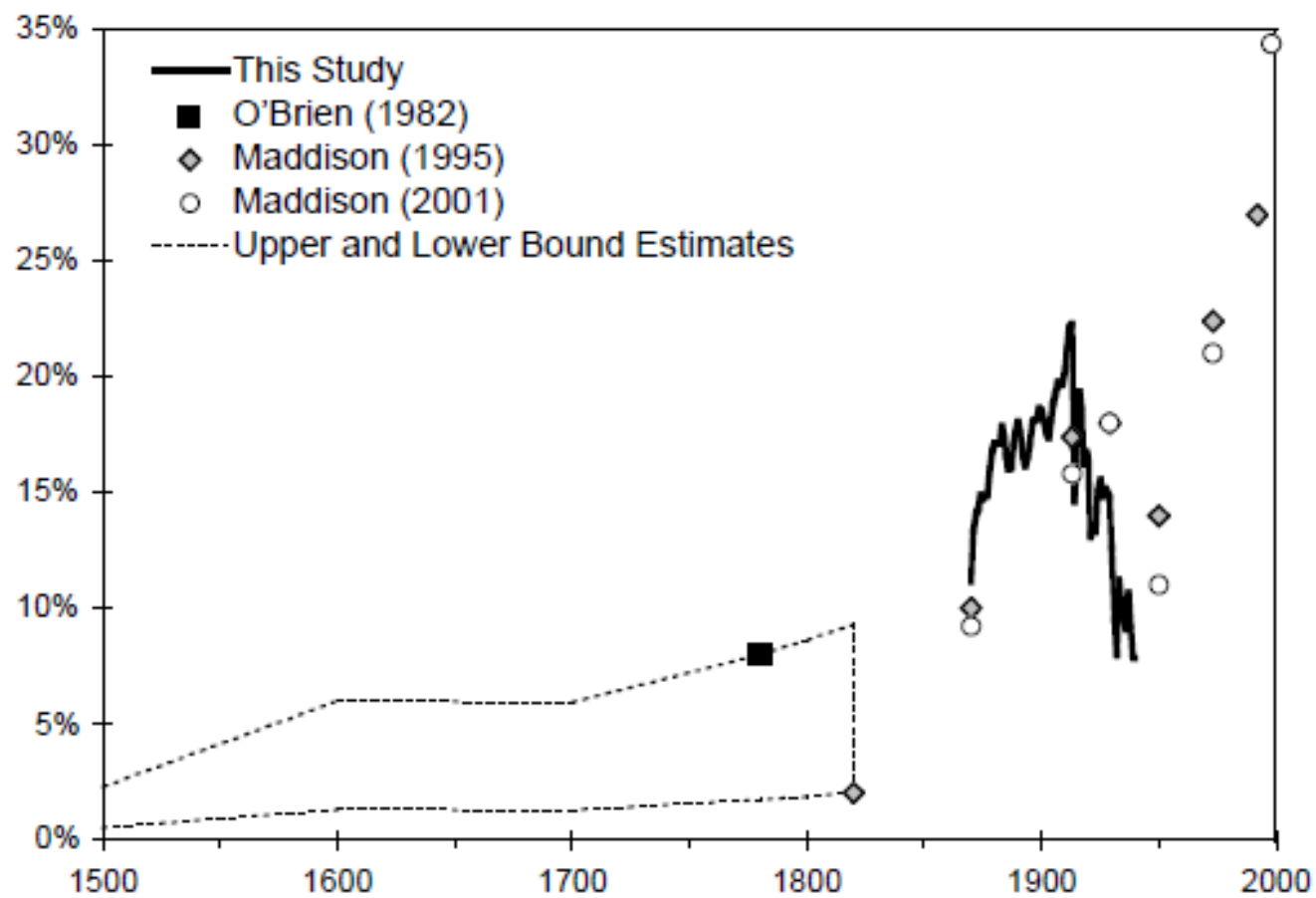


# The interwar trade decline

Paul Krugman

FIGURE I  
Five Hundred Years of World Trade-to-GDP Ratios



Determinants of globalization: a toy model

Assume two symmetric countries, each specialized in production

Goods enter symmetrically into utility, with elasticity of substitution  $\sigma$  between the goods

One factor of production, labor

It takes  $\alpha$  units of labor to produce one unit of either country's good; it takes  $\tau$  units of labor to transport that good to the other country

