Monopsony Power in the Labor Market

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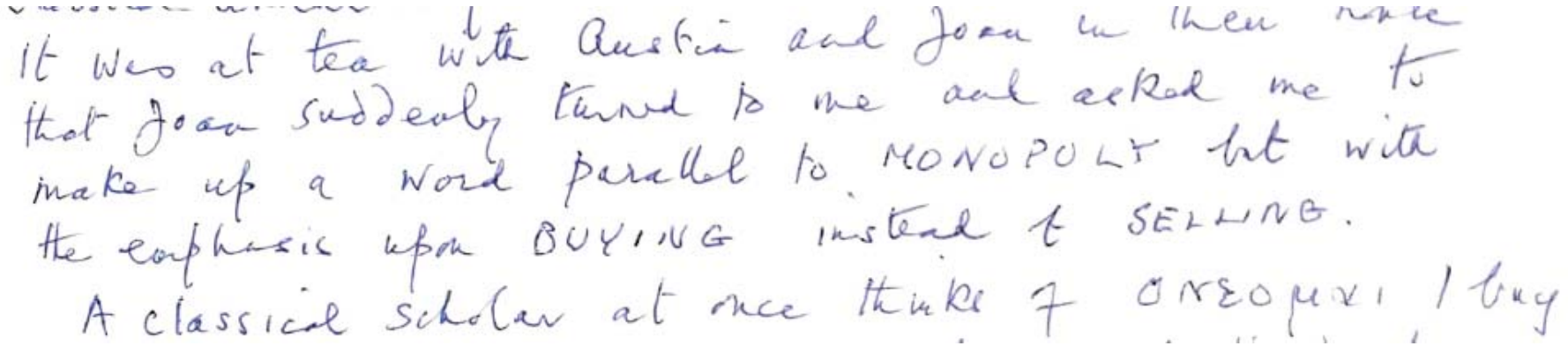
The beginnings…

- **Robinson (1933)** developed the theory of monopsony (and recruited B.L. Hallward to devise an appropriate word for market power among buyers)


It was at tea with Austin and Joan in their house
that Joan suddenly turned to me and asked me to
make up a word parallel to MONOPOLY but with
the emphasis upon BUYING instead of SELLING.
A classical scholar at once thinks of ὀψωνέω I buy

"It was at tea with Austin and Joan in their house that Joan suddenly turned to me and asked me to make up a word parallel to MONOPOLY but with the emphasis on BUYING…."

The beginnings…

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- among labor economists there was an initially positive reception (e.g., Reynolds, AER, 1946):

(upward-sloping supply) "… has made its way rapidly into the textbooks and seems well on its way to being generally accepted as a substitute for the horizontal supply curve of earlier days."

- But by the 1960's: monopsony had been relegated

The dark ages....

For example, in his 2004 review of Manning's book, Peter Kuhn wrote:

[U]pward-sloping labor supply curves—whether induced by search or other factors—seem unlikely to me to be a serious constraint for most firms.

And, according to Wikipedia (May 27, 2025):

Empirical evidence of monopsony power has been relatively limited. In line with the considerations discussed above, but perhaps counter to common intuition, ***there is no observable monopsony power in low-skilled labour markets in the US.***

A renaissance?

Since 2010 or so, there appears to be a revival of interest in monopsony

Counts of NBER WP's from Labor Studies Program with "monopsony" in title, abstract, or keywords

1990-1999: 1.5 per year

2000-2009: 3.8 per year

2010-2019: 8.6 per year 2020+: 24 per year

Monopsony is even beating robots in #LS papers

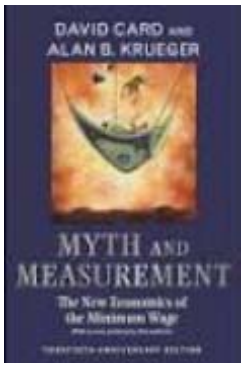
What led to the renaissance?

