The Great Depression

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GDP per capita

Real GDP per capita is measured using US$, inflation adjusted at prices of 2011. Multiple benchmarks allow cross-country income comparisons.

United States

$10,000
$1,000

1820 1850 1900 1950 2000 2016

Source: Maddison Project Database (2018)

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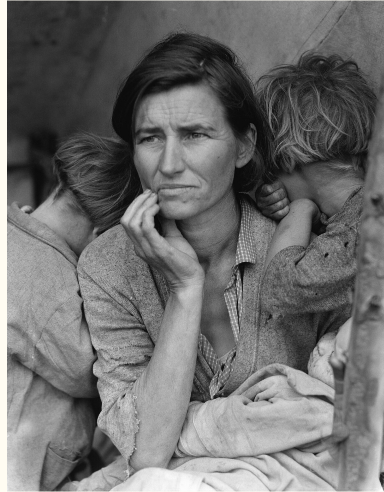
The Great Depression



Background: The Roaring 1920s

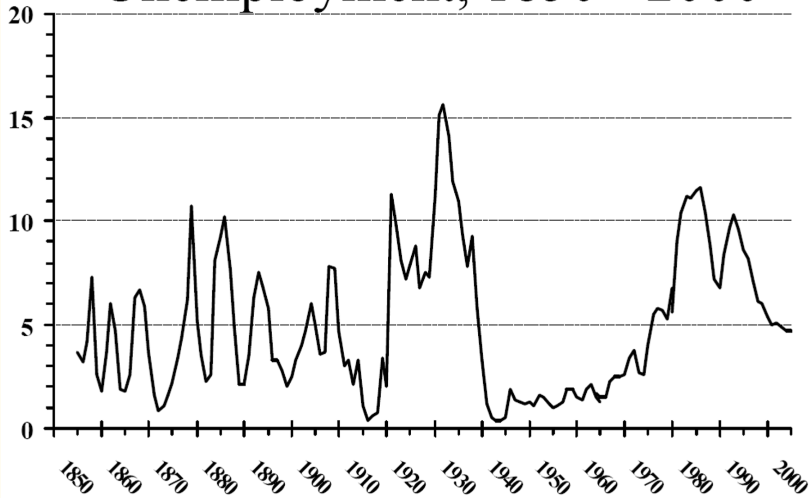
- The US experienced a sharp recession in 1920-1921.
- Economic recovery was rapid.
- Between 1919-1929, the US economy grew by 2.41% per year.

Background: The Gold Standard

- After WWI, a version of the gold standard was restored.
- Classical gold standard relied on international cooperation and the Bank of England as lender of last resort.
- Britain only rejoined the Gold Standard in 1925.
- BoE was unable to act as lender of last resort; this role fell to the Federal Reserve.
- Federal Reserve and French central bank accumulated more than 60% of the world's gold supplies in the 1920s.

Background: The Wall Street Crash

- Signs of a recession in 1928.
- March 25: Federal Reserve warns of "excessive speculation."
- Stocks slide between March and May, then rise again in June-July.
- The collapse begins on September 3, 1929.
- Black Thursday on October 24: the market lost 11% of its value, followed by Black Monday and Black Tuesday.


Unemployment, 1850 - 2000
20
15
10
5
0
1850
1860
1870
1880
1890
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000

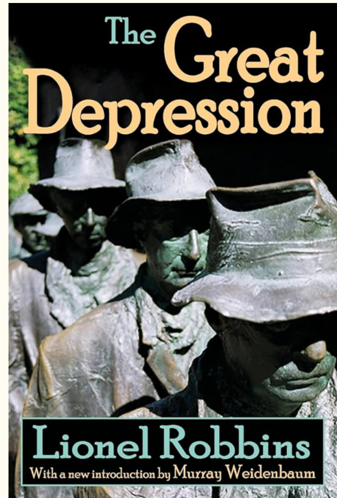
Different Explanations of the Great Depression

- Four classic explanations:
  - Austrian
  - Marxist
  - Keynesian
  - Monetarist
- Since the 1990s, explanations often build on Monetarist insights:
  - Emphasis on the gold standard and failure of the banking system.

