Increasing Returns, Monopolistic Competition, and Optimal Unemployment

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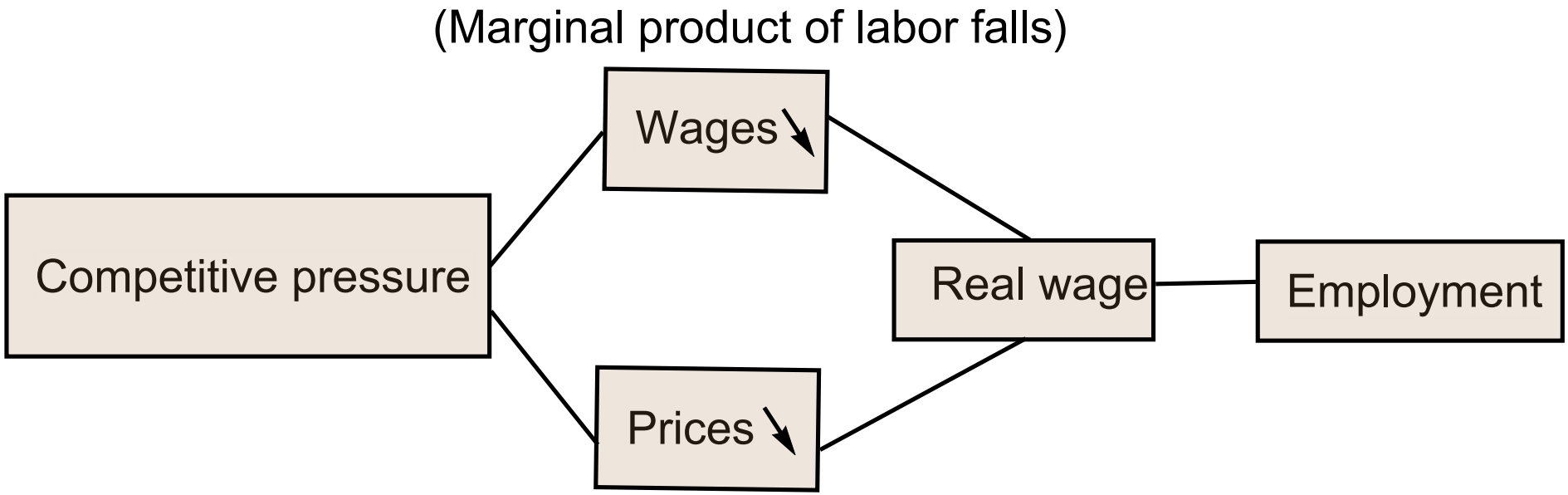
De Loecker, Eeckhout, Unger (2020, QJE) — a rise in market power from 21% in 1955 to 61% now.
→ lowers consumer well-being and decreases the demand for labour

- Product market isle:
  - the boom of VES models: allow for variable mark-up and pro-competitive effects
- Labour market isle:
  - search and matching frictions allow for an endogenous unemployment rate

