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Comment on

Guvenen and Smith

"Inferring Labor Income Risk from Economic Choices: An Indirect Inference Approach"

Fifth PIER IGIER International Conference

November 3 2007, Philadelphia PA

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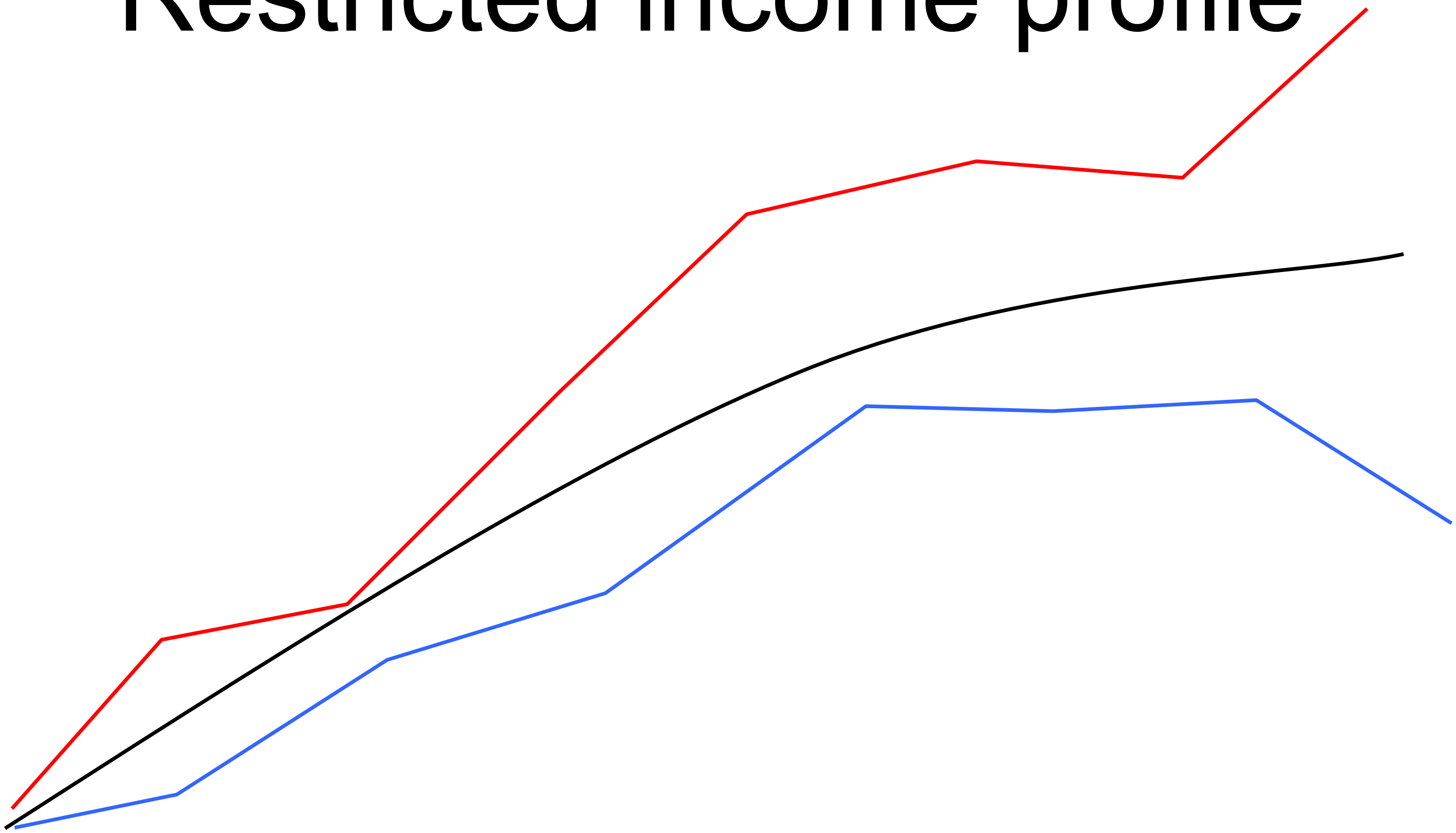
Restricted income profile