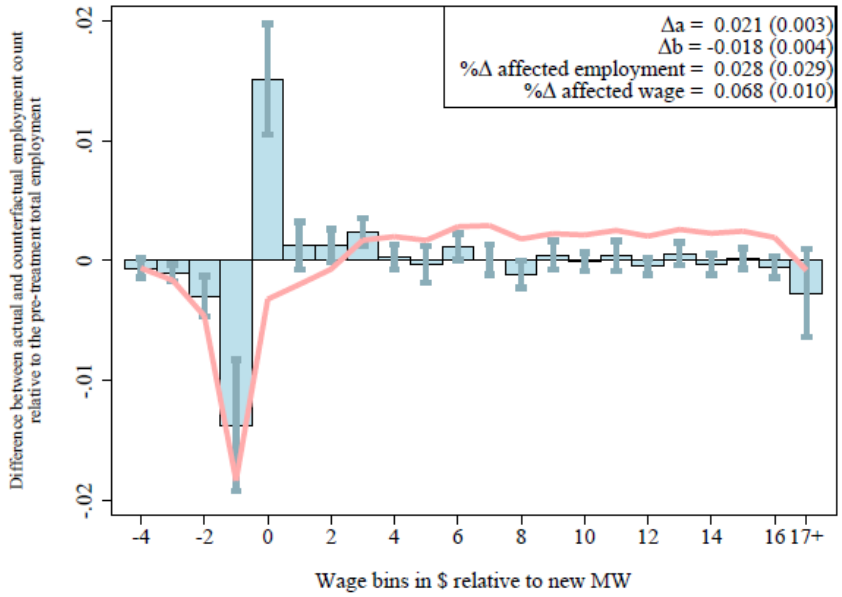
1) Evidence on minimum wages

a) CK's Myth&Measurement (largely dismissed at the time)
"*The authors challenge economic notions that make logical sense with new evidence: but they never offer a convincing theoretical explanation*" (Hamermesh)

b) extensions of the "border design" to much bigger samples Dube, Lester, Reich, 2010, 2016

c) extended DD studies Cenzig et al 2019





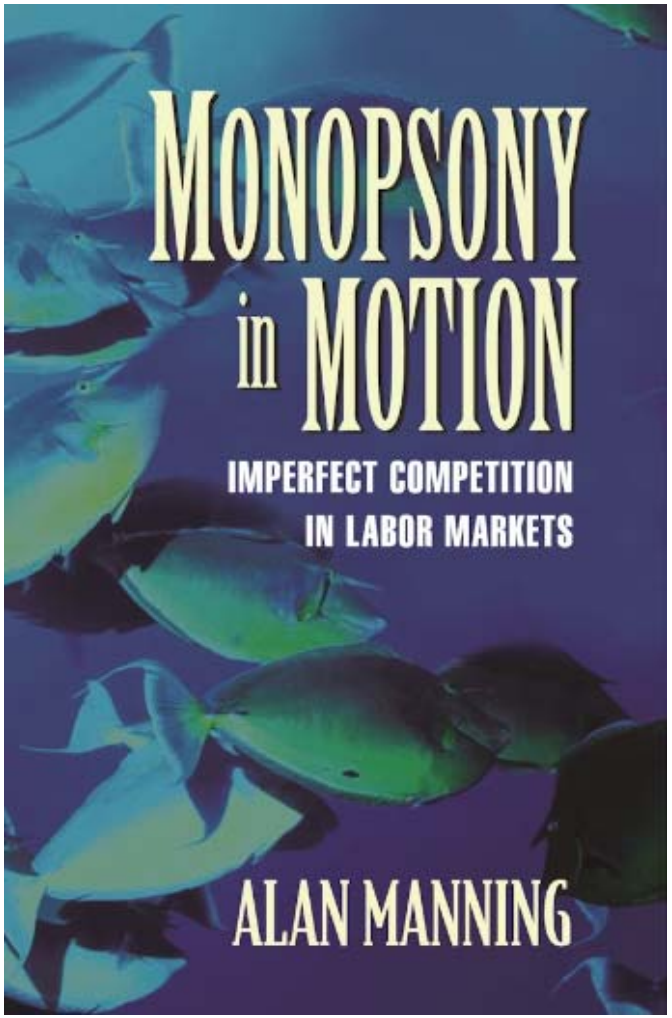
What led to the renaissance?

2) Monopsony in Motion

– introduces dynamic monopsony model based on Burdett-Mortensen (BM) to the masses

– clarifies concepts of 'job ladder' and the elasticity of supply in a dynamic model (very confusing to the previous gen.)

