

Discussion of “Human Capitalists”

By Eisfeldt, Falato, and Xiaolan

Eric Zwick

Chicago Booth and NBER

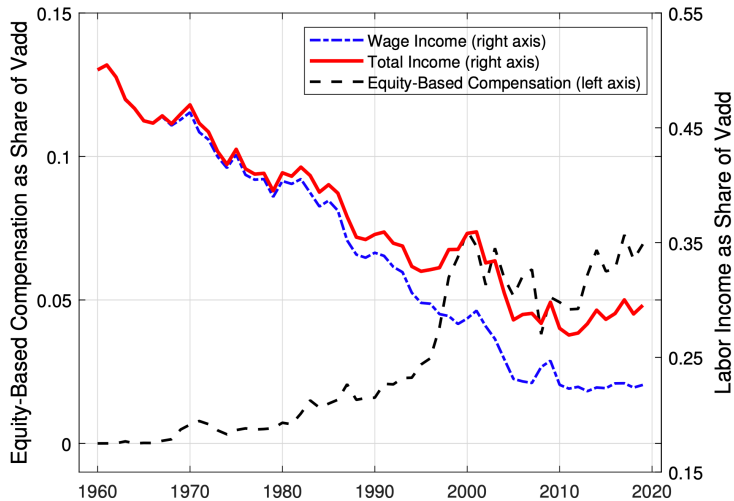
NBER Macro Annual, March 31, 2022

IMPORTANT PAPER!

1. Evolution of stock-based comp → Missing labor income
2. Correcting for missing labor matters
 - ▶ Accounts for 1/3 of the labor share decline in mfg
 - ▶ Accounts for all of the decline for non-production workers
 - ▶ Recovers the complementarity of skill and capital
3. Model-implied estimates point toward wage-stock substitution
 - ▶ Stock comp looks more like marginal product than bargaining rents

IMPORTANT PAPER!

(b) Total Labor Share

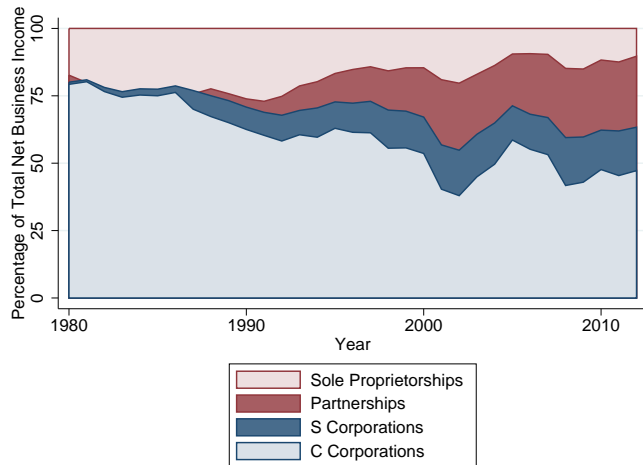


IMPORTANT PAPER!

Bottom line: Major contribution with ample room for follow-on work.

#1: THE RISE OF PASS-THROUGH BUSINESS INCOME

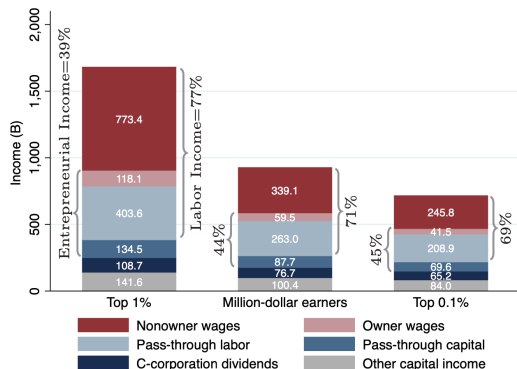
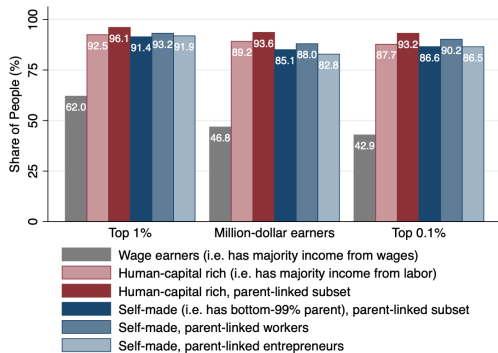
COOPER MCCLELLAND PEARCE PRISINZANO SULLIVAN YAGAN ZIDAR ZWICK (2016)



