

DISCUSSION OF
Household Debt Overhang and Human Capital Investment
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- Two categories of household debt relief: modifications and **default** (Indarte 2022)
- **Default** primarily comes in two forms:
 - ① Discharging debt through **bankruptcy** \sim 10% of all households file (Starvins 2000)
 - ② Becoming **delinquent** by stopping payments (possibly after filing rejected)
- Delinquency is very common, around $5\times$ as common as bankruptcy (Herkenhoff 2012)
- Much of empirical literature on HH default focuses on bankruptcy (more objective)
- **Key policy trade-off:** **default** helps borrowers smooth consumption across states, but can distort (**ex-ante** and ex-post) incentives

① **Determinants** of bankruptcy filing decision:

- Sensitivity to cash-on-hand (liquidity) $>$ filing incentives (moral hazard) (Indarte 2023)

② **Ex-post** effects of receiving bankruptcy protection:

- Increases income (Dobbie-Song 2015)
- Lower mortality and financial distress (Dobbie-Song 2015, Dobbie et al. 2017)
- Reduces sensitivity of employment to aggregate shocks (Auclert et al. 2019)

③ **Ex-ante** effects of bankruptcy:

- Increases entrepreneurial risk-taking (Fan-White 2003)
- Crowding out of health insurance (Mahoney 2015)
- Reduces value of marital risk-sharing (Traczynski 2011)

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- **This paper:** Reduces labor supply and human capital investment

- Two closely related empirical findings:
 - ① Income increases after receiving bankruptcy protection (Dobbie-Song 2015)
 - ② Negative home equity reduces labor supply (Bernstein 2021)
- Literature has proposed “**debt overhang**” as an explanation to these findings (Dobbie-Song 2015, Donaldson et al. 2019)
 - Key idea: **wage garnishment** during default acts as a **tax**, reducing labor supply
 - Bankruptcy reduces wage garnishment relative to delinquency \Rightarrow Finding #1
 - Negative equity induces default and garnishment \Rightarrow Finding #2

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 - Key idea: wage garnishment during default acts as a tax, reducing labor supply
 - Bankruptcy reduces wage garnishment relative to delinquency ⇒ Finding #1
 - Negative equity induces default and garnishment ⇒ Finding #2
- **My first (sleep-deprived post-job market) reaction to this paper:** another model with the same mechanism, but a different outcome
 - Effect of debt overhang on human capital is less severe because effective garnishment is lower (Hart-Moore 1994)

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- **My second (post-vacation) reaction:** a model with a **different mechanism** that more closely captures the household version of Myers 1977 debt overhang

DEBT OVERHANG FROM WAGE GARNISHMENT IN STATIC MODELS

- Debt overhang in prior models comes from **garnishment** (DS 2015, Donaldson et al. 2019)
- Agents in repayment:

$$\max_{\ell} U(w\ell - (1+r)d) - \psi(\ell) \Rightarrow \psi_{\ell} U_c^{-1} = w$$

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- **Results:** ignoring wealth effects, labor supply is

- 1 Lower in bankruptcy and delinquency than in repayment
- 2 Higher in bankruptcy than delinquency because $\alpha_b < \alpha_d$ (Dawsey et al. 2013)

$$F(S, K) = \max_{a \geq 0, S', \ell \geq 0} \left\{ U(C, a, \ell) + e^{-\delta} \mathbf{E}_\nu \left[(1 - \tau) F(S', K') + \tau H(K') \right] \right\}$$

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- Note: **no** wage garnishment anywhere \Rightarrow different mechanism from prior lit!

COMMENT 1: COMPARE WITH WAGE GARNISHMENT

- Your mechanism is: *If I know I'm going to default soon, it's not worth working or investing because any resources this produces will be taken if I default*
- Mechanism in prior lit: *When in default, I don't want to work or invest because the benefits will be garnished*
- These two mechanisms are quite different
 - **Timing**: in former, labor supply/investment declines **prior** to default
 - **Policy**: level of wage garnishment matters in the latter
 - Aside: I like yours better – closer to Myers 1977 intuition!

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- **Suggestion:** Compare with a model of wage garnishment
 - Possible specification: default subject to a utility cost, wages garnished in default, exit default when debts repaid
 - Would be nice to say which is the “right” model of debt overhang!

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- **Suggestion**: Compare with a model of wage garnishment
- **Suggestion**: Show results from simulations in the model
 - How far in advance does debt overhang “kick-in” in event-time relative to default?
 - An important novelty of your mechanism is the **timing**!

COMMENT 2: IMPORTANCE OF DEFAULT RULE

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- Features of default rule that I can't tell if are important:
 - ① No separate decision to default: default occurs with assets hit lower bound
 - Different from lit on consumer/sovereign default, where default occurs in bounded region of state space (Chatterjee et al. 2007, Herkenhoff 2012)

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 - 2 RHS of constraint is endogenous \Rightarrow lower ℓ_t or a_t to induce default?
 - Different from dynamic corporate models, where constraint (typically) depends on variables that are already chosen or are exogenous (Bolton, Chen, and Wang, 2011)

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 - 3 No costs of default (aside from exclusion)
 - Different from lit on consumer/sovereign default (Chatterjee et al. 2007) and evidence that non-monetary costs help explain low HH bankruptcy filings (White 1998, Indarte 2023)

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 - ③ No costs of default (aside from exclusion)
- **Suggestion:** Examine robustness to alternative models of default
 - Most natural specification would be Chatterjee et al. 2007
 - I'm sympathetic to computational constraints, but what makes many models of default computationally demanding is pricing the debt, which isn't needed here!

COMMENT 3: USE MODEL QUANTITATIVELY

- Most of the analysis of the model is qualitative, but the model is quantitative
- **Suggestion:** Take the model to the data **quantitatively**
- Examples:
 - Have a hump-shaped relationship between leverage and labor supply/human capital investment in the data. Can the model match this and what parameters are most important for generating this relationship?
 - The “back-propagation” result of labor supply \rightarrow human capital depends on substitutability between human capital and labor supply (θ_{al}). Can you estimate this in the data and quantify how large this parameter is?
- Important because main contribution of paper is **model** not empirics (in my view)

“Public policies intended to incentivize labor supply through balance sheet interventions should account for their impact on skills acquisition due to the dynamic complementarity between the two.”

- What exactly do you mean? Which debt relief policies does your mechanism make more or less effective?
- Example: is this dynamic complementarity a cost of doing ex-ante relative to ex-post debt relief? Typically, we think ex-ante is better!
- Note: if this is the case, I **really** want to see an estimate of θ_{al} !

- Great paper that provides a nice framework for thinking about important questions
 - **Worth reading:** helped organize my thoughts about HH debt overhang
- Summary of my comments:
 - ① Help us understand how your mechanism differs from prior work and depends on your model of default
 - ② Strengthen the connection between the model and empirical analysis
- I look forward to seeing future versions of this paper and others!
 - If you liked this paper, check out “[Student Loans and Labor Supply Incentives](#)” to see how the effect of debt overhang on labor supply makes IDR less attractive!