

Discussion of
The Cross-Section of Labor Leverage and Equity
Returns

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The paper in a nutshell

1. Wages are smoother than productivity or revenues → labor costs create leverage for shareholders
2. This generally increases a firm's risk exposure
3. → risk premia should be related to firms' labor shares
4. Paper presents empirical support for 1 – 3

Labor Leverage

Labor leverage, l , is defined by

$$l \equiv \frac{d\Delta\pi_t/d\Delta x_t}{d\Delta y_t/d\Delta x_t} - 1 \quad (\text{Proposition 1})$$

where π , y , x denote the logs of operating profits, value added by the firm, and TFP.

- Thus $l > 0$ requires that firm profits are more sensitive to productivity changes than value added.
- This is shown to be the case if
 - ◊ Wages are smooth: $\partial w/\partial x < 1$
 - ◊ and labor and capital are complements: elasticity of substitution $\gamma < 1$.

Implications

- Under the above assumptions it can be shown that

$$\partial I / \partial S > 0 \quad (\text{Proposition 2}) \quad (1)$$

where Labor Share, S , is the ratio between the total labor expenses and the value added by a firm: $S = \frac{WL}{Y}$.

- Assuming a single factor asset pricing model and that $\beta^x > \beta^w$, the firm's cash flow risk, β , is increasing in labor share (Proposition 3).
- Thus, more labor intensive firms should earn higher excess returns.

Main Empirical Findings

1. Verify in the data the sufficient conditions for existence of a positive labor leverage
 - a. Profit growth is significantly more volatile than wage growth
 - b. labor share is counter-cyclical (negative slope in GDP growth)
 - c. $\rightarrow \partial w / \partial x < 1$.
 - d. Estimate elasticity of substitution between labor and capital (range: from 0.4 to 0.57)
2. The long-short portfolio earns an excess returns of 4.82% per year for *LS*-sorted portfolios

General Comments

- Interesting paper!
- Clarifies the necessary and sufficient conditions for positive labor leverage
- Provides interesting stylized facts on labor cost dynamics
- Provides results on labor share and stocks' risk and return characteristics

General Comments

- Relation to existing literature should be clarified and sharpened. What is new, what has been in the literature?
 - ◇ Wage smoothness has been documented /discussed in the literature for some time.
 - ◇ What is the contribution relative to, say, Baily (1974), Danthine and Donaldson (2001), or Berk and Walden (2013), or Zhang (2014)? Don't these models generate the necessary and sufficient conditions for labor leverage?
 - ◇ Page 4: *"Overall, the key difference is that our model dynamics stems from simple "spot" labor markets with realistic assumptions about labor demand and labor supply, while this literature focuses on "implicit contracts" and the ensuing insurance arrangements. both channels are likely present in reality"*
 - ◇ I do not see the "two channels" but rather a reduced form modelling of the risk sharing.

General Comments

- How is labor leverage related to financial leverage?
 - ◇ Via risk sharing: Berk Stanton Zechner (2010) show that labor share and financial leverage should be linked. Chemmanur, Cheng, Zhang (JFE 2013) show that wages and leverage are in fact related.
 - ◇ Via strategic bargaining: See papers, e.g. Matsa (2010), Agrawal and Matsa (2013), Ellul and Pagano (2014, 2015)..... High labor share may lead to high leverage (better bargaining).
 - ◇ Via "crowding out" of financial leverage by labor leverage.
 - ◇ In all cases the observed relation between labor leverage and stock returns would be affected!
 - ◇ → should be accounted for in empirical section. Maybe double sort by financial and labor leverage?

Specific Comments

- In Table III, non-labor costs (nlc and tc) have a slope > 1 when regressed on sales. Intuition?
- How exactly was the final sample obtained? When trying to replicate Table III, I got over 12,000 observations and lower slope coefficients on nlc and tc, but higher ones on labor costs. The paper reports 8,173 observations.

