

## Ninth Lecture

# Stagflation

### Differential accumulation (revision)

- Breadth and depth once more
- Internal vs. external depth

### Internal depth

- Differential efficiency?
- Differential input prices?
- Running on empty: “meeting the average”

### External depth

- “Inflation is always an everywhere a distributional phenomenon”
- Differential inflation
- Differential stagflation

### History and theory

- “Price revolutions”
- The 20<sup>th</sup> century: the rise of organized power and staglatory accumulation
- The centennial theory/reality fracture
- “Stagflation” and structure”, or “stagflation as restructuring”?
- Stagflation as an “anomaly”: explaining stagflation with power
- Stagflation as the “normal”: explaining power with stagflation

### The conventional creed

- The “classical dichotomy”
- Liquidity
- Excess demand, deficient supply

### Keynesianism

- The Phillips Curve
- Lipsey’s “general theory”
- Samuelson and Solow’s modification: from wages to prices
- “We are all Keynesians”
- A “menu of choices” and Kalecki’s political “business cycle”
- Eating the cake and having it, too: power without redistribution

### Monetarism

- Expectations: economic agents strike back
- Friedman and Phelps: Adaptive expectations
- How long is the “short run”?
- What is the “normal rate of unemployment”?
- Rational expectations: subjective and objective probabilities
- Muth, Sargent and Lucas: the collective economist as God
- *Laissez faire*, once more
- Expectations: from Keynes’ uncertainty to the New Classicists’ probability
- The “science” of the Phillips Curve, or “can theory ever be wrong?”

**Supply shocks**

- Stagflation: an upward sloping Phillips Curve?
- The postmodern “other”: blame it on the oil sheiks, the weather and the workers
- Oil sheiks and the whether: do raw material prices cause inflation?
- Do workers cause inflation?
- “Wage push” or “profit push”?
- “Markup inflation” and “barriers to entry”

**Inflation and redistribution**

- Barking up the wrong tree
- Inflation as restructuring
- Where is politics?
- Redistribution: capitalists contra workers
- Redistribution: large vs. small firms
- Why stagflation – “return” and “risk”

**Regimes of differential accumulation**

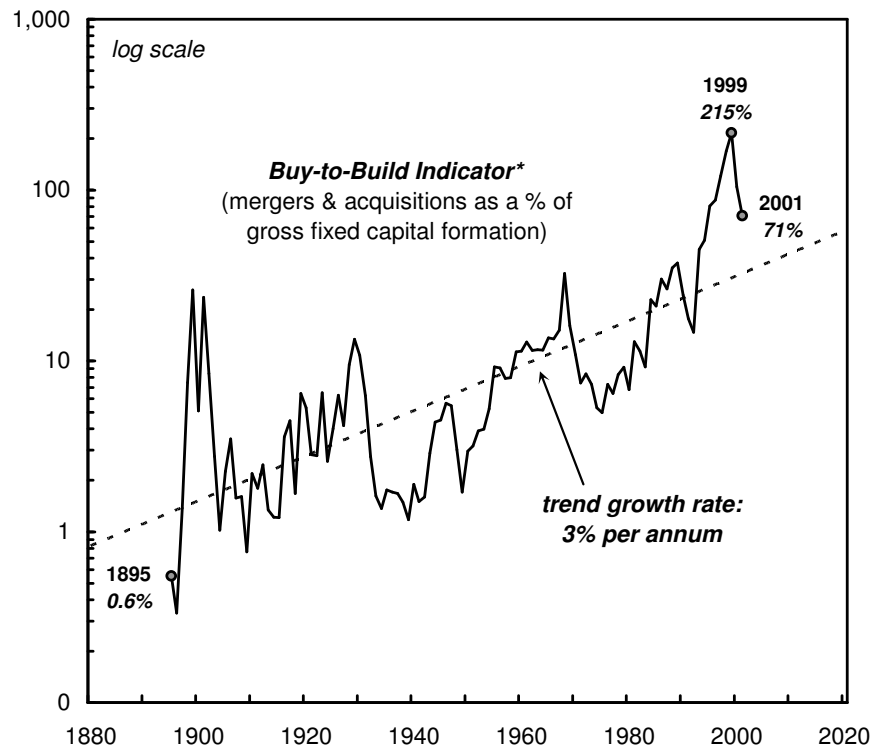
- The pendulum of breadth and depth

**Differential Earnings**

$$earnings_D \equiv employment_D \times earnings\ per\ employees_D$$

Table 1  
**Regimes of Differential Accumulation**

	<i>External</i>	<i>Internal</i>
<i>Breadth</i>	Green-field	Mergers & Acquisitions
<i>Depth</i>	Stagflation	Cost-cutting



**FIGURE 1 U.S. Accumulation: Internal vs. External Breadth**

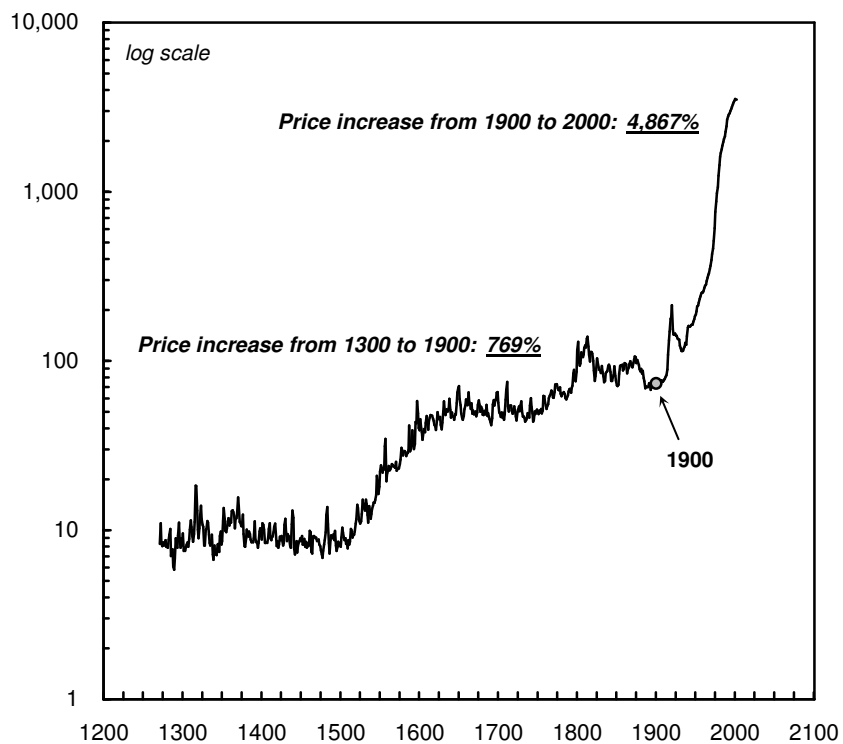
\* Based on splicing of separate series.

SOURCE: Jonathan Nitzan and Shimshon Bichler (2002) *The Global Political Economy of Israel*, p. 54; data extended to 2001.