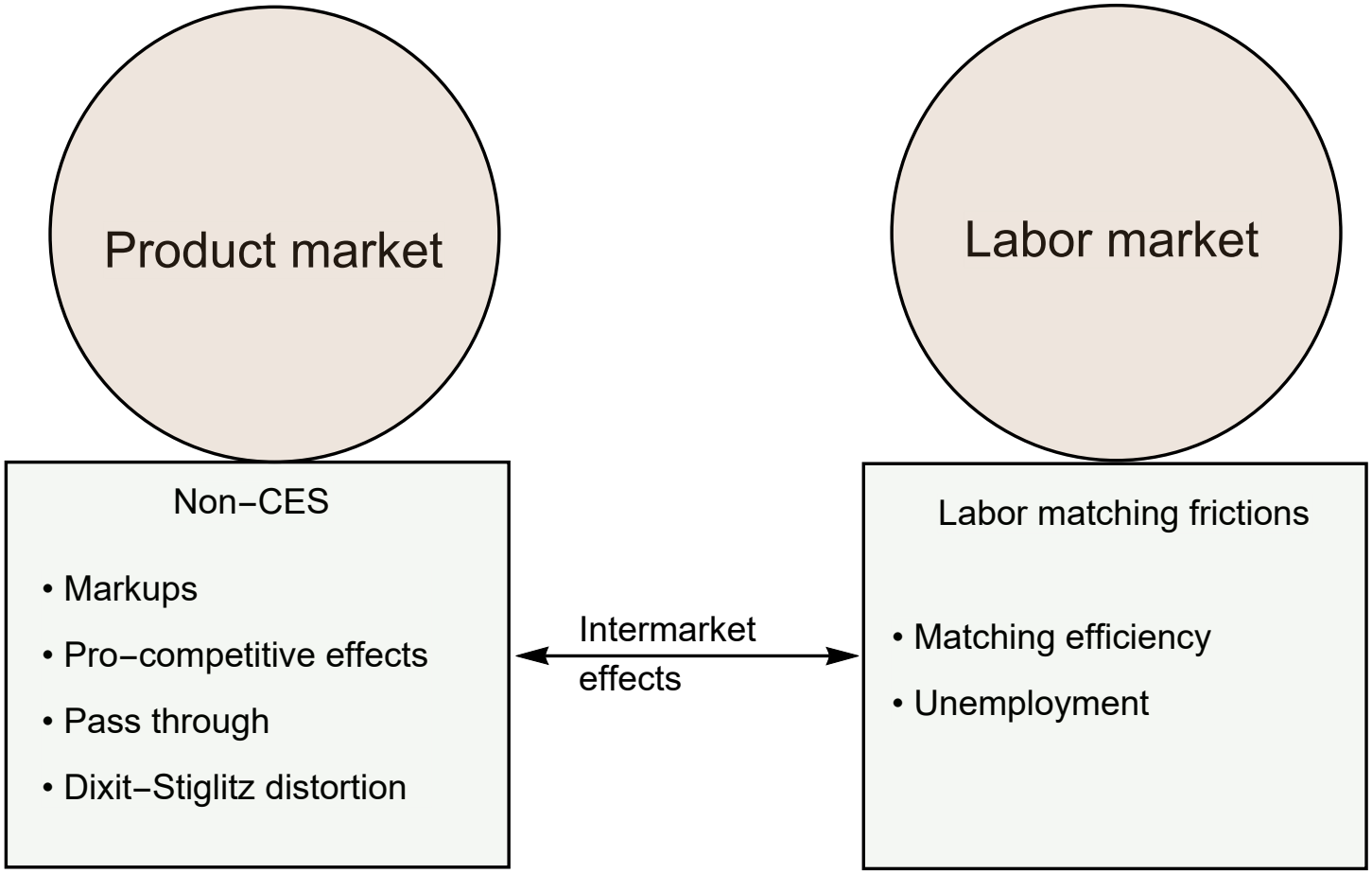
However, little is known about their interaction.

Can deregulation help boost employment?

- The effect of increased competition is not evident.
- Employment level can rise or fall.



Two pillars


Product market
Labor market
Non−CES
• Markups
• Pro−competitive effects
• Pass through
• Dixit−Stiglitz distortion
Intermarket
effects
Labor matching frictions
• Matching efficiency
• Unemployment

Consumers:

- One factor-one sector economy with a differentiated good;
- Representative households, each consists of workers;
- *Directed search*: a household sends its workers to search for a job with a certain wage
  θ_w - market tightness; $m(\theta_w)$ - probability of filling a vacancy;
  $m(\theta_w)\theta_w$ - probability of employment.

