



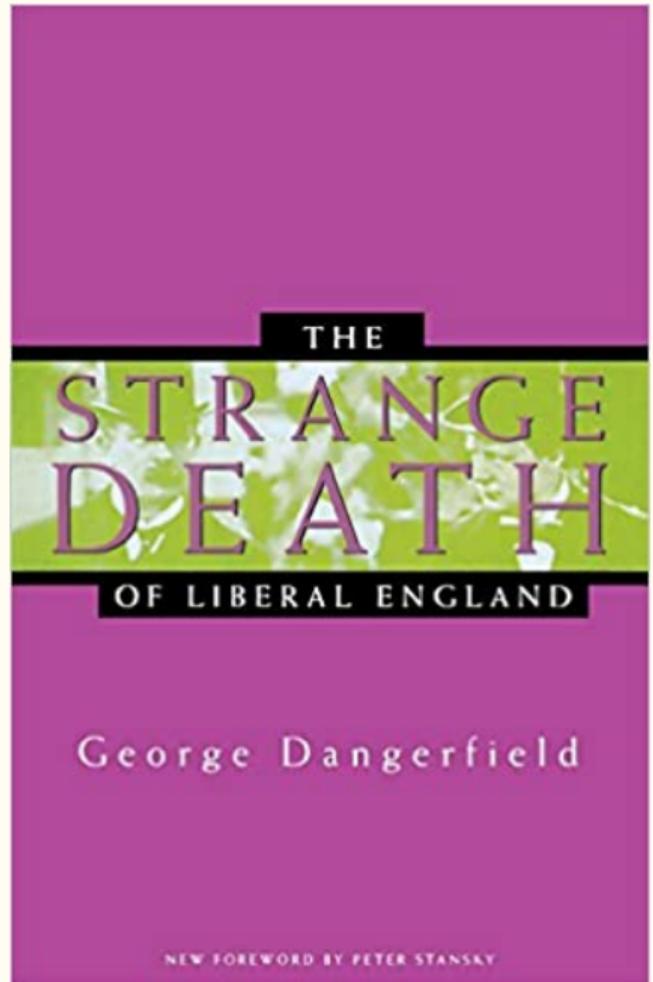
# The Strange Death of Liberal Europe

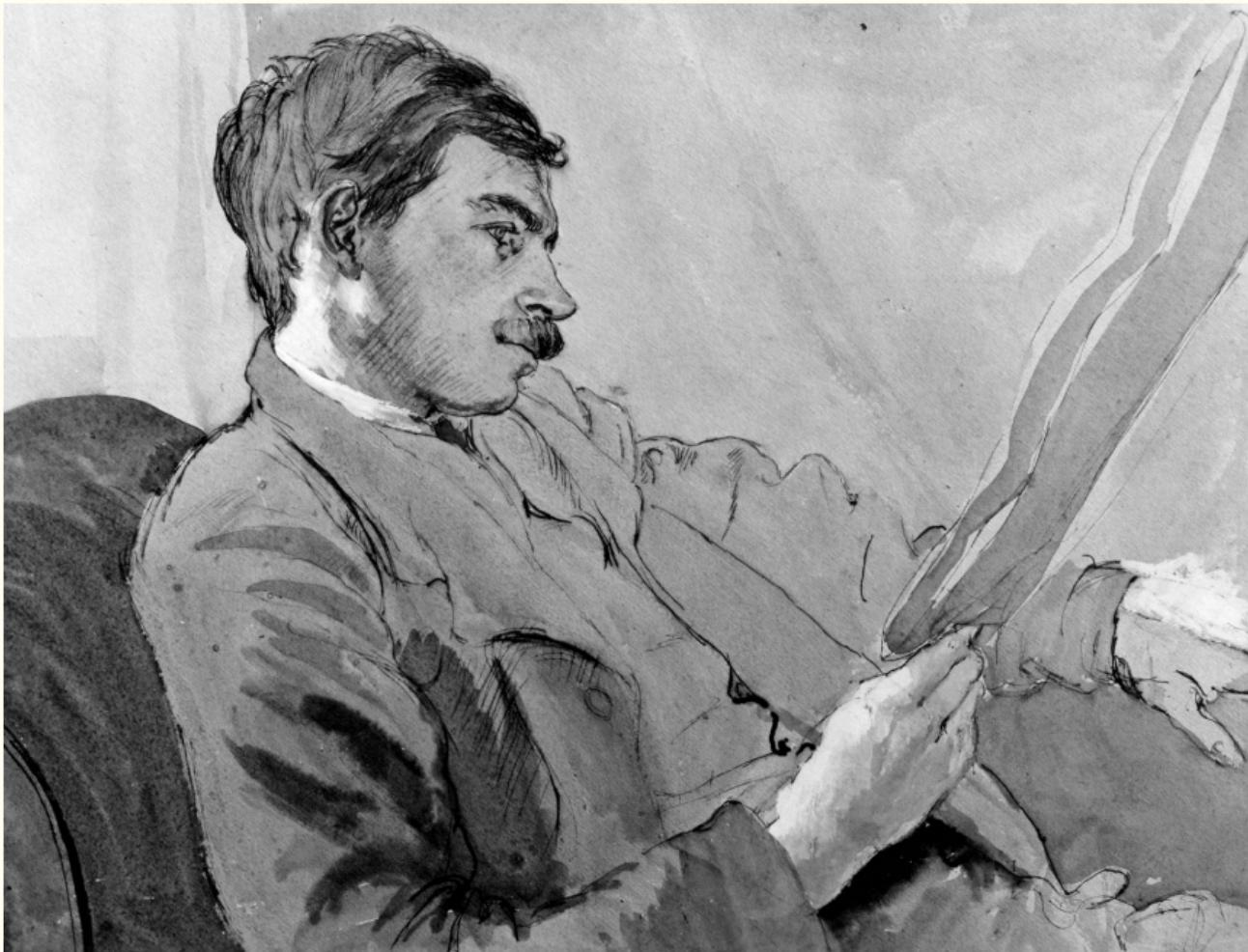
---

Jesús Fernández-Villaverde<sup>1</sup>

September 29, 2025

<sup>1</sup>University of Pennsylvania





*The*  
**Economic Consequences  
of the Peace**

**John Maynard Keynes**



## On Europe in 1914

“...for [the middle and upper classes] life offered, at a low cost and with the least trouble, conveniences, comforts, and amenities beyond the compass of the richest and most powerful monarchs of other ages. The inhabitant of London could order by telephone, sipping his morning tea in bed, the various products of the whole earth.... he could at the same moment and by the same means adventure his wealth in the natural resources and new enterprises of any quarter of the world, and share, without exertion or even trouble, in their prospective fruits and advantages.... He could secure... cheap and comfortable means of transit to any country or climate without passport or other formality....But, most important of all, he regarded this state of affairs as normal, certain, and permanent, except in the direction of further improvement, and any deviation from it as aberrant, scandalous, and avoidable.”

# A world without World War I

- Hitler dies as an unknown, failed painter in Munich.
- Lenin dies as a bitter, resentful exiled revolutionary in Switzerland.
- Stalin dies in his exile in Siberia after picking up a fight with a policeman.
- Winston Churchill dies as a minor British politician who could not follow the party's discipline and had colorful youth adventures in South Africa.
- This course is being taught at the University of Berlin, as [Die Grundlagen der Marktwirtschaft](#).



## World War I starts

---

- Balance of power: a Serbian kills an Austrian prince in Bosnia; Russia, unhappy, declares war on Germany, and, thus, to prevent Germany from defeating France, New Zealanders land in Turkey.
- Proximate cause was the killing of Archduke Franz Ferdinand of Austria in Sarajevo, Bosnia.
- Dispute with Serbia, escalation with Russia.
- Events swamp France and the United Kingdom.
- In particular, the liberal government of Asquith in the United Kingdom hesitates: Should it intervene or remain neutral?.
- Germany invades France through Belgium.
- The Coming of the war surprises many, including financial markets.

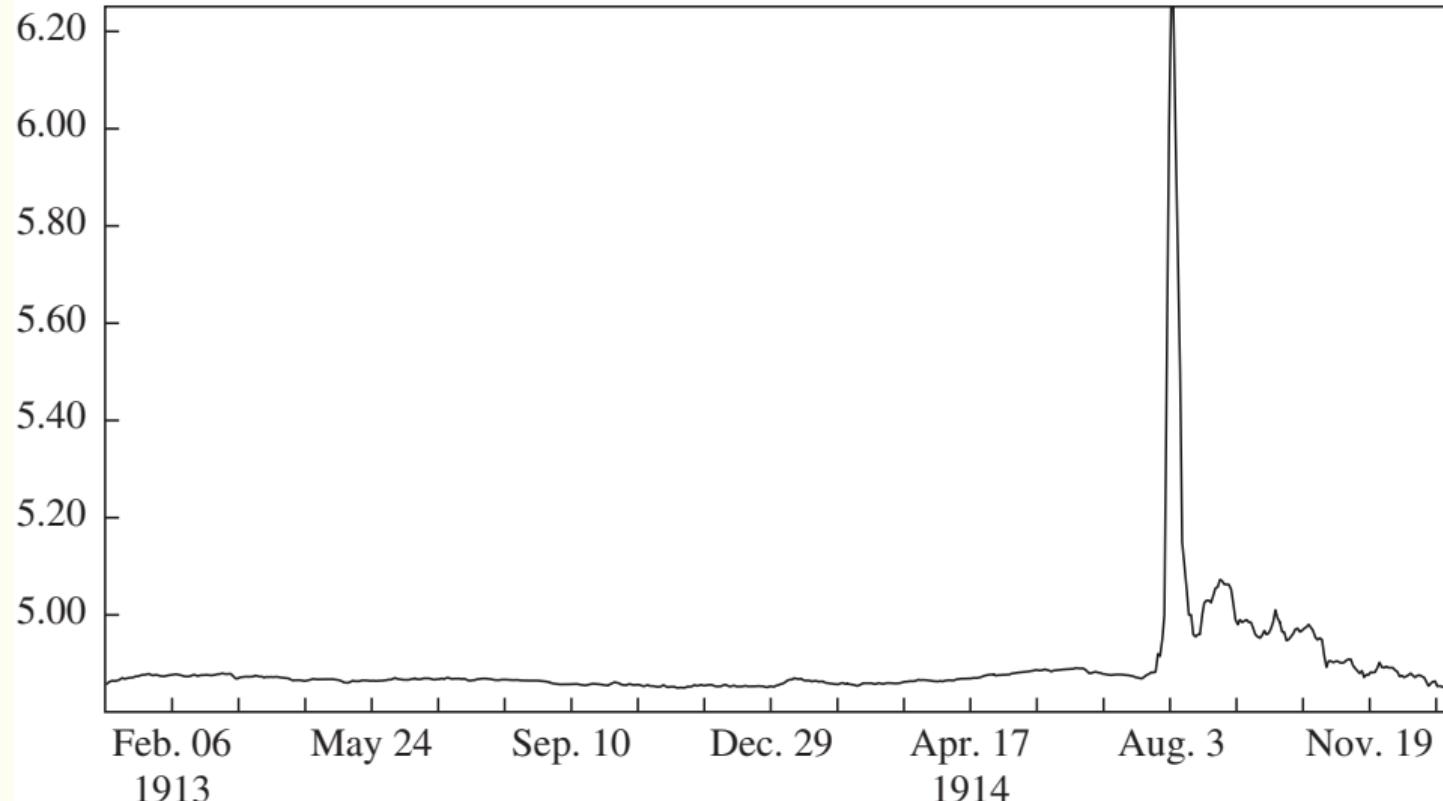
**Table 1.** Selected Financial Indicators, June–July 1914