Key: Dramatic rise in pass-through business activity

#1: THE RISE OF PASS-THROUGH BUSINESS INCOME

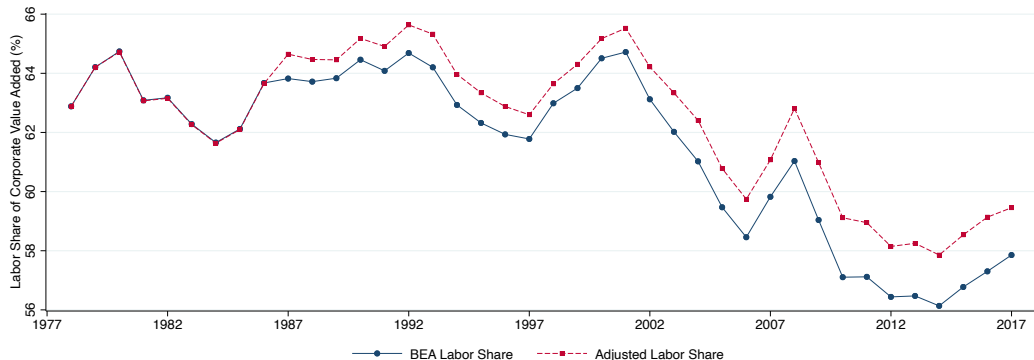
SMITH YAGAN ZIDAR ZWICK (2019)



Key: Accounting for human capital share of biz income transforms view of top 1%

#1: THE RISE OF PASS-THROUGH BUSINESS INCOME

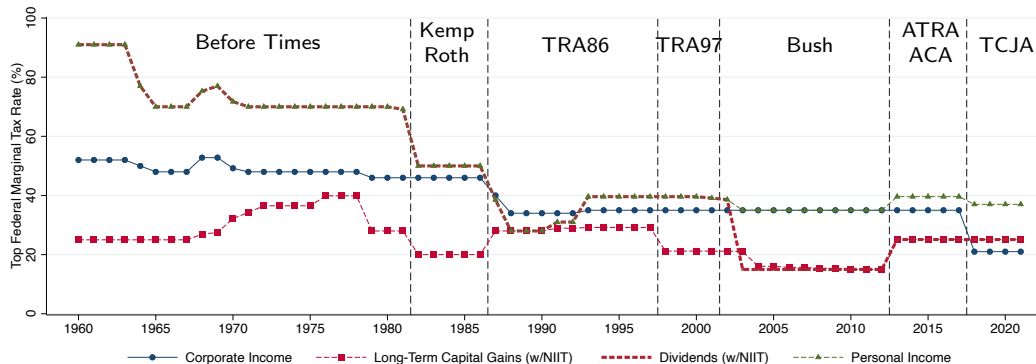
SMITH YAGAN ZIDAR ZWICK (2021)



Key: Pass-through growth accounts for 1/3 of corporate labor share decline

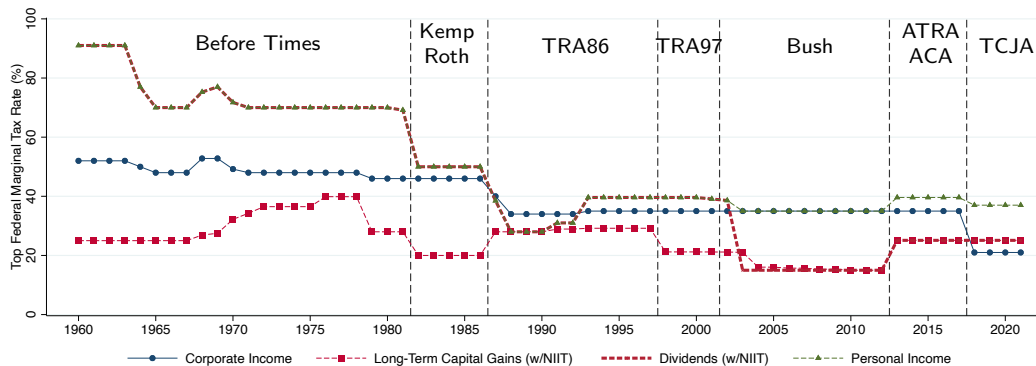
1. Recharacterized wages for S-corporation owner-managers
2. Migration of labor-intensive firms into non-corporate (partnership) sector