Austrian Explanations

- Many contemporaries viewed the downturn as the result of an asset price bubble in America in the late 1920s.
- Lionel Robbins (1936):

  "We have seen how an inflation which operates through the mechanism of the money market may breed errors of anticipation among the capital producing industries which lead first to the phenomenon of a boom and then, when these errors are revealed, to a consequential collapse."



Austrian Explanations

- Associated with F.A. Hayek and Joseph Schumpeter.
- Some modern evidence for capital misallocation due to easy credit in the 1920s.
- But nothing that indicates the scale of the corresponding recession.
- The effects of the credit boom were drowned by the much larger collapse in the money supply. Modern research however finds some support for the view that this caused the downturn in 1929-1930.

Was Hayek a liquidationalist?

- J. Bradford DeLong:

  "In adopting such 'liquidationist' policies, the Federal Reserve was merely following the recommendations provided by an economic theory of depressions that was in fact common before the Keynesian Revolution and was held by economists like Friedrich Hayek, Lionel Robbins, and Joseph Schumpeter"

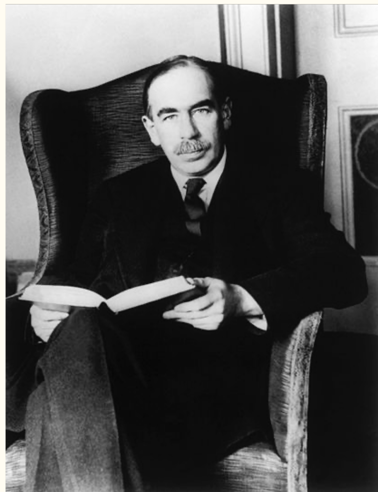
- Contra Friedman and DeLong:
  - Hayek's 1931 book (and Lionel Robbins' 1934 book) could not have influenced Hoover administration policy 1929-31
  - No evidence that Hayek's theory, or his anti-cheap-money statements, influenced the Fed.
  - Hayek's theoretical monetary policy norm advised policy-makers: do not "let the bottom drop out of the world," but stabilize nominal income. But he failed to speak out at that time.
  - The Fed's acquiescence in deflation instead stemmed from the Real Bills Doctrine (we'll get to that).

The Great Depression as a Crisis of Capitalism

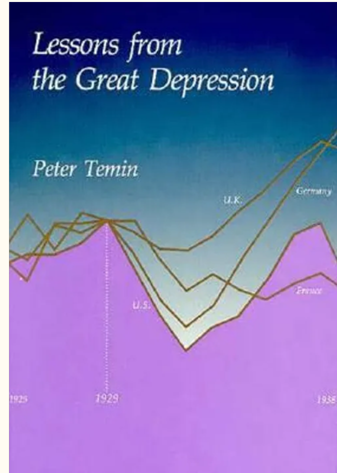
- Marxist view:
  - Predicted crisis due to declining profits.
  - Overproduction in the 1920s as consumers reached limits of demand for durable goods.
  - High inequality exacerbated underconsumption.

Keynesian Causes of the Great Depression

- John Maynard Keynes in the General Theory (1936) argued that financial markets are subject to "animal spirts."
- Financial markets are subject to a "beauty contest" and hence not rational.
- The Wall Street Crash brought about a crisis of confidence.
- Collapse in demand generates a negative self-fullfilling economic collapse via the multiplier.



"Consumption was unusually low in 1930, even after correcting for the fall in income. This can be related in large part to the fall in the stock market, both because of the effect of the stock market crash on wealth and its effect on the liquidity of consumers . . . Expectations became more and more pessimistic starting in late 1930, whether originating from monetary or other causes. And problems in the housing and foreign exchange markets may have added to the decline.