– shows how monopsony perspective can inform many policy issues (gender gaps, returns to exp., effects of job loss, employer size premium…)



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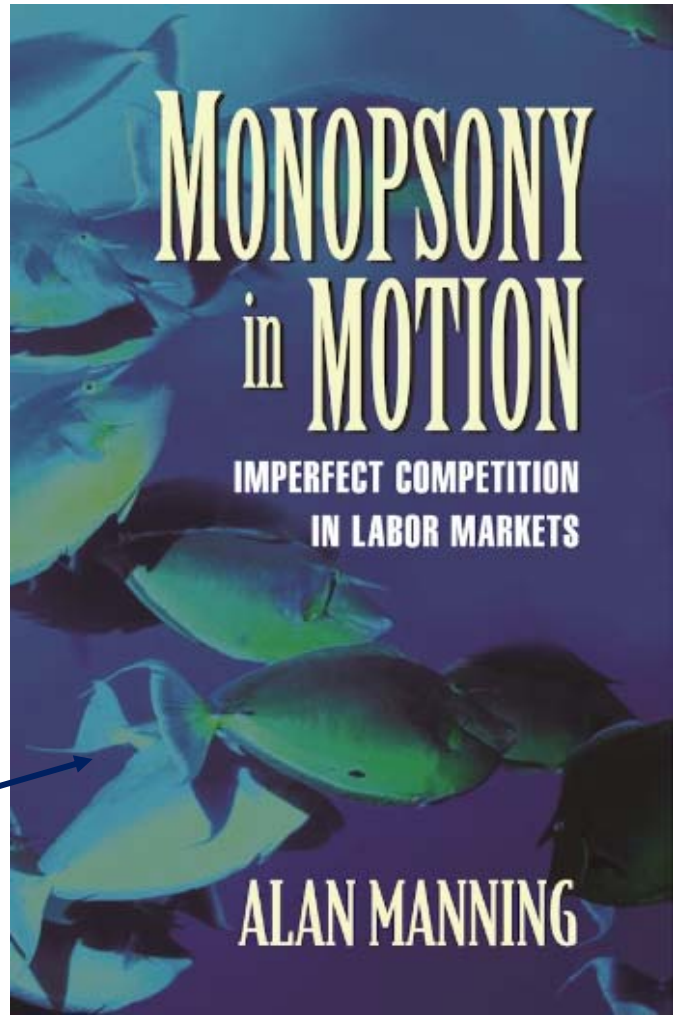

fish

Other factors in the renaissance

1) Empirical evidence on responses to minimum wage
2) Monopsony in motion
3) differentiated workplace models (monopsonistic competition -- Bhasker&To, 1999; CCHK, 2018…)

   - BM assumes very imperfect info about jobs

   - BUT: Caldwell et al (2025) find that workers know a lot about pay premiums at different firms

   - Monopsonistic comp. models assume workers know wages at different firms but are happy with their choice

   - highly tractable → lots of recent studies

   - Kline (2025, Handbook) has detailed summary

Aside: Where was monopsony in the 1st generation of modern labor research?

- modern labor economics starts with 1960 Census (Hanoch, 1966) SEO (Ashenfelter, 1972), SCF (Stafford, 1968); then CPS, PSID, NLS
- very little attention to employer wage setting. Why?
  - no firm information – so Hicks (1932) is perfect!
  - influence of "Chicago school" (Stigler, HG Lewis…)

exceptions: unions, quits/turnover

1. In 1st gen labor, many studies of "union sector" (often without individual firms (Riddell, 1979; Card, 1990)…

1st gen. labor research (2)

- union bargains with firm over wages, with some concern over employment (de Menil, 1971; Svejnar, 1986)
- eg. Union maximizes $u(w, L) = (w - a)^{\alpha} L^{\beta}$
- implicitly: ∞ elasticity, can be generalized (Card, 1986)
- firm then sets employment (some attempts to allow efficient bargaining where wage is not allocative, but ….)

<u>Implications</u>:

- wage depends on firm profitability and a
- $w > a \Rightarrow$ employment is inefficiently low
- many (still) believe the #1 problem in labor markets is that ***wages are too high*** (blame Keynes?)

