Structure and Practice in Modern Monopsony

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This talk

- Desiderata of a Marxian model of the labor market:
  - constant returns,
  - exploitation (in at least some sense!)
  - domination via involuntary unemployment (reserve army)
- Marx's own model can't coherently have those ingredients together.
- Perfect competition -> only exploitation is due to ownership of capital, no involuntary unemployment (Roemer)
- +incomplete contracts -> allows perfect competition with domination (Bowles and Gintis)
- The empirical failure of "law of one wage" and perfectly elastic labor supply.
- Pigouvian exploitation -> exploitation but only voluntary unemployment.
- A synthesis: labor discipline plus monopsony= exploitation + involuntary unemployment.
- Applications: What do Bosses Do, 2 faces of American Slavery
- Empirically distinguishing the 2 using matched worker-firm data.

Marx in a Marshallian Diagram
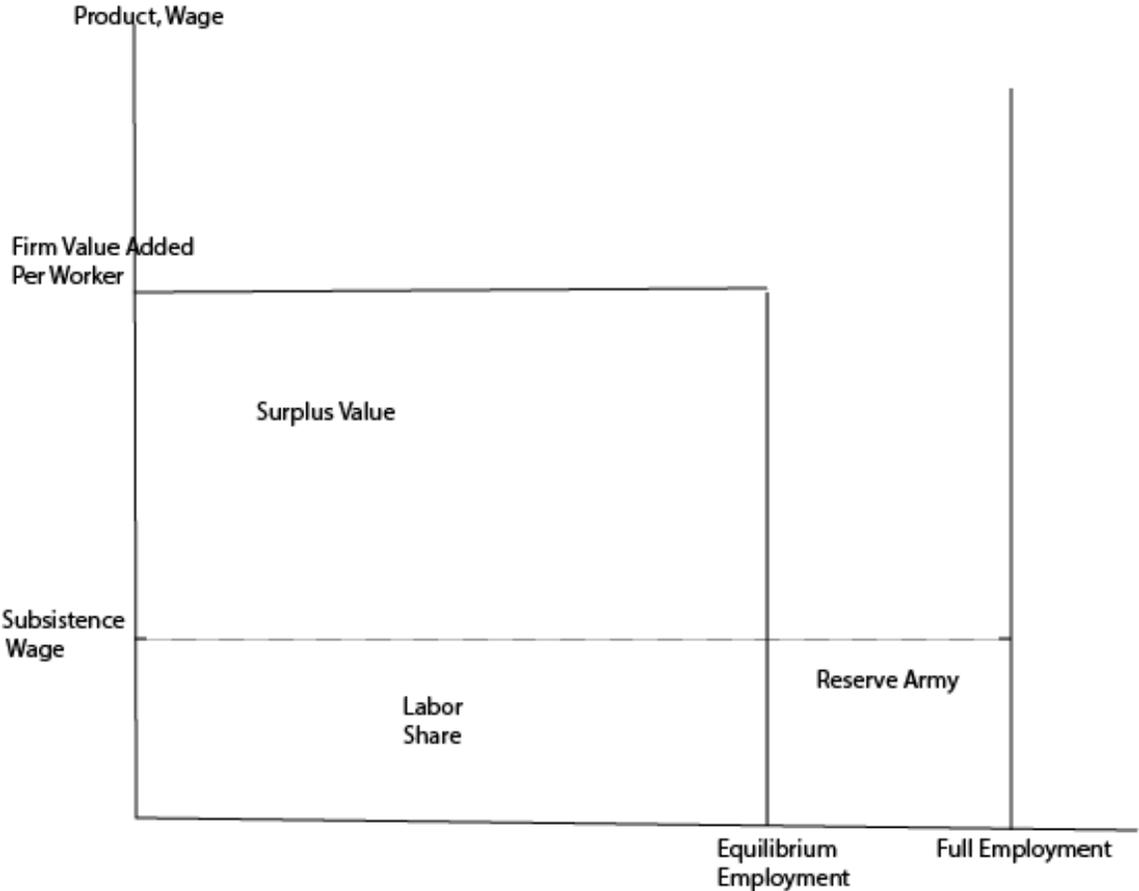
The Marxian model of the labor market

- As an analytical model: makes a pile of empirical predictions.
  - Absolute SV: Employers want more surplus value without reducing unemployment.
    - Go for intensive margins of hours, speedup, etc.
  - Relative SV: Increase output/worker, decrease cost of wage goods.
    - Depends on terms of trade with other sectors.
- As a normative criticism of capitalism:
  - Locates the labor transaction as a source of exploitation (p > b)
  - But also has the labor transaction as a source of domination (involuntary unemployment -> employer has credible threat to fire workers).
- But how is unemployment involuntary possible while profits are positive?
- Why don't firms bid the wage up to long-run marginal productivity?
  - If diminishing returns, what's the fixed factor? Inconsistent with perpetual capital accumulation (Samuelson 1962)