The Fall in Consumption and the Role of Uncertainty

- Temin (1976) estimated a consumption function and found that there was an autonomous fall in consumption in 1929-1930.
- Romer (1990) finds evidence for role of uncertainty on the purchasing on consumer durables.
- But the central cause of the Great Depression – if no the initial downturn – was the collapse in the money supply

TABLE I
CONSUMER BEHAVIOR FOLLOWING THE GREAT CRASH

	Cumulative percentage change in real seasonally adjusted retail sales					
	Oct. 1929	Nov. 1929	Dec. 1929	Jan. 1930	Feb. 1930	Mar. 1930
Automobile registrations	−5.5	−14.1	−18.9	−23.7	−11.7	−20.4
Department store sales	−8.4	−10.1	−4.5	−15.8	−11.7	−16.4
Mail-order sales	−4.1	−7.4	3.4	−20.6	−25.6	−35.8
Ten-cent store sales	−0.3	1.7	−2.5	−2.7	−0.1	−7.4
Grocery store sales	5.9	3.1	3.4	NA	NA	NA

	Percentage change in real output of consumer goods		
	1928	1929	1930
Durable goods	7.5	0.5	−32.4
Semidurable goods	4.1	1.8	−13.8
Perishable goods	1.6	4.3	−1.6

Monetarist Explanations

- The Monetarists position argues that the Federal Reserve pursued contractor policies after 1928.
- These policies exacerbated the stock market crash, induced bank failure, and propagated the depression internationally.
- But why did they do it?
- Milton Friedman put emphasis on the death of Benjamin Strong in 1928.

The Real Bills Doctrine

- Differentiated between money used for speculation and real economic activity.
- The Fed started the Direct Pressure Initiative in 1929 which required bankers seeking Federal Reserve assistance to swear never to have made speculative loans.
- Flaws:

  "There is no economic theory that supports the real bills doctrine... From the standpoint of currently accepted monetary theory, policy should focus on stabilizing aggregate demand and/or inflation, not specific types of credit."
  (Calomiris, 2013)

The Real Bills Doctrine

"There is no economic theory that supports the real bills doctrine, either as a theory of banking or as a theory of monetary policy. From the standpoint of banking theory, there is no obvious reason to believe that banks should be encouraged to engage solely or mainly in financing trade, rather than industrial finance, consumer finance, securities finance, or real estate finance; all credit supports economic activity and no type of credit is inherently more socially desirable than another. From the standpoint of currently accepted monetary theory, policy should focus on the targeting of interest rates, exchange rates, inflation, credit aggregates, and monetary aggregates, out of a desire to stabilize aggregate demand and/or inflation, and there is no recognized special connection between trade credit, per se, and aggregate demand or inflation." (Calomiris, 2013)

Monetary Contraction Begins in 1928

Table 2

Alternative measures of U.S. monetary policy.