#1. A COMMON ANCESTOR: TRA86



Key: Evolving incentives to compensate labor

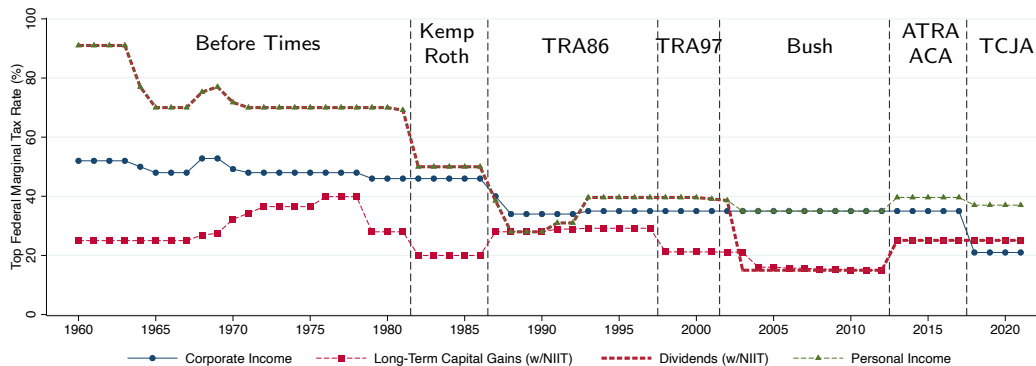
#1. A COMMON ANCESTOR: TRA86



Incentives for Entrepreneurs:

1. Before Times: Leave money in firm, consume through firm, generate paper losses
2. TRA86: If C-corp, shift to wages/bonuses. If pthru, shift to profits.
3. Always: Defer LT cap gains (value \downarrow in t_{corp}, r)

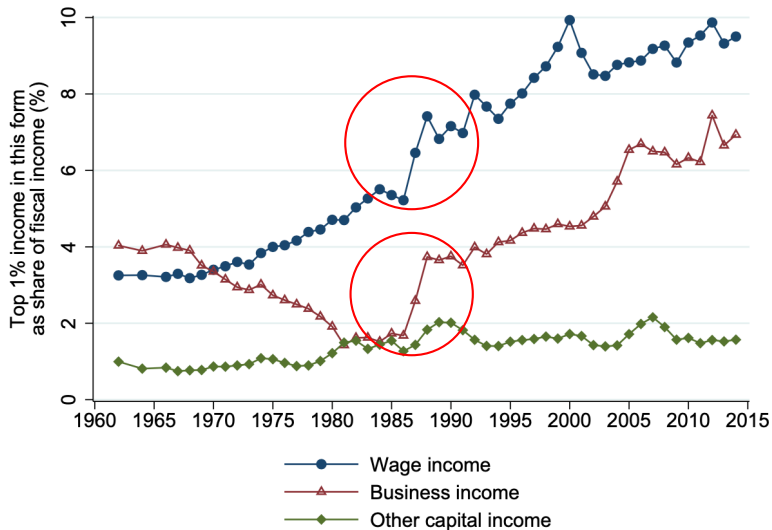
#1. A COMMON ANCESTOR: TRA86



Incentives for Employee Compensation:

1. Before Times: Consume through firm, defer via pensions
2. TRA86: Wages/bonus, NSOs, and pensions
3. Post-97, Bush: Stock increasingly attractive, esp ISOs

#1. A COMMON ANCESTOR: TRA86



Source: SYZZ (2019)

#2. PAID IN PROMISES

This Paper: Stock comp has grown in importance **AND** is not properly recorded

Question: How true is this?

- ▶ If stock comp appears on W2, then maybe less an issue. . .

#2. PAID IN PROMISES

Employees take lower salary in exchange for:

1. Non-Qualified Stock Options (NSO)
 - ▶ Recorded on W2 when exercised, subsequently treated as stock
2. Incentive Stock Options (ISO)
 - ▶ Only ever recorded as capital gains
3. Restricted Stock Units (RSU)
 - ▶ Recorded on W2 when vested, subsequently treated as stock
4. Other options
 - ▶ Pensions and ESOPs
 - ▶ Profit sharing plans
 - ▶ Flexible life insurance/annuities (popular in Europe)

#2. PAID IN PROMISES

1. 83(b) election allows NSO recipients to reduce W2 amount

THE HOLLOWAY GUIDE TO

Equity Compensation



Stock options, RSUs, job offers, and taxes—a detailed reference, including hundreds of resources, explained from the ground up, for both employees and managers.

