The Cross-Section of Labor Leverage and Equity Returns

Andres Donangelo  François Gourio  Miguel Palacios
UT Austin  Chicago Fed  Vanderbilt University

Labor and Finance Conference
Capri, September 8, 2016
This Paper

We show that:

1. Labor-capital complementarity and wage smoothness results in labor leverage
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2. Under the same conditions, labor leverage is an increasing function of labor share
We show that:

1. Labor-capital complementarity and wage smoothness results in labor leverage

2. Under the same conditions, labor leverage is an increasing function of labor share

3. Assuming a firm’s exposure to aggregate shocks is larger than wage’s exposure to shocks, the previous results imply a positive relation between labor leverage and expected returns.
We find empirical evidence:

1. Wages are smooth (yes, we know this, but we also find labor costs are smooth)
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2. Labor and capital are strictly complements
We find empirical evidence:

1. Wages are smooth (yes, we know this, but we also find labor costs are smooth)

2. Labor and capital are strictly complements

3. A positive relation between labor leverage and expected returns
   - Measured by exposure to risk (betas)
   - Measured by average realized returns
This Paper

We calibrate a structural model:

1. We match relevant moments
We calibrate a structural model:

1. We match relevant moments

2. We find that the structural model matches many other moments
This paper and the literature

\[ \lambda_m \beta^i_m \]
This paper and the literature

\[ \lambda_m \beta^i_m \]

\[ \lambda_m \]

“Fundamental” GE Models

Lucas (78);
... (many others)...
Danthine and Donaldson (02)
...

“Traditional O.L.”
Models w/ Fixed Operating Costs

Carlson, Fisher, and Gianmarino (04)
...; Novy-Marx (11);...

Labor Leverage

Donangelo, Gourio, and Palacios
This paper and the literature

\[ \lambda_m \beta^i_m \]

\[ \lambda_m \beta^i_m [\rho^i_m, \sigma^i_{\text{RET}}] \]

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GE Models
- Sharpe-Lintner (64, 65)
- (CAPM)
- Mayers (1973)

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Donangelo, Gourio, and Palacios  The Cross-Section of Labor Leverage
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Adj Costs etc
Berk, Green, and Naik (04)
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$x^i$

$\sigma^\text{CF}_i$

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**Financial Leverage**

**Capital Structure**

Liveidan, Sapriza, and Zhang (09)

Gomes and Schmidt (10)

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\[ \sigma^\text{CF}_i \]

Financial Leverage

Operating Leverage

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“Fundamental” GE Models
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...
This paper and the literature

\[ \lambda_m \beta_i \]

\[ \rho_m \]

\[ \beta_i m \left[ \rho_i, \sigma_i^{\text{RET}} \right] \]

\[ \sigma_i^{\text{RET}} \left[ x_i, \sigma_i^{\text{CF}} \right] \]

\[ \sigma_i^{\text{CF}} \]

GE Models
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\lambda_m \beta^i_m
\]

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\]

\[
\sigma^\text{RET}_i \left[ x_i, \sigma^\text{CF}_i \right]
\]

\[
x_i
\]

Financial Leverage

Capital Structure

Operating Leverage

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... Labor Leverage

Donangelo, Gourio, and Palacios

The Cross-Section of Labor Leverage
This paper and the literature

1. Note: We are not explaining anomalies

2. We are pointing out the relevance for labor leverage in the cross-section of expected returns
What is Labor Leverage?

- Cash flow risk amplification due to labor costs
What is Labor Leverage?

- Cash flow risk amplification due to labor costs
- What is special about labor costs?
  - Main operating cost for firms
  - Smoother than other costs:
What is Labor Leverage?

- Cash flow risk amplification due to labor costs

What is special about labor costs?

- Main operating cost for firms
- Smoother than other costs:

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<th>Δlc</th>
<th>Δnlc</th>
<th>Δtc</th>
<th>lc^g (%)</th>
<th>nlc^g (%)</th>
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<td>0.72***</td>
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<td>0.43***</td>
<td>1.46***</td>
<td>1.07***</td>
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<td></td>
<td>(0.01)</td>
<td>(0.03)</td>
<td>(0.03)</td>
<td>(0.16)</td>
<td>(0.28)</td>
<td>(0.12)</td>
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<td>sale^g (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm FE</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>R-sq. (%)</td>
<td>19.23</td>
<td>72.88</td>
<td>76.69</td>
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<td>8,173</td>
<td>8,173</td>
<td>8,173</td>
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</table>
What causes Labor Leverage?