Year	Rate of growth of prices (CPI) (1)[a]	Rate of growth of high-powered money (2)[b]	Rate of growth of nominal money (M1) (3)[c]	Rate of growth of nominal money (M2) (4)[d]	Rate of growth of real money (M1/CPI) (5)[e]
1919	+14.1%	+10.1%	+15.7%	+16.0%	+1.6%
1920	+14.7%	+10.2%	+9.8%	+13.5%	[−4.9%]
1921	[−11.5%]	[−9.7%]	[−11.9%]	[−7.5%]	[−0.4%]
1922	[−6.5%]	[−3.5%]	+3.1%	+4.4%	+9.6%
1923	+1.8%	+5.6%	+4.7%	+7.9%	+2.9%
1924	+0.3%	+2.5%	+2.5%	+4.3%	+2.2%
1925	+2.6%	+1.4%	+8.8%	+9.3%	+6.2%
1926	+0.8%	+2.5%	+2.8%	+4.3%	+2.0%
1927	[−1.9%]	+1.5%	[−1.1%]	[+1.9%]	[+0.8%]
1928	[−1.2%]	[−1.2%]	[−0.1%]	[+3.3%]	+1.1%
1929	[0.0%]	[−0.7%]	[+1.6%]	[+0.1%]	+1.6%
1930	[−2.6%]	[−2.8%]	[−3.5%]	[−1.3%]	[−0.9%]
1931	[−9.4%]	+5.5%	[−5.7%]	[−6.2%]	+3.7%
1932	[−10.7%]	+6.4%	[−15.5%]	[−21.1%]	[−4.8%]
1933	[−5.5%]	+2.0%	[−6.1%]	[−13.6%]	[−0.6%]
1934	+3.4%	+15.3%	+9.1%	+9.5%	+5.7%
1935	+2.6%	+14.4%	+17.9%	+14.0%	+15.3%
1936	+1.0%	+9.0%	+16.2%	+13.0%	+15.2%
1937	+3.5%	+14.2%	+3.2%	+4.2%	[−0.3%]
1938	[−1.8%]	+8.0%	[−4.7%]	[−2.5%]	[−2.9%]
1939	[−1.5%]	+16.9%	+11.1%	+7.8%	+12.6%

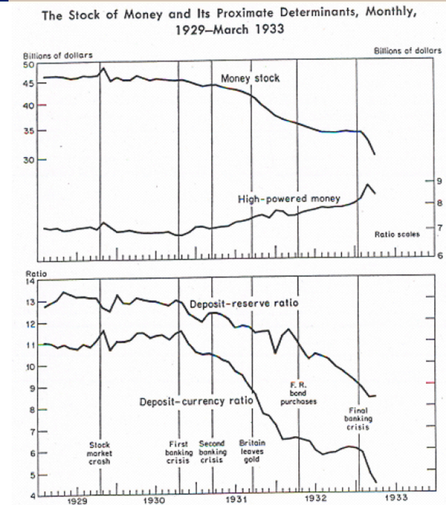
Keynesian and Monetarist Views

1. Hard-line Monetarist: monetary policy is the initial primary cause e.g. Schwartz (1981)
2. Soft-line Monetarist: initial shock may have been a combination of monetary and non-monetary factors e.g. Friedman and Schwartz (1963)

"a series of negative shocks, monetary in origin, reduced real output and the demand for labor and shifted the demand for securities to short-term instruments and high grade, long-term securities. Destroy a bank system, and the real economy will grind to a halt. There are no unexplained changes in spending that serve as a deus ex machina."

Possible Causes

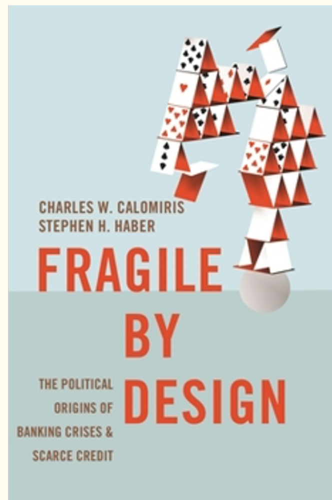
- Death of Benjamin Strong in 1928 but he was a believer in the GS.
- F&S argue that Fed policy deteriorated after 1929 due to a shift in power within the Fed System.
- Maintenance of Gold Standard was a drain on external reserves.
- The deposit to currency ratio fell making banks more vulnerable to runs.
- The Fed failed to act as a lender of last resort. But the existence of a Fed prevented a coordinated response from the bigger bankers themselves.



Source: Freidman and Schwartz, *Monetary History*, p. 333.