80 pages and 366 links — last update a year ago

EDITION #2.1.0

CREDITS

Original Authors

JOSHUA LEVY (Holloway)  

JOE WALLIN (Carney Bradley Spellman)  

83(b) Elections SHARE SECTION

COMMON QUESTIONS COVERED HERE

What is an 83(b) election?

How do 83(b) elections work?

Can the 83(b) election be filed late?

[Show 1 more](#)

This section covers one of the most important and complex decisions you may need to make regarding stock awards and stock options: paying taxes early with an 83(b) election.

- Generally, restricted stock is taxed as ordinary income *when it vests*.
- If the stock is in a startup with low value, this may not result in high tax. If it's been years since the stock was first granted and the company is now worth a lot, the taxes owed could be quite significant.

DEFINITION

The Internal Revenue Code, in Section 83(b), offers taxpayers receiving equity in exchange for work the option to pay taxes on their options before they vest. If qualified, a person can tell the IRS they prefer this alternative in a process called an **83(b) election**. Paying taxes early with an 83(b) election can potentially reduce taxes significantly. If the shares go up in value, the taxes owed at vesting might be far greater than the taxes owed at the time of receipt.

#2. PAID IN PROMISES

2. Firms adopt plans that permit range of NSO, ISO, RSU

SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

FORM S-1

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

PAYPAL, INC.

(Exact name of Registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

7374
(Primary Standard Industrial
Classification Number)

77-0510487
(I.R.S. Employer
Identification No.)

303 Bryant Street
Mountain View, California 94041
(650) 864-8000

(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

Peter A. Thiel
Chief Executive Officer
PayPal, Inc.
303 Bryant Street
Mountain View, California 94041
(650) 864-8000

(Name, address, including zip code, and telephone number, including area code, of agent for service)

#2. PAID IN PROMISES

2. Firms adopt plans that permit range of NSO, ISO, RSU

If our stockholders sell substantial amounts of our common stock in the public market following this offering, the market price of our common stock could decline. Based on shares outstanding as of May 31, 2002, upon completion of this offering we will have 60,562,884 shares of common stock outstanding. The 6,210,000 shares of our common stock sold in our initial public offering and all of the shares of our common stock sold in this offering will be freely tradable in the public market, including any shares sold pursuant to the exercise of the underwriters' over-allotment option.

In addition, 6,668,408 shares reserved for issuance pursuant to outstanding options and warrants and 4,358,526 shares available for grant under our existing stock plans as of May 31, 2002 will become eligible for sale in the public market once permitted by provisions of various vesting agreements, lock-up agreements and Rule 701 under the Securities Act, as applicable. See "Shares Eligible for Future Sale."

1999 Stock Plan

Our board of directors adopted the 1999 Stock Plan in March 1999, and our stockholders approved the plan in May 1999. The plan allows us to issue awards of incentive or nonqualified stock options or restricted stock. Our employees and consultants are eligible to receive awards under the plan, but only employees may receive incentive stock options. We have reserved a total of 4,677,733 shares of our common stock for issuance under the plan. The plan is administered by our board of directors, or a committee of our board appointed by the board to administer the plan. The board of directors or the committee administering the plan selects the participants who will receive awards and determines the terms and conditions of such awards. Restricted stock is generally subject to a repurchase option in favor of PayPal exercisable upon the voluntary or involuntary termination of the employee or consultant's relationship with us for any reason.

