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# Overview

- **Contribution**

- Including equity-based compensation in high-skilled labor income **reduces total decline in labor's wage-only income share relative to total value added since the 1980s by over 30%.**
- Inclusion of equity-based compensation eliminates majority of the decline in the high-skilled labor share.
- Argue the return to high-skilled labor can resolve the otherwise puzzling lack of evidence of complementarity between high-skilled labor and new-economy physical capital.

- Paper closest to Krusell et al. (2000) (and reaffirms findings)

# The goal

- Total income for high-skill workers = wages + stock option grants.

# Dataset

- Look at public and private firms in **only** manufacturing (SIC codes 2001-3999)
- Why the manufacturing sector? decline in the labor share occurred predominantly in the manufacturing sector.
- Merges
  - NBER-CES manufacturing industry dataset. Get wages from here. (1960-2011)
  - Compustat. Provides reserved shares (1960-1995)
  - RiskMetrics. Provides reserved shares (1996-2005)
  - Hand picked data from public SEC filings between 2006-2019
- **Reserved Shares:** measure of equity-based compensation firm-level data on shares reserved for employee compensation from public-firm SEC filings. 10-K statements filed with SEC.

# Wage Income -- NBER-CES

- provides a “clean” measure of wages.
- Establishments both private and public.
- 1958-2011
- Provides data for output, employment, payroll, investment goods prices, and value added.

# Equity-Based Compensation

- Compustat (1960-1995). Public firms reporting of shares reserved for employee compensation used to construct series of new equity grants.
- RiskMetrics (1996). Covers firms from the S&P 500, S&P midcap, and S&P smallcap indexes. From sample period....
  - New grants of employee stock options are about 8% relative to value added
  - 78% of grants go to employees who are not the c-suite executives. Compare to Execucomp and find same number (in recent years).
- SEC Filings. Hand-collected the reserved shares data for the industries covered in the NBER-CES dataset from firms' 10-K filings.

# Proposed Equity-Based Compensation Measure

- $NG = RS/gp$
- $RS$  is reserved share.  $gp$  is average granting period.
- Use RiskMetric subsample (1996-2005) to estimate weighted average granting period ( $gp$ ).
- Construct a measure of new grants to value added using the aggregate Black and Scholes value of newly granted stock options (BS) from Risk Metrics for the period 1996-2005. both measures are highly correlated over that time.

# Recap

- Merged dataset 5000+ firms, represents 40% of value of sales in public-firm universe.
- Most of the results are presented as ratio to value added. Value added comes from NBER-CES so it includes private firms. They adjust for this.