The Walrasian Labor Market
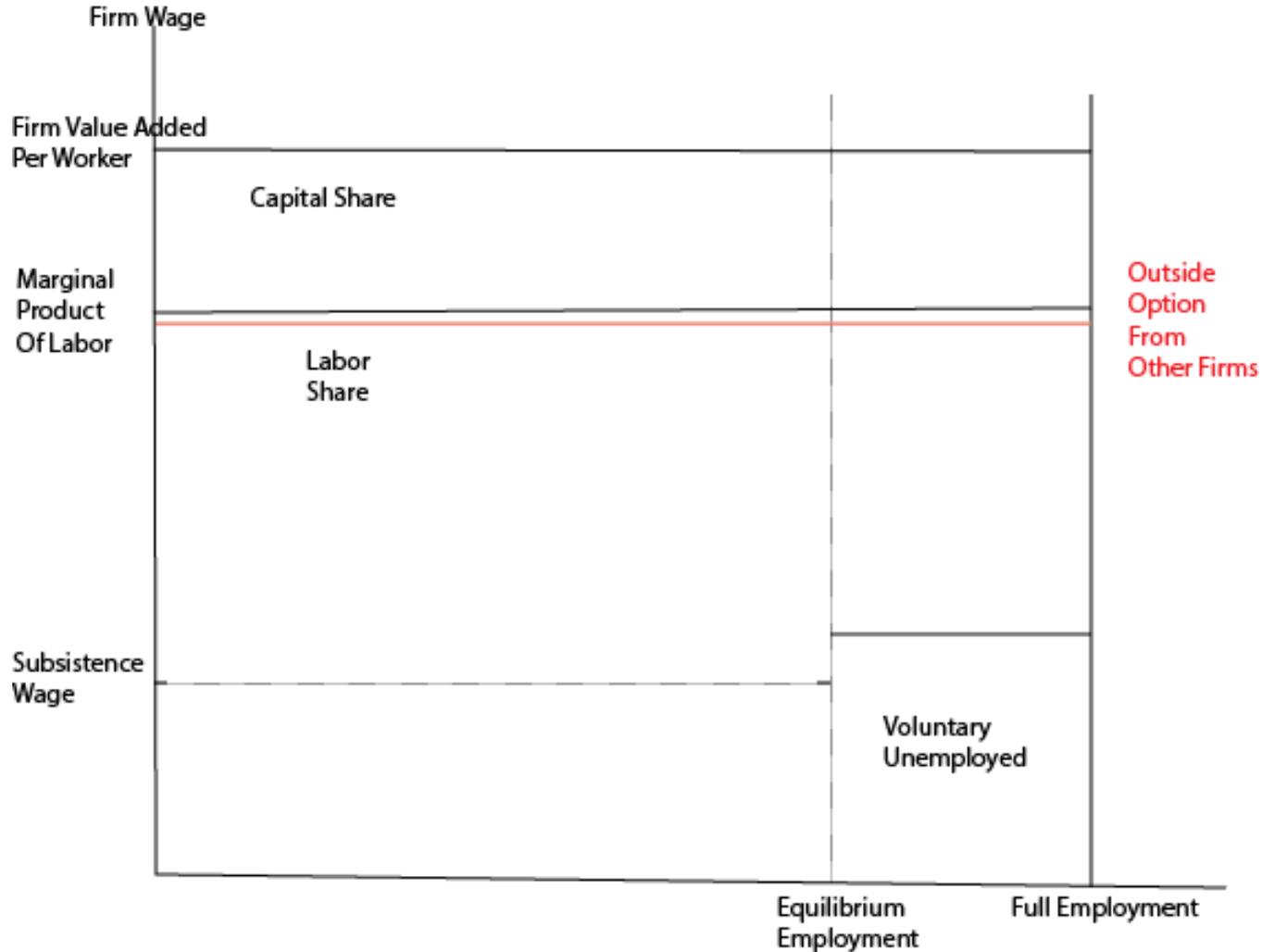
The Labor Discipline resolution (CRS version)
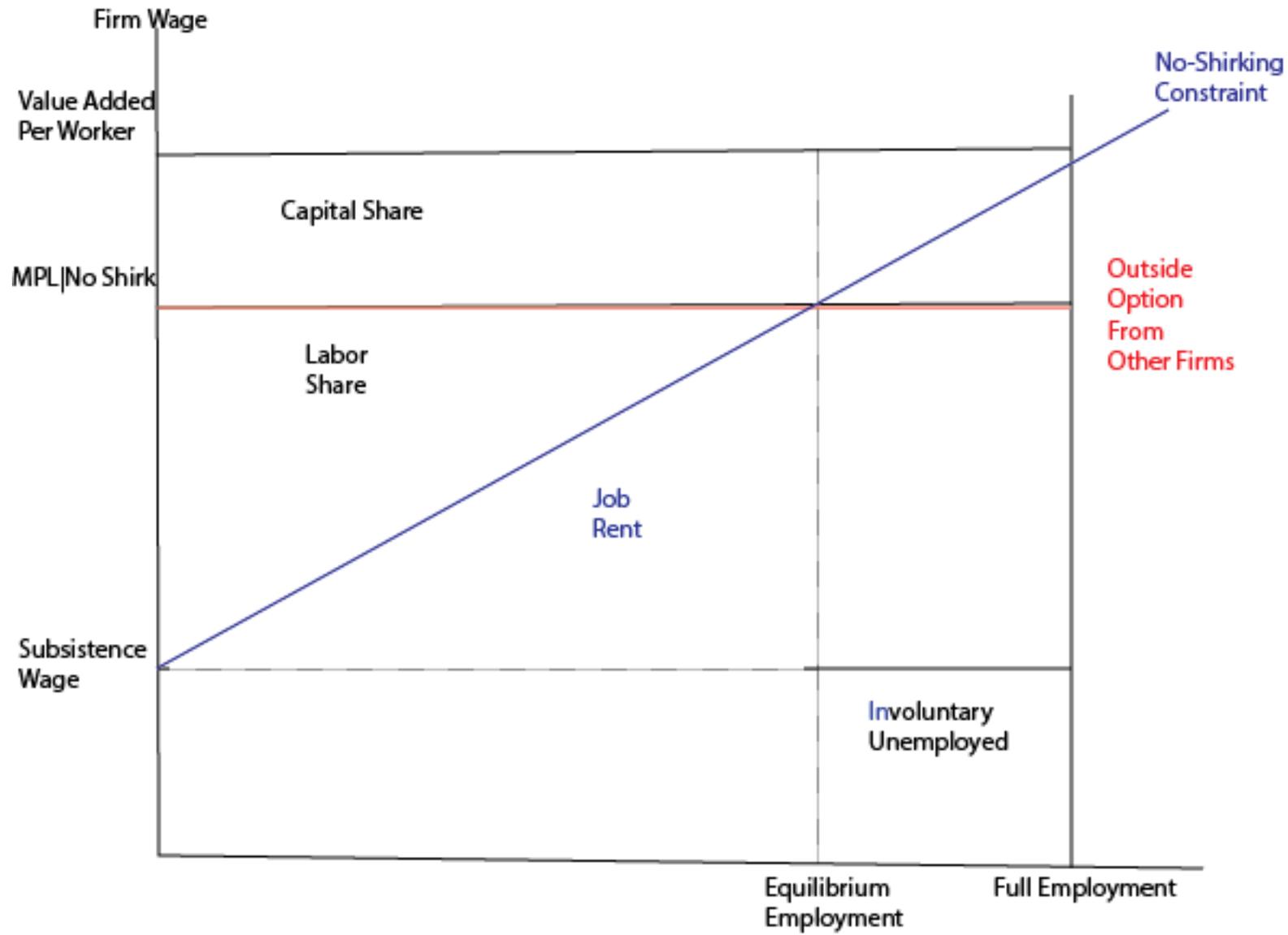
# The problems with the labor discipline resolution