#2. PAID IN PROMISES

2. Firms adopt plans that permit range of NSO, ISO, RSU

- ▶ Compensation advisors/HR/employees negotiate best fit
- ▶ Best fit often focuses on reducing tax on W2
- ▶ Fewer options for avoiding W2 income in more mature firms

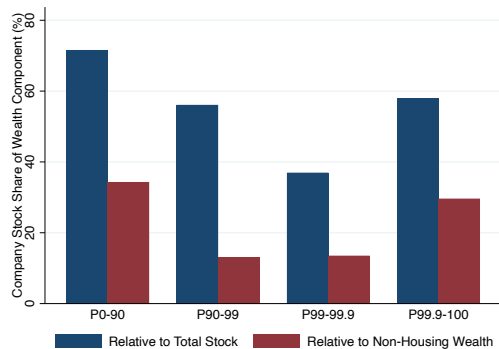
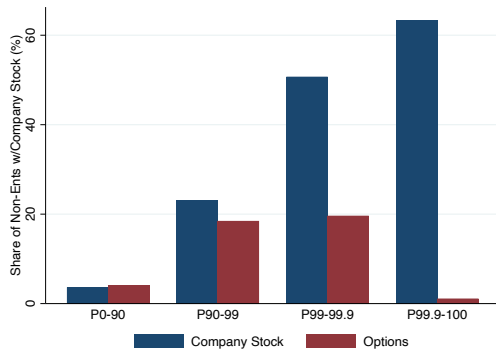
#2. PAID IN PROMISES

3. Options especially popular among high-growth pvt companies
 - ▶ 90% of Silicon Valley companies grant options
 - ▶ 80% of these companies grant ISOs (vs. 20% of public cos)

Source: Natl Association of Stock Plan Professionals (2019)

#2. PAID IN PROMISES

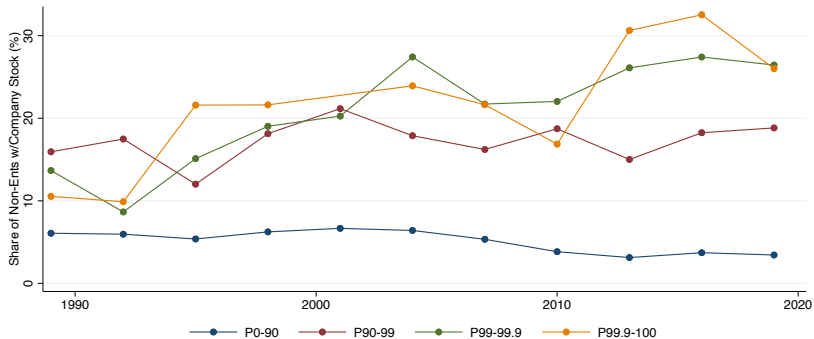
4. Company stock remains a favorite asset class



Source: SCF (2019)

#2. PAID IN PROMISES

4. Company stock remains a favorite asset class



Source: SCF (1989–2019)

#2. PAID IN PROMISES

5. Value of stock as currency increased since the 1980s



Source: Sarin Summers Zidar Zwick (Forthcoming)

#2. PAID IN PROMISES

1. 83(b) election allows NSO recipients to reduce W2 amount
2. Firms adopt plans that permit range of NSO, ISO, RSU
3. Options especially popular among high-growth pvt companies
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#2. PAID IN PROMISES

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Question: How true is this?

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Overall: Many reasons to believe the basic premise

- ▶ 30-40% missing from current measures may be conservative
- ▶ Focus on reserved shares smartly avoids accounting issues

#3. A TOP-DOWN APPROACH

Goal: Test the $1/3$ result with aggregate data from 2017

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Scenario	Raw BEA	SYZZ-Adjusted
Corporate GVA (\$B)	11,090	12,161
Employee Comp (\$B)	6,420	7,235
Corporate Profits in GVA (\$B)	1,650	1,650
Labor Share	57.9%	59.5%
Target Labor Share	62.9%	62.9%
"Missing" Labor Comp (\$B)	556	414
Labor Share of Profits for 100% of Missing	33.7%	25.1%
Labor Share of Profits for 1/3 of Missing	11.2%	8.4%

#3. A TOP-DOWN APPROACH

Goal: Test the $1/3$ result with aggregate data from 2017

Assumption: Labor owns 10% of corporate sector equity (EFX)

- ▶ \$165B of corporate profits to labor

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Versus:

1. Total W2 income for those with $> 100K$ wages (\$2.7T): 9.6%
2. Total W2 income for those with $> 200K$ wages (\$1.3T): 20.2%

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3. Per top 10% of Compustat employees (4.2M): \$40K

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4. Total fiscal dividend and cap gains income (\$868B): 19%

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3. Per top 10% of Compustat employees (4.2M): \$40K
4. Total fiscal dividend and cap gains income (\$868B): 19%
5. Total wage income of top 10% (\$3.2T): 5%
6. Ditto if Compustat are 1/3: 15%