“Running on empty”

“How do you build a company, when your buyers are infinitely knowledgeable and where your suppliers maintain a level playing field for your competitors? What remains your competitive differentiator or your source of value or whatever academic cliché you want to wrap around it?”

Andrew Grove, Chairman of Intel. Cited in Byrne, John A. 2000. Visionary vs. Visionary. *Business Week*, August 28, pp. 210-212.



**FIGURE 2** Consumer Prices in the U.K.

SOURCE: *Global Financial Data* (series code: CPGBRM); *WEFA*. Historical data from David Hackett Fischer. 1996. *The Great Wave. Price Revolution and the Rhythm of History*. New York and Oxford: Oxford University Press.

CHART III  
 PRICES AND PRODUCTION FOR AGRICULTURE, 1926-1933

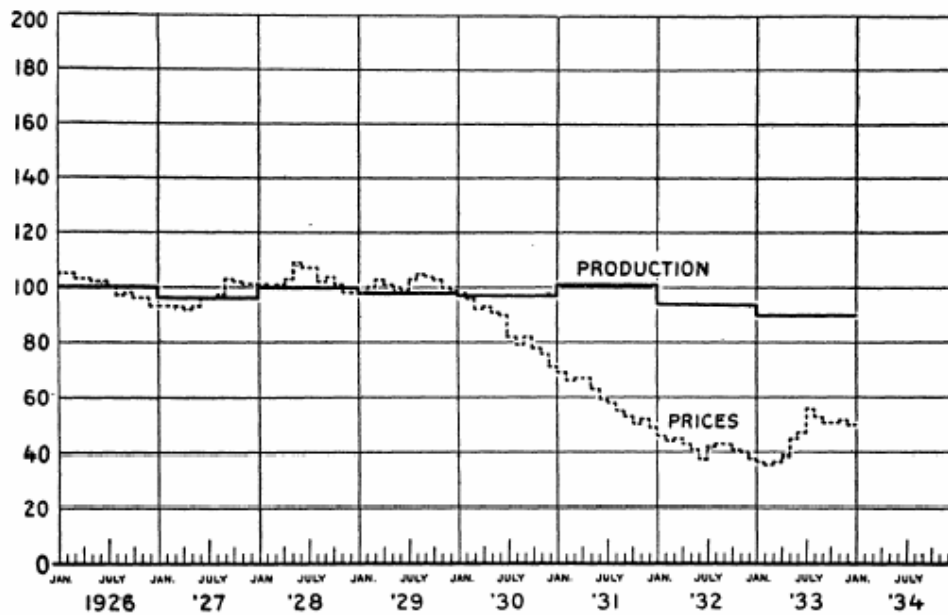


CHART IV  
 PRICES AND PRODUCTION FOR THE AGRICULTURAL  
 IMPLEMENTS INDUSTRY, 1926-1933

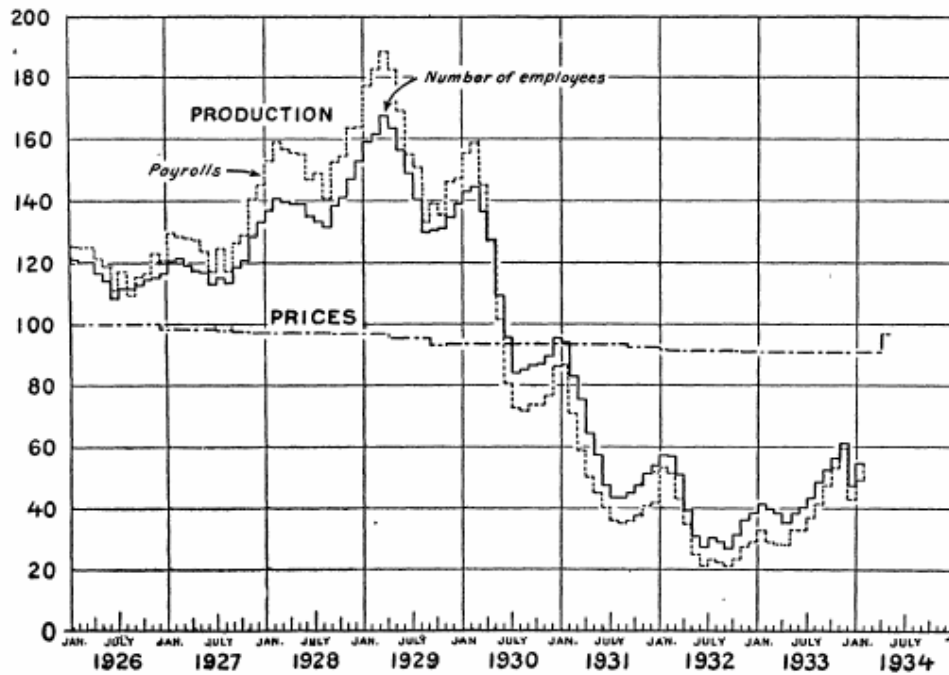
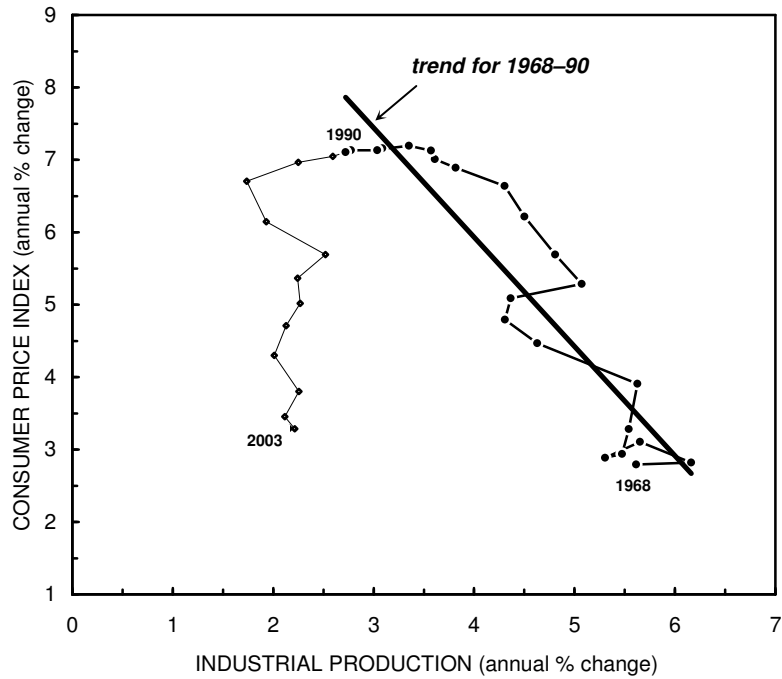