1st gen. labor research(3)

2. Quits and turnover

- Parsons (1970), Pencavel (1970) model optimal wage setting by employers with quit rate q(w): dynamic monopsony!
- Jovanovich (1979). Optimal contract when match component is learned over time. Creates a **worker-specific job ladder** climbed by experimentation. Later jobs pay more and last longer – same idea in P-VR sequential auction
- idiosyncratic match surplus drives sorting/matching. In DMP and many variants wages are determined after match is formed → non-allocative
- CHK event studies and estimation show very small match effects and "common" job ladder (as in BM)

Other factors in the renaissance

1) Empirical evidence on responses to minimum wage

2) Monopsony in Motion

3) differentiated workplace models

4) NEW DATA!

- administrative data sources linking workers to firms; AKM model and recognition of firm component in wages

New evidence on firms' market power

5+ new bodies of evidence

1. wage elasticities of quits and recruiting
2. pass-through of productivity shocks to wages
3. production function (Hall/De Loecker) approach
4. wage effects of concentrated employment
5. conspiracies and legal restraints on mobility

1. *Quits, recruiting and application elasticities*

- connection between quit/recruiting elasticities and elasticity of labor supply unclear until BM/Manning
- Benchmark $\varepsilon_S = \varepsilon_R - \varepsilon_Q$ Simple version $\varepsilon_R = |\varepsilon_Q| \rightarrow \varepsilon_S = -2\,\varepsilon_Q$

new evidence...

1. Quits, recruiting and application elasticities (con't)

- Dal Bo, Finan, Rossi (2013): RCT of posted/offered wages
  - find $\varepsilon_R \approx 2.1$ ➔ $\varepsilon \approx 4.2$ under Manning rule of thumb
- Azur, Berry, Marinescu (2019): application rates to jobs (nested logit)
- many studies of quit elasticities
  e.g. Bassier, Dube and Naidu (2022)
- Sokolova and Sorensen (2021) meta analysis:
  ε_s in the range of 4-6* (mostly based on $\varepsilon_S = -2\,\varepsilon_Q$)

*footnote: CK 1995: $\varepsilon_s \approx 5$ based on few studies

new evidence…

2. *Relationship Between Wages and Firm Productivity*

- Card et al (CCHK): monopsonistic competition based on logit pref's. Calibration shows ε_S of 5-10 can rationalize rent sharing estimates in literature
- Lamadon et al (2022): pass-through of firm and market VA shocks with nested logit supply (monopsonistic comp) - broadly consistent w/ Sokolova and Sorensen
- Berger, Herkenhoff, and Mongey (2021): firm reactions to state-specific tax changes, with strategic interactions (based on model of Atkeson and Burstein, 2008): markdown of wages relative to marginal revenue products is around 25%

new evidence…

3. Hall/De Loecker approach

Production function:

$$\log Q = \theta_{QL} \log L + \theta_{QM} \log M + \theta_{QK} \log K + \nu$$

+ assumptions

- *labor (L) and other inputs (M) freely variable within period*
- *M purchased at exogenous price*
- *labor supply elasticity* ε_S
- *output sold with demand elasticity* ε_D
- *cost shares of L,M are* α_L, α_M

Then: price/MC markup $= \frac{\theta_{QM}}{\alpha_{QM}} = \frac{\varepsilon_D}{\varepsilon_D - 1}$

MFC/W markdown $= \frac{\theta_{QL}}{\theta_{QM}} \times \frac{\alpha_M}{\alpha_L} = \frac{1+\varepsilon_S}{\varepsilon_S}$

new evidence…

3. Hall/De Loecker approach (con't)

Yeh, Macaluso, Hershbein (2022)

- plant level markdowns for US mfg: median = 1.36 (ε_S=2.5)

Delabastita and Rubens (2023)

- mine-level data for Belgian coal mines

1880-1990 ≈ 1.8, 1900-1915 ≈ 2.1

(interpret rise as a result of cartel of mining co's; with cartel, mapping of markdown to firm-specific labor supply is complicated!)

new evidence…

3. Hall/De Loecker approach (con't)

Problems: a lot of applications (including Yeh et al., 2023) don't observe output (Q) and instead observe revenue (R). But for a monopolistic firm with output elasticity ε_D

$$\theta_{RM} \equiv \frac{\partial log R}{\partial log M} = \frac{\varepsilon_D - 1}{\varepsilon_D}\theta_{QM}$$