- “Keynesian” mechanisms (i.e., driven by K-L relations):
  - Labor Risk Insurance: ...; Danthine and Donaldson (2002); Parlour and Walden (2011); Berk and Walden (2013); (Mindy) Zhang (2014); ...  
  - Unions: Chen, Kacperczyk, and Ortiz-Molina (2011);...  
  - Job Search and Wage Bargaining: Petrosky-Nadeau, Zhang, and Kuehn (2013); ...  
  - Wage Rigidity: Favilukis and Lin (2015a,b); ...  

- “Neo-Classical” mechanisms (i.e., technology driven):
  - L-K Complementarity: Gourio (2007) (now subsumed by this paper); Palacios (2012)  
  - Labor Mobility: Donangelo (2014);
A Broad Definition of Labor Leverage

- Value Added: $Y[X_t, W_t]$

- Operating Profits: $\Pi[X_t, W_t]$

($X_t$ is TFP or price of good produced, $W_t$ is wage rate)
A Broad Definition of Labor Leverage

- Value Added: $Y[X_t, W_t]$

- Operating Profits: $\Pi[X_t, W_t]$

$(X_t$ is TFP or price of good produced, $W_t$ is wage rate)

- Labor Leverage ($\ell$)

$$\ell \equiv \frac{d\Delta \pi_t/d\Delta x_t}{d\Delta y_t/d\Delta x_t} - 1$$

$(\pi, x, \text{ and } y$ denote the logs of $\Pi, X, \text{ and } Y)$
Link Between Labor Share and Labor Leverage

- Adding some structure:

\[ Y_t = X_t F[K, L_t] \]  
\[ \Pi_t = \max_{L_t} \{ X_t F[K, L_t] - L_t W_t \} \]  

(value added)  
(operating profits)

\[ \ell = (1 - \gamma) S_t \frac{1}{1 - \partial \frac{\Delta w_t}{\Delta x_t}} \left( 1 + \gamma S_t \frac{1}{1 - \partial \frac{\Delta w_t}{\Delta x_t}} \right) \]

\[ \gamma \equiv F_K[K, L_t] F_L[K, L_t] F_{KL}[K, L_t] \]

(K-L Elasticity of Substitution)

\[ \text{Labor Leverage is increasing in Labor Share (S) when:} \]

- Wages are sufficiently smooth:
  \[ \partial \frac{\Delta w_t}{\Delta x_t} < 1 \]
- K and L are strictly complements:
  \[ \gamma < 1 \]
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- Adding some structure:

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Y_t = X_t F[K, L_t] \quad \text{(value added)}
\]

\[
\Pi_t = \max_{L_t} \{ X_t F[K, L_t] - L_t W_t \} \quad \text{(operating profits)}
\]

- Labor Leverage: \( \ell = \frac{(1-\gamma) \frac{S_t}{1-S_t} \left(1 - \frac{\partial \Delta w_t}{\partial \Delta x_t}\right)}{1+\gamma \frac{S_t}{1-S_t} \left(1 - \frac{\partial \Delta w_t}{\partial \Delta x_t}\right)} \)

\[
\gamma \equiv \frac{F_K[K,L]F_L[K,L]}{F[K,L]F_{KL}[K,L]} \quad \text{(K-L Elasticity of Substitution)}
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\[ \ell = \frac{(1-\gamma) \frac{S_t}{1-S_t} \left( 1 - \frac{\partial \Delta w_t}{\partial \Delta x_t} \right)}{1 + \gamma \frac{S_t}{1-S_t} \left( 1 - \frac{\partial \Delta w_t}{\partial \Delta x_t} \right)} \]

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- Labor Leverage is increasing in Labor Share \((S)\) when:
  - Wages are sufficiently smooth:  
  \[ \frac{\partial \Delta w_t}{\partial \Delta x_t} < 1 \]
  - \(K\) and \(L\) are strictly complements:  
  \[ \gamma < 1 \]
Sidenote