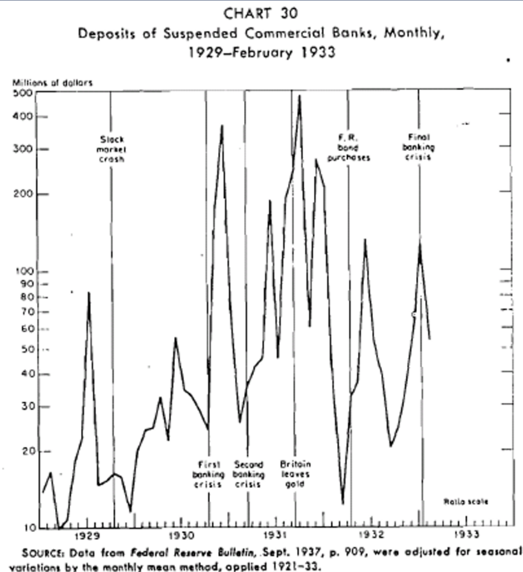
Fragile by Design

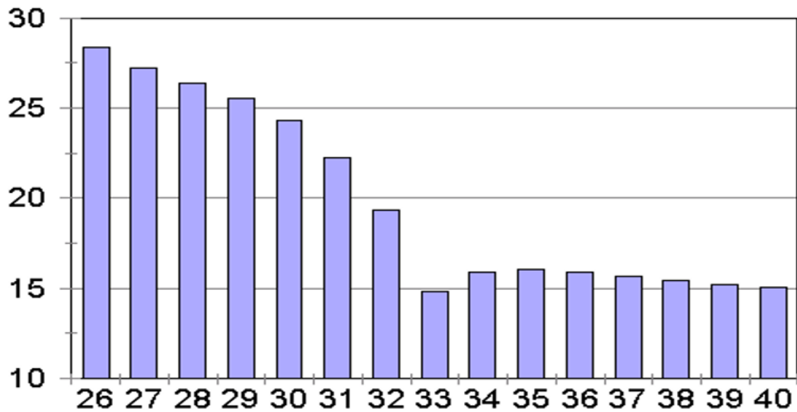
- Banking regulations keep banks small.
- Unit banking. Nationwide branch banking was not permitted until 1994.
- Unit banking meant banks were less diversified and more exposed to location-specific shocks.
- Unit banks also could not coordinate in response to a regional or national shock..
- No deposit insurance so borrowers had incentives to run on the bank if they felt the bank might fail.



Bank Failure and Credit Rationing

- 1st Banking Crisis: October 1930
- Existence of Federal Reserve prevented a concerted restriction by larger banks.
- 2nd Banking Crisis: March 1931
- Failure of Kreditanstalt frozen foreign reserves.
- Depositors converted deposits into currency.
- 3rd Banking Crisis: January 1931




Number of Banks
1000's
30
25
20
15
10
26
27
28
29
30
31
32
33
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35
36
37
38
39
40

The Financial Channel

- Debt deflation channel (Fisher 1933).
- Falling asset and commodity prices make it harder for debts to repay a loan (fixed in nominal terms).
- This might just be a redistribution between borrowers and lenders.
- But in an environment of asymmetric information, a borrower's net worth determines the agency of lending.
- An severe decrease in borrower's net worth can make it impossible to access credit. This can prevent them expanding their business or cause them to default.
- If the latter occurs, then banks may also fail.

The Role of the Gold Standard

- Temin (1989): the GS as a regime was the mechanism caused tight monetary policy but the initial shock was WW1.
- Friedman Schwartz (1963):

  'the worldwide scope of the contraction once it got under way does not mean that it did not originate in the United States . . . The international effects were severe and the transmission rapid, not only because the gold-exchange standard had rendered the international finance system more vulnerable to disturbances, but also because the United States did not follow gold-standard rules' (360)