- Only "Marxist" exploitation because product (inclusive of effort) = wage.
- "Thin thread?" structural injustice of capitalism reduced to allocation of authority inside workplace.
- Empirical: difficult to directly measure effort.
  - "Human Resources Heisenberg Principle": When can measure effort, often case employer can too -> piece rates.
    - Widespread use of bonus/piece rates makes firing a second-best motivation device.
  - Many early empirical papers on "efficiency wages" focused on turnover (Krueger and Summers 1986)
    - But this is in fact employment supply to the firm -> monopsony!
  - Evidence winds up being indirect:
    - Minimum wages increase check-out counter productivity (Coviello et al 2019)
    - Labor market slack increases productivity (Lazear and Shaw 2016)
    - But directly observe if labor discipline is the mechanism.

The absence of the firm in all of these models

- In all of these models, the "law of one price" holds in the labor market.
- Labor discipline model can have heterogeneous wages because of monitoring technology.
  - But direction is wrong: good monitoring firms pay low wages, and have higher employment.
  - Need Rebitzer and Taylor monitoring technology -> monopsony!
- Assumes markets are perfectly competitive: workers get marginal product (including whatever it takes to prevent shirking).
  - Nobody voluntarily quits a job.
  - Labor discipline model: if firm cuts wage, employee shirks, gets detected and is fired.

Firms have effects on worker wages.

Figure 1: **Changes in hourly wages and incidence of job separations for quartile-to-quartile transitions**