- Model implies $\gamma = \frac{\partial \Delta y_t / \partial \Delta x_t - 1}{\partial \Delta \pi_t / \partial \Delta x_t - 1}$. Thus, labor leverage present if $\partial \Delta \pi_t / \partial \Delta x_t > \partial \Delta y_t / \partial \Delta x_t$

- We will use this result to verify the conditions for labor leverage are met
Empirical Results
Measure of Firm-Level Labor Share

Two constructed measures of labor share:

1. Main measure of labor share (LS):

   \[ LS_{it} \equiv \frac{XLR_{it}}{OIBDP_{it} + XLR_{it} + INVFG_{it} - INVFG_{it-1}} \]
Two constructed measures of labor share:

1. **Main measure of labor share (LS):**

   \[ \text{LS}_{it} \equiv \frac{XLR_{it}}{OIBDP_{it} + XLR_{it} + INVFG_{it} - INVFG_{it-1}} \]

2. **Extended measure of labor share (ELS):**

   \[ \text{ELS}_{it} \equiv \begin{cases} 
   \text{LS}_{it} & \text{if LS}_{it} \text{ is non-missing} \\
   \frac{XLR_{it}}{OIBDP_{it} + \text{LABEX}_{it} + INVFG_{it} - INVFG_{it-1}} & \text{if LS}_{it} \text{ is missing,} 
   \end{cases} \]

   where \( \text{LABEX} = \text{EMP} \times \text{Industry Average of (XLR/EMP)} \)
## Characteristics of Firms Sorted by Labor Share

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<th>8</th>
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<tr>
<td>L</td>
<td>0.33</td>
<td>0.32</td>
<td>0.81</td>
<td>0.63</td>
<td>7.22</td>
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<td>0.63</td>
<td>0.58</td>
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<td>2</td>
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<td>0.53</td>
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<td>6.83</td>
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<td>0.47</td>
<td>0.39</td>
<td>327</td>
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<td>3</td>
<td>0.65</td>
<td>0.65</td>
<td>3.09</td>
<td>0.57</td>
<td>6.56</td>
<td>6.64</td>
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<td>1.28</td>
<td>0.47</td>
<td>0.40</td>
<td>327</td>
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<td>4</td>
<td>0.74</td>
<td>0.74</td>
<td>3.31</td>
<td>0.69</td>
<td>6.22</td>
<td>6.53</td>
<td>0.28</td>
<td>1.37</td>
<td>0.49</td>
<td>0.37</td>
<td>327</td>
</tr>
<tr>
<td>H</td>
<td>0.85</td>
<td>0.85</td>
<td>3.63</td>
<td>0.82</td>
<td>5.74</td>
<td>6.28</td>
<td>0.27</td>
<td>1.43</td>
<td>0.52</td>
<td>0.33</td>
<td>326</td>
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</tbody>
</table>
## Cyclicality of Labor Share
### Validation of LS and ELS as Measures of Labor Leverage

<table>
<thead>
<tr>
<th>Proxy for Labor Share (S)</th>
<th>LS</th>
<th>ELS</th>
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<tr>
<td></td>
<td>I</td>
<td>II</td>
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<td>$gdp_t^g$</td>
<td>-0.33***</td>
<td>(0.12)</td>
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<tr>
<td>$tfp_t^g$</td>
<td>-0.43*</td>
<td>(0.25)</td>
</tr>
<tr>
<td>$mkt_t^g$</td>
<td>-0.03*</td>
<td>(0.02)</td>
</tr>
<tr>
<td>Firm FE</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>R-sq. (%)</td>
<td>0.54</td>
<td>0.30</td>
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<tr>
<td>Obs.</td>
<td>13,508</td>
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Sensitivity of Operating Profit Growth to Shocks
Validation of LS and ELS as Measures of Labor Leverage