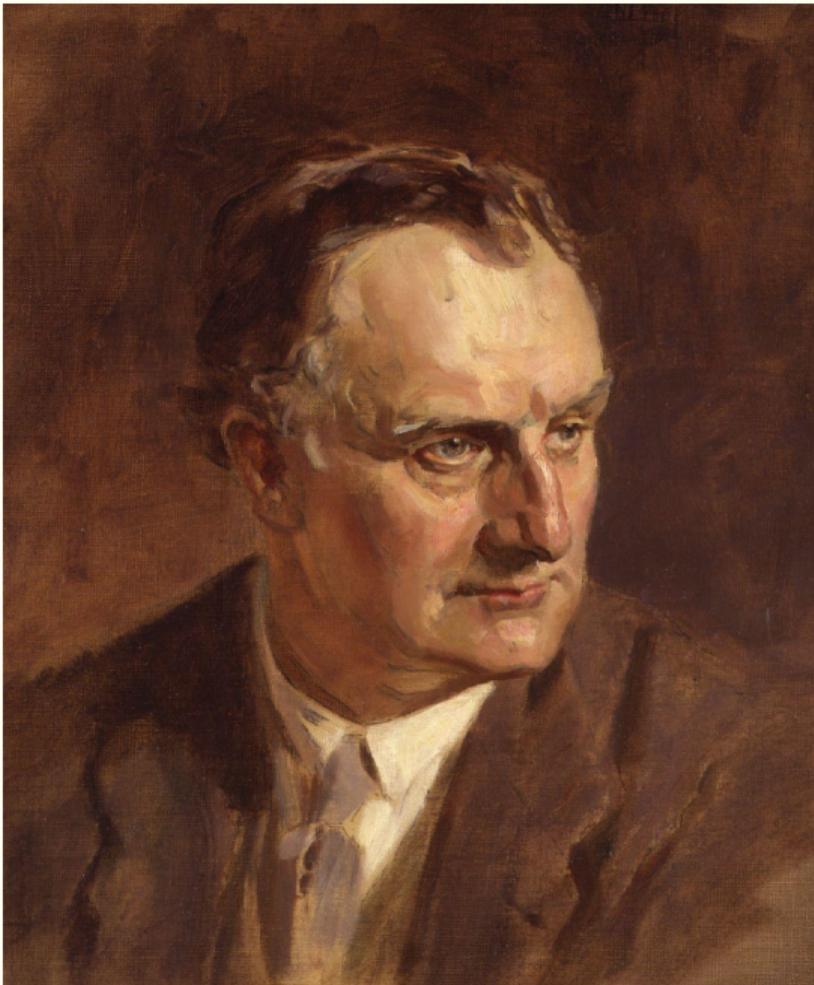
Date	Government bond yields (percent a year)					Interest on commercial bills, first- class (percent a year)	Three-month-forward exchange rates (currency units per pound sterling, January 7 = 100)				
	U.K., 2.5% consols	France, 3% rentes	Russia, 5% of 1822	Austria, 4%	Germany, 3% of 1891		Paris	St. Petersburg	Vienna	Berlin	New York
June 5	3.38	3.49	4.13	4.71	3.90	2½ <sub>16</sub>	100.01	101.23	100.10	101.21	100.41
June 12	3.39	3.49	4.13	4.82	3.90	2½	100.05	101.23	100.10	101.18	100.49
June 19	3.34	3.55	4.13	4.82	3.90	2½ <sub>16</sub>	100.01	101.23	100.10	101.14	100.54
June 26	3.33	3.59	4.13	4.71	3.90	2½ <sub>8</sub>	100.03	101.09	100.23	101.09	100.39
July 3	3.31	3.58	4.13	4.65	3.90	1¾ <sub>8</sub>	99.89	100.90	100.23	101.15	100.72
July 10	3.30	3.62	4.13	4.65	3.92	2	100.03	100.97	100.15	101.21	100.21
July 17	3.29	3.62	4.13	4.94	3.92	2½ <sub>8</sub>	99.95	100.40	100.15	101.16	100.21
July 24	3.33	3.69	4.13	5.00	3.95	2½ <sub>16</sub>	100.01	101.47	100.42	101.23	100.21
July 31	3.55	3.64	4.24	5.13	4.11	5	98.5	n.a.	n.a.	n.a.	n.a.

Source: *The Economist*.

**Figure 4.** U.K.-U.S. Exchange Rate, 1913–14

Dollars per pound sterling





### **John Alfred Spender, recalling a conversation with Sir Edward Grey.**

"I had two short talks with Grey during the "twelve days." I ran into him on the stairs of the Foreign Office on Saturday, August 1st [...] I saw him again late in the evening at his room at the Foreign Office on Monday, August 3rd, and it was to me he used the words which he has repeated in his book, "The lamps are going out all over Europe, and we shall not see them lit again in our lifetime." We were standing together at the window looking out into the sunset across St. James's Park, and the appearance of the first lights along the Mall suggested the thought."

## Historiography

- Historiographical discussion of the origins of the war has never ceased to be an intense area of debate.
- Key: Fritz Fisher's contribution looking at German archives.
- Important for us:
  1. Role of Germany.
  2. Role of economic motives.
- But, please, do not pay much attention to “History Channel” or “airport bookstore” arguments.
  1. **The Guns of August** by Barbara W. Tuchman is the worst of the crop, perhaps because it is so well written from a stylistic perspective.
  2. **Blackadder Goes Forth** is one of the best British comedies ever, but its relation to reality is “weak.”

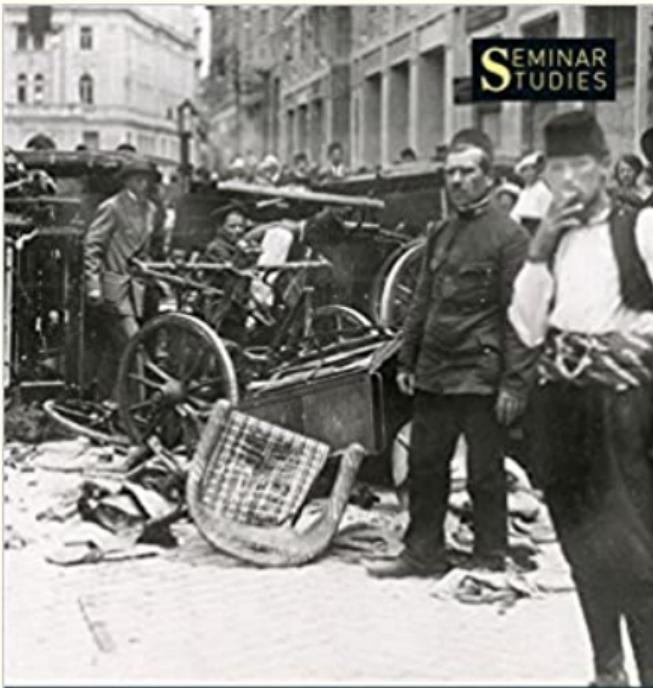
"A book at once scholarly and dramatic; without it neither the history of modern Germany nor the First World War can be adequately understood."  
—Fritz Stern, Columbia University

Fritz Fischer  
Germany's Aims in  
the First World War

with an Introduction by Hajo Holborn



SEMINAR  
STUDIES



# ORIGINS OF THE FIRST WORLD WAR

Fourth edition

GORDON MARTEL



BARBARA W. TUCHMAN'S GREAT WAR SERIES

# THE GUNS OF AUGUST

*The Outbreak of World War I*

WINNER  
*of the*  
PULITZER  
PRIZE



BARBARA W. TUCHMAN



## Structural reasons

---

- Any other cause might have delivered the same result: the Moroccan quarrel, the Bosnian crisis, and then again the Moroccan question.
- Germany rolled the dice one time too many.
- Austria-Hungary was reckless in its search to punish “Slavic” nationalism.
- Russia and Serbia, however, should also share an important part of the blame.
- Economic motives (imperialism, trade disputes, ...) are nowadays considered less important (some exceptions).
- Similarly, the Anglo-German naval arms race was effectively over by 1912.