Legend: 1 to 1, 1 to 2, 1 to 3, 1 to 4, 4 to 1, 4 to 2, 4 to 3, 4 to 4
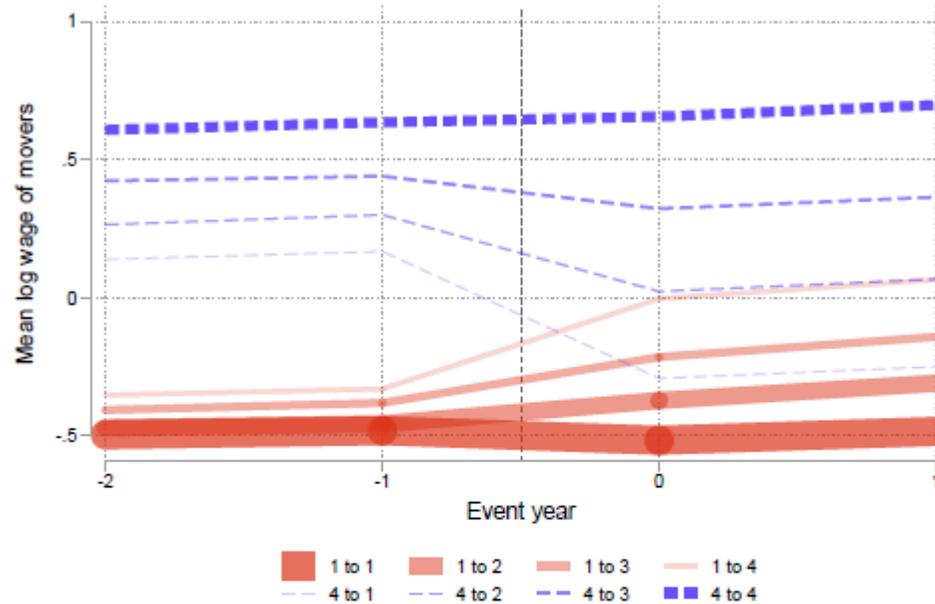
Note: The thickness of the lines is proportional to the number of job-to-job separations between the relevant quartiles over 1998-2017. The legend indicates origin quartile to destination quartile, where quartiles are defined along the firm distribution of average wage in each firm. The change in wage is shown for movers, who are defined as workers who make a job-to-job transition at any point over the period and are observed for at least 9 consecutive quarters before and after. The observation recording the separation and the following observation are omitted since these represent quarters that were partially worked, and are particularly susceptible to measurement error in wages. Event quarters are collapsed into years in sets of 4 around the separation quarter.

See same worker at different firms over time in administrative UI data from Oregon.

Worker goes from top 25% paying firms to bottom experiences roughly 40% wage cut.

Worker going from bottom 25% to top 25% paying firms experience same increase.

Law of one price doesn't hold in the labor market.

"Firm effects" explain roughly 15-20% of hourly wage variation.
Bassier, Dube, Naidu 2019 and see Card et al 2014

US low wage labor markets

- Dube, Giuliano, and Leonard (2019)
- Big US retailer changes wage raise pattern in response to minimum wage using a policy that has cutoffs that depend on initial wage.
- Lots of workers quit, but only those who didn't get raises while their peers did.
- Sensitivity of quits to own wage change pretty low (residual ls elasticity of around 4.6).
- Note that if labor market was super competitive would be pretty hard to have wage policies like this!