The Role of the Gold Standard

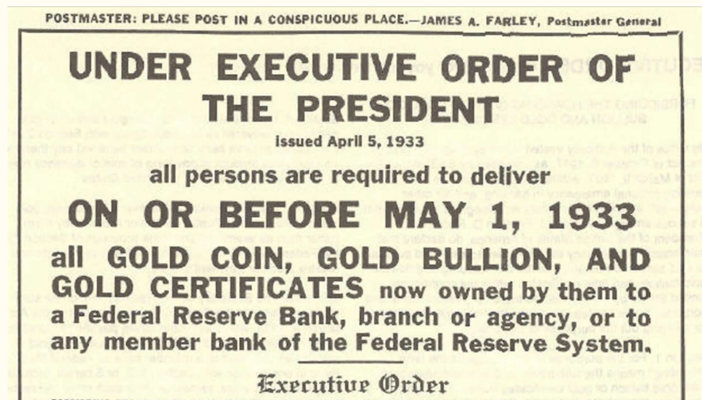
- The gold standard became a constraint on policy.
- Note capital was highly mobile so deflation was exported rapidly.
- After 1931 recovery only became possible through devaluation.

Did the New Deal Work?

- Conventional View emphasizes the role of the New Deal in expansionary fiscal policy to increase aggregate demand.
- However, in reality expansionary fiscal policy was modest.

Did the New Deal Work?

- Initial New Deal policies were very successful in stabilizing the financial system.
- By going off the Gold Standard, the Roosevelt administration were able to pursue expansionary monetary policy.
- Monthly industrial production rose 57% between March and July 1933.



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UNDER EXECUTIVE ORDER OF THE PRESIDENT

Issued April 5, 1933

all persons are required to deliver

ON OR BEFORE MAY 1, 1933

all GOLD COIN, GOLD BULLION, AND GOLD CERTIFICATES now owned by them to a Federal Reserve Bank, branch or agency, or to any member bank of the Federal Reserve System.

Executive Order

The Downside of the New Deal

- Roosevelt sought to increase prices and wages by encouraging cartels.
- He believed that excess competition was the cause of the Great Depression.
- Limiting competition and improving workers bargaining power.
- First phase was the NIRA (1933-1935). Second phase was the NLRA
- As a result, Cole and Ohanian (2004) argue private investment remained low and output remained below trend until 1941.
- By the end of the 1930s, Roosevelt had begun to reverse some of this pro-cartelization policies and the DOJ had resumed prosecuted anti-trust cases.

Table 1. Selected Acts of Congress Substantially Attenuating or Threatening Private Property Rights, 1933–1940

1933
Agricultural Adjustment Act
National Industrial Recovery Act
Emergency Banking Relief Act
Banking Act of 1933
Federal Securities Act
Tennessee Valley Authority Act
Gold Repeal Joint Resolution
Farm Credit Act
Emergency Railroad Transport Act
Emergency Farm Mortgage Act
Home Owners Loan Corporation Act

1934
Securities Exchange Act
Gold Reserve Act
Communications Act
Railway Labor Act

1935
Bituminous Coal Stabilization Act
Connally ("hot oil") Act
Revenue Act of 1935
National Labor Relations Act
Social Security Act
Public Utilities Holding Company Act
Banking Act of 1935
Emergency Relief Appropriations Act
Farm Mortgage Moratorium Act