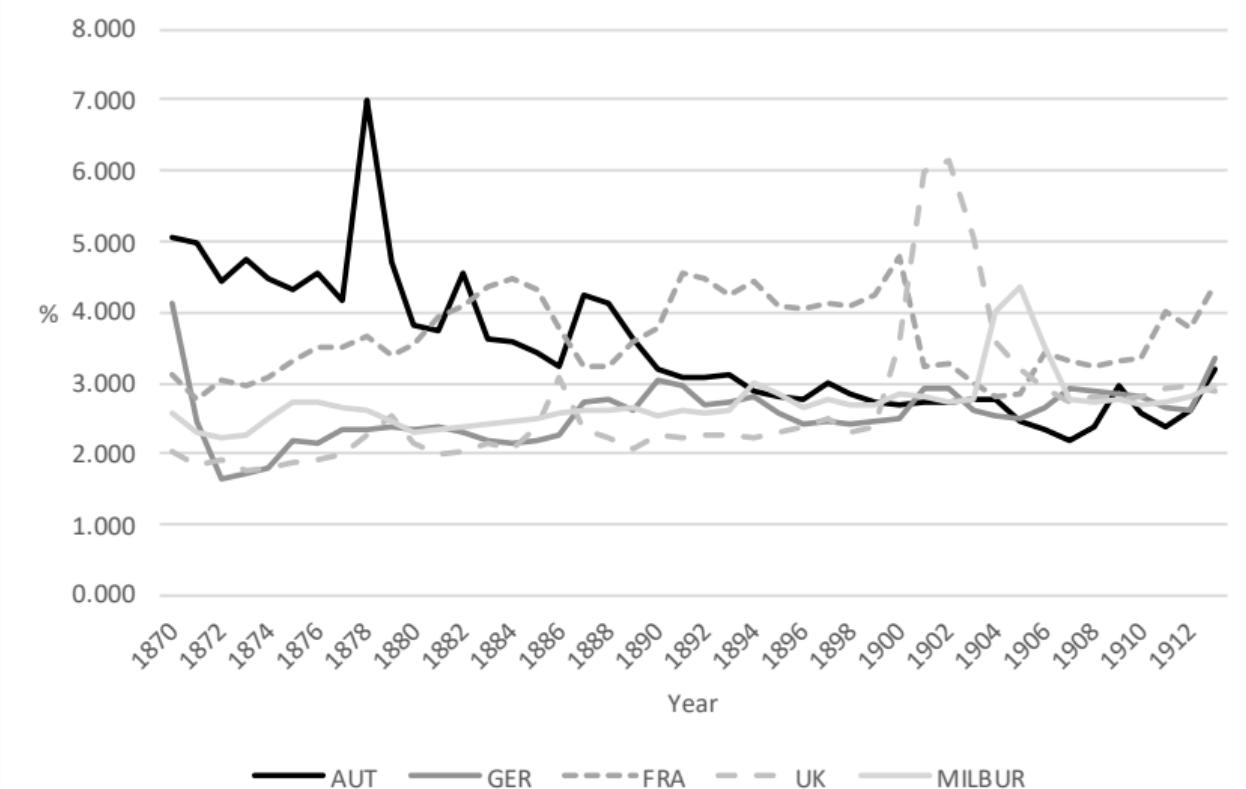


THE  
**RUSSIAN ORIGINS**  
OF THE FIRST WORLD WAR

SEAN McMEEKIN

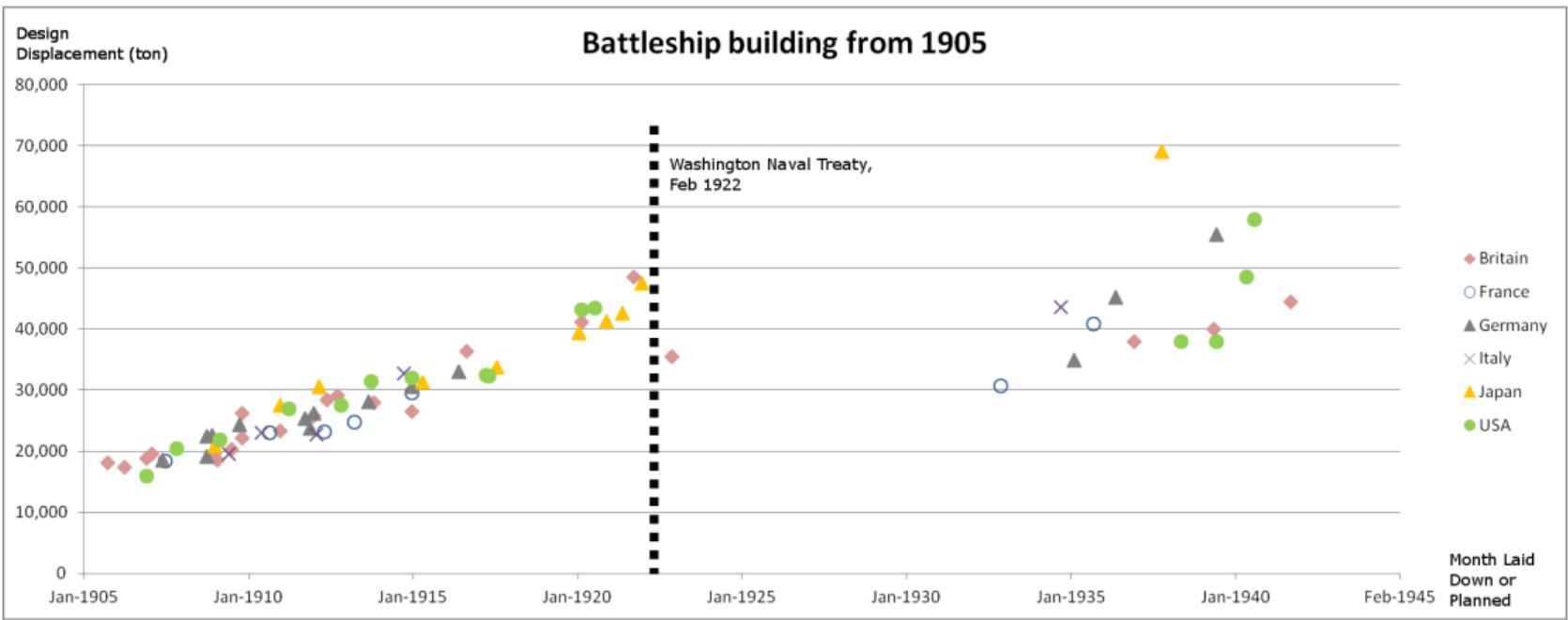


**Figure 1** Military spending before World War I, 1870-1913



Note: MILBUR = average of the military burdens of 16 nations.

Source: Eloranta (2007).

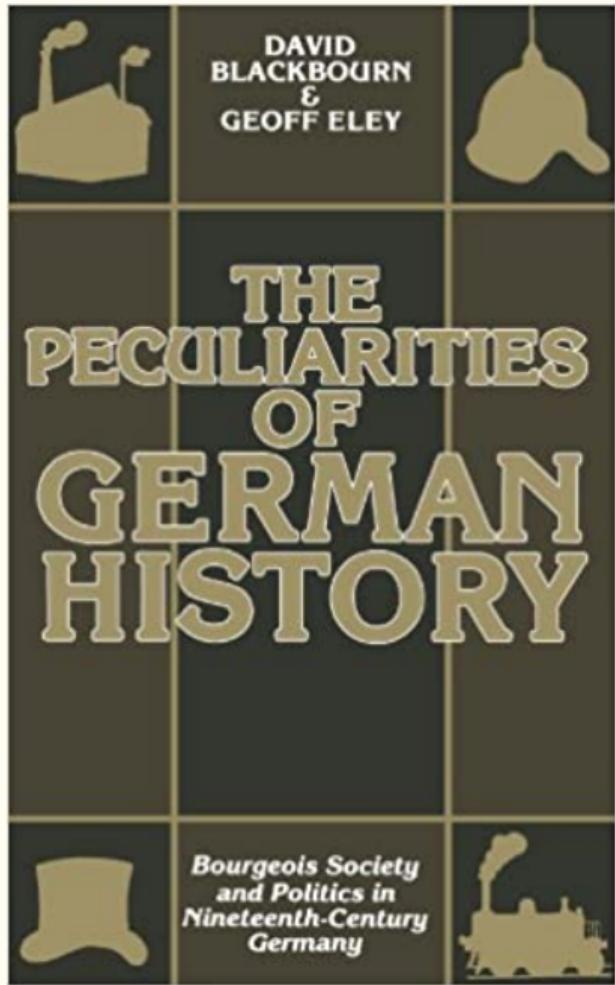




## Germany in 1914

---

- Peculiar structure created by German unification.
- A “sonderweg”?
- Political system under intense pressure:
  1. SPD vote in 1912 elections to the Reichstag.
  2. Budget deficit and federal constitution.
  3. Sense of isolation in Europe, and that time is running against Germany.
  4. Extreme nationalism of the middle and upper classes.
- In July 1914, a small elite in Germany and Austria-Hungary decides to trigger a general war.
- Most likely, under more democratic systems, this would not have been the case.



"There is much to admire in *The Pity of War*... Niall Ferguson can confidently claim to have inherited [A.J.P.] Taylor's mantle."—*The New York Review of Books*

# THE PITY OF WAR



Explaining World War I

NIALL FERGUSON



## Max Weber, The National State and Economic Policy

"[W]e all consider the German character of the East as something that should be protected, and that the economic policy of the state should enter into the lists in its defense. Our state is a national state, and... we have a right to make this demand..."