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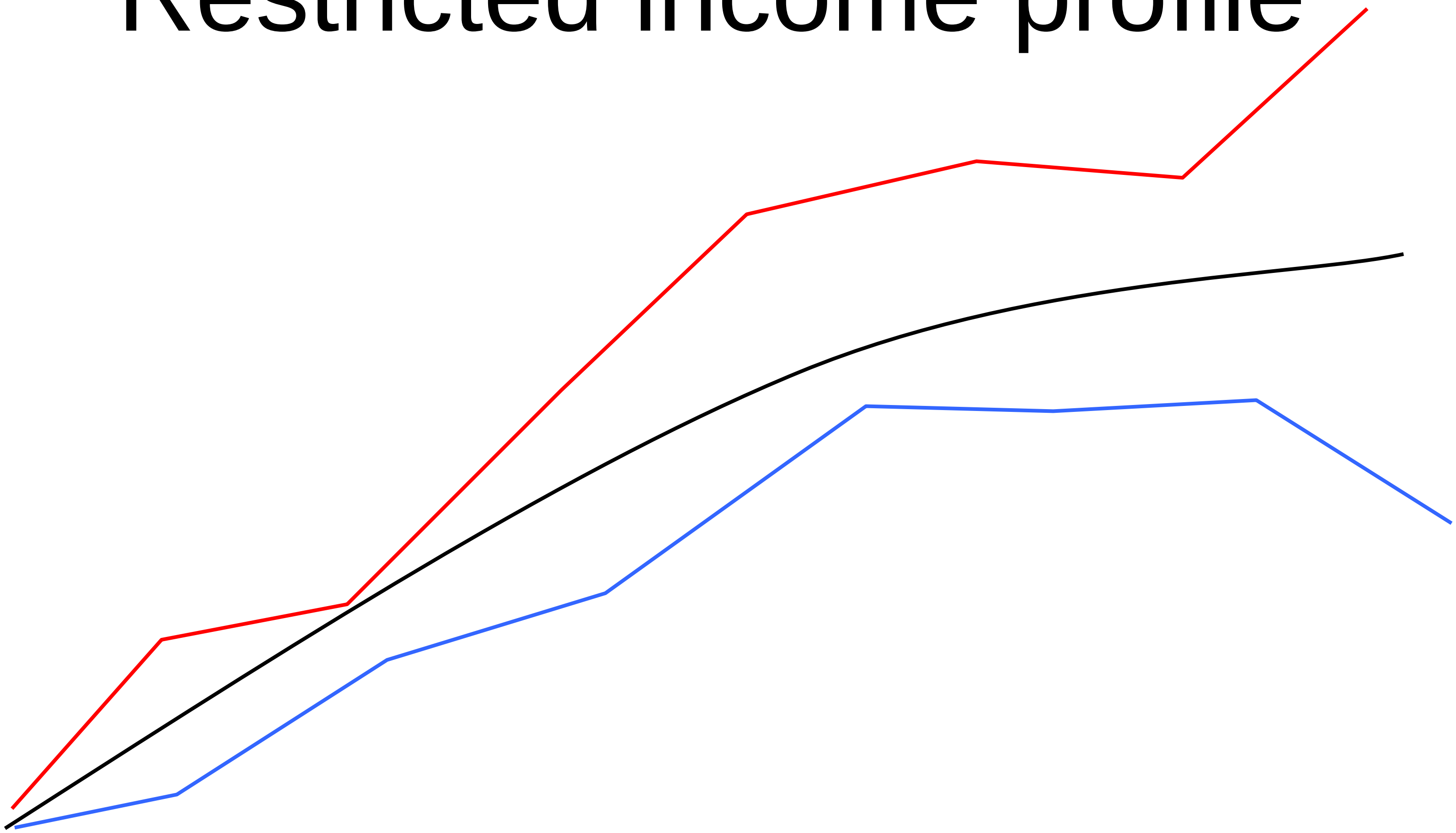