<table>
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<tr>
<th></th>
<th>$S=LS$</th>
<th>$S=ELS$</th>
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<td>Aggregate Shock</td>
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<tr>
<td></td>
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<td>$gdp^g$</td>
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<tr>
<td>shock$_t$</td>
<td>1.96***</td>
<td>2.37***</td>
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<tr>
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<td>(0.23)</td>
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<tr>
<td>$S_{it-1} \times$ shock$_t$</td>
<td>1.15***</td>
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<td>$S_{it-1}$</td>
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<td>(0.01)</td>
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<tr>
<td>Firm FE</td>
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<td>Y</td>
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<tr>
<td>R-sq. (%)</td>
<td>10.89</td>
<td>8.59</td>
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<td>Obs.</td>
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<td>68,873</td>
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Donangelo, Gourio, and Palacios The Cross-Section of Labor Leverage 15/25
# Elasticity of Profits and Value Added

Validation of LS and ELS as Measures of Labor Leverage

<table>
<thead>
<tr>
<th>Elasticities of profits and value added</th>
<th>( \hat{\Theta}_\Pi )</th>
<th>( \hat{\Theta}_Y )</th>
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<tbody>
<tr>
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<td>I</td>
<td>II</td>
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<tr>
<td>( \text{gdp}^g_t )</td>
<td>9.29***</td>
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<td>(0.17)</td>
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<td>( \text{tfp}^g_t )</td>
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<td>( \text{MKT}_t )</td>
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<td></td>
<td>(0.02)</td>
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<td>( \text{R-sq. (%)} )</td>
<td>0.09</td>
<td>0.07</td>
</tr>
<tr>
<td>( \text{Obs.} )</td>
<td>54,406</td>
<td>54,406</td>
</tr>
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</table>
## Labor Share and Measures of Risk

### Panel B: Average Betas of Portfolios Sorted on ELS

<table>
<thead>
<tr>
<th>Factor</th>
<th>L</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>H</th>
<th>H-L</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT</td>
<td>1.05***</td>
<td>1.31***</td>
<td>1.37***</td>
<td>1.44***</td>
<td>1.52***</td>
<td>0.47***</td>
</tr>
<tr>
<td></td>
<td>(0.07)</td>
<td>(0.05)</td>
<td>(0.05)</td>
<td>(0.05)</td>
<td>(0.07)</td>
<td>(0.07)</td>
</tr>
<tr>
<td>SMB</td>
<td>0.73***</td>
<td>1.05***</td>
<td>1.21***</td>
<td>1.32***</td>
<td>1.56***</td>
<td>0.83***</td>
</tr>
<tr>
<td></td>
<td>(0.13)</td>
<td>(0.12)</td>
<td>(0.13)</td>
<td>(0.14)</td>
<td>(0.13)</td>
<td>(0.05)</td>
</tr>
<tr>
<td>HML</td>
<td>-0.43***</td>
<td>-0.67***</td>
<td>-0.60**</td>
<td>-0.57**</td>
<td>-0.55**</td>
<td>-0.12</td>
</tr>
<tr>
<td></td>
<td>(0.15)</td>
<td>(0.21)</td>
<td>(0.23)</td>
<td>(0.23)</td>
<td>(0.24)</td>
<td>(0.10)</td>
</tr>
<tr>
<td>$tfp_g$</td>
<td>3.81</td>
<td>4.93*</td>
<td>5.15**</td>
<td>5.38**</td>
<td>5.93**</td>
<td>2.12**</td>
</tr>
<tr>
<td></td>
<td>(2.41)</td>
<td>(2.44)</td>
<td>(2.26)</td>
<td>(2.39)</td>
<td>(2.43)</td>
<td>(0.80)</td>
</tr>
<tr>
<td>$gdp_g$</td>
<td>1.78</td>
<td>2.17</td>
<td>2.86</td>
<td>2.88</td>
<td>3.56</td>
<td>1.78**</td>
</tr>
<tr>
<td></td>
<td>(1.93)</td>
<td>(2.13)</td>
<td>(2.00)</td>
<td>(1.96)</td>
<td>(2.20)</td>
<td>(0.83)</td>
</tr>
<tr>
<td>$wage_g$</td>
<td>0.84</td>
<td>0.18</td>
<td>4.02</td>
<td>3.14</td>
<td>3.66</td>
<td>2.83</td>
</tr>
<tr>
<td></td>
<td>(1.82)</td>
<td>(3.38)</td>
<td>(3.19)</td>
<td>(2.93)</td>
<td>(3.36)</td>
<td>(2.09)</td>
</tr>
</tbody>
</table>
### Excess Stock Returns (VW), Firms Sorted on Labor Share, 1963-2012