FIGURE 3 The Seeds of Differential Stagflation

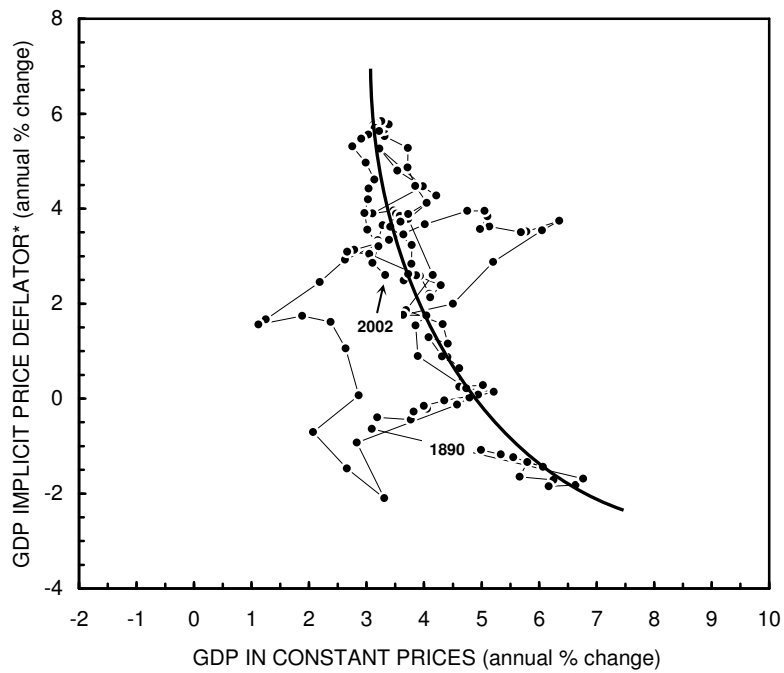
SOURCE: Means, Gardiner C. 1935. Price Inflexibility and Requirements of a Stabilizing Monetary Policy. *Journal of the American Statistical Association* 30 (190, June): 401-413.



**FIGURE 4** Industrialized Countries: Long-Term Inflation and Growth

NOTE: Series are shown as 20-year moving averages. The trend line represents an OLS regression for the 1968–90 period.

SOURCE: IMF International Financial Statistics through Global Insight (series codes: L66&I@C110 for industrial production; L64@C110 for the consumer price index).

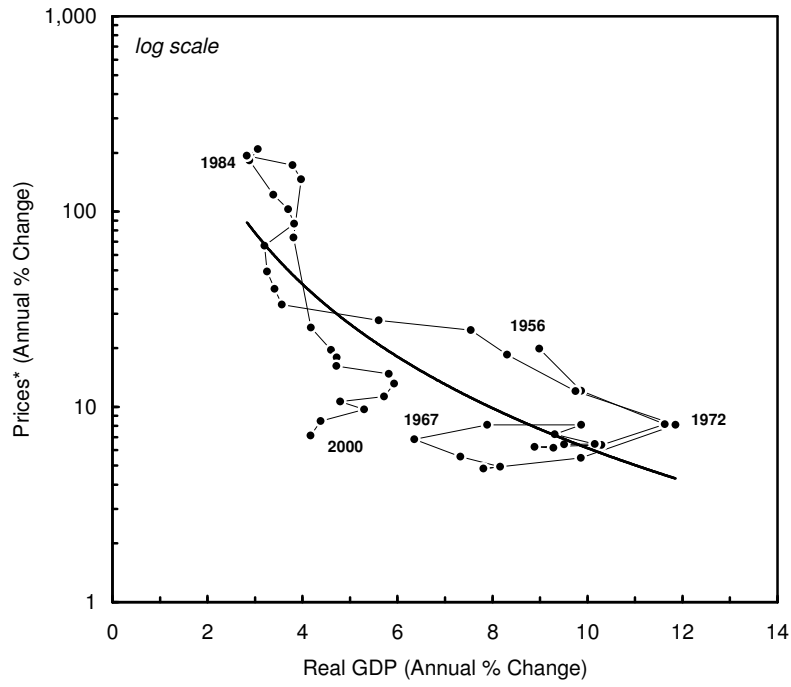


**FIGURE 5 United States: Long-Term Inflation and Growth**

\* Ratio of GDP in current prices to GDP in constant prices.

NOTE: Series are shown as 20-year moving averages. The smooth curve running through the observations is drawn freehand for illustration purposes.

SOURCE: Historical data till 1928 are from The Bank Credit Analyst Research Group. From 1929 onward, data are from the U.S. Department of Commerce through Global Insight (series codes: GDP for GDP; GDP96 for GDP in constant prices).



**FIGURE 6 Israel: Long-Term Inflation and Growth**

NOTE: Series are shown as 5-year moving averages.

SOURCE: Israel Central Bureau of Statistics.



**The neutrality of money**

“There cannot, in short, be intrinsically a more insignificant thing, in the economy of society, than money.”

John Stuart Mill

“Money is a veil.”

Irving Fisher

“Money is neutral, a veil with no consequences for real economic magnitudes.”.

Franco Modigliani

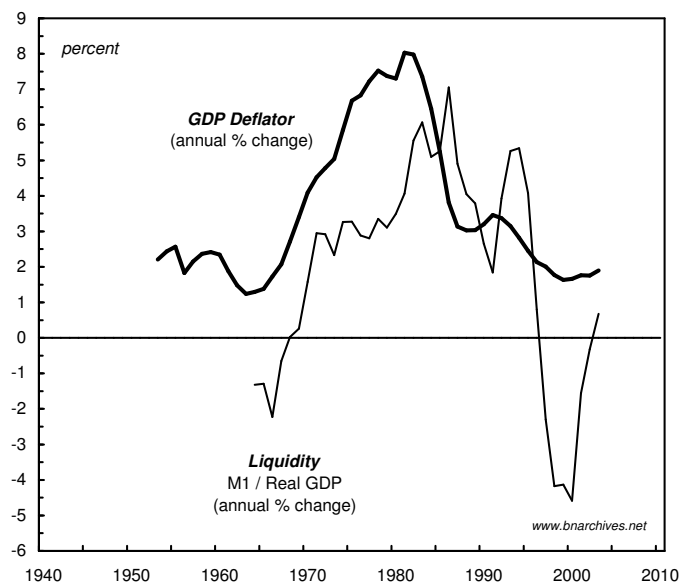
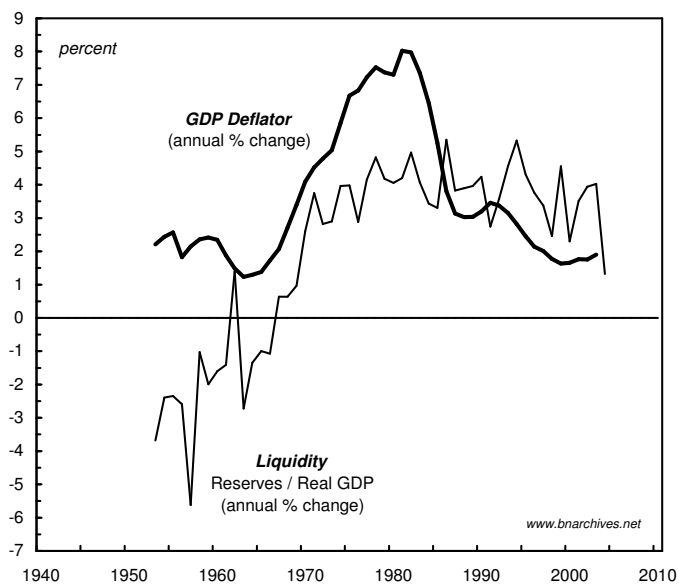
“Inflation is always and everywhere a monetary phenomenon.”