1936
Soil Conservation & Domestic Allotment Act
Federal Anti-Price Discrimination Act
Revenue Act of 1936

1937
Bituminous Coal Act
Revenue Act of 1937
National Housing Act
Enabling (Miller-Tydings) Act

1938
Agricultural Adjustment Act
Fair Labor Standards Act
Civil Aeronautics Act
Food, Drug & Cosmetic Act

1939
Administrative Reorganization Act

1940
Investment Company Act
Revenue Act of 1940
Second Revenue Act of 1940

But in the US, Private Investment only fully recovered in 1946

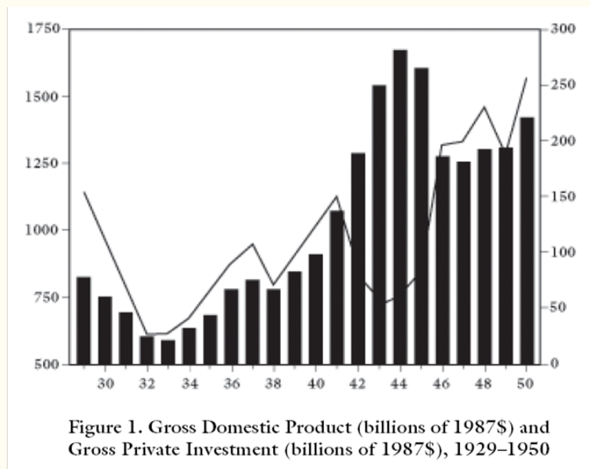


Figure 1. Gross Domestic Product (billions of 1987$) and Gross Private Investment (billions of 1987$), 1929–1950

The Weak Recovery

- New Deal policies significantly raised wages and prices.
- Farming was not covered by the NIRA.
- Relative prices between covered and uncovered industries were distorted.
- Cole and Ohanian (2004) formalize this in a model and calibrate to show that it can account for the slow recovery after 1933.

TABLE 1
CONTINUATION OF THE DEPRESSION (1929 = 100)

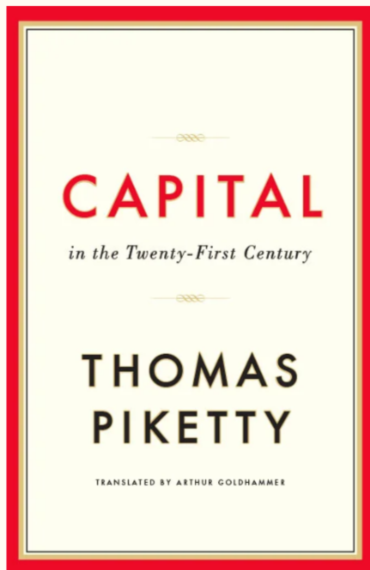
Year	GNP	Consumption	Investment	TFP	Manufacturing Wage	Private Hours Worked
1934	64.4	71.9	27.9	92.6	111.1	68.7
1935	67.9	72.9	41.7	96.6	111.2	71.4
1936	74.7	76.7	52.6	99.9	110.5	75.8
1937	75.7	76.9	59.5	100.5	117.1	79.5
1938	70.2	73.9	38.6	100.3	122.2	71.7
1939	73.2	74.6	49.0	103.1	121.8	74.4

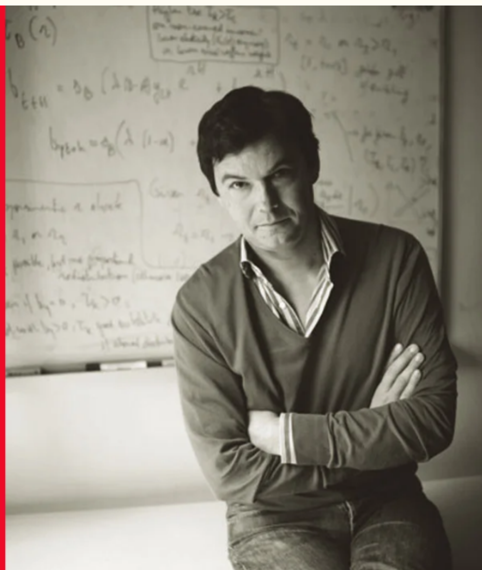
TABLE 2
INDEXED REAL WAGES RELATIVE TO TREND

Sector	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
Manufacturing	101.7	106.3	105.1	102.9	110.8	112.0	111.6	118.9	122.9	123.6
Bituminous coal	101.2	104.8	91.4	90.4	110.1	119.1	125.3	127.8	130.9	132.7
Anthracite coal	...	...	100.0	100.0	92.7	90.3	89.9	89.1	94.1	94.4
Petroleum	...	...	100.0	103.6	108.9	113.6	115.4	124.8	129.1	128.8
Farm	94.6	78.8	63.0	60.9	60.8	64.1	67.7	72.9	68.5	68.6

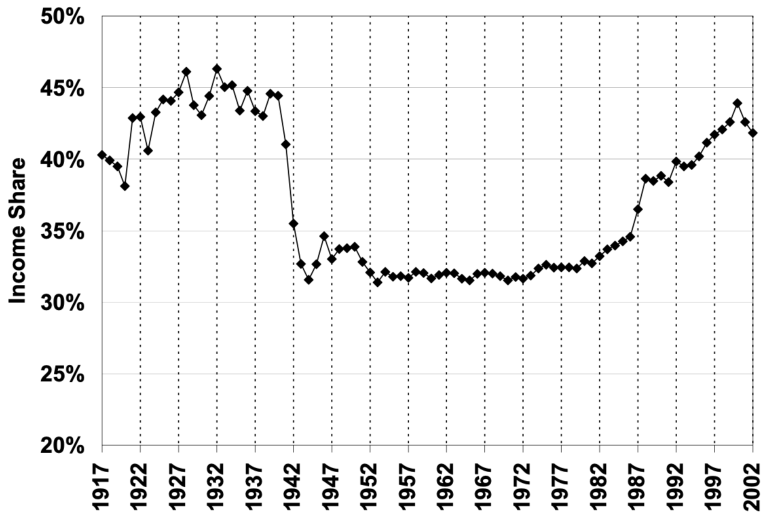
NOTE.—Wages are deflated by the GNP deflator and a 1.4 percent trend, which is the growth rate of manufacturing compensation in the postwar period. They are indexed to be 100 in 1929, except for the wages in anthracite and petroleum, which are indexed to 1932 = 100 because of data availability.

Thomas Piketty





Piketty and Saez on American Inequality in the 20th Century

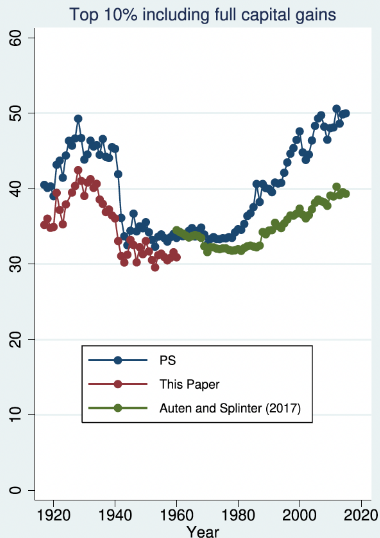


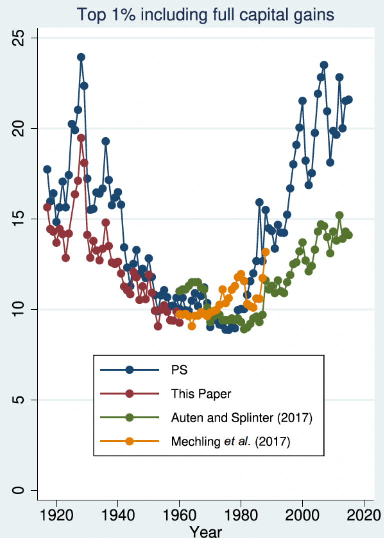
Piketty and Saez's interpretation of the data

1. WWI, the Great Depression, and WWII may explain the decline, but they do not explain why the decline persisted.

2. They cite the creation and development of the progressive (and very high) income tax as the "natural and realistic candidate."

Corrections to Piketty and Saez





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1. Piketty and Saez overstate inequality levels in this period.
2. The decline during World War II was smaller than depicted.
3. The Great Depression, rather than World War II, played the more significant role.

Some Potential Reinterpretations

1. Piketty and Saez overstate inequality levels in this period.
2. The decline during World War II was smaller than depicted.
3. The Great Depression, rather than World War II, likely played the more significant role.
4. The increase in income inequality after 1980 was more moderate than Piketty claimed.
5. The causal link between high progressive tax rates and low inequality is not obviously apparent.