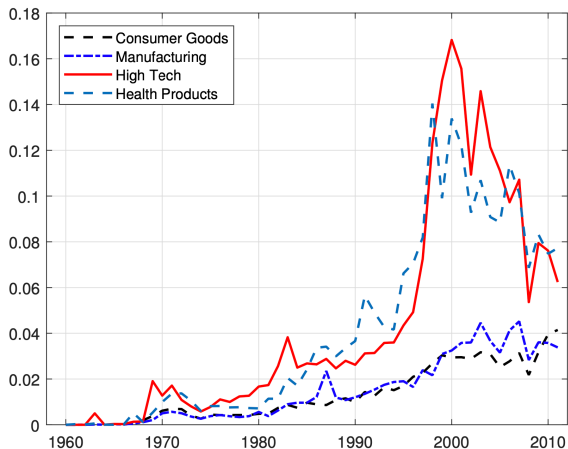
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Goal: Test the $1/3$ result with aggregate data from 2017

Takeaway: Aggregate magnitudes totally plausible

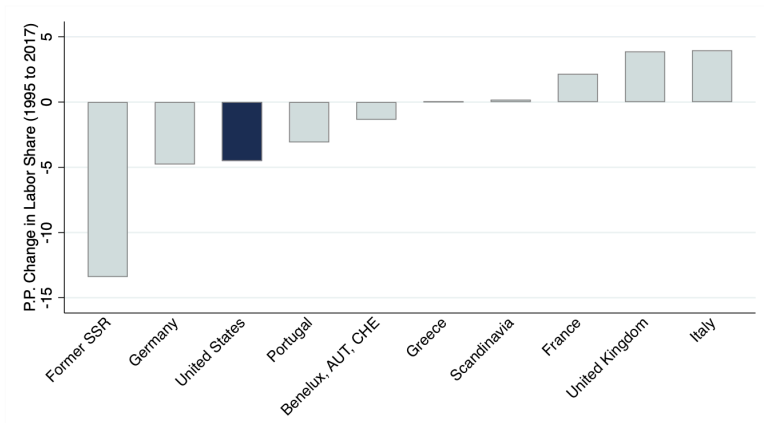
#4. HUMAN CAPITALIST STORY HELPS ON MANY FRONTS

1. LS decline concentrated in the 2000s



#4. HUMAN CAPITALIST STORY HELPS ON MANY FRONTS

2. U.S. LS trend is sharper than most countries



Source: SYZZ (2021)

#4. HUMAN CAPITALIST STORY HELPS ON MANY FRONTS

3. Key role for superstar firms

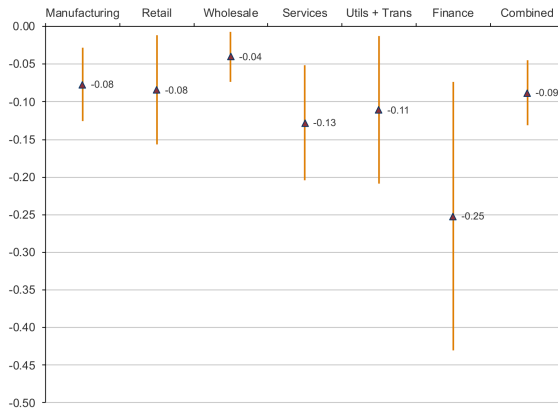


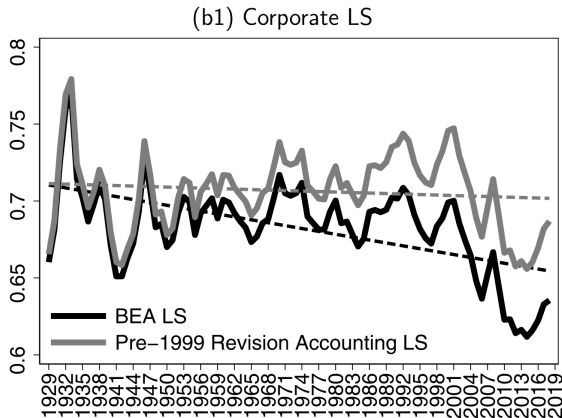
FIGURE VI

The Relationship between the Change in Labor Share and the Change in Concentration across Six Sectors

Source: Autor Dorn Katz Patterson Van Reenen (2019)