Milton Friedman

**The quantity theory of money**

[ $P$  = prices,  $T$  = transactions,  $M$  = money,  $V$  = velocity,  $Q$  = output; lower case variables represent rates of change]

1.  $P * T \equiv M * V$
2.  $P \equiv M * V / T$
3.  $p \approx m + v - t$
4.  $p \approx m - t \quad ; v = 0$
5.  $p \approx m - q \quad ; t = q$



**FIGURE 7 United States: Liquidity and inflation**

NOTE: Annual data smoothed as 5-year moving averages

SOURCE: IMF.

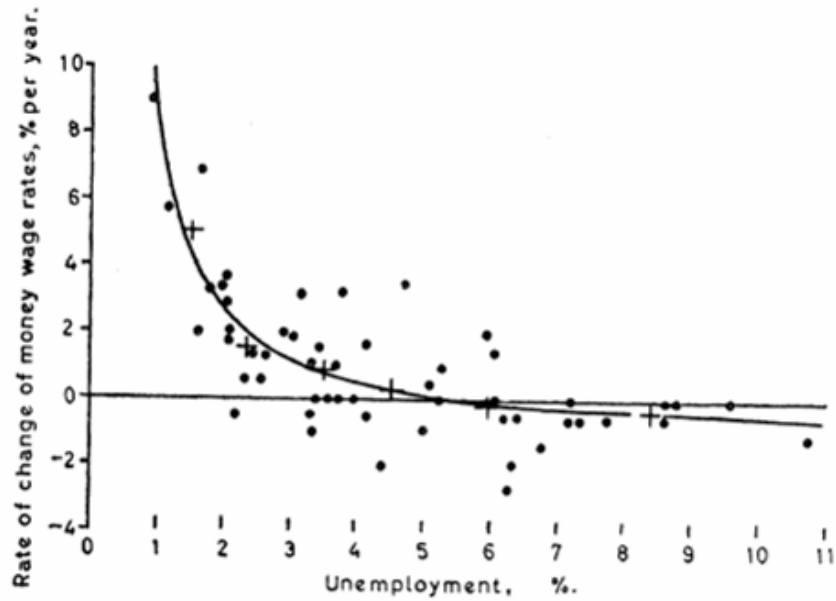


Fig.1. 1861 - 1913

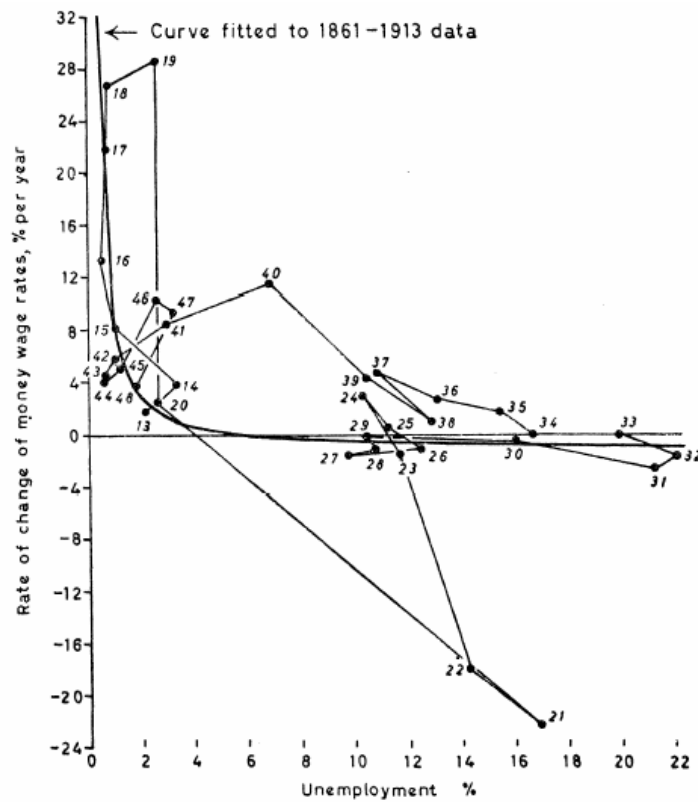


Fig. 9 1913 - 1948

**FIGURE 8 The Phillips Curve**

SOURCE: Phillips, A. W. 1958. The Relation Between Unemployment and the Rate of Change of Money Wages in the United Kingdom, 1861-1957. *Economica* New Series 25 (100, November): 283-299

### **From wage inflation to price inflation**

$W$  is the wage rate,  $U$  is the rate of unemployment,  $P$  is the price level,  $Q$  is output per worker (labour productivity),  $K$  is the markup, and lower-case variables denote corresponding rates of change.

$$1. \quad w = f(U)$$

$$2. \quad P = (1 + K) \frac{W}{Q}$$

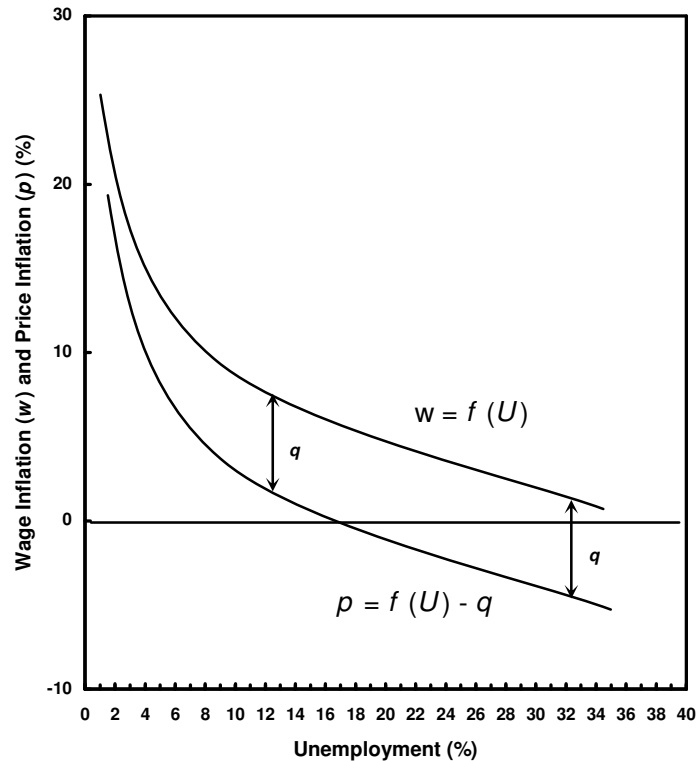
$$3. \quad p = \left(1 + \dot{K}\right) + w - q$$