Both countries have ad valorem tariffs at rate  $t$

Then the ratio of imports to consumption of home good is

$$[(1+\tau/\alpha)(1+t)]^{-\sigma}$$

Trade as a share of GDP: define

$$v = (1 + \tau/\alpha)^{-(\sigma-1)} (1+t)^{-\sigma}$$

Then import share is  $v/(1+v)$

For zero transport costs and free trade,  $v=1/2$

The higher either tc or tariffs, the lower is import share

Surprise insight: real transport costs  $\tau/\alpha$  only fall if technological progress in transportation faster than progress in rest of economy

TABLE III  
EXPLAINING THE RISE AND FALL OF WORLD TRADE, 1870–1939

	1870	1900	1913	1929	1938
<i>(a) Actual levels</i>					
(1) World trade/GDP (percent)	11	19	22	15	9
(2) World trade (exports + imports, million 1913 US\$)	7,899	23,932	39,762	35,613	24,774
(3) World GDP (million 1913 US\$)	71,020	129,032	178,280	240,678	269,299
(4) Gold standard (trade weighted share, up to 56 countries)	13	81	88	89	25
(5) Tariffs (trade weighted share, 35 countries)	12	13	11	13	20
(6) Transport Costs (1913 = 100, British real index)	125	112	100	116	138

So protectionism becomes a major factor only after 1929

# Why did real transportation costs rise after 1913?

Key point: trend depends on relative productivity growth in transport and other activities

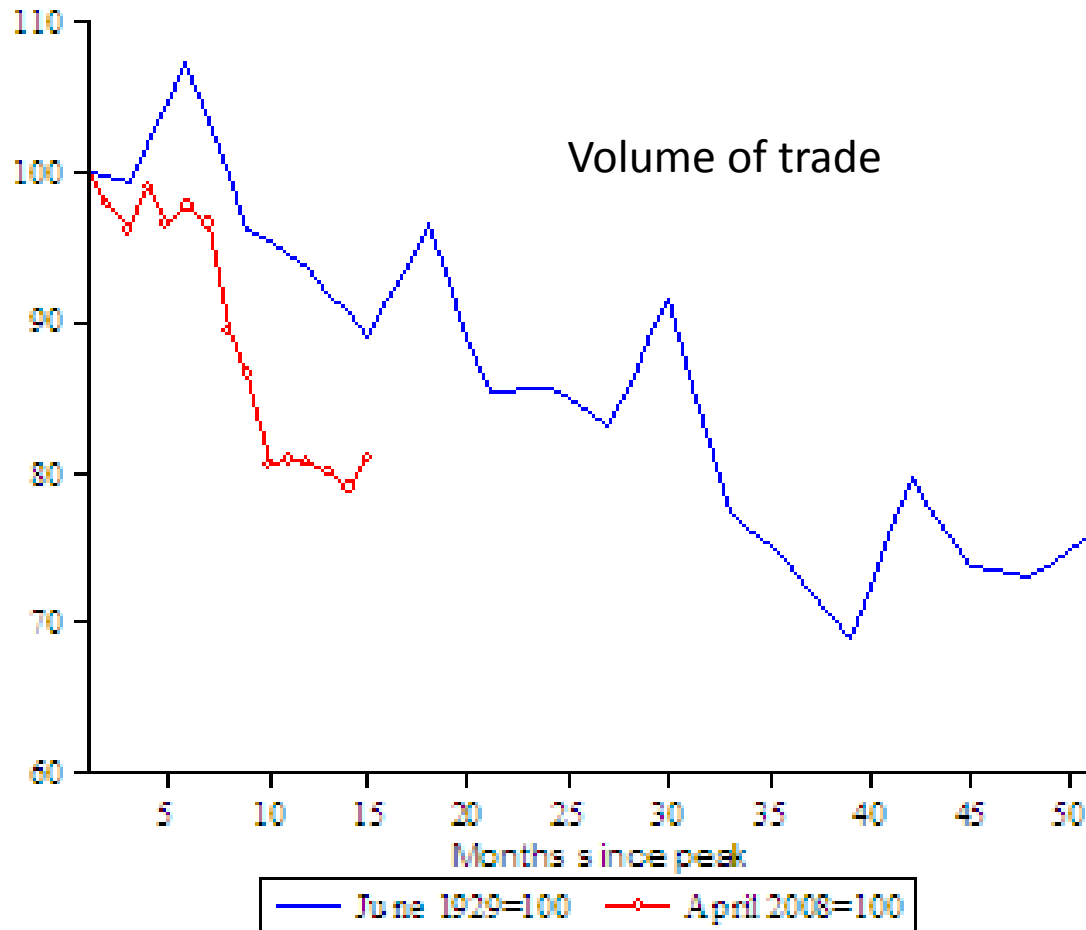
A crude hypothesis: driving technologies of economic growth

