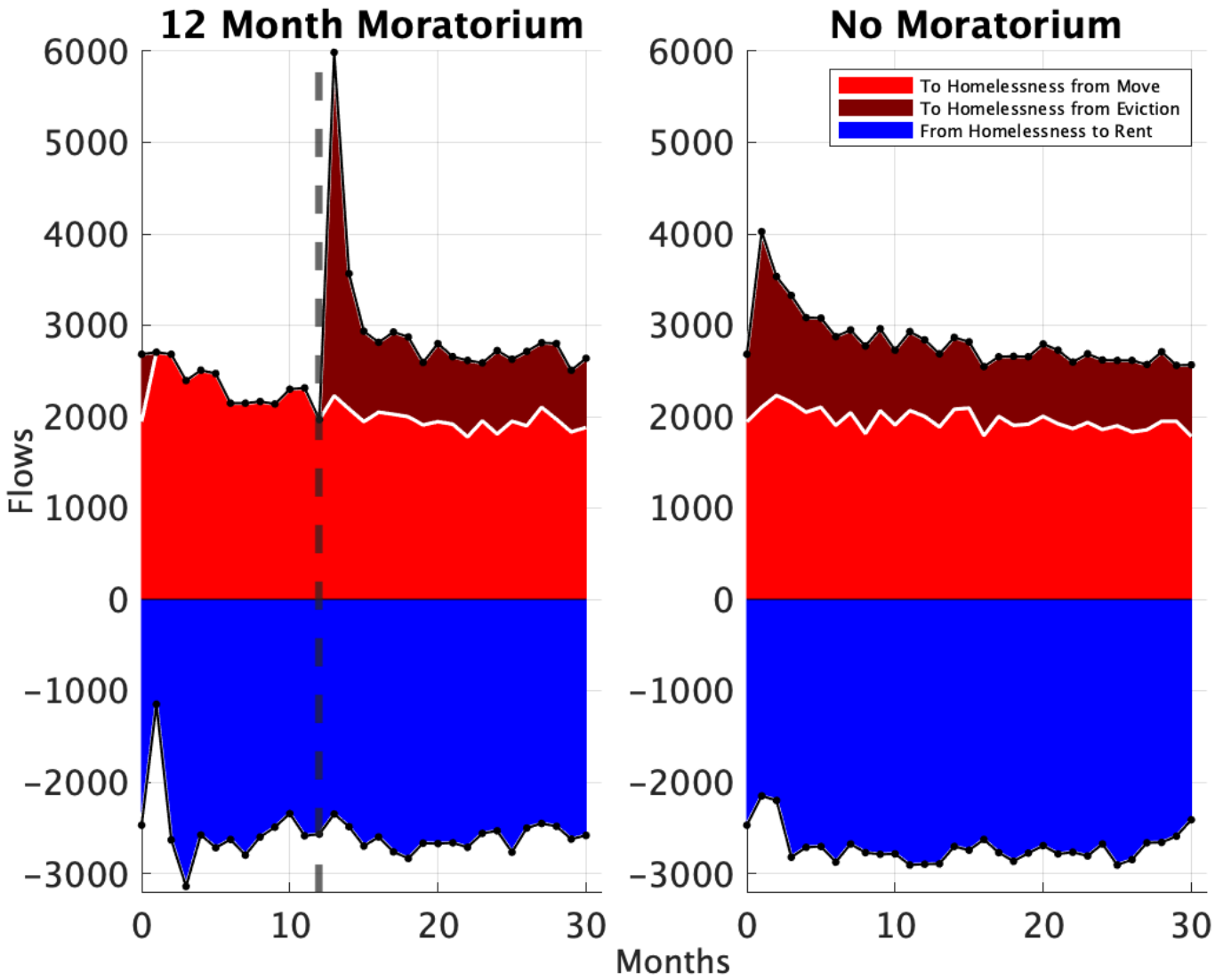
Homelessness flows with and without a moratorium

- Under moratorium, movers only slightly more likely to become homeless
- Return quickly to rent as moratorium nears its end