If the markup is fixed, we have,

$$4. \quad w = p + q$$

Substituting into equation 1:

$$5. \quad p = f(U) - q$$



### **Cost push and the end of perfect competition**

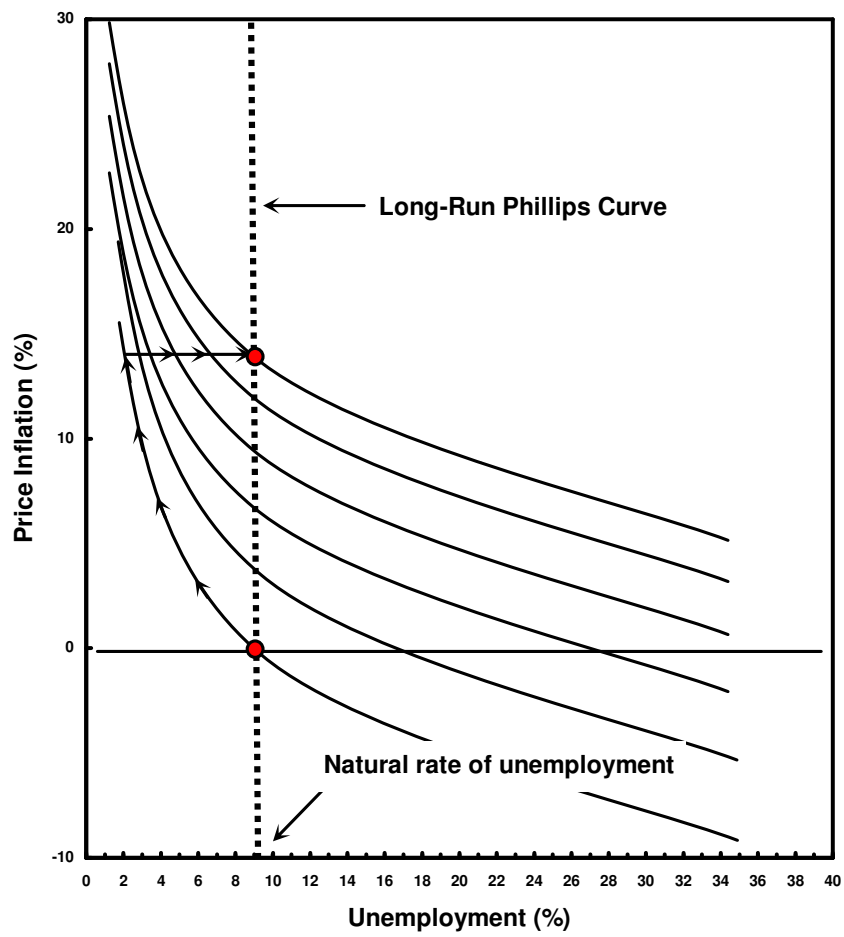
“Some holders of this view [cost push] attribute the push to wage boosts engineered unilaterally by strong unions. But others give as much or more weight to the co-operative action of all sellers –organized and unorganized labor, semimonopolistic managements, oligopolistic sellers in imperfect commodity markets – who raise prices and costs in an attempt by each to maintain or raise his share of national income, and who among themselves, by trying to get more than 100 per cent of the available output, create ‘seller’s inflation . . . to explain possible cost-push inflation, it would seem more economical from the very beginning to recognize that imperfect competition is the essence of the problem and drop the perfect competition assumptions.”

Samuelson, Paul A., and Robert M. Solow. 1960. Problem of Achieving and Maintaining a Stable Price Level: Analytical Aspects of Anti-Inflation Policy. *The American Economic Review* 50 (2. May): 177-194

**“Expectations Augmented Phillips Curve”**

$$p_t = f_1(U_t) + p_t^e$$

$$p_t^e = f_2(p_t)$$



### **Rational Expectations**

“ . . . expectations of firms (or, more generally, the subjective probability distribution of outcomes) tend to be distributed, for the same information set, about the prediction of the theory (or the ‘objective’ probability distributions of outcomes).”

Muth, John F. 1961. Rational Expectations and the Theory of Price Movements. *Econometrica* 29 (3, July): 315-335.

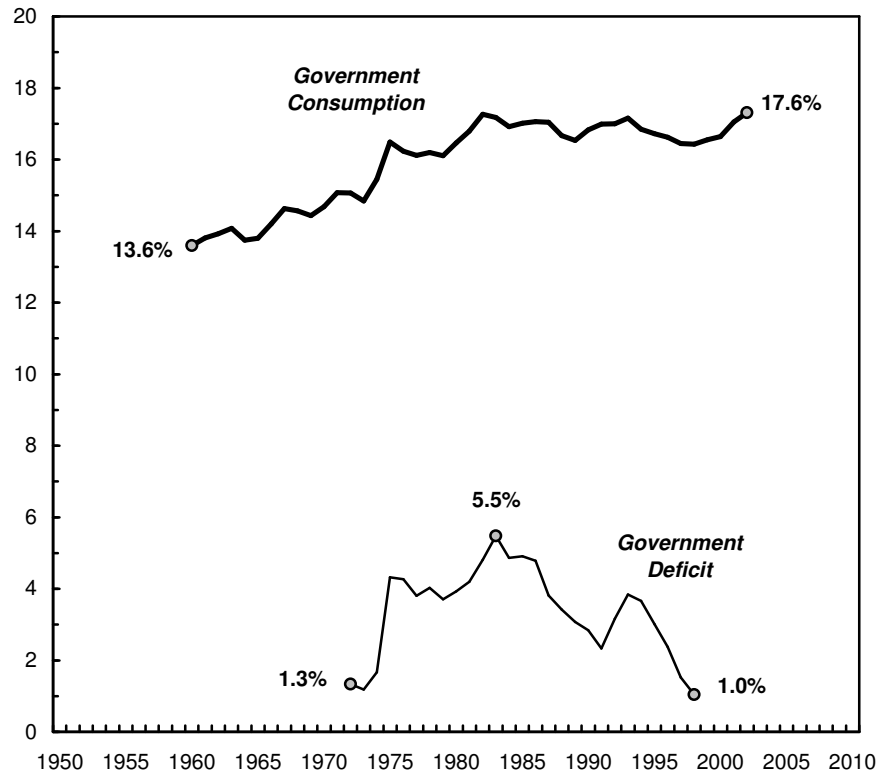
“ . . . expectations of inflation are assumed to be endogenous to the system in a very particular way: they are assumed to be ‘rational’ in Muth’s sense – which is to say that the public’s expectations are not systematically worse than the predictions of economic models. This amounts to supposing that the public expectations depend, in the proper way, on the things that economic theory says they ought to.”