<table>
<thead>
<tr>
<th>Portfolio</th>
<th>L</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>H</th>
<th>H-L</th>
</tr>
</thead>
<tbody>
<tr>
<td>$LS_{t-2}$</td>
<td>6.11***</td>
<td>7.80***</td>
<td>6.26***</td>
<td>5.73**</td>
<td>10.18***</td>
<td>4.06*</td>
</tr>
<tr>
<td></td>
<td>(1.91)</td>
<td>(1.90)</td>
<td>(2.01)</td>
<td>(2.67)</td>
<td>(2.46)</td>
<td>(2.20)</td>
</tr>
<tr>
<td>$ELS_{t-2}$</td>
<td>6.98***</td>
<td>7.36***</td>
<td>7.00***</td>
<td>7.47***</td>
<td>10.23***</td>
<td>3.25*</td>
</tr>
<tr>
<td></td>
<td>(1.79)</td>
<td>(1.78)</td>
<td>(1.74)</td>
<td>(2.11)</td>
<td>(2.54)</td>
<td>(1.92)</td>
</tr>
</tbody>
</table>
Structural Model

If we have time...
Model Setup
Economic environment

- Pricing kernel:
  \[ \frac{d\Lambda_t}{\Lambda_t} = -rdt - \eta dZ_t^\lambda \]

- Wages:
  \[ \frac{dW_t}{W_t} = \mu \mu_w dt + \sigma_w \rho_w dZ_t^\lambda + \sigma_w \sqrt{1 - \rho_w^2} dZ_t^w, \]
Model Setup
Output and Productivity

• Value added: \( Y_t = X_t (\alpha L_t^\rho + (1 - \alpha) K_t^\rho)^{\frac{1}{\rho}} \),
Model Setup
Output and Productivity

• Value added: \( Y_t = X_t \left( \alpha L_t^\rho + (1 - \alpha) K_t^\rho \right)^{\frac{1}{\rho}} \),
  \( \gamma = \frac{1}{1 - \rho} \) K-L Elasticity of Substitution
Value added: \( Y_t = X_t \left( \alpha L_t^\rho + (1 - \alpha) K_t^\rho \right)^{\frac{1}{\rho}}, \)
\( \gamma = \frac{1}{1 - \rho} \) K-L Elasticity of Substitution

Productivity:
\[
\frac{dX_t}{X_t} = \mu_x dt + \sigma_x \rho_x dZ^\lambda + \sigma_x \sqrt{1 - \rho_x^2} dZ^x.
\]
Model Setup
Labor Share and Operating Profits

Labor Share dynamics:

\[ \frac{dS_t}{S_t} = \mu_s dt + \sigma_{s\lambda} dZ^\lambda + \sigma_{sw} dZ^w + \sigma_{sx} dZ^x \]
Model Setup
Labor Share and Operating Profits

Labor Share dynamics:

\[
\frac{dS_t}{S_t} = \mu_s dt + \sigma_{s\lambda} dZ^\lambda + \sigma_{sw} dZ^w + \sigma_{sx} dZ^x
\]

Strict L-K complementarity \((0 < \gamma < 1)\) implies X-S relations:

\[
\sigma_{sx} = -(1 - \gamma) \sigma_x \sqrt{1 - \rho_x^2} < 0, \quad \text{(LS lower in high productivity firms (X-S))}
\]

\[
\sigma_{sw} = (1 - \gamma) \sigma_w \sqrt{1 - \rho_w^2} > 0, \quad \text{(LS higher in high-wage paying firms (X-S))}
\]
Model Setup

Labor Share and Operating Profits

Labor Share dynamics:

\[
\frac{dS_t}{S_t} = \mu_s dt + \sigma_{s\lambda} dZ^\lambda + \sigma_{sw} dZ^w + \sigma_{sx} dZ^x
\]

Strict L-K complementarity \((0 < \gamma < 1)\) implies X-S relations:

\[
\sigma_{sx} = -(1 - \gamma) \sigma_x \sqrt{1 - \rho_x^2} < 0, \quad \text{(LS lower in high productivity firms (X-S))}
\]

\[
\sigma_{sw} = (1 - \gamma) \sigma_w \sqrt{1 - \rho_w^2} > 0, \quad \text{(LS higher in high-wage paying firms (X-S))}
\]