1860s to WWI: Steam! (and canals). This was huge for transportation, important but not as huge for manufacturing, not so big for agriculture/services

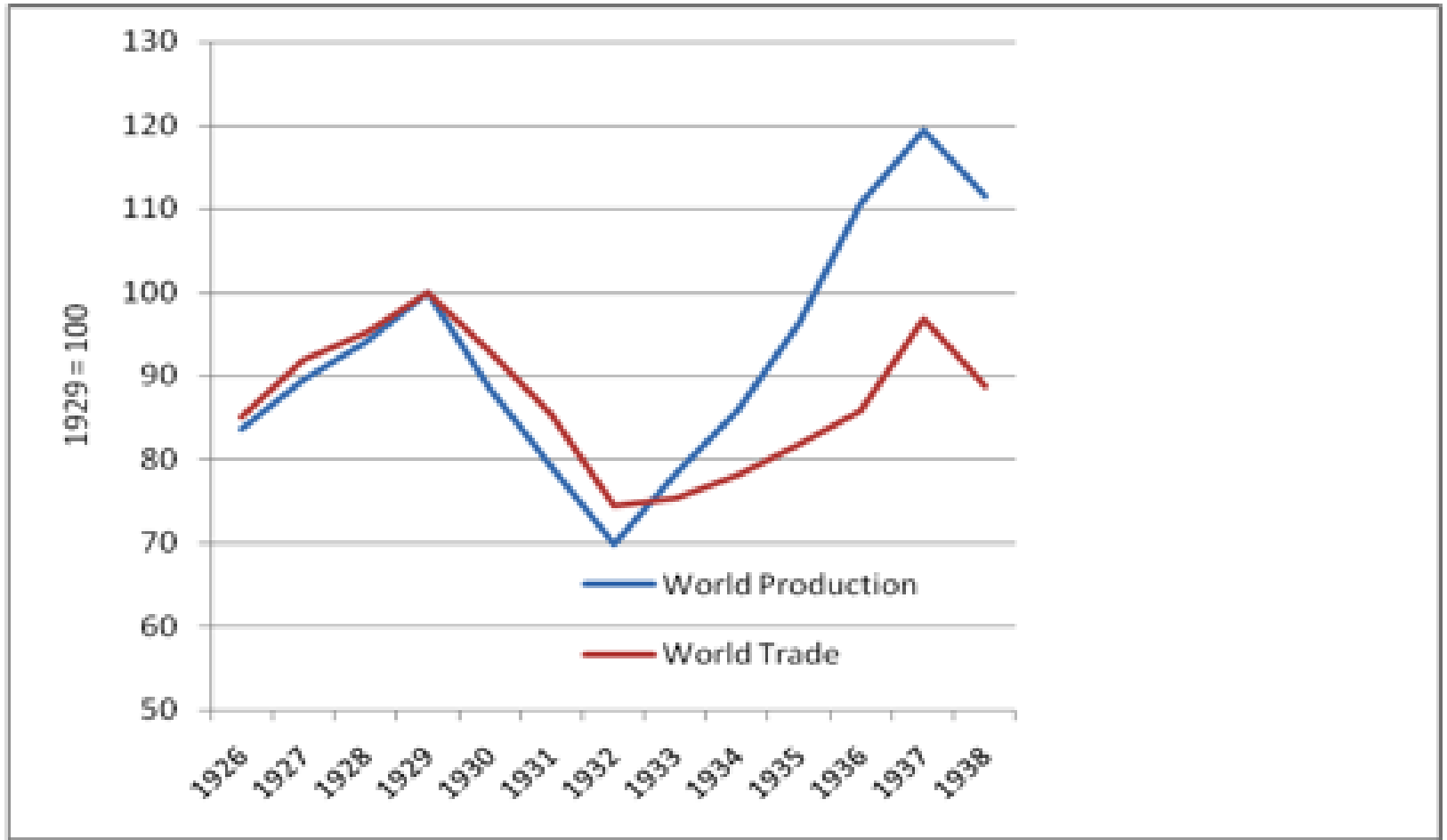
20s and 30s: electricity and internal combustion; huge for manufacturing, agriculture, not so big for long-run (as opposed to local) transport

# The Great Depression:

Big contraction in trade, but that doesn't necessarily indict protectionism ...