Sargent, Thomas J. 1973. Rational Expectations, the Real Rate of Interest, and the Natural Rate of Unemployment. *Brookings Papers on Economic Activity* (2): 429-472.

$$p_t^e = E(p_t | I_{t-1})$$

$$p_t = E(p_t | I_{t-1}) + u_t$$

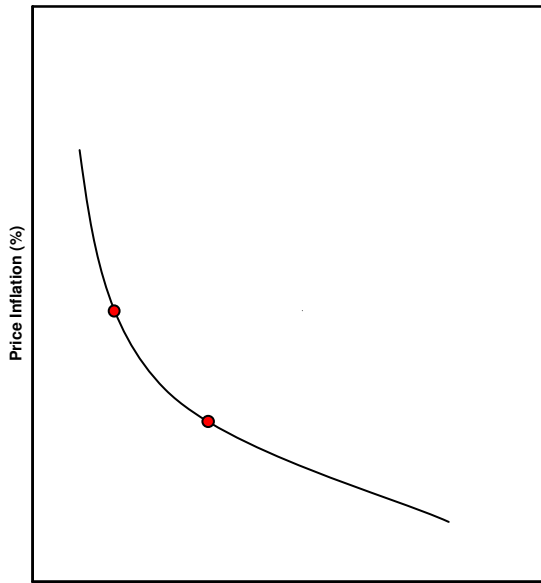
$$p_t - p_t^e = u_t$$



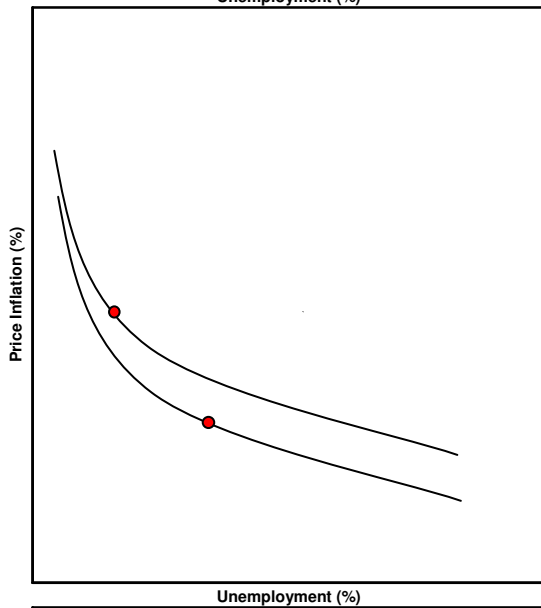
**FIGURE 9** Public Sector Indicators (% of World GDP)

NOTE: Series are shown as 12-months moving averages.

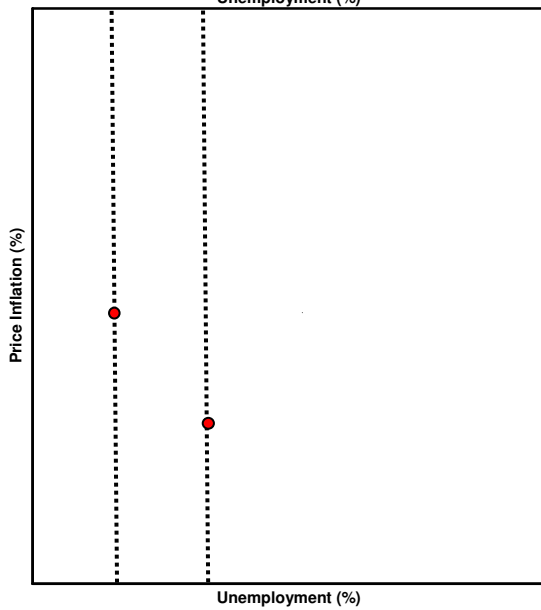
SOURCE: World Bank, World Development Indicators Online, 2004.



Original Phillips Curve?



Adaptive Expectations?



Rational Expectations?



**Supply Shocks: The Usual Suspects**

“A clear and central villain of the piece is the historically unprecedented rise in commodity prices (mainly food and oil) in 1973-74 and again in 1979-80 that not coincidentally accompanied the two great burst of stagflation.

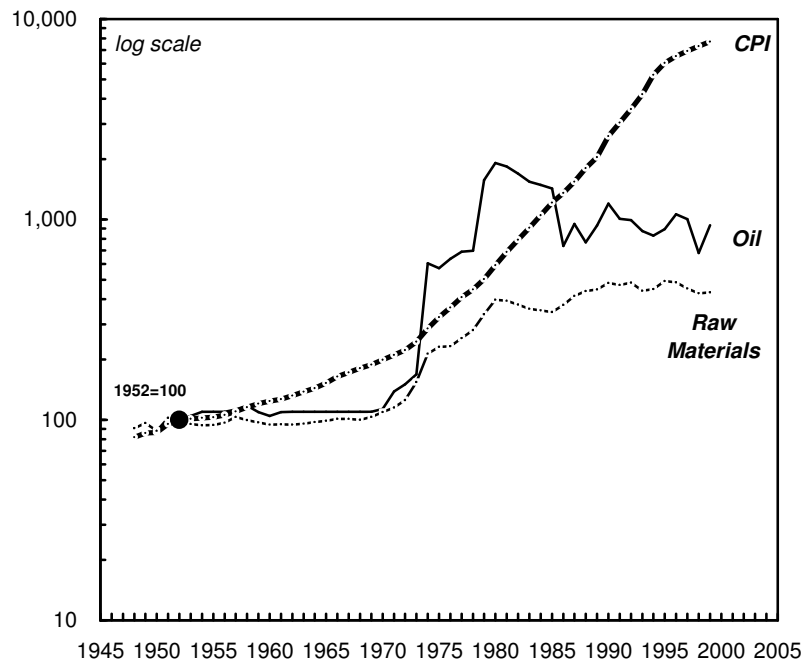
“. . . one of the variables that set the stage for the 1970s stagflation was the rise in union power and militancy at the end of the 1960s. . . . A real wage boom resulted, which started a squeeze on profits even before 1973. . . . It strikes us as misguided to consider the labor market as a perfectly competitive bourse when in almost every OECD economy much of the labor force is unionized and governments play an enormous role in affecting labour compensation.”

Bruno, Michael, and Jeffrey Sachs. 1985. *Economics of Worldwide Stagflation*. Cambridge, Mass.: Harvard University Press, p. 7