Producers:

- Linear cost function, $cx\mathcal{L} + f$
- Post V vacancies, each costs h units of labor
- Productive labor: $L - hV - f$

A household maximizes its utility function

$$\max_{x_\omega, w} \log\left[\int_\Omega v\left[x_\omega\right] d\omega\right] - \Gamma m\left[\theta_w\right]\theta_w,$$

$$\int_\Omega p_\omega x_\omega d\omega \leqslant w m\left[\theta_w\right]\theta_w.$$

Workers are perfectly mobile in their search direction $\rightarrow$ the value of job search is equalized among all wage contracts $\Rightarrow$ wage curve:

$$\mathcal{E}w\left[\theta\right] = -\left(\frac{\Gamma}{\lambda w\left[\theta\right]} - 1\right)\left(1 + \mathcal{E}m\left[\theta\right]\right) < 0$$

- a trade-off between probability of being employed and the wage

Product market

$$\frac{cx\mathcal{L}}{cx\mathcal{L}+f}=\begin{cases}1+\mathcal{E}v'[x] & ME\\ \mathcal{E}v[x] & SO\end{cases}$$

Labor market

$$m\theta[m]\Gamma\left(1-\frac{1}{1-\eta}\frac{h}{m-h}\right)^{-1}=\begin{cases}\mathcal{E}v[x] & ME\\ 1 & SO\end{cases}$$

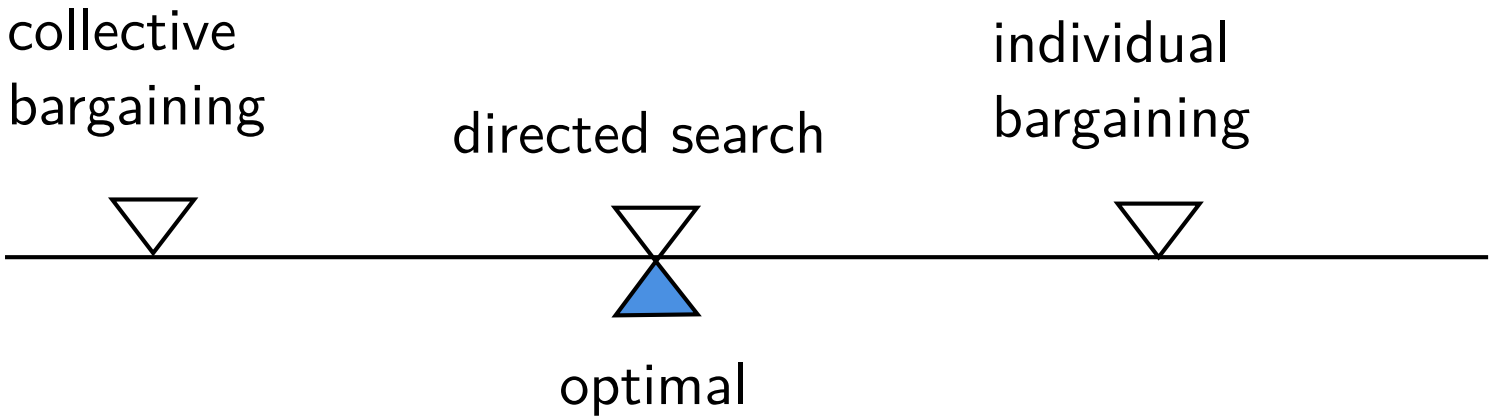
Dixit-Stiglitz distortion is the same as in the standard model.
The unemployment is too high, even under CES.

$\mathcal{E}v[x]$ — appropriability factor aka "social" markup. It is the proportion of the utility gain from adding a variety, holding quantity per firm fixed.