(from the formula for MR) which implies that

$$\frac{\theta_{RM}}{\alpha_M} = \frac{\varepsilon_D - 1}{\varepsilon_D}\frac{\theta_{QM}}{\alpha_M} = 1.$$

$\Rightarrow$ we can't infer p/MC markdown from $\frac{\theta_{RM}}{\alpha_M}$ (Bond et al, 2021)

Also: how credible are estimates of θ_{Qj} or θ_{Rj} ?

new evidence…

3. Hall/De Loecker approach (con't)

Another problem: markdowns across industries are positively correlated with industry wage premiums (wrong sign)

- industry wage premiums from Card, Rothstein, Yi (2023)
- markdowns from Yeh et al for 3-digit mfg only

new evidence…

4. The Number of Competitors for Labor Services

- old ‘structure conduct performance’ lit. looked at #competitors or HHI
- well known problems with this approach (Berry et al, 2019) (e.g., in BM search model there is a continuum of firms, yet each has market power)
- Nevertheless, in legal cases, the claim that there are ‘many potential employers’ is widely used to discredit monopsony
- <u>New fact</u>: the number of potential employers for many occupations in many local markets is small. e.g., Azar et al., (2020) analysis of vacancies (occupation x CZ): typical HHI is 4300 (equivalent to 2.3 equal-sized recruiting firms)

new evidence….

4. Number of Competitors (continued)

Average wages and HHI:

- Azar et al (2022): posted wages and HHI's (occupation x CZ). instrument HHI with HHI in other markets → negative effect
- Rinz (2022): average wages (admin tax data) and HHI (ind x CZ). Similar IV strategy
- recent studies: manipulations of HHI due to M/A activity:
  - Arnold (2020). event study of M/A
  - Benmelech et al (2022). IV
  - Prager and Schmidt (2021). Hospital consolidations that raise HHI in CZ lower wages of nurses and pharmacy techs

new evidence...

5. Conspiracies

Recent legal cases:

a) software and animation engineers in Silicon Valley. Ruling on class action by Judge Lucy Koh reveals names and details:

Lucasfilm sells what will become Pixar to Steve Jobs (mid-1980s). To avoid bidding wars, Lucasfilm and Pixar agree:

(1) not to "cold call" each other's employees;

(2) to notify the other company of applications

(3) all poaching offers will be final

Ultimately this agreement covers Microsoft, Google etc and lasts 20+ years!

new evidence…

5. Conspiracies (con't)

b) "no hire" agreement between the medical schools at Duke University and University of North Carolina (Seaman v. Duke). Reveals importance of 'local competition' even for Drs!

c) 'no poaching agreements' in franchise contracts (Ashenfelter&Krueger, 2022). Covers workers with no obvious trade secrets (e.g., McDonalds staff). NPA's made illegal in many states following AK paper.

Lafontaine et al (2023): find that after legislation and threats of legal action, wages rise by 5-6% at restaurant chains that formerly used NPA's relative to wages at chains that did not use NPA's

Agenda for the future

a. More work on models

- lesson from trade and IO: tractable models are critical
- currently: 2 approaches to monopsony: search models (BM) ('new monopsony') and idiosyncratic preferences ('new classical monopsony)

Search	Preferences
*Plus: dynamics and turnover (clearly important for competition); job ladder (Moscarini Postel Vinay, 2018), assortative matching (*Lindenlaub and Postel-Vinay, 2025) *Minus: people seem to know where the good jobs are*	*Plus: huge infrastructure in IO/trade to exploit (e.g., forms of competition); easier to build in models of collusion* *Minus: no job ladder. firms are always labor starved. People know about other jobs but just don't want them!*

Agenda for the future (2)

b. More causal studies

- exogenous variation in competitor wages (e.g., Staiger et al)
- exogenous firm-level shocks that pass through to wages / employment (e.g., Kroft et al, 2022, procurement auctions), possibly to wages at competitors (Caldwell Harmon)
- evidence on start/end of cartels and collusive agreements (e.g., Delabastita and Rubens, Lafontaine et al)
- how important is collusion? Scuderi and Roussille (2025) – not so important?