**Supply Shocks: The Cruel Dilemmas**

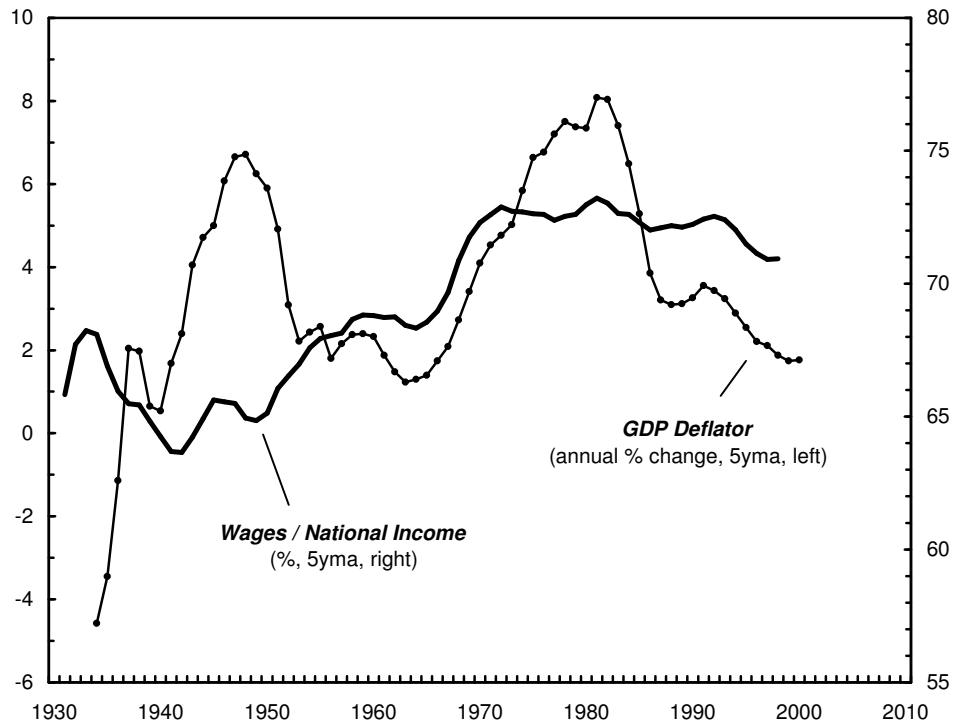
“The limited capability of policy to influence supply poses a particularly vexing problem in a stagflationary world since any stabilization policy adopted in response to stagflation is bound to aggravate one of the problems [inflation or unemployment] even as it helps cure the other. Such is the policy dilemma of stagflation.”

Blinder, Alan S. 1979. *Economic Policy and the Great Stagflation*. New York: Academic Press, pp 20-21.



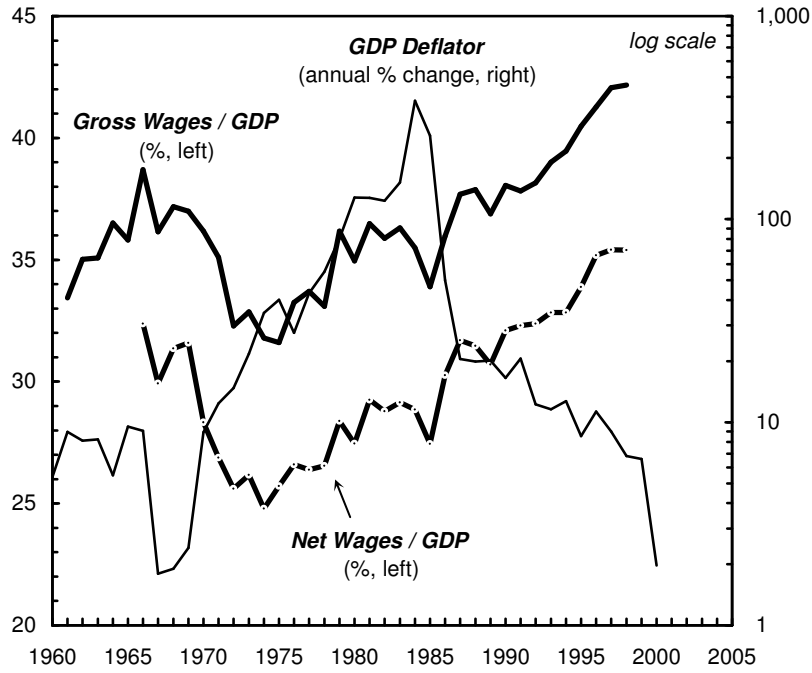
**FIGURE 10** World prices

SOURCE: IMF



**FIGURE 11** Inflation and the Wage Share in the United States

SOURCE: U.S. Bureau of Economic Analysis



**FIGURE 12** Inflation and the Wage Share in Israel

SOURCE: Bank of Israel. Israel Central Bureau of Statistics

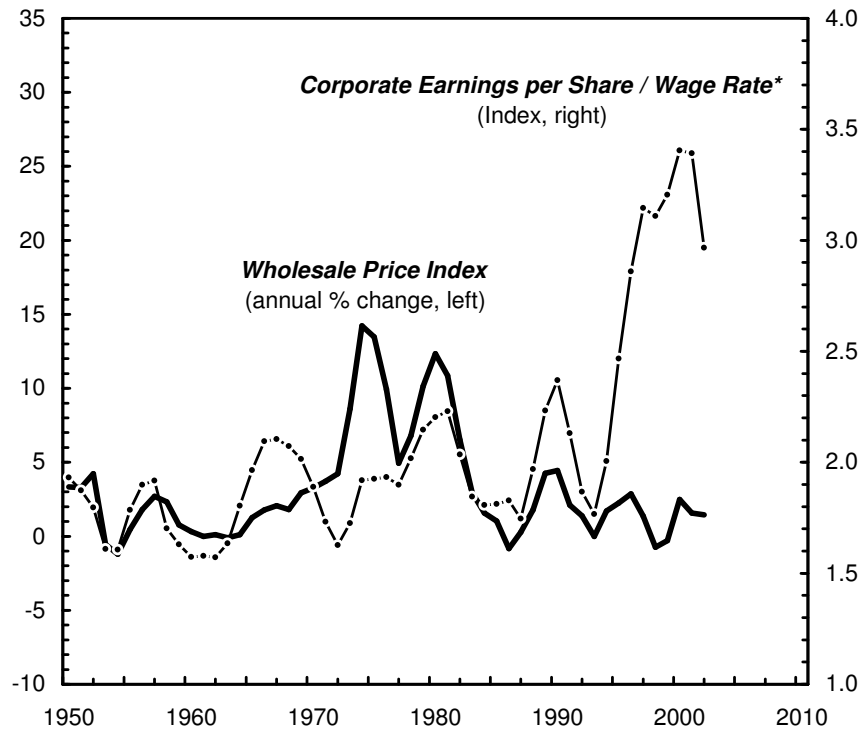
**Wage push or profit push?**

Price = Unit Wage + Unit Profit

$$P = W + \Pi$$

$$P = (1+K) * W \quad \text{where } K = \Pi/W$$

- “Wage push” inflation can occur only if K is fixed.
- If K is fixed, the rates of change of profit and of wages are the same.
- If the two rates of change are the same, “wage push” inflation must also be “profit push” inflation.