#4. HUMAN CAPITALIST STORY HELPS ON MANY FRONTS

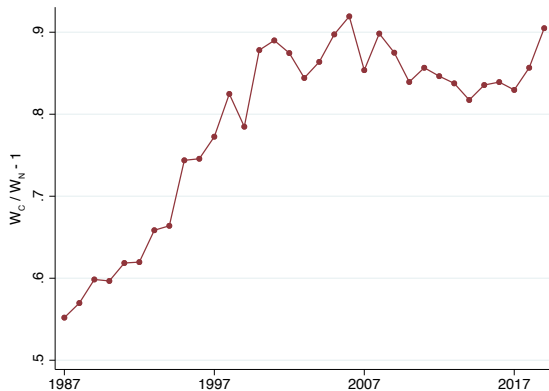
4. Rising importance of intangibles



Source: Koh Santaaulàlia-Llopis Zheng (2020)

#4. HUMAN CAPITALIST STORY HELPS ON MANY FRONTS

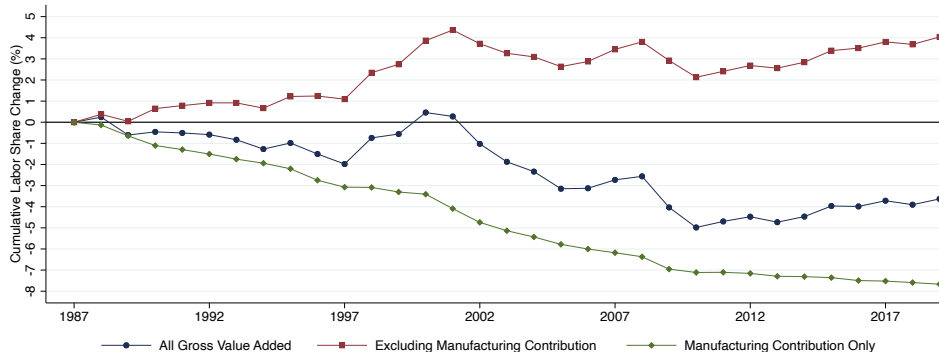
5. College premium flattened in the late 90s



Source: Finkelstein McQuillan Zidar Zwick (In Preparation)

#4. HUMAN CAPITALIST STORY HELPS ON MANY FRONTS

6. Manufacturing drives the LS decline



Source: SYZZ (2021)

#4. HUMAN CAPITALIST STORY HELPS ON MANY FRONTS

6. Manufacturing drives the LS decline

Pierce Schott (2016)

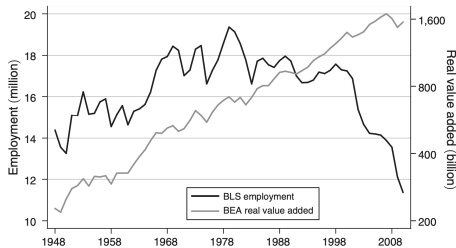
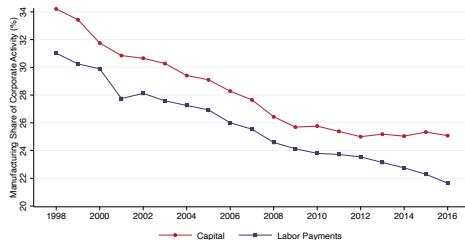


FIGURE 3. US MANUFACTURING EMPLOYMENT VERSUS VALUE ADDED

Note: Figure compares annual manufacturing employment as of March according to the US Bureau of Labor Statistics (1948–2010, series CEU3000000001) to real value added as measured by the Bureau of Economic Analysis (1948–2010).

Data from SYZZ (2021)



Although: No human capitalists at shuttered plants

#4. HUMAN CAPITALIST STORY HELPS ON MANY FRONTS

1. LS decline concentrated in the 2000s
2. U.S. LS trend is sharper than most countries
3. Key role for superstar firms
4. Rising importance of intangibles
5. College premium flattened in the late 90s
6. Manufacturing drives the LS decline

Unresolved: Quantitative reckoning for fall in mfg employment/investment

IMPORTANT PAPER!

Bottom Line: Major contribution with ample room for follow-on work

Avenues for Future Work:

1. Better data on stock compensation
2. Explore the implications for other big questions
3. Room to learn more about manufacturing decline