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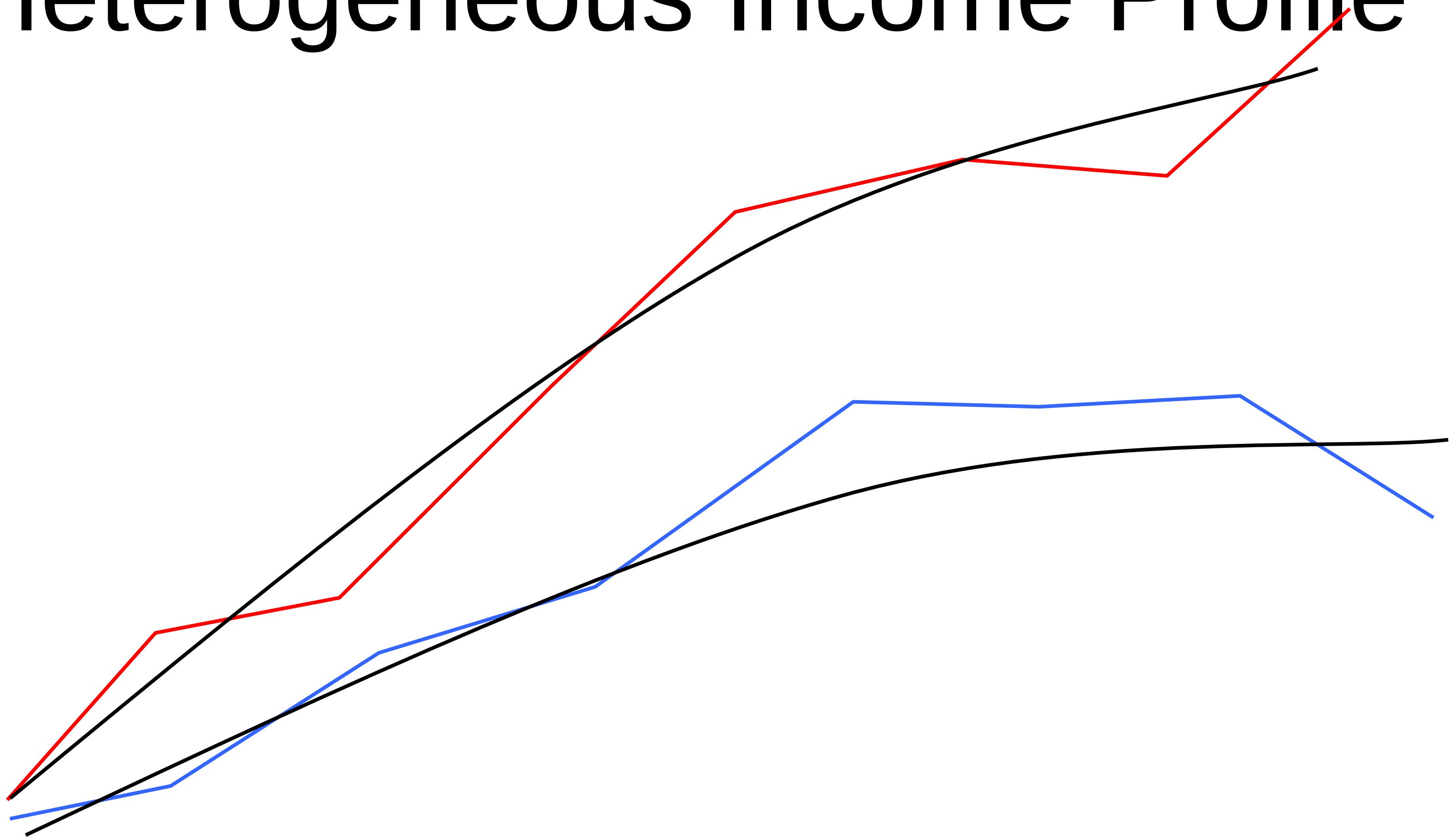