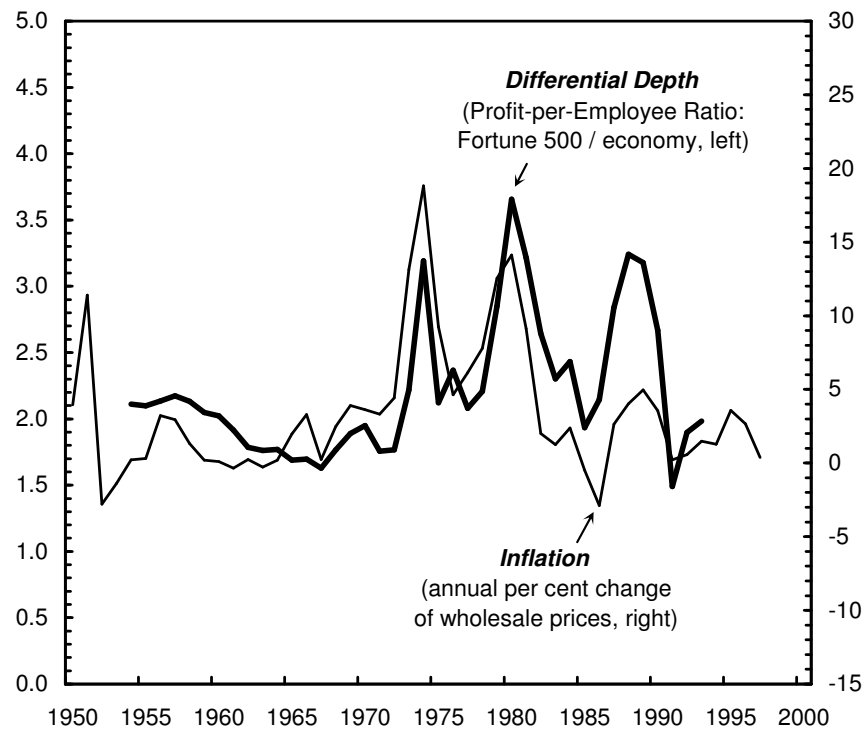


**FIGURE 13 U.S. Inflation and Capital-Labour Redistribution**

\* Corporate earnings per share are for the *S&P 500* Index (ratio of price to price/earnings). The wage rate is the average hourly earning in the private sector.

NOTE: Series are smoothed as 3-year moving averages.

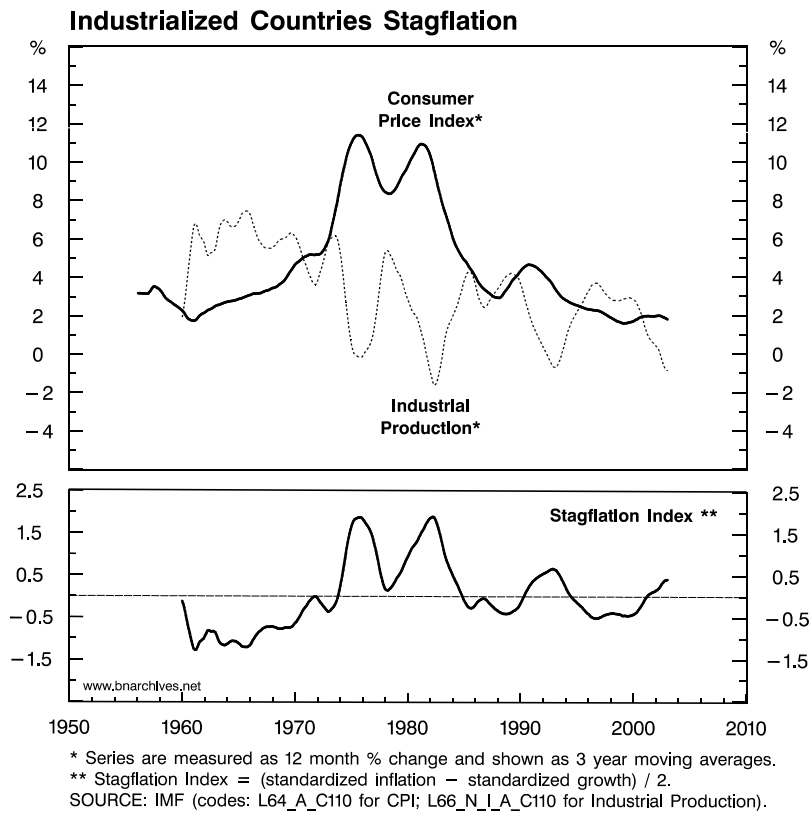
SOURCE: Global Financial Data (series codes: *\_SPXD* for price; *SPPECOMW* for price/earnings); U.S. Department of Commerce and U.S. Bureau of Labor Statistics through Global Insight (series codes: *AHEEAP* for the wage rate; *WPINS* for the wholesale price index).



**FIGURE 14** Differential Depth and Inflation in the U.S.A.

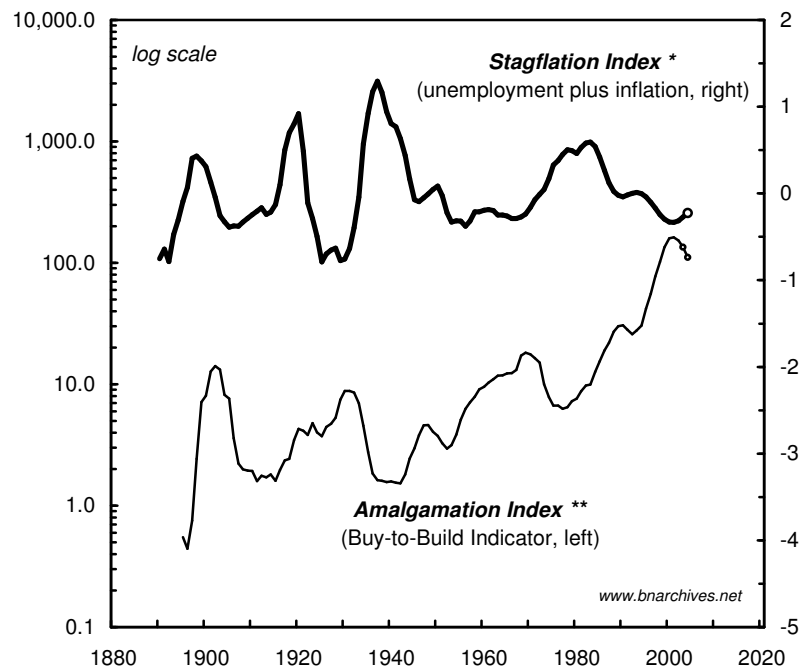
NOTE: The economy's profit per employee is computed by dividing corporate profit with inventory valuation adjustment and capital consumption allowance, less taxes, by the number of non-agricultural employees. Fortune's profit per employee is computed by dividing net profit by the number of employees.

SOURCE: *Fortune*; U.S. Department of Commerce.



**FIGURE 15** Stagflation Index





**FIGURE 16 Amalgamation and Stagflation in the U.S.A.**

\* Computed as the average of: (1) the standardized deviations from average of the rate of unemployment, and (2) the standardized deviation from the average rate of inflation of the GDP implicit price deflator.

\*\* Mergers and acquisitions as a percent of gross fixed capital formation.

NOTE: Series are shown as 5-year moving averages (the first four observations in each series cover data to that point only).

SOURCE: The Stagflation Index is computed based on data from the U.S. Department of Commerce through Global Insight (series codes: RUC for the rate of unemployment and GDP/GDP96 for the GDP implicit price deflator). Nitzan, Jonathan, and Shimshon Bichler. 2006. *New Imperialism or New Capitalism?* *Review* XXIX (1, February).