B. September 1, 1997

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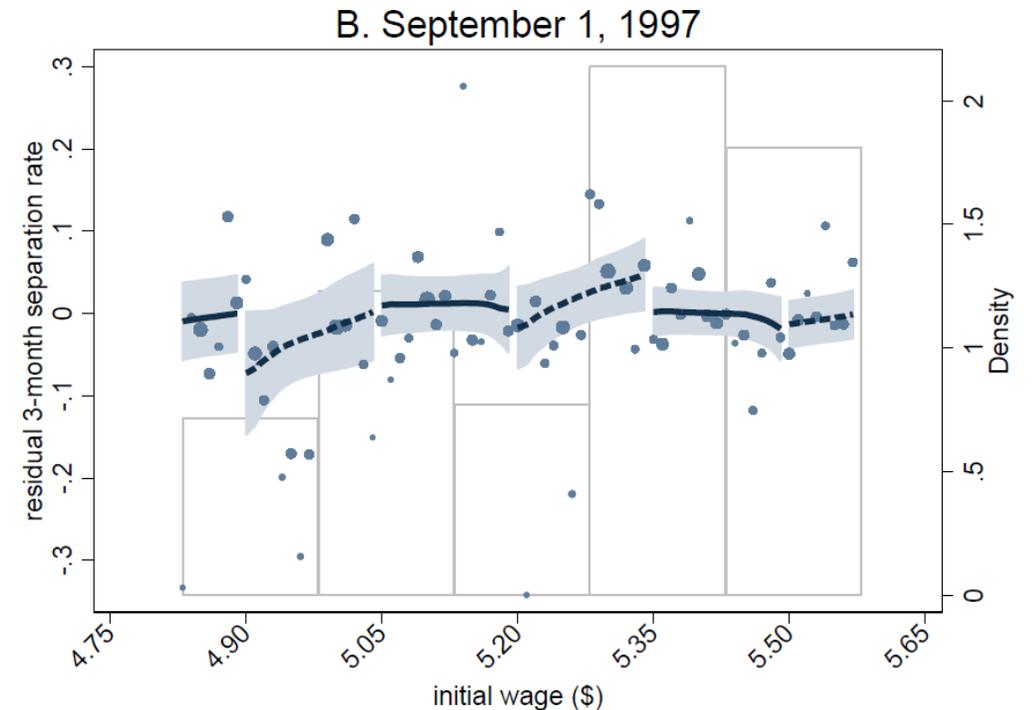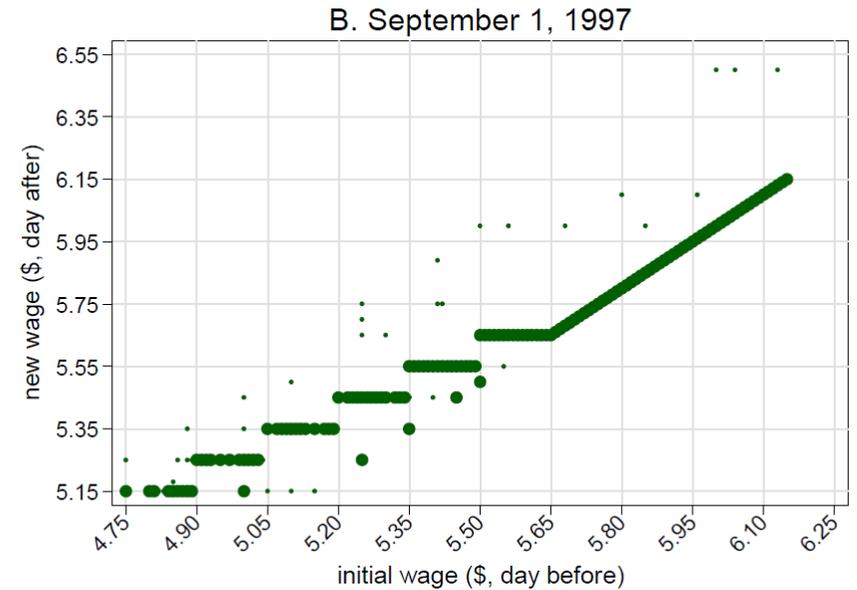
Pigouvian Exploitation
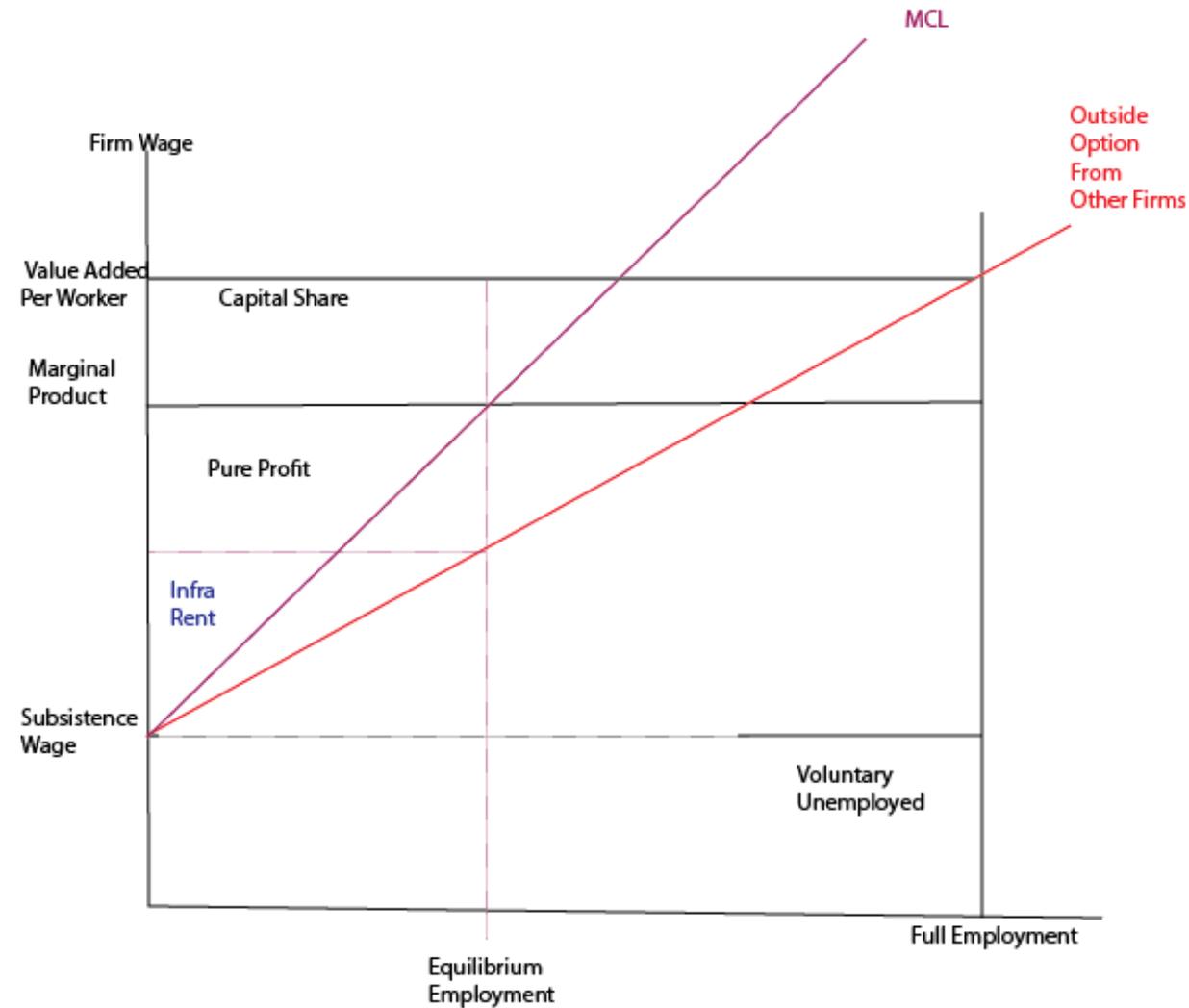
Sources of monopsony