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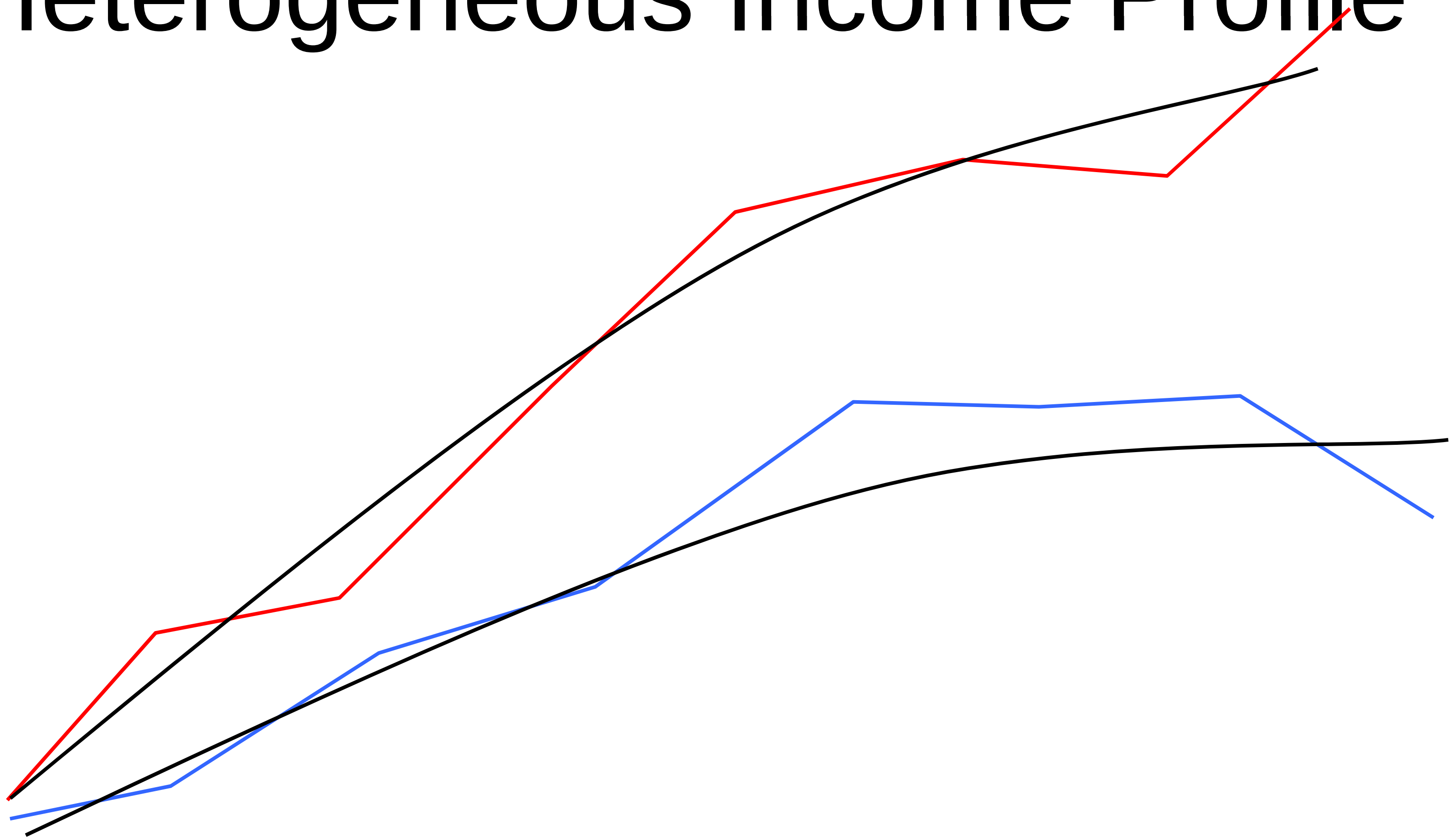
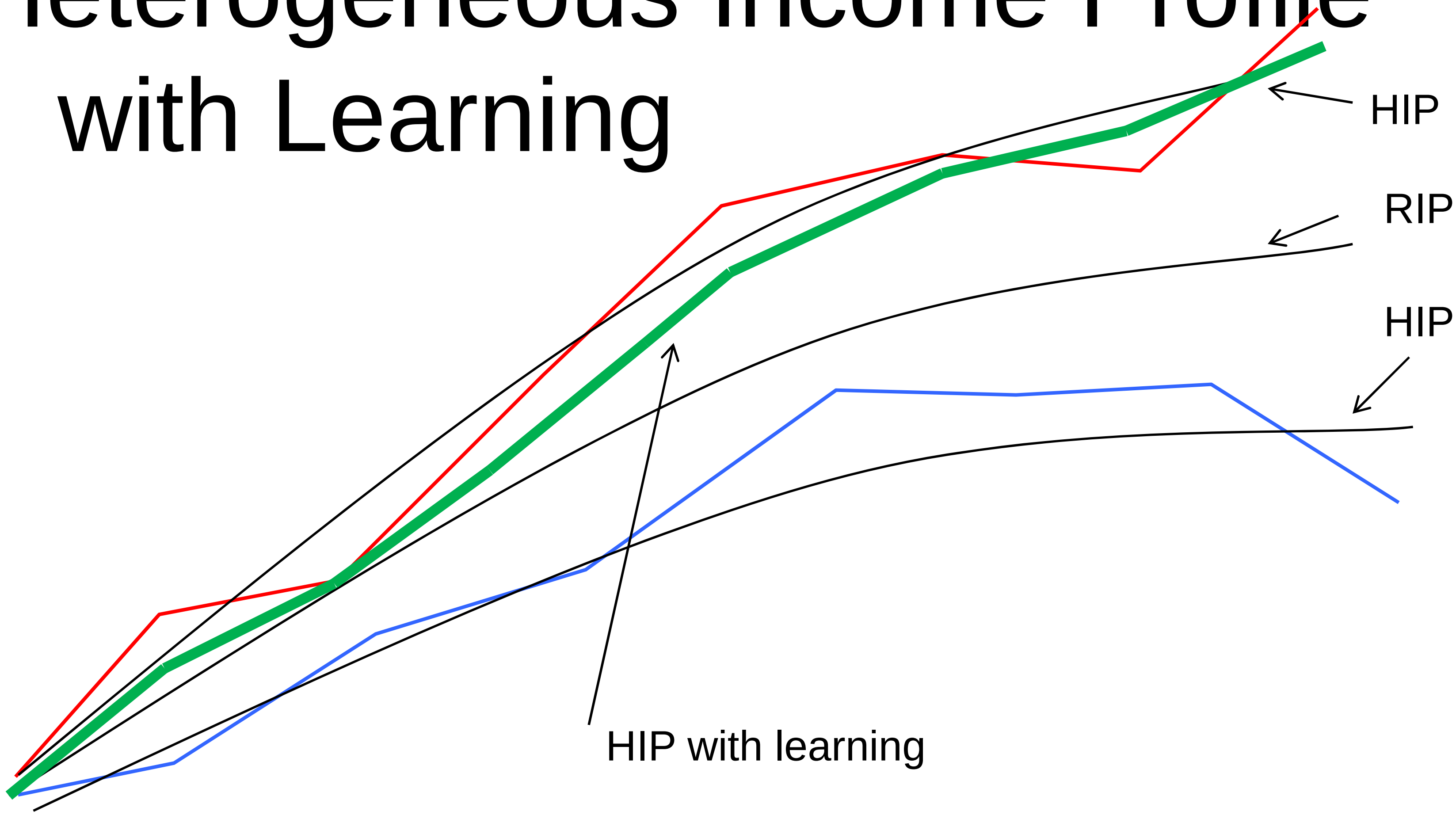