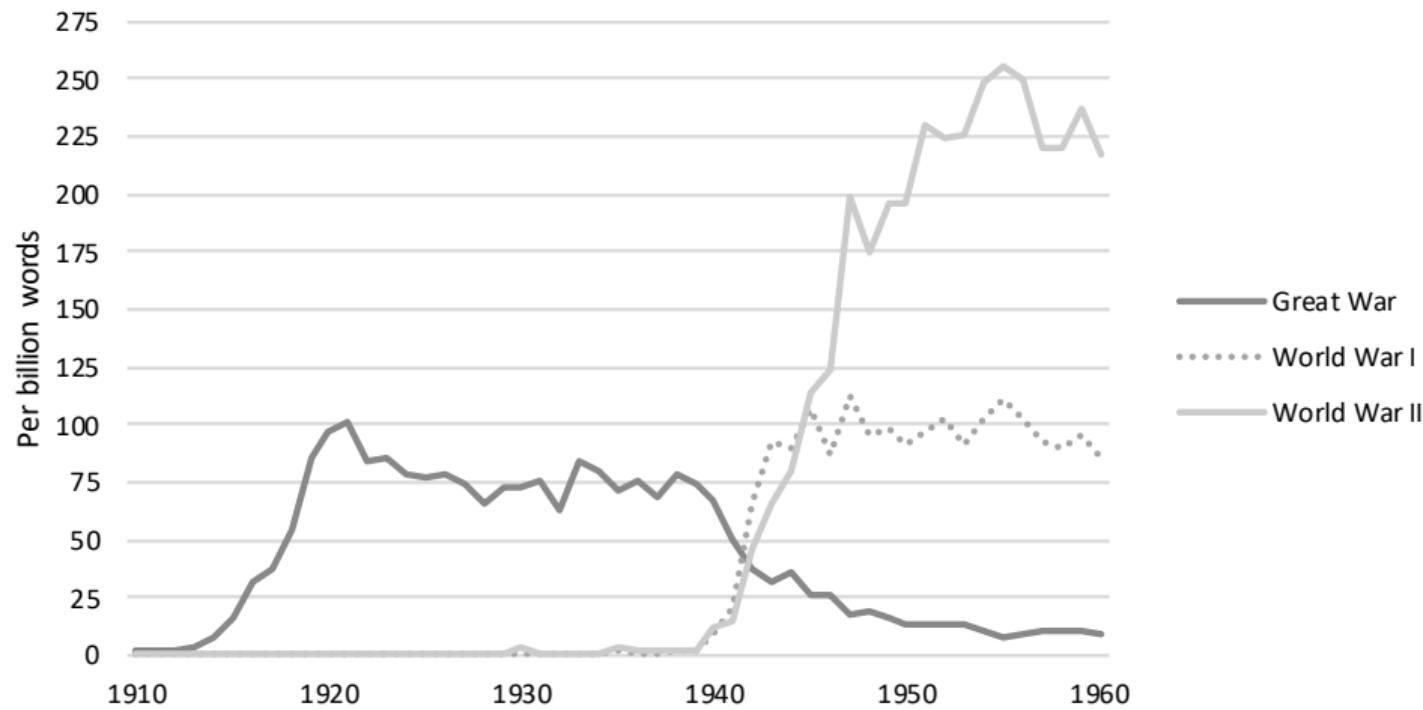
Certainly the vulgar conception of political economy is that it consists in working out recipes for making the world happy... However... [reality] prevents us from imagining that peace and happiness lie hidden in the lap of the future, it prevents us from believing that elbow-room in this earthly existence can be won in any way than through the hard struggle of human beings with each other..."

The economic policy of a German state, and that standard of value adopted by a German economic theorist, can therefore be nothing other than a German policy and a German standard... Our successors will not hold us responsible before history for the kind of economic organization we hand over to them, but rather for the amount of elbow-room we conquer for them in the world..."

## The economics of World War I

- First modern, total war among industrialized economies. Known for decades as the “Great War.”
- The U.S. Civil War was an important precedent. Think about the Siege of Petersburg (1864-1865) and Ulysses S. Grant’s strategy from late 1863 onward.
- As of today (2021), there are parts of France you CANNOT visit due to destruction from the war (**Zone rouge**).
- Enormous impact in Africa, Middle East, Asia, Oceania, and the Americas.
- Even in neutral countries: Spain.
- Death toll: 10 million deaths in the fighting, 20 to 40 million deaths from the flu pandemic in 1917/18, and up to 2 million deaths in the Armenian Genocide.
- End of mass migration of previous decades and reduction of trade flows.

**Figure 1** The renaming of the Great War as World War I, 1910-1960

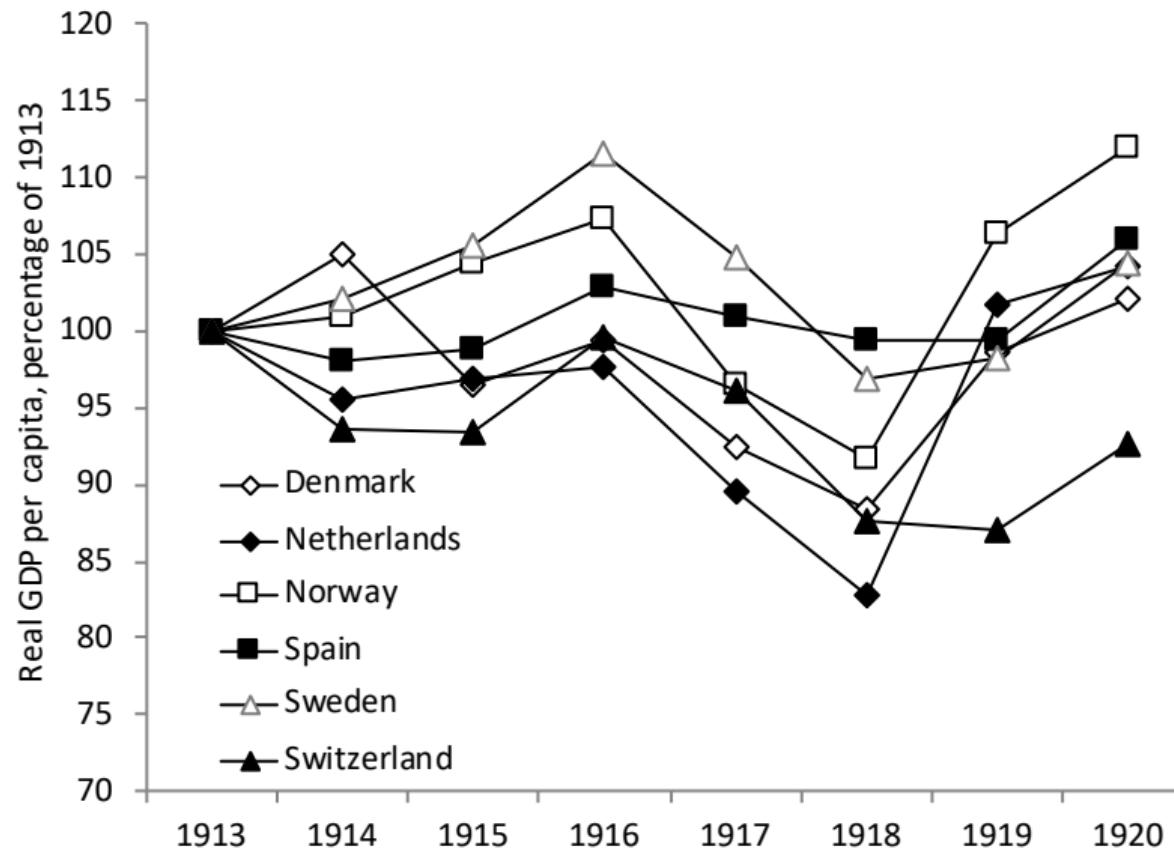


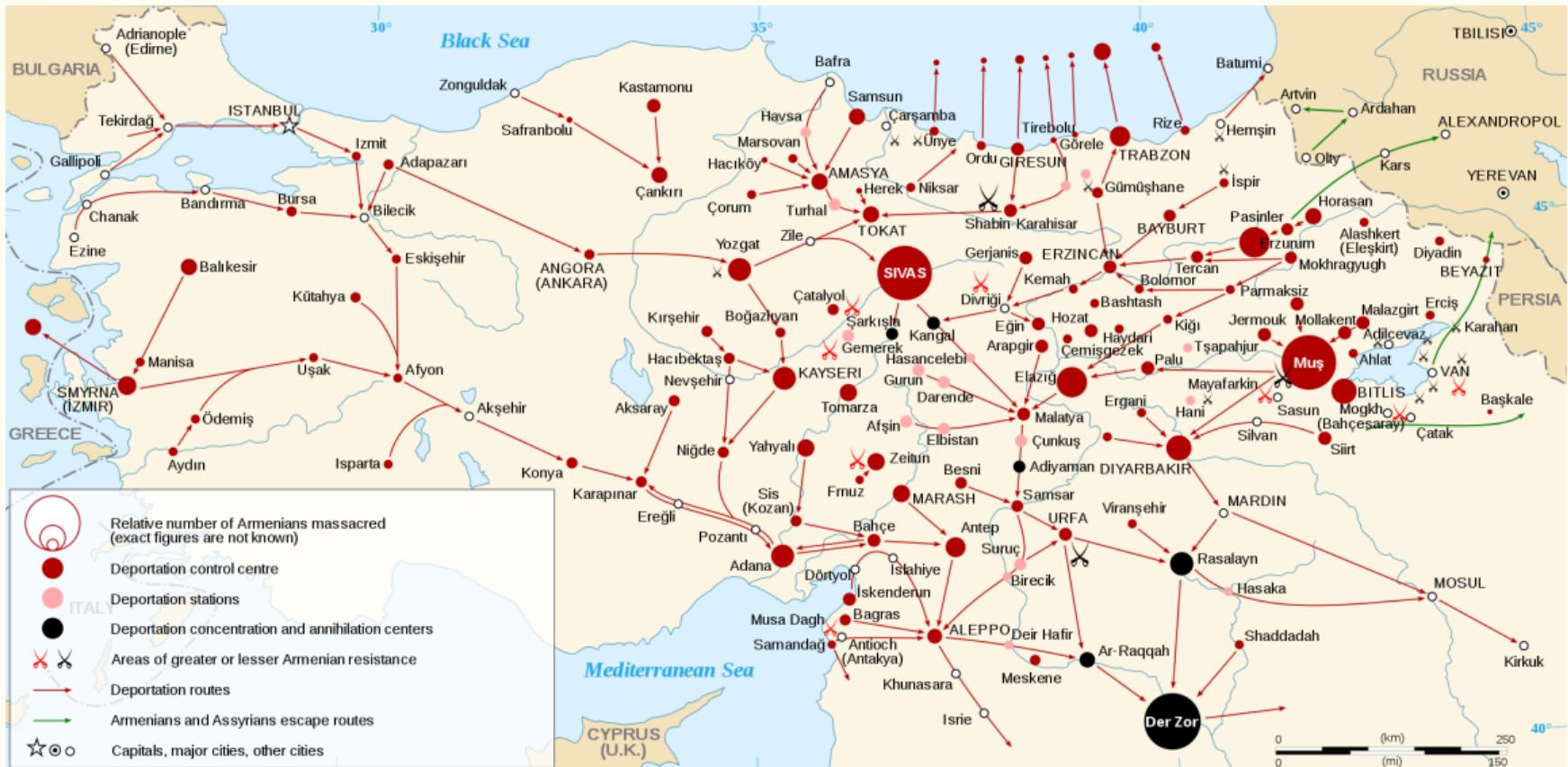
*Note:* The vertical axis measures the unsmoothed relative frequency of “Great War,” “World War I”, and “World War II” in the Google Books English-language corpus.