Table III
Smoothness of Labor Costs

This table reports estimates of panel data regressions of changes of costs on changes in sales. Δlc and $lc^e(\%)$ are the \$ and % changes of staff expenses. Δnlc and $nlc^e(\%)$ are the \$ and % changes of the sum of operating expenses (SG&A and COGS) minus staff expenses. Δtc and $tc^e(\%)$ are the \$ and % changes of the sum of operating expenses (SG&A and COGS). Standard errors clustered by firm are shown in parentheses. Significance levels are denoted by (* = 10% level), (** = 5% level), and (***) = 1% level). The sample covers all industries in Compustat, except Financials, over the period 1963–2012.

	Cost (Dependent Variable)					
	Δlc	Δnlc	Δtc	$lc^e(\%)$	$nlc^e(\%)$	$tc^e(\%)$
$\Delta sale$	0.09*** (0.01)	0.72*** (0.03)	0.81*** (0.03)			
$sale^e(\%)$				0.43*** (0.16)	1.46*** (0.28)	1.07*** (0.12)
Firm FE	Y	Y	Y	Y	Y	Y
R-sq. (%)	19.23	72.88	76.69	0.00	9.96	59.25
Obs.	8,173	8,173	8,173	8,173	8,173	8,173

Specific Comments

- Is it so intuitive that capital is fixed and labor flexible in the short run?
- What would change if you switch this assumption around?

Labor Share Measure

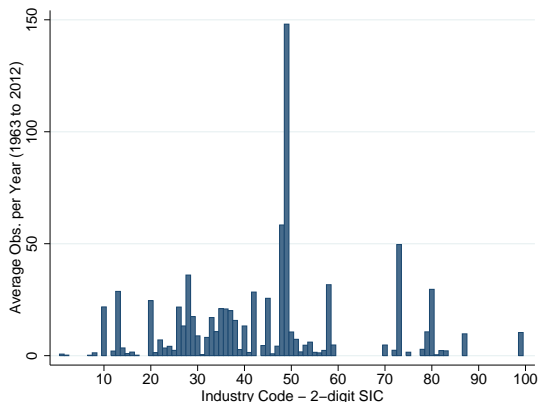
$$LS_{it} = \frac{XLR_{it}}{OIBDP_{it} + XLR_{it} + \Delta INVFG_{it-1,t}}$$

Since total staff expenses, XLR, is often missing, a new variable is defined:

$$ELS_{it} = \begin{cases} LS_{it} & \text{if non-missing } XLR \\ \frac{LABEX_{it}}{OIBDP_{it} + LABEX_{it} + \Delta INVFG_{it-1,t}} & \text{if missing } XLR \end{cases}$$

- *LABEX* is obtained by estimating an industry average of the per-employee compensation and multiplying it by the number of employee
- Important question: **which firms report the XLR item?**

The Majority of Firms Reporting *XLR* are in the Utility Industry



- The utility industry is highly regulated
 - ◇ Firms in this industry are often excluded in corporate finance and asset pricing applications

Probit - Are the Reporting and Non-Reporting Samples Comparable?

- Dependent variable is a dummy taking value one if the firm reports *XLR* and zero otherwise
- Table presents marginal effects
- Firms are statistically different from several observable characteristics
 - ◊ The firm size (Log(Sale)) will be a concern in the asset pricing tests

Profitability	0.105 (0.136)
Capex	-0.978*** (0.138)
Cash Holding	0.0140 (0.0985)
Log(Sale)	0.142*** (0.00813)
M/B	-0.0261*** (0.00970)
Book Leverage	-0.472*** (0.0692)
Collateral	-0.985*** (0.121)
Tangible Assets	2.334*** (0.107)

Comment on Empirics: Asset Pricing Tests

- Long-Short portfolios do not produce abnormal returns once FF factors are considered.
- Thus, strictly speaking no evidence of a labor leverage factor.
- Why is average excess returns across labor share sorted portfolios not always monotonous (Table VII) as predicted by the dynamic model?
- At least it would be useful to first sort by size and then check within each size category for labor leverage effects.

Small comments

- Tables numbered in Roman numbers but in Arabic in the text. . . .
- Captions need to be improved (e.g. Table II)
- More explicit derivation of formulas would be helpful

Conclusion

- Interesting paper!
- Main advice:
 - ◇ Place it better in the literature
 - ◇ Sharpen the paper's focus (clarify the punchline, does the dynamic model contribute enough? ...)
 - ◇ Provide more transparency in sample selection.