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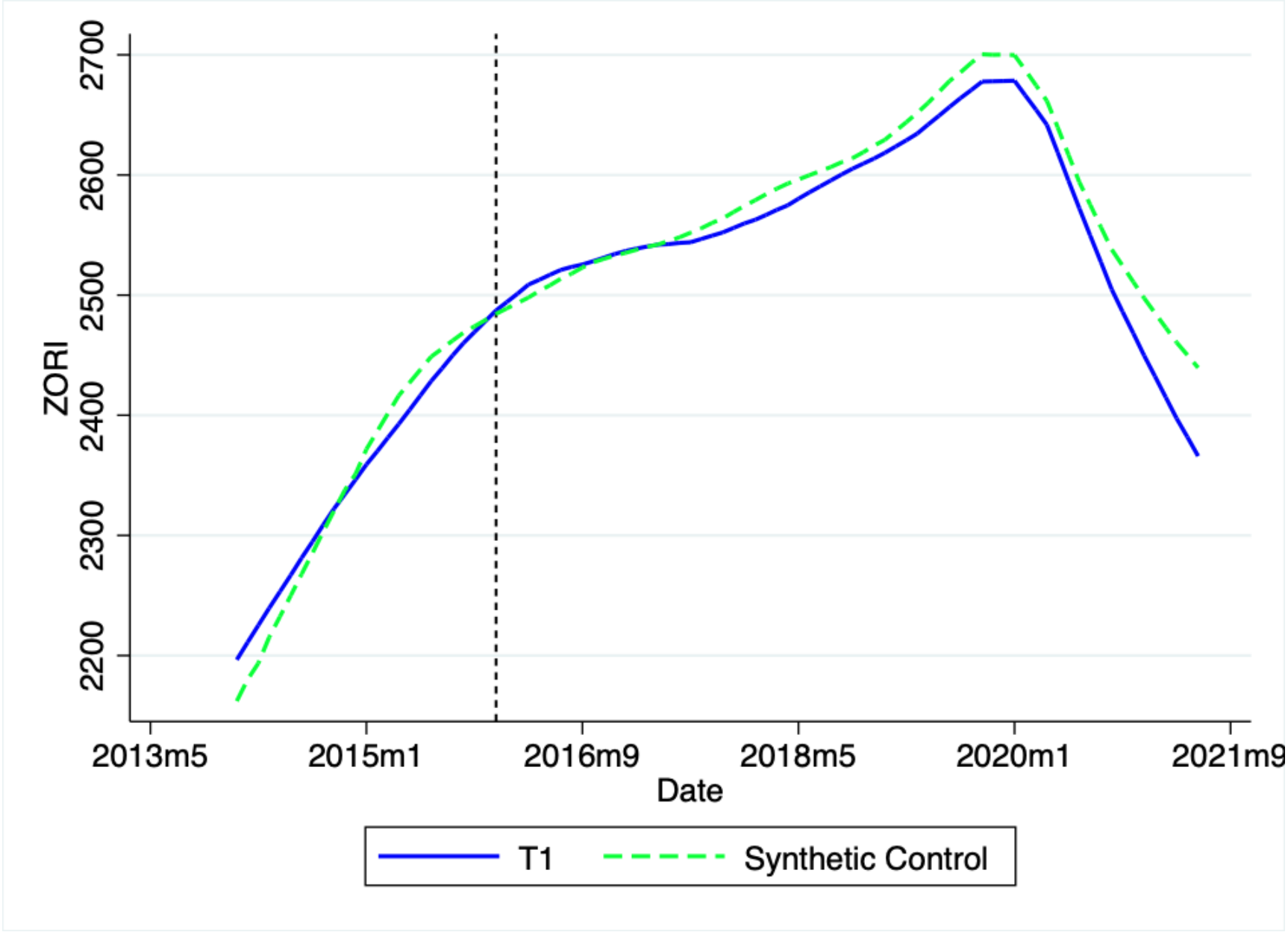
Right-to-Counsel legislation - empirical challenges

- Eight cities have already passed Right-to-Counsel reforms
  - NYC (2016), SF, Newark (2019), rest (2020-21)
- In all but NYC, reforms not yet implemented or rolled out in COVID-19
- NYC: "Universal Access to Counsel" gradually phased in by Zip code
  - Ellen et al. (2020): less eviction cases end with eviction, cases longer
- Evaluate effects on rents using Zip code level Zillow Observed Rent Index
  - Compare ZORI in treated Zip codes to synthetic control group
  - Find no meaningful differences figure
- Caveats:
  - Still early to observe equilibrium effects
  - Unique legal environment limits generalizability to other jurisdictions
    - ★ Rent control regulations provide incentives to unlawfully evict tenants
    - ★ Landlords of rent regulated dwellings can raise rent when tenant leaves
    - ★ Once rent exceeds threshold, dwelling no longer rent controlled
    - ★ Lawyers can prevent unlawful evictions and future rent increases
    - ★ No effect on rents suggests another force might act to increase rents

Back

Rent effects of "Universal Access to Counsel"

- Difference in average ZORI rents between Zip codes treated in 2016 and non-treated Zip codes



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