Herbert Hoover's Cartelization Policies and the start of the Great Depression

by Lee Ohanian

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Lucas Conference, Chicago April 2007

Outline

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- Exogenous high real wages (Bordo Erceg Evans, 2000)
- No! (Cole Ohanian, 2001)
- Endogenous high real wages? (Ohanian, 2007)

Early phases of the great depression (1929-31)

Aggregate facts

- GDP: -20%
- Employment: -25%
- Investment: -50%
- Consumption: -15%
- **Little change in TFP**
- **Aggregate real wages: +7%**

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Sectoral Facts

- Manufacturing output and hours: -50%, Farm: stable
- Manufacturing real wages: +10%, Farm wages -10%
- Relative price of manufacturing falls

A one sector sticky wage model

Key assumptions: given k, n is determined by labor demand, real wages exogenous

$$\begin{aligned} y &= n^{\gamma}k^{1-\gamma} \\ w &= \gamma n^{\gamma-1}k^{1-\gamma} \end{aligned}$$

Key result (Assuming $\hat{k} = 0$)

$$\begin{aligned} \hat{n} &= \frac{1}{\gamma - 1}\hat{w} \approx -3\hat{w} \\ \hat{y} &= \frac{\gamma}{\gamma - 1}\hat{w} \approx -2\hat{w} \end{aligned}$$

A 7% increase in wage gives a 14% fall in GDP, and 21% fall in employment, not too far from the observed.

A two sectors sticky price model

Add a farm sector (σ is the elast. of substitution between farm and mfg)

$$\begin{aligned} y_m &= n_m^{\gamma} k_m^{1-\gamma} \\ w &= \gamma p n_m^{\gamma-1} k_m^{1-\gamma} \\ p &= y_m^{-\frac{1}{\sigma}} \end{aligned}$$

yielding

$$\hat{y} = \frac{\gamma}{\gamma\frac{\sigma-1}{\sigma} - 1}\hat{w} \approx \begin{array}{cc} -\gamma \approx -\frac{2}{3}\hat{w} & \text{if } \sigma = 1 \\ -\frac{\gamma}{1+\gamma} \approx -\frac{2}{5}\hat{w} & \text{if } \sigma = 1/2 \end{array}$$

So a 10% increase in mfg wages generates a fall in mfg output between 7% and 4% : much less than the observed!

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- Price effect dampens reduction in labor demand caused by high wages
- also manufacturing relative prices actually fell!

Investment

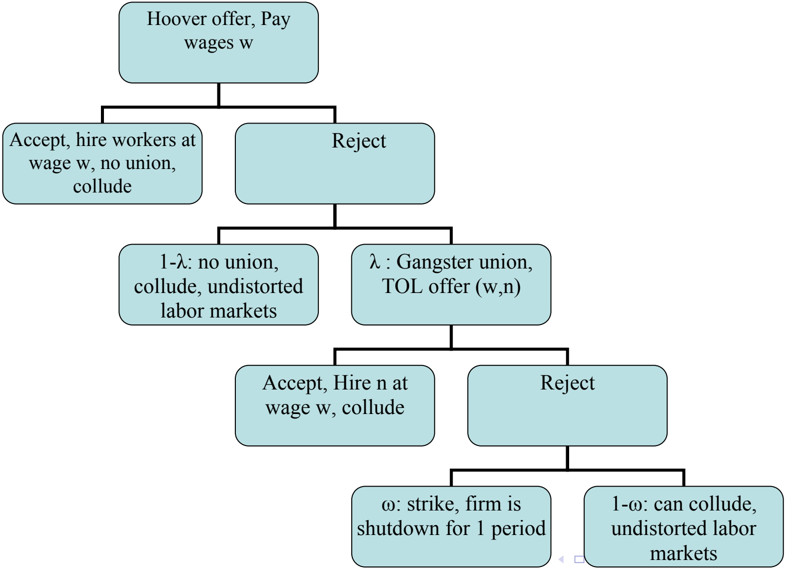
If high real wages are associated with investment fall, **and investment is intensive in manufacturing** then:

- Increase in manufacturing real price is small or negative
- Large drop in manufacturing output

What makes investment fall?

- If people had expectations about what was going to happen in 1932-1934 (fall in TFP)
- If wage increases are very persistent (very high degree of stickyness)
- If high wages are associated with higher collusion. Firms want to reduce the capital stock from competitive to collusive -$>$ large investment drop (note that it is the interaction between collusion and sticky wages that does it, as each separately has small effect)
- If wages, employment investment in manufacturing are jointly set by Hoover and firms under the threat of a gangster union (Hoover-Ohanian policy)

The Hoover-Ohanian policy



The Hoover-Ohanian policy

- Set the highest possible wage subject to a period by period reservation profit
- Let manifacturing firms collude

Outcomes from policy

- Wages increase
- Big investment decline (Collusion and low returns to capital)
- Fall in employment (Collusion and Gangster union objective)
- Fall in manufacturing relative price
- Wages increase in 1932 but actually fall in 1930

Wages under the Hoover policy

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  - In 1929-31 increasing union pressure but not big change in antitrust enforcement, that was already quite lax.
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  - In 1929-31 increasing union pressure but not big change in antitrust enforcement, that was already quite lax.
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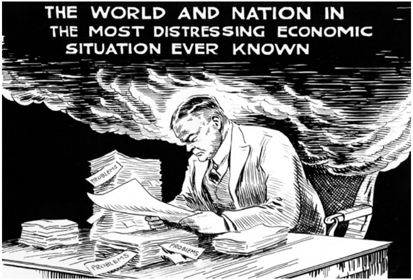
- Suggestion: introduce the Hoover policy in a collusive environment. Consistent with patterns above, implies fall in profits, can get larger wage increases.

Conclusions



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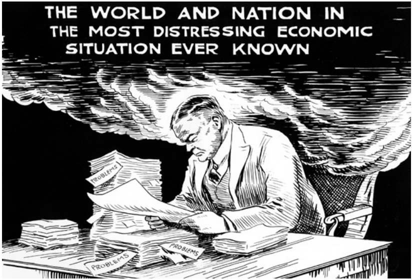

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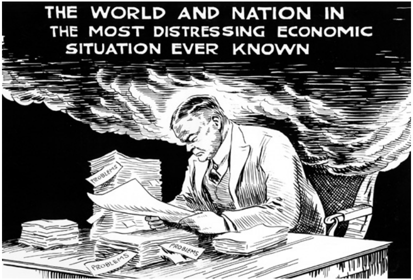

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