*Source:* The Google NGram Viewer at <http://books.google.com/ngrams>.



**Figure 1** Change in real GDP per capita of six neutral countries, 1913-1920

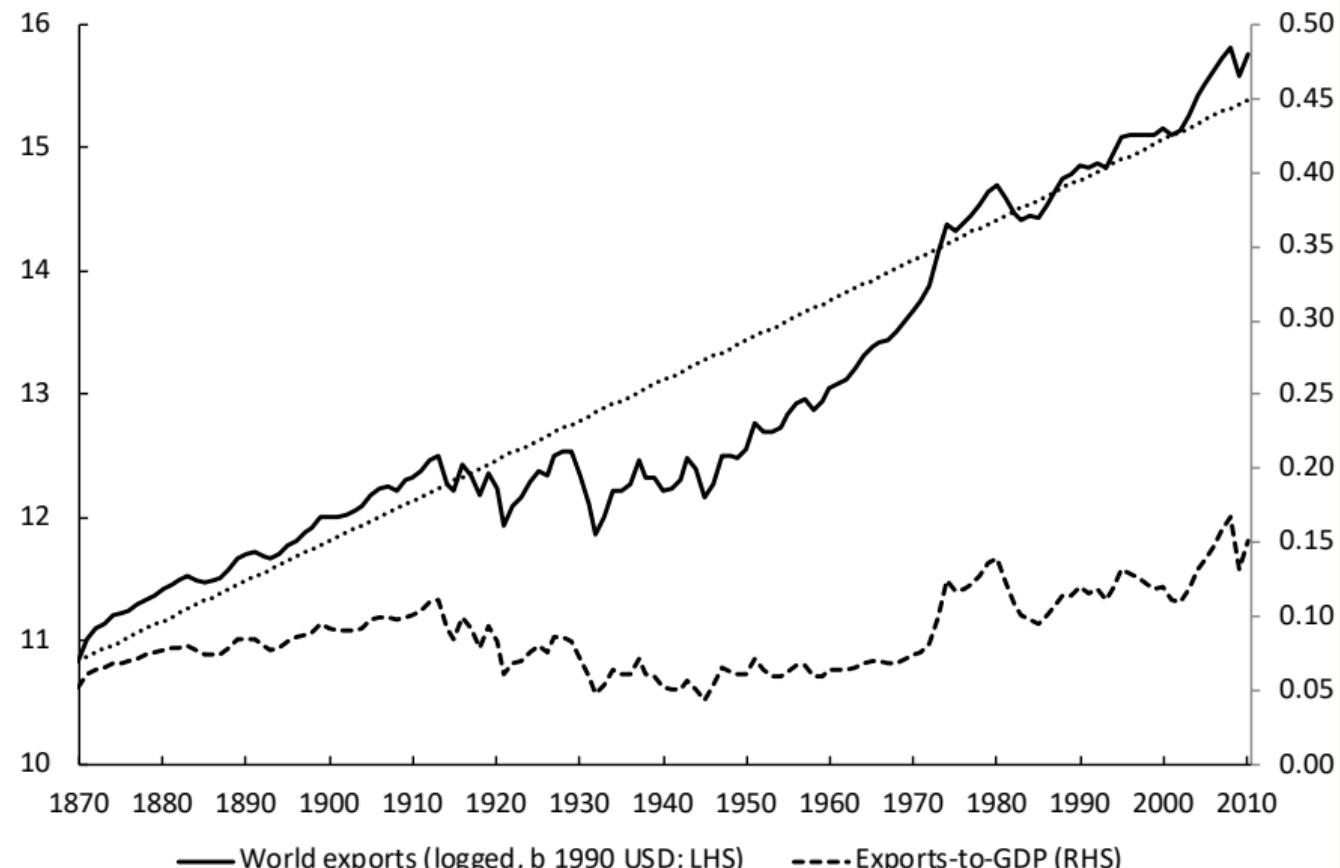




# THE PROMISE



**Figure 2** World exports, 1870-2010



## The economics of World War I

- Allies have many more resources than the Central Powers and control the sea routes, telegraphic communications, and international finance.
- In particular, Britain sets up a naval blockade, can receive large amounts of supplies from its Empire, and manipulate the flow of information from Europe to the rest of the globe.
- However, the Central Powers have a well-entrenched position, the superior fighting ability of the German army, and submarine warfare.
- Neither side has the military knowledge to break the stalemate in the Western front (in particular, logistics to exploit a breakthrough have fallen behind), and the Eastern Front is too huge for decisive victories.

**Table 1** The alliances in World War 1: Resources of 1913

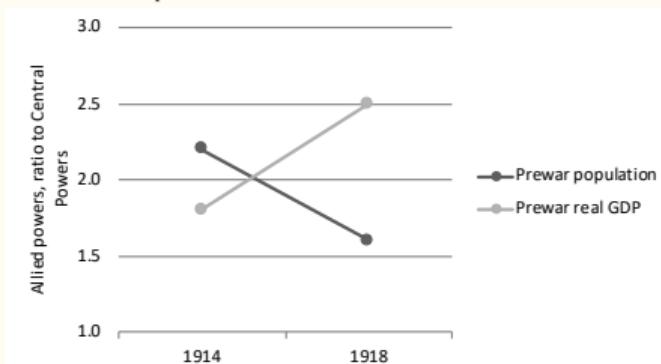
		Territory		GDP in 1990 prices	
	Population, million	Million sq. km	Ha. per head	\$ billion	\$ per head
<b>Allies</b>					
<i>November 1914</i>					
Allies, total	793.3	67.5	8.5	1096.5	1,382
UK, France, and Russia only	259.0	22.6	8.7	622.8	2,405
<i>November 1916</i>					
Allies, total	853.3	72.5	8.5	1,213.4	1,422
UK, France, and Russia only	259.0	22.6	8.7	622.8	2,405
<i>November 1918</i>					
Allies, total	1,271.7	80.8	6.4	1,760.5	1,384
UK, France, and USA only	182.3	8.7	4.8	876.6	4,809
<b>Central Powers</b>					
<i>November 1914</i>					
Central Powers, total	151.3	5.9	3.9	376.6	2,489
Germany and Austria-Hungary only	117.6	1.2	1.0	344.8	2,933
<i>November 1915</i>					
Central Powers, total	156.1	6.0	3.8	383.9	2,459

Source: Broadberry and Harrison (2005: 7-10).

**Table 1** Real GDP of the main belligerents, 1912-1920 (1913 = 100)

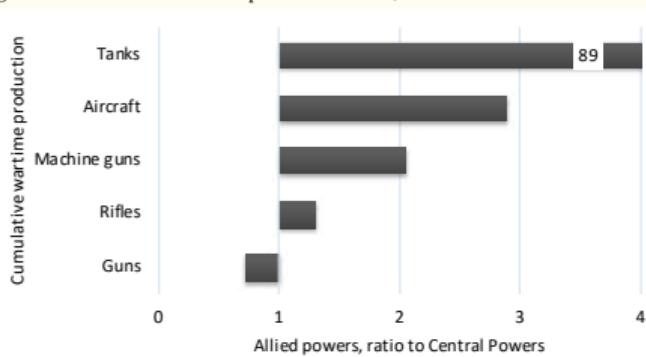
	Germany	Austria-Hungary	France	United Kingdom	Russia (USSR)
1912	95.7	100.5	100.6	96.4	...
1913	100.0	100.0	100.0	100.0	100.0
1914	95.2	83.4	92.9	99.9	97.6
1915	80.9	77.4	91.0	106.8	102.3
1916	81.7	76.5	95.6	108.0	92.5
1917	81.8	74.8	81.0	107.7	82.1
1918	82.0	73.3	63.9	107.2	50.1
1919	66.0	61.8	75.3	94.4	42.7
1920	71.7	66.4	87.1	87.6	42.0

**Figure 1** Pre-war population and real GDP of the Great Powers: Allies, ratio to central powers

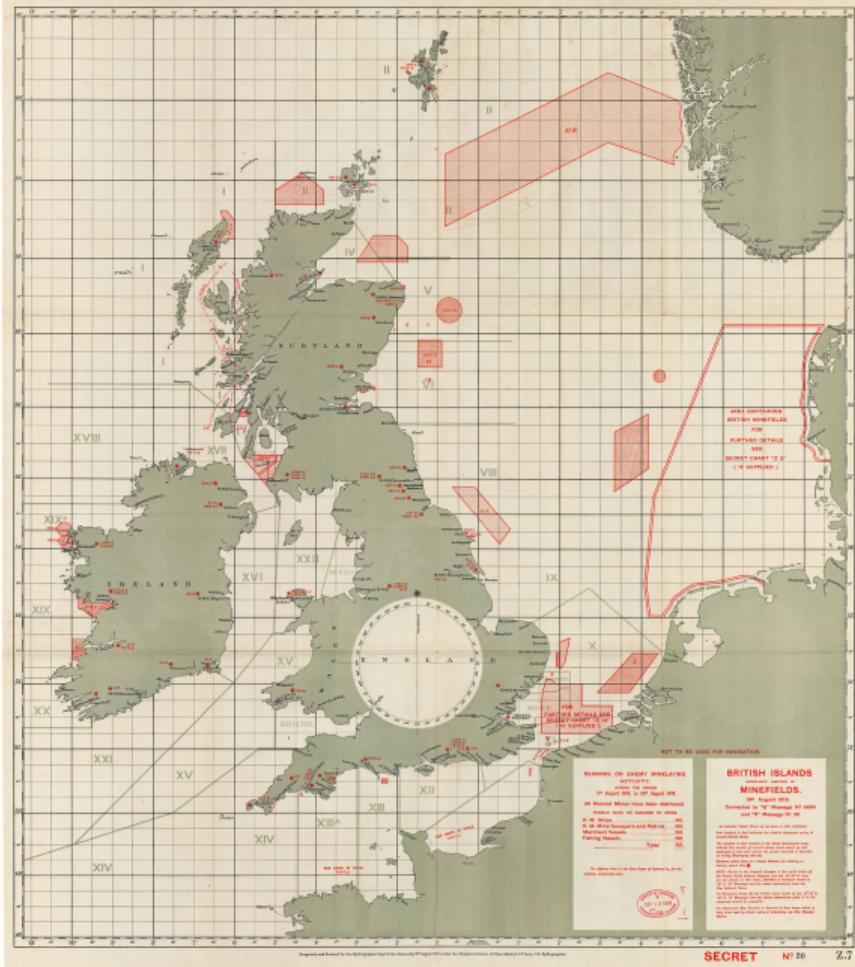


Source: Broadberry and Harrison (2005: 11). The figure counts Britain France, and either Russia (in 1914) or the US (in 1918) against Germany and Austria-Hungary. All figures are based on 1913, because wartime changes are not known for all countries. GDP is measured in international dollars at 1990 prices.