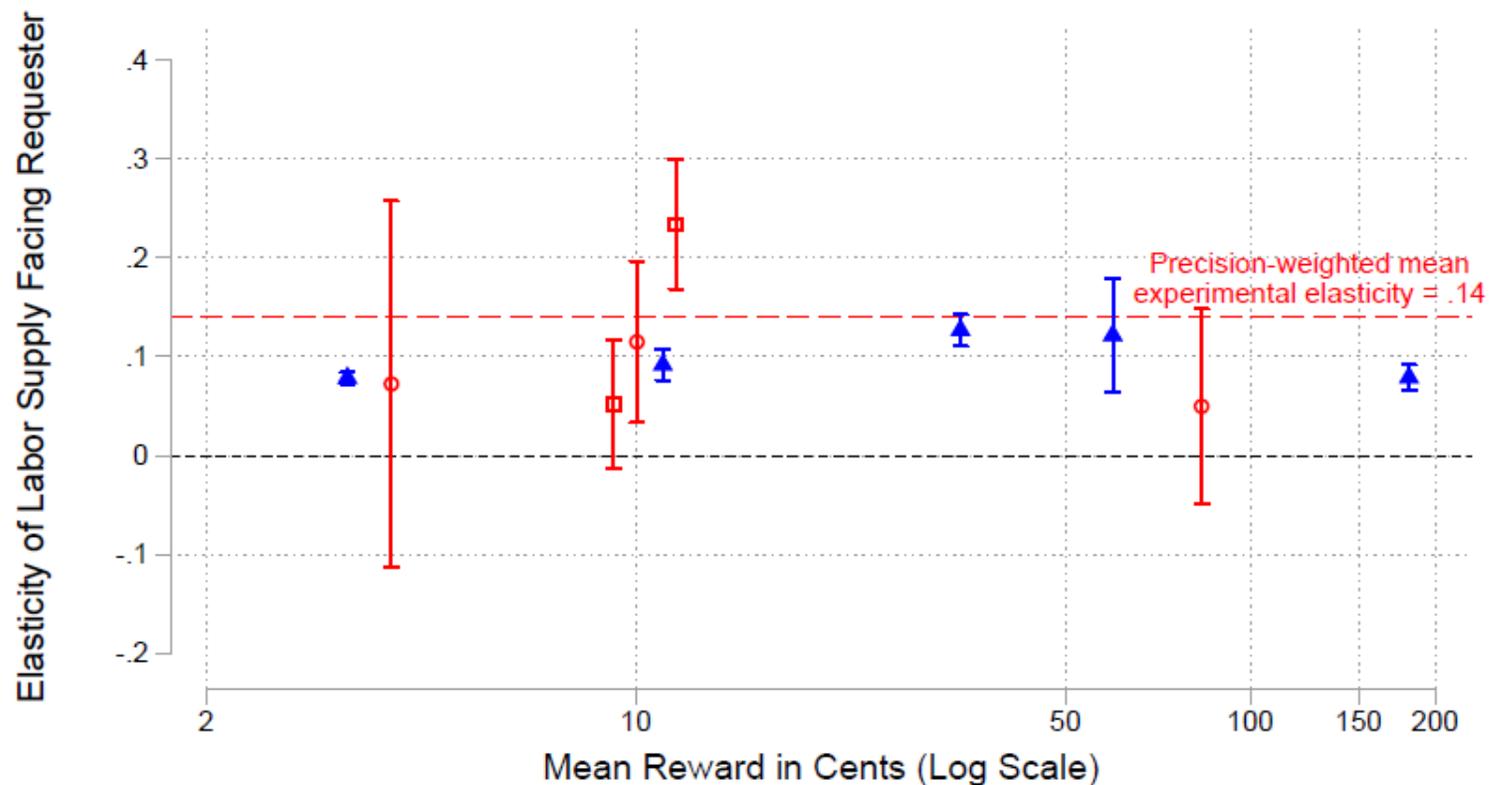- **Not just a single employer!**
- Monopsony is closer to the wage-turnover trade-off firms face.
- Generally used to mean firm has some wage-setting power.
- Combined with <u>diverse and difficult to measure</u> worker's outside options
- Search costs, concentrated employers are certainly important factors.
- But most interesting, I think, is the idiosyncratic valuation of a worker for a job.
  - Jobs high-dimensional and social: Relationships with co-workers and supervisors, commute times, tastes for particular tasks (Random utility models e.g. Mcfadden 1974)
  - Mental representation of job value likely very noisy (Woodford 2019)
  - Most people don't get that much experience with job shopping, while employers get much more experience with worker shopping.
- And employers know they can keep the ones who really want/need this job at well below their marginal product, even if they don't know who those workers are.