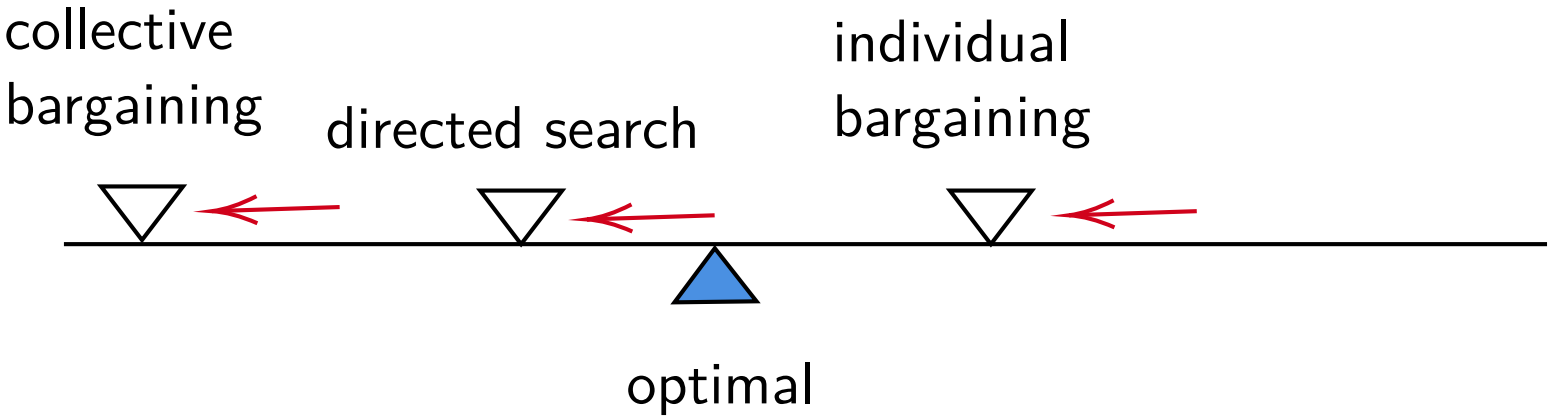
Unemployment level is always inefficiently high

- appropriability distortion, i.e. the fact that each firm internalizes only a fraction of the consumer surplus in its revenue;
- propagates onto the labor market and reduces the marginal product of labor;
  wedge = (the social - private value of a job)$>$ 0
- intrinsic to any monopolistic competition framework

- Bauer and Lingens (2014): in the absence of imperfect product market,



- This paper: due to product market distortion



This mechanism is present even under CES.

Product market:

- appropriability distortion $\Rightarrow N \downarrow$
- business-stealing distortion $\Rightarrow N \uparrow$
- under CES they are perfectly balanced $\rightarrow$ efficient firm size

Labour market:

- negative externality of vacancy posting for firms $\Rightarrow V \downarrow$
- positive externality of vacancy posting for workers $\Rightarrow V \uparrow$
- under directed search the Hosios condition holds

When combined, efficiency result breaks down!

Empirics

- Nicoletti, Scarpetta (2005): Positive effect of product market deregulation on employment;

Fall in (wasteful) fixed costs:

- ◇ decreases firm size (higher competition);
- ◇ increases employment iff $\mathcal{E}v[x]$ is decreasing in x.

Thus, VES modeling is indispensable for the explanation of deregulation consequences.

If Dixit-Stiglitz distortion is corrected, the labor market distortion is amplified!

Labor market deregulation increases the employment rate, correcting the labor market distortion.
Firm licensing accompanied by a reduction in employment taxes is a welfare-superior policy than simple redistributive licensing fees.

	x^{opt} first best	$x^{opt}\&f_l$	$x^{opt}\&f_l \rightarrow t_L$	$x^{opt}\&f_l \rightarrow t_{f\ or\ w}$
Δ E	-4.4%	-1.6%	-0.4%	+0.3%

Thank you.

Please send comments or questions to
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What kind of regulation?

Product market

- Fixed entry costs: bureaucratic costs
- Licensing costs
- Market size

Labor market

- Wage tax: typical payroll tax $= 20\%$ and income tax $= 25\%$
- Employment tax: Firing tax is about average quarterly wage (Mortensen, Pissarides, 2003)