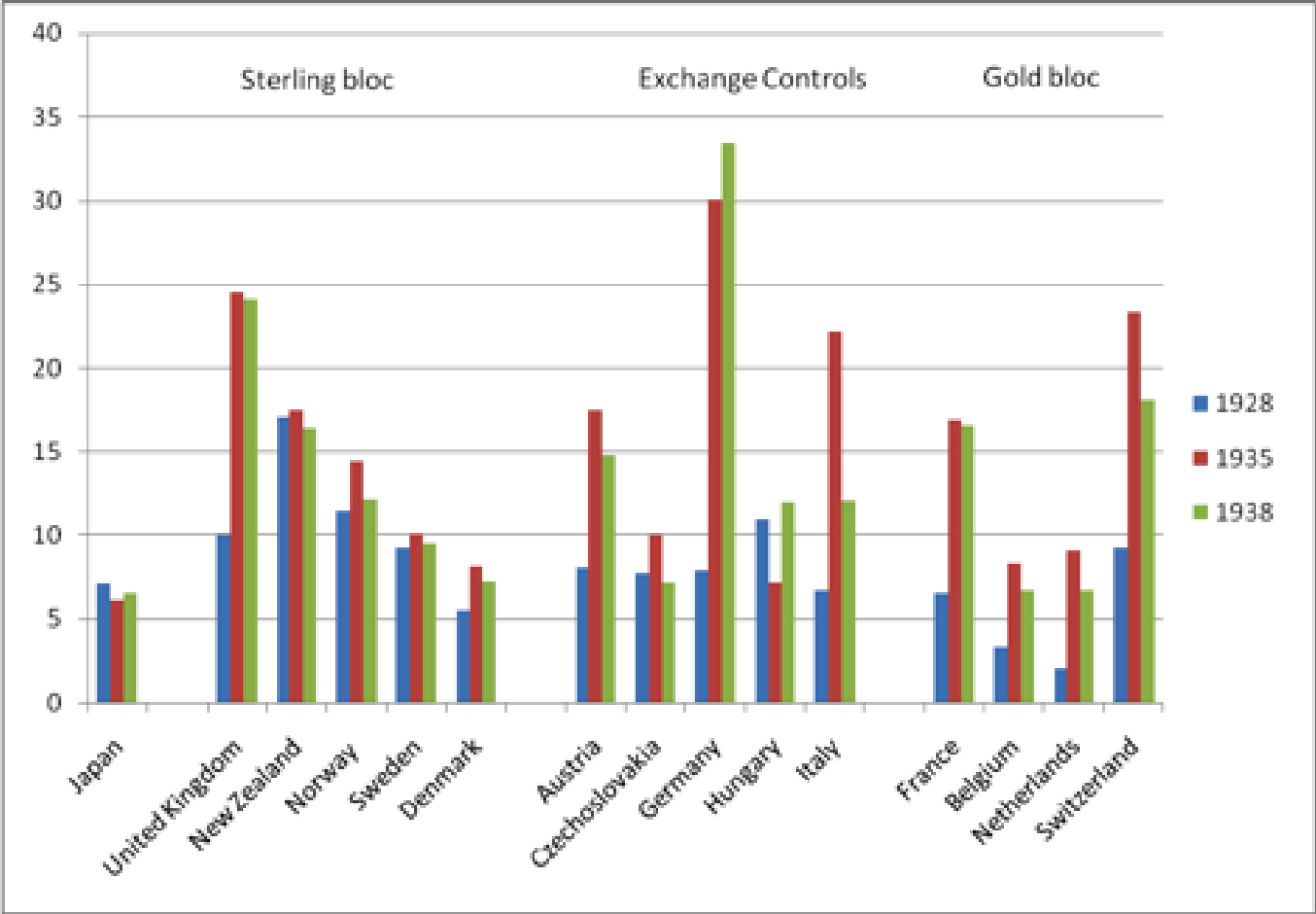
But when output recovered, trade didn't



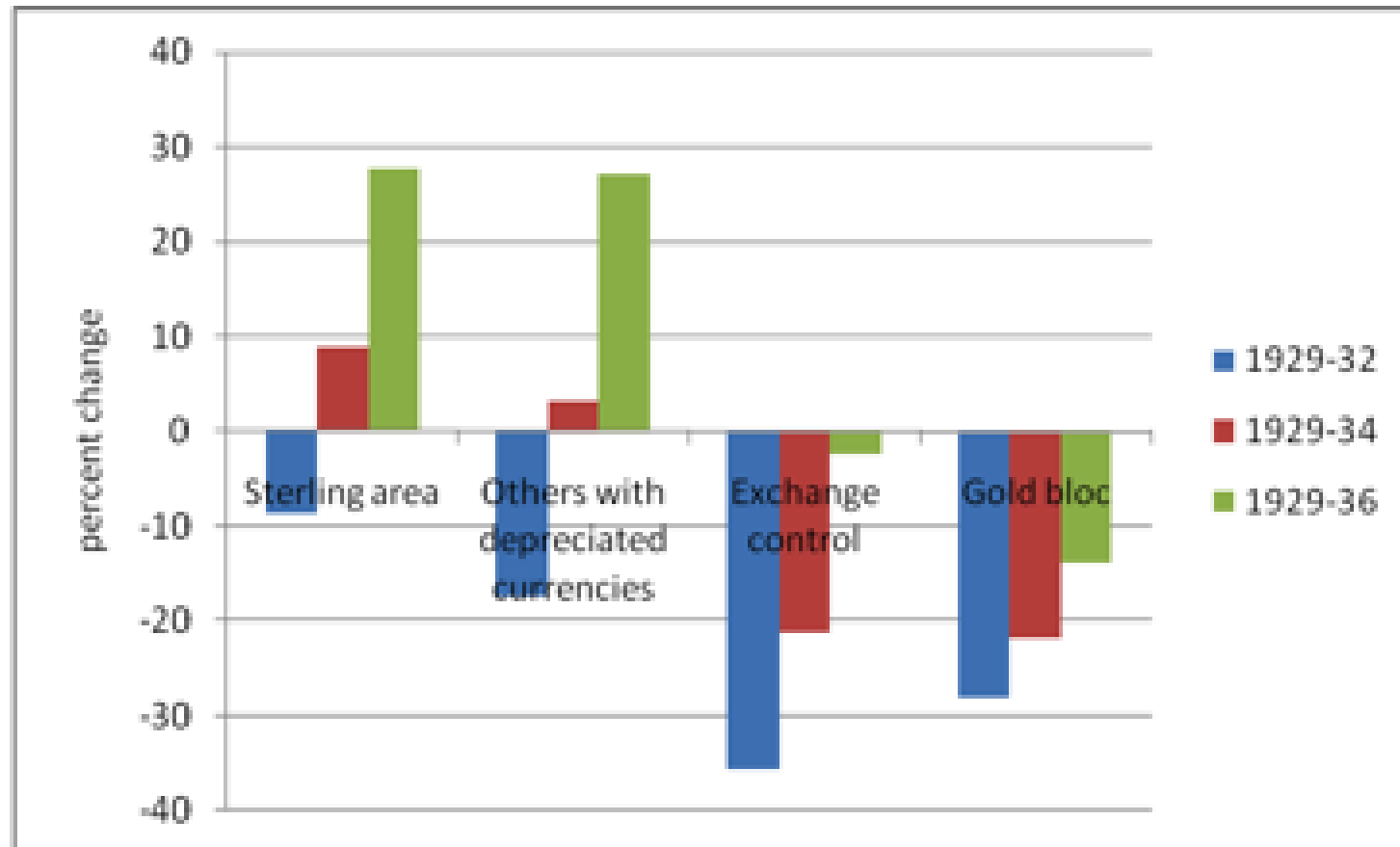


# Protectionism varied with exchange rate regime

## Tariff rates



Countries with fixed exchange rates suffered more ...  
(industrial production)





### Tariffs as % of dutiable imports