**Figure 2** Cumulative wartime production: Allies, ratio to Central Powers



Sources: War production from Adelman (1988: 45), except UK from Broadberry and Howlett (2005: 212) and Austria-Hungary from Schulze (2005: 88).



NICHOLAS A. LAMBERT

# PLANNING ARMAGEDDON

British Economic Warfare and the First World War



# **The First World War: An Agrarian Interpretation**

**Avner Offer**

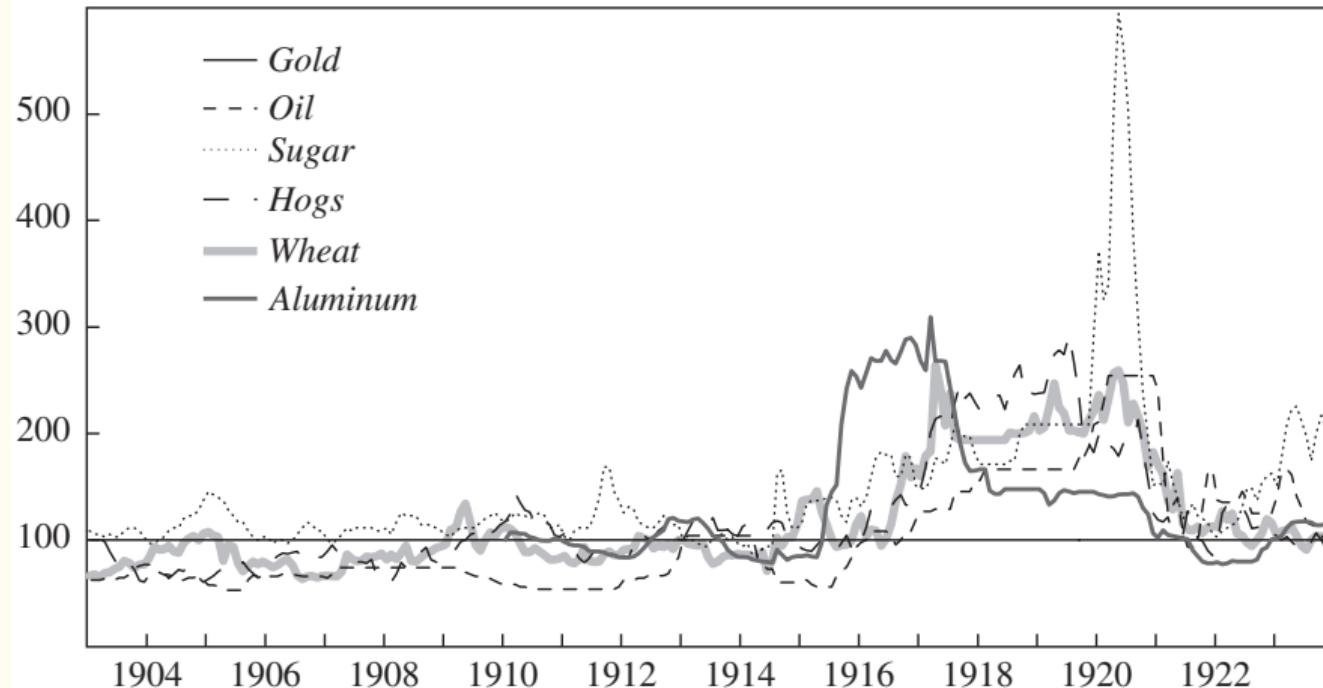


# The economics of World War I

- By early 1917, nearly all economies are at a breaking point:
  1. Russia → February Revolution. Proximate cause: bread shortage.
  2. Germany → Turnip Winter (**Steckrübenwinter**).
  3. France and Italy have exhausted their financial resources. Supported only by British loans.
  4. The British Empire is getting close to bankruptcy.
- Decisive entry of the U.S. in the war (April 6, 1917).
- On the other hand, Russia leaves the war, and Germany “wins” in the East. Treaty of Brest-Litovsk (March 3, 1918). Template for German expansion plans during World War II.

**Figure 5. Selected Commodity Prices before and after the First World War<sup>a</sup>**

Indexes, Jan. 1913 = 100

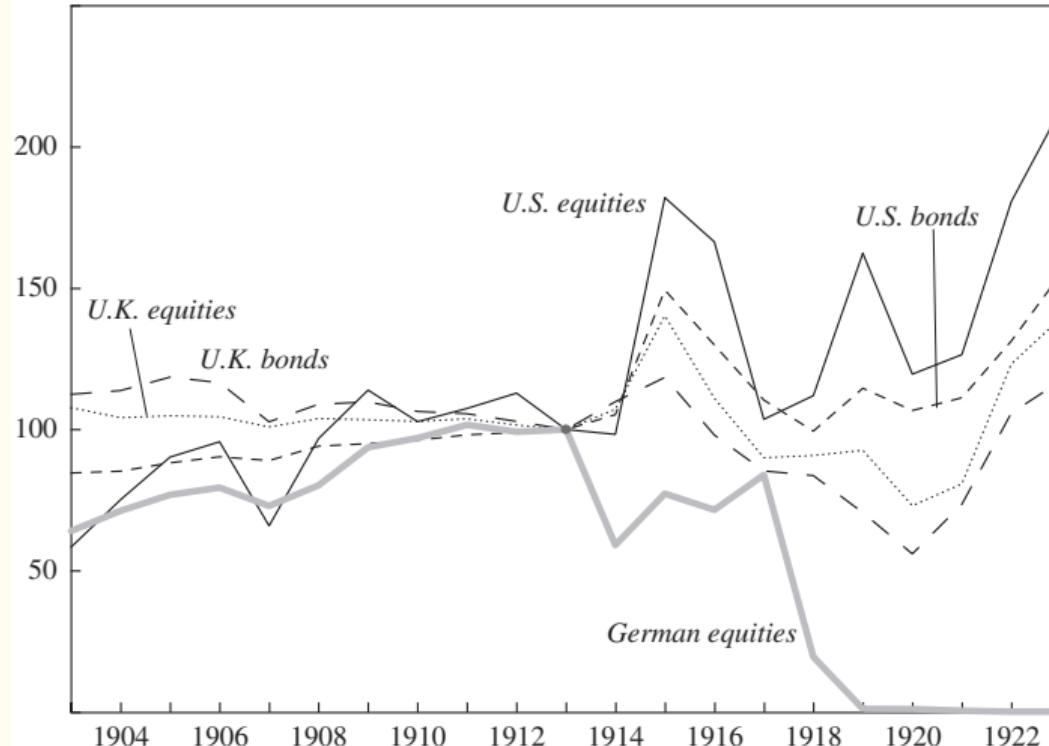


Source: Global Financial Data.

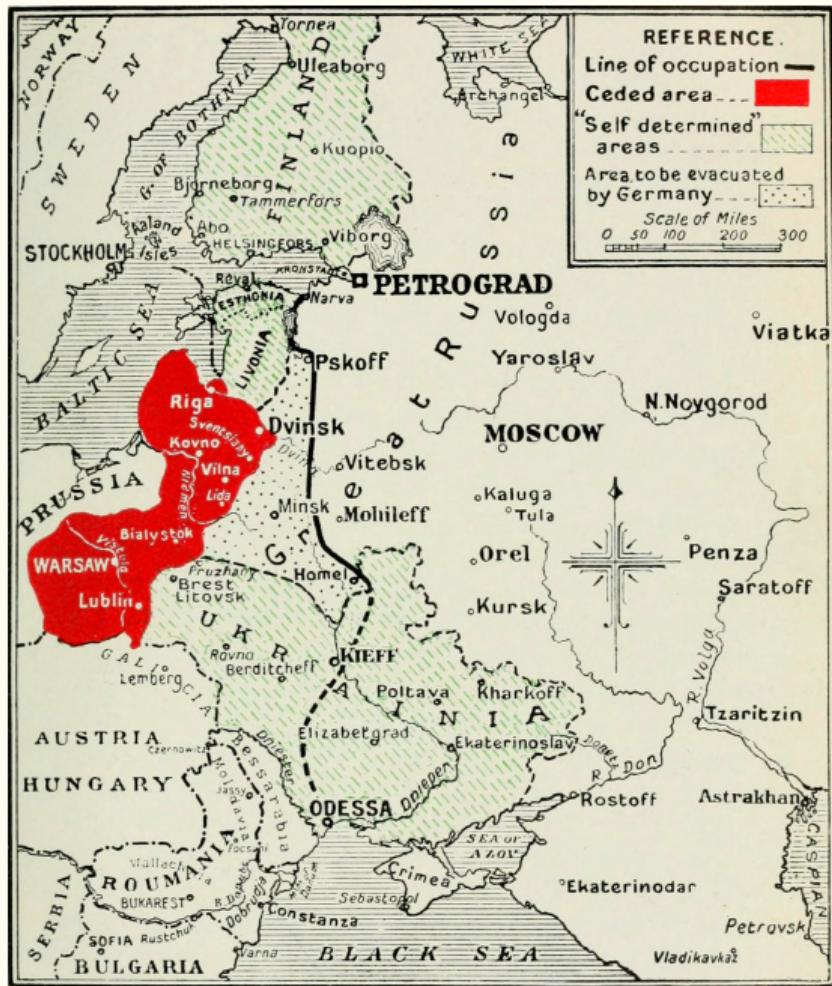
a. Figure uses U.S. data, which are more readily available than U.K. data.