Heterogeneous Income Profile with Learning



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Model HIP with learning: age-varying uncertainty
Looks like RIP when young and HIP when old
Tight common prior: RIP to agent and HIP to labor economist
Tight correct prior: HIP to both

Why are these models so hard to disentangle?

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Maybe also age-varying variances of persistent and transitory shocks!

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Insight: learning shows up in optimal consumption/saving
Problem: hard to identify learning vs. flexible exog shock process

II. What can we learn from consumption?

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Typical/previous approach: Primicieri and Van Rens (2003)

Income process: $\Delta \ln Y_{i,t} = \alpha_i + \underbrace{\Delta u_{i,t} + \gamma_i \Delta e_t}_{\text{Transitory}} + \underbrace{\eta_{i,t} + \gamma_i v_t}_{\text{Permanent}}$

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PIH model: $(E_t - E_{t-1}) \ln C_{i,t} = \frac{1-R^{-1}}{1-R^{t-T}} \sum_{s=0}^{T-t} R^{-s} (E_t - E_{t-1}) \ln Y_{i,t}$

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Estimate by matching moments: $var\left(\Delta \ln Y_{i,t}\right)$, $Var\left(\Delta \ln C_{i,t}\right)$, $cov\left(\Delta \ln C_{i,t}, \Delta \ln Y_{i,t}\right)$, $cov\left(\Delta \ln Y_{i,t}, \Delta \ln Y_{i,t-1}\right)$, etc.

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Nice: focusses on the implications of the model that help to distinguish cases/identify parameters rather than moments that one happens to have in hand

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Also identification from different histories in income causing variation in expected income growth across households

Estimated parameters

Data:	**Y**	**Y+C**	**Y+C (RIP)**	Y+C (fill)
ρ	0.636	0.789	0.972	0.773
σ_η	0.192	0.171	0.140	0.179
σ_ε	0.146	0.053	0.085	0.033
$\sigma_\beta(\times 100)$	2.645	1.877	—	1.780
σ_α	0.496	0.329	0.369	0.279
λ	—	0.768	—	0.795
$\sigma_{\alpha\beta}$	-0.475	-0.303	—	-0.506
σ_{u^c}	—	0.341	0.342	0.340
$\sigma_{\overline{u}^c}$	—	0.402	0.435	0.391
σ_{u^y}	—	0.153	0.092	0.150

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Eg. If you want to study portfolio choice over the life-cycle, need to re-estimate all over