+ Relative smoothness of wages implies

\[
\sigma_{s\lambda} = -(1 - \gamma) (\rho_x \sigma_x - \rho_w \sigma_w) < 0, \quad \text{(LS is countercyclical (T-S))}
\]
Model Calibration
Model Calibration

- **Motivation:**
  1. Use model as a proof-of-concept for theory
  2. Study relation between endogenously determined LS and labor leverage and stock returns
Model Calibration

Motivation:

1. Use model as a proof-of-concept for theory
2. Study relation between endogenously determined LS and labor leverage and stock returns

SMM details:

- Number of simulations per calibration pass: 10,000
- Number of firms per simulation: 10,000
- Number of years per simulations: 100
- Number of periods per year: 12
## Calibration Results

### Panel A: Smoothness and Cyclicality of Macroeconomic Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Data Model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Variable 1</td>
</tr>
<tr>
<td>gdp$^g$</td>
<td>1.000</td>
</tr>
<tr>
<td>tfp$^g$</td>
<td>0.862</td>
</tr>
<tr>
<td>wage$^g$</td>
<td>0.275</td>
</tr>
<tr>
<td>profit$^g$</td>
<td>0.628</td>
</tr>
<tr>
<td>$\sigma$</td>
<td>0.030</td>
</tr>
<tr>
<td>Slope on gdp*</td>
<td>1.000</td>
</tr>
</tbody>
</table>

### Panel B: CS Std. Dev. of Firm-Level Value-Added Growth

- 0.131
- 0.151

### Panel C: Mean and Cross-Sectional Standard Deviation of Labor Share

- Mean: 0.594
- $\sigma$: 0.186

### Panel D: Elasticity of Substitution Between Labor and Capital

<table>
<thead>
<tr>
<th>$\hat{\Theta}^\Pi$</th>
<th>$\hat{\Theta}^Y$</th>
<th>$\hat{\rho}$</th>
<th>EOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.19</td>
<td>5.68</td>
<td>-1.50</td>
<td>0.40</td>
</tr>
<tr>
<td>2.17</td>
<td>1.47</td>
<td>-1.45</td>
<td>0.405</td>
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</table>

### Panel E: Sensitivity of Operating Profit Growth to GDP and TFP Shocks

<table>
<thead>
<tr>
<th>Variable</th>
<th>Data Model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Variable 1</td>
</tr>
<tr>
<td>gdp$^g_t$</td>
<td>1.96</td>
</tr>
<tr>
<td>$S_{it-1} \times$ gdp$^g_t$</td>
<td>1.15</td>
</tr>
<tr>
<td>tfp$^g_t$</td>
<td>1.53</td>
</tr>
<tr>
<td>$S_{it-1} \times$ tfp$^g_t$</td>
<td>2.83</td>
</tr>
<tr>
<td>$S_{it-1}$</td>
<td>0.13</td>
</tr>
<tr>
<td></td>
<td>0.14</td>
</tr>
</tbody>
</table>
### Calibration Results

<table>
<thead>
<tr>
<th>Portfolio Sorts (Unlevered Stock Returns / Asset Returns)</th>
<th>Data</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>2.83</td>
<td>2.45</td>
</tr>
<tr>
<td>2</td>
<td>3.69</td>
<td>2.93</td>
</tr>
<tr>
<td>3</td>
<td>4.69</td>
<td>3.28</td>
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<tr>
<td>4</td>
<td>4.14</td>
<td>3.67</td>
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<tr>
<td>H</td>
<td>4.72</td>
<td>4.38</td>
</tr>
<tr>
<td>H-L</td>
<td>1.89</td>
<td>1.93</td>
</tr>
</tbody>
</table>
Conclusion
Conclusion

1. L-K Complementarity + Smooth Wages $\Rightarrow$ Labor-Induced Form of Operating Leverage ("Labor Leverage")

2. Novel theoretically motivated measure of firm-level labor leverage

3. Evidence for the economic significance of labor leverage for cash flows and for equity returns