**Figure 3. Inflation-Adjusted Total Returns for U.K., U.S., and German Securities before and after the First World War**

Indexes, 1913 = 100



Source: Global Financial Data.

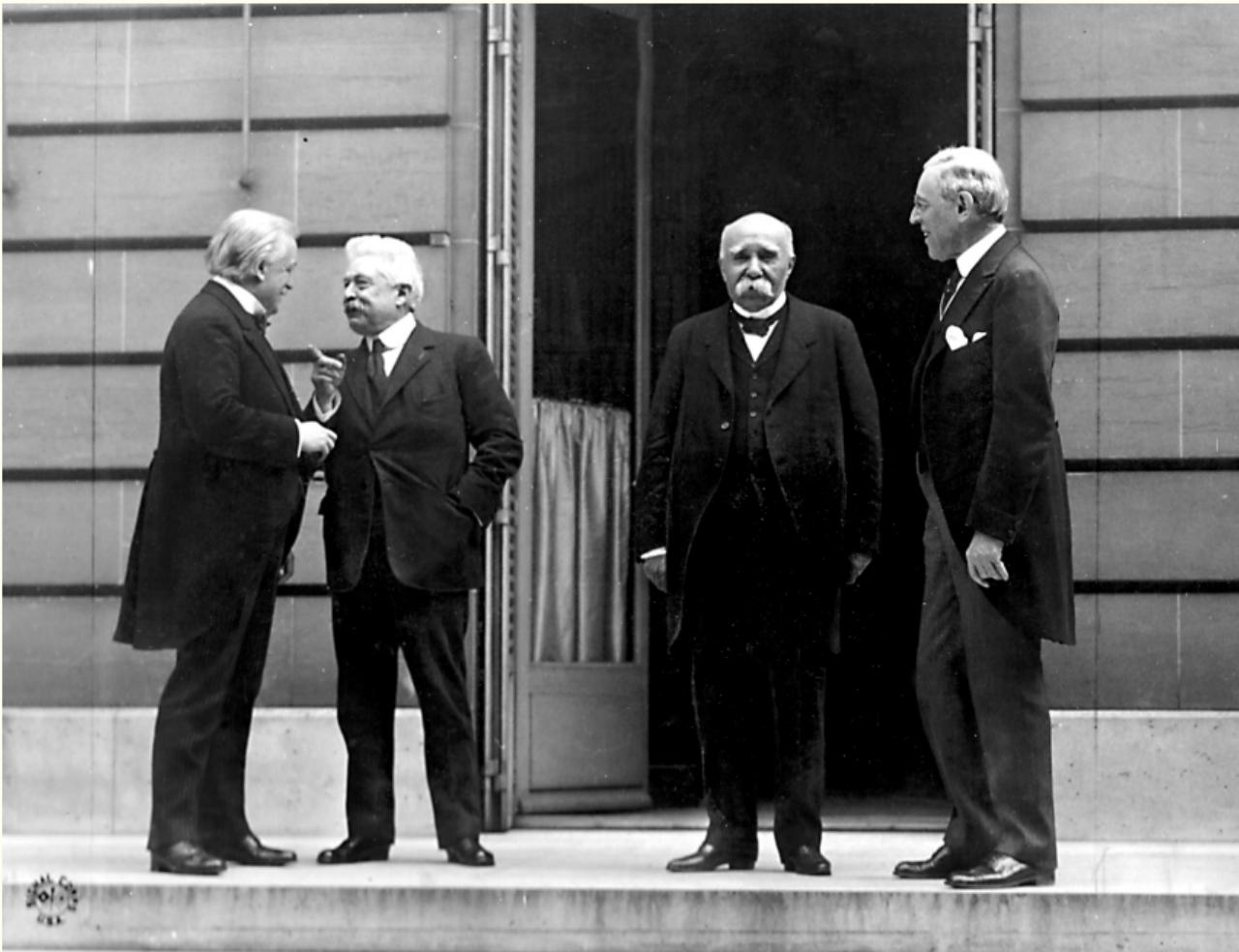


## Failed reconstruction

- After four years of war, the Central Powers collapsed rather quickly.
- Reasons: military and economic. German leadership tries to save as much as possible of its future.
- Unfortunate consequences (the stab-in-the-back myth, **Dolchstoßlegende**).
- German, Austrian-Hungarian, Ottoman, and Russian empires disappear.
- Allies organize a peace conference in Versailles:
  1. Decide what to do with Germany.
  2. Reorganize the world political system.
  3. Reorganize the world economy.







## On the Reconstruction of Europe

The Treaty includes no provisions for the economic rehabilitation of Europe, —nothing to make the defeated Central Empires into good neighbors, nothing to stabilize the new States of Europe, nothing to reclaim Russia; nor does it promote in any way a compact of economic solidarity amongst the Allies themselves; no arrangement was reached at Paris for restoring the disordered finances of France and Italy, or to adjust the systems of the Old World and the New.

The Council of Four paid no attention to these issues, being preoccupied with others,—Clemenceau to crush the economic life of his enemy, Lloyd George to do a deal and bring home something which would pass muster for a week, the President to do nothing that was not just and right. It is an extraordinary fact that the fundamental economic problems of a Europe starving and disintegrating before their eyes, was the one question in which it was impossible to arouse the interest of the Four. Reparation was their main excursion into the economic field, and they settled it as a problem of theology, of polities, of electoral chicane, from every point of view except that of the economic future of the States whose destiny they were handling.

## On Clemenceau

Clemenceau was by far the most eminent member of the Council of Four, and he had taken the measure of his colleagues. He alone both had an idea and had considered it in all its consequences. His age, his character, his wit, and his appearance joined to give him objectivity and a, defined outline in an environment of confusion...

He felt about France what Pericles felt of Athens –unique value in her, nothing else mattering; but his theory of politics was Bismarck's. He had one illusion –France; and one disillusion–mankind, including Frenchmen, and his colleagues not least. His principles for the peace can be expressed simply. In the first place, he was a foremost believer in the view of German psychology that the German understands and can understand nothing but intimidation, that he is without generosity or remorse in negotiation, that there is no advantage be will not take of you, and no extent to which he will not demean himself for profit, that he is without honor, pride, or mercy. Therefore you must never negotiate with a German or conciliate him; you must dictate to him. On no other terms will he respect you, or will you prevent him from cheating you.

## On Wilson

The President was not a hero or a prophet; he was not even a philosopher; but a generously intentioned man, with many of the weaknesses of other human beings, and lacking that dominating intellectual equipment which would have been necessary to cope with the subtle and dangerous spellbinders whom a tremendous clash of forces and personalities had brought to the top as triumphant masters in the swift game of give and take, face to face in Council...

He not only had no proposals in detail, but he was in many respects, perhaps inevitably, ill-informed as to European conditions. And not only was he ill-informed—that was true of Mr. Lloyd George also—but his mind was slow and unadaptable. The President's slowness amongst the Europeans was noteworthy...

He did not remedy these defects by seeking aid from the collective wisdom of his lieutenants. He had gathered round him for the economic chapters of the Treaty a very able group of business men; but they were inexperienced in public affairs, and knew (with one or two exceptions) as little of Europe as he did, and they were only called in irregularly...