Monopsony Even in Thick Online Labor Markets

Figure: Elasticity of Labor Supply Facing Requester plotted against Mean Reward in Cents (Log Scale). Precision-weighted mean experimental elasticity = .14. Legend: ○ Recruitment (Experimental); □ Retention (Experimental); ▲ Recruitment (Double-ML, pooled MTurk samples) By Reward Quintile.

The problems with monopsony

- All unemployment still voluntary -> no reserve army.

- No employer wants to fire worker because p > w -> not credible threat of firing.

- Marginal product not a normatively interesting baseline.
  - In any case, if wage < MPL < APL, then exploitation of workers under capitalism should be a problem for JB Clark-ist normative frameworks as well as Marxists.

- But it is a long-run equilibrium?
  - In one sense no, but for most practical purposes yes.

A synthesis: the supply of effective labor facing the firm
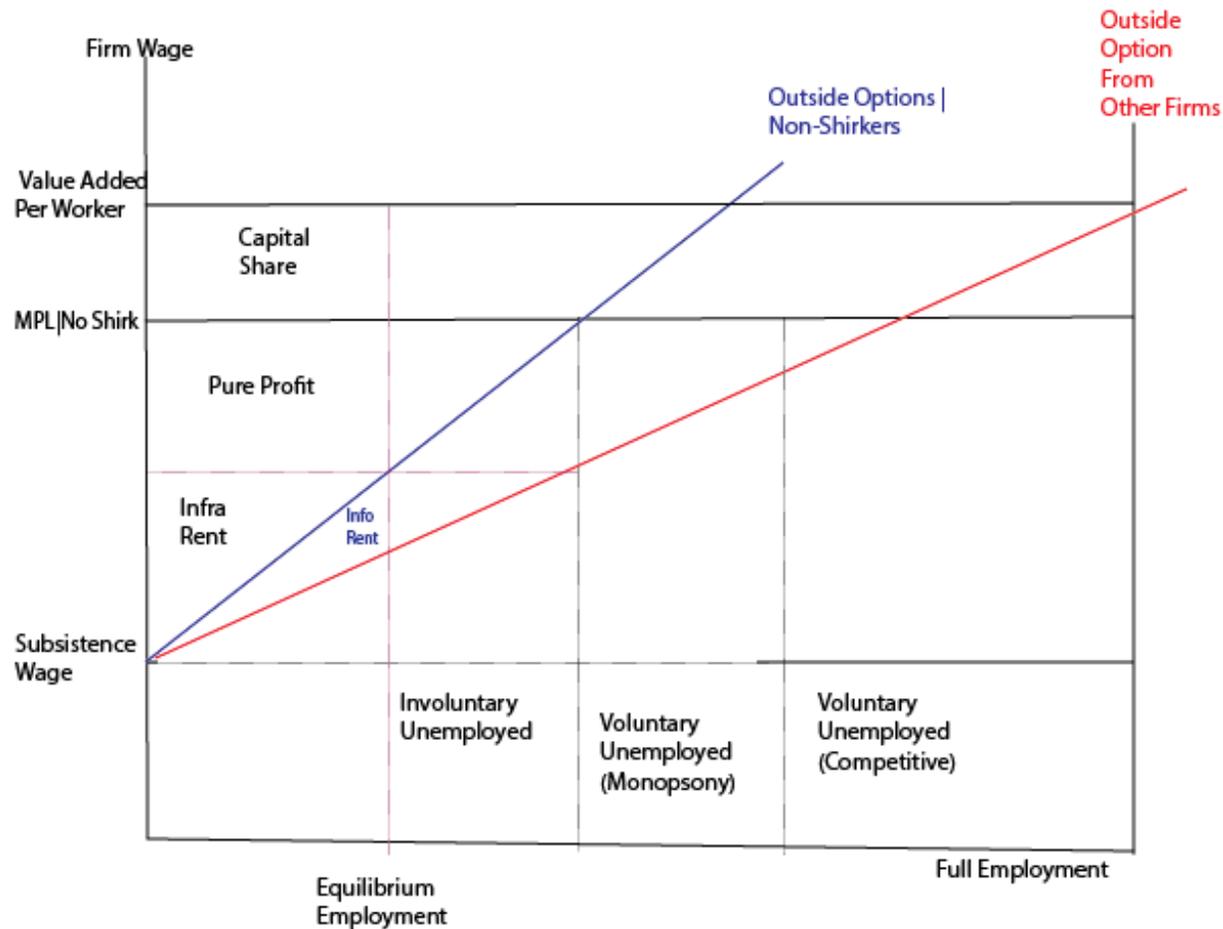
Replace residual labor supply curve with "labor supply conditional on not shirking"

Gets involuntary unemployment + exploitation with constant returns technology.

Firms don't use all the monopsony power they have because of effort constraint.

Structure and Practice Once Again.

- Wage=Cost of reproduction of labor-power
- Classical reading: subsistence wage.
- Subsistence wage neither necessary nor sufficient for reproduction of labor-power.
- Reproduction as <u>Worker Exerting Effort At A Firm</u>
  - (BG 1982) Exerting Effort. Value of labor power needs to include job rents to deter shirking.
  - But Also At A Firm. Value of labor-power needs to deter quits and attract new recruits.
    - Riff on the word "entretien" (1867 French edition of Capital).
  - Complementary: e.g. value of monitoring even higher because inframarginal profit off every additional employee.
  - Force that restrains market power not competition, but instead incentives (and selection).
  - Capital income includes pure monopsony profit, can't distinguish in nat'l accounts.

Application 1: What do bosses/platforms do.

- Marglin 1976: factory system not necessarily just an improvement in productivity, also a transfer from independent producers to factory owners.
  - Mechanism 1: lowered monitoring costs reduce job rents.
  - Mechanism 2: "vertical restraints" preventing producers from contracting with others.
    - Backed by Master and Servant law (Naidu and Yuchtman 2013) criminalizing breach of contract.
- Extremely relevant to understanding gig/platform economy.
  - Centralizing previously dispersed service sector jobs (nannies, delivery workers)
  - Monitoring facilitated by customer feedback.
  - Widespread use of non-competes
    - E.g. no direct contracting between worker and customer.

Application 2: The 2 Faces of American Slavery

- Slavery deploys state violence to solve both dimensions of conflict in the labor market.
- Thick, liquid markets in enslaved people -> no distortion of "price" in order to recruit and retain workers.
  - Fugitive slaves the analogue of quits -> low and short durations (Dittmar and Naidu 2016).
  - Fleisig (1976) perfectly elastic supply of slave labor to farm, monopsony in free labor.
    - ->big plantations run by talented entrepreneurs, low K/L ratios. Labor augmenting rather than labor saving technology (Slave shovels vs Mccormick reaper).
- Threat of flight deterred by slave patrols -> no limited liability constraint -> can use punishments to deter shirking.
  - Lower wage, but higher job rents (Acemoglu and Wolitzky 2010).
  - Paradoxes of labor scarcity: increase coercion when raise MPL, decrease coercion when raise outside option.

Empirically Unpacking the 2 ingredients.

- Imagine you randomized wages within a firm
- Labor discipline -> low wage workers start shirking, get detected and fired into unemployment.
- Monopsony -> low wage workers quit to other firms.
- Would love to run this experiment!
  - What can we do without the perfect data?
- Look across firms, isolate "firm wage policy" with AKM decomposition.
  - Write wage=firm +worker+year, take "firm" component, separate from worker and year.
- Regress: separations on firm wages as a rough test
  - Separations to Non-Employment (N-E) -> efficiency wages
  - Separations to Employment (E-E) -> monopsony.
  - Evidence for both, but bit stronger (as might be expected), for E-E separations.

Table 1: **Separations and recruits elasticities to own wage**

	Wage			Firm FE			Wage Components	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
All separations	-.321	-.244	-.529	-1.343	-1.36	-1.444	-1.051	-.39
	(.011)	(.004)	(.018)	(.069)	(.07)	(.089)	(.066)	(.016)
E-E separations	-.352	-.275	-.701	-1.727	-1.748	-1.769	-1.314	-.561
	(.011)	(.005)	(.027)	(.096)	(.098)	(.125)	(.09)	(.023)
N-E separations	-.298	-.202	-.498	-1.224	-1.241	-1.353	-.985	-.333
	.01	.004	.019	.066	.068	.085	.065	.017
E-E recruits	-.036	-.106	-.019	.057	.059	.113	.093	-.053
	(.017)	(.007)	(.009)	(.037)	(.037)	(.043)	(.035)	(.006)
Pct. EE-recruits	.466	.466	.466	.466	.466	.466	.466	.466
Labor supply ε	.71	.617	1.313	3.128	3.166	3.203	2.359	1.053
	(.023)	(.01)	(.042)	(.15)	(.153)	(.193)	(.141)	(.035)
Obs (millions)	15.9	15.9	108	107	107	73.4	107	107
Hourly wage		Y	Y	Y	Y	Y	Y	Y
Hazard spec.	Y	Y						
Firm FE			Y	Y	Y	Y	Y	
Non-firm wage res.								Y
F-stat					203813	1129	192906	
Split-Sample					Y		Y	
Lag						Y		

Note: The first stage F-stat is given for the row 1 regression. The unit of observation for the hazard specifications is an employment spell, and for the linear specifications is each job-quarter record. Column 1 outcome is quarterly wage. Column 6 uses the lag of the firm FE as an instrument, which excludes period 1 (1998-2002) observations. Columns 7 and 8 (spec. 7) give the elasticities from the firm FE and non-firm wage (hourly wage - firm FE) respectively, for a single regression. Firm fixed effects are censored at the 2.5 percent tails of the firm FE distribution. Jobs are restricted to private firms larger than 20. Standard errors are shown in parentheses.

Conclusion

- Combination of monopsony and labor discipline resolves many issues that plague each separately.

- Get a model that has both exploitation and domination (via involuntary unemployment) in the labor market equilibrium.

- Important to take markets as they are, not as models say they are.

- Supply of Effective Labor to Firm -> furnishes a rich theory of labor markets well suited to a data rich, low-cost experiment world.