"ESSENTIAL...EPIC IN SCOPE, BOLDLY ARGUMENTATIVE...A SPLENDID  
INTERPRETIVE HISTORY." —THE NEW YORK TIMES BOOK REVIEW

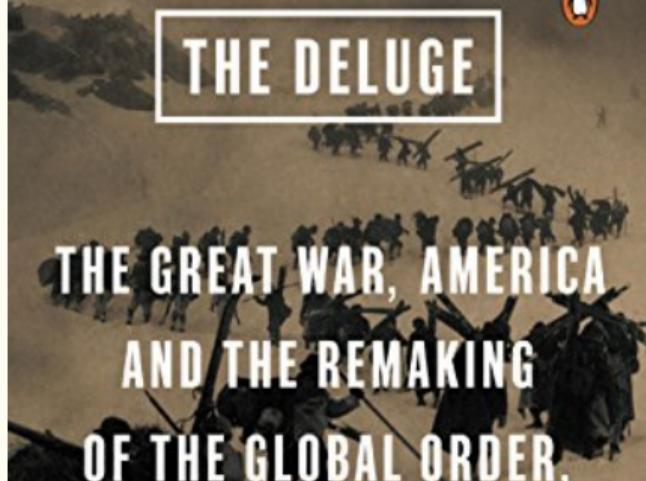


# THE DELUGE

## THE GREAT WAR, AMERICA AND THE REMAKING OF THE GLOBAL ORDER, 1916–1931

ADAM TOOZE

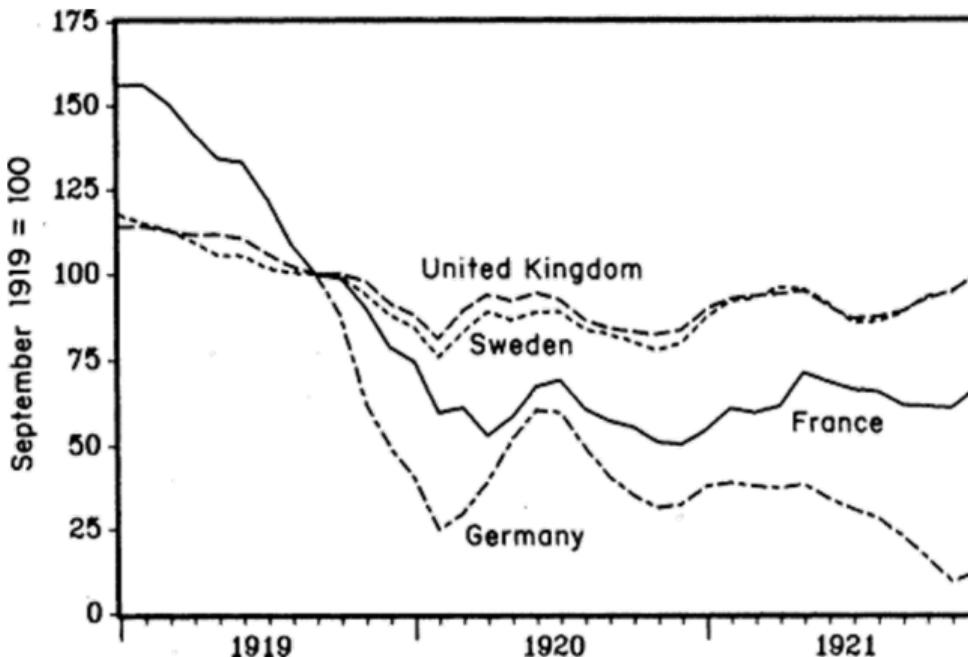
AUTHOR OF THE WAGES OF DESTRUCTION



## Roaring twenties

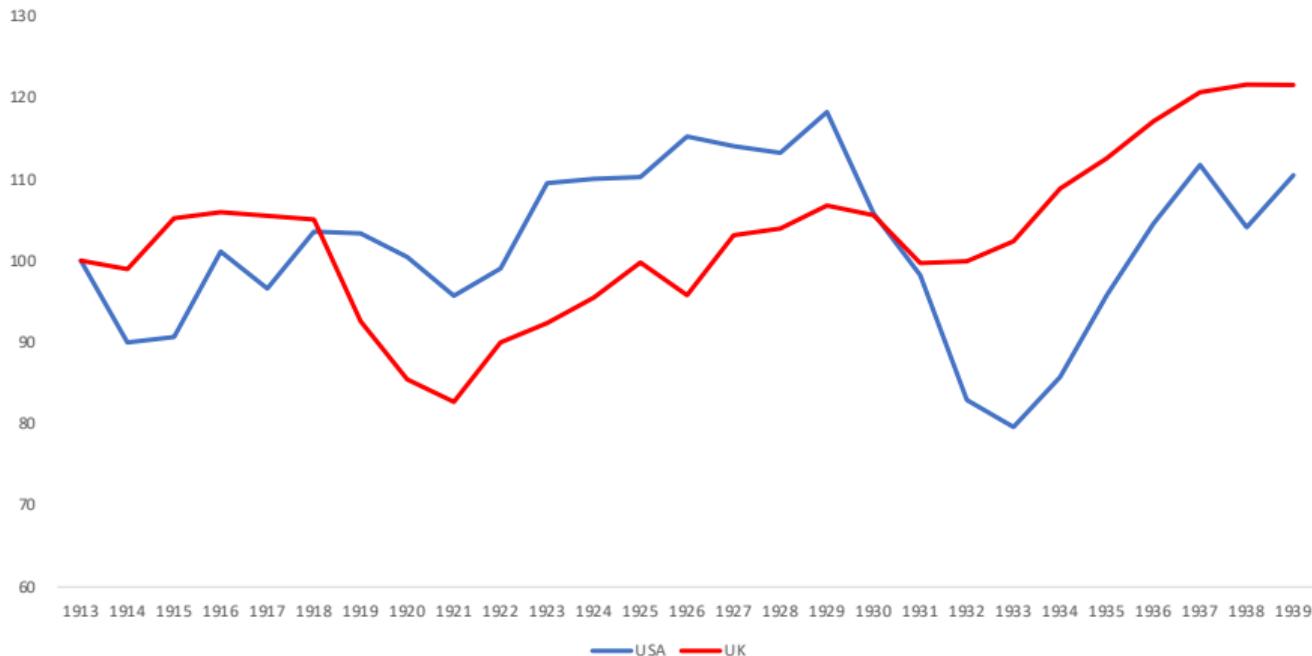
- Somehow surprisingly, the world experienced a prosperous decade in the 1920s.
- Large increments in productivity.
- Electricity, cars, radio, housing, etc.
- After a few difficult early years, even Germany stabilizes. The hyperinflation of 1923 has more of a political than an economic origin.
- In fact, the first country to depart from the Versailles order is Italy, with fascism (1922). Italy had been a victor.
- Large capital flows between the U.S. and Europe.
- By around 1928, Keynes' worst nightmares looked too pessimistic.

# Exchange rate index, 1919-1921 (September 1919=100)

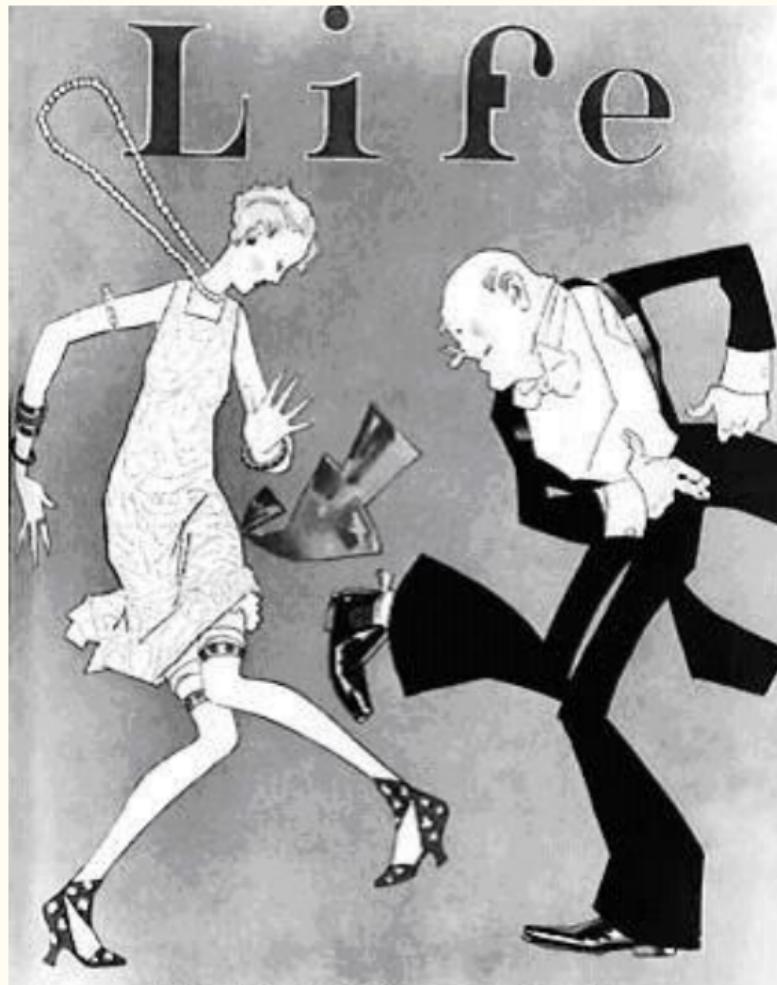


Fuente: Eichengreen (1992)

# Real GDP per capita index (1913=100)



Source: Maddison project dataset



**Ford**  
TOURING CAR

\$298  
F.O.B. DETROIT

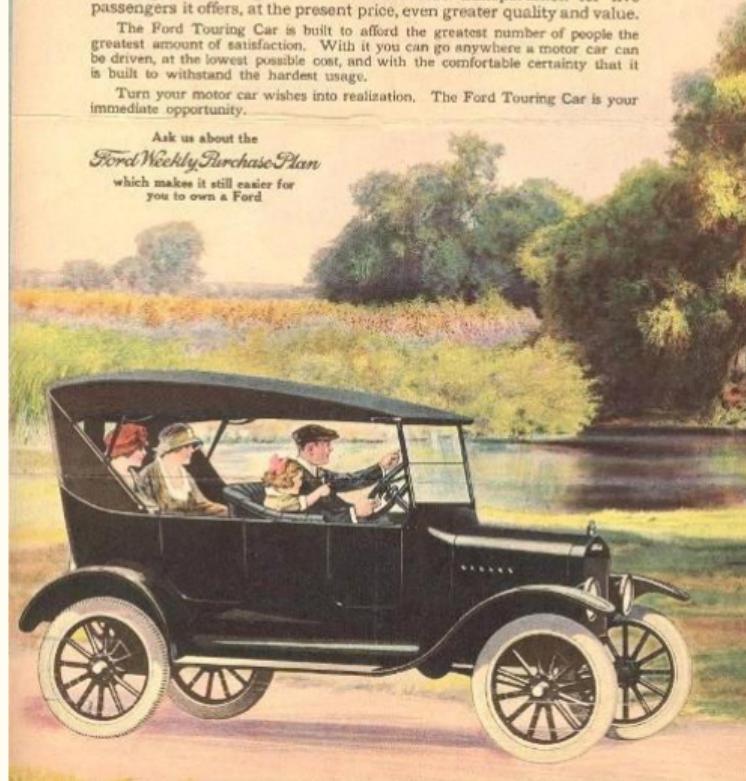
ALL out-of-doors is at the immediate command of the owner of this universally popular Ford model.

Long acknowledged as the lowest cost transportation for five passengers it offers, at the present price, even greater quality and value.

The Ford Touring Car is built to afford the greatest number of people the greatest amount of satisfaction. With it you can go anywhere a motor car can be driven, at the lowest possible cost, and with the comfortable certainty that it is built to withstand the hardest usage.

Turn your motor car wishes into realization. The Ford Touring Car is your immediate opportunity.

Ask us about the  
*Ford Weekly Purchase Plan*  
which makes it still easier for  
you to own a Ford





This model  
of quality  
is made  
in wood.

RCA

Radiola Grand and Mahogany Stand with "B" batteries and 4 Radiotron WD-11 dry cell vacuum tubes \$350.00.

# Radiola Grand

WITH the Radiola Grand, radio takes on new meaning. The simplicity of tuning in—just a knob or two to turn. The big distances it covers—picking up far-away stations with volume enough to fill a room. The perfection of tone with which the loudspeaker—carefully built in like the horn of a fine phonograph—gives forth the music and speech. All this—combined in a cabinet of skillful workmanship and tasteful design—places Radio in the home where beauty counts—and performance.

#### Points to Note:

All the batteries—dry cells—are hidden away inside.

You can regulate the volume of sound by a control that governs the loudspeaker.

For long distance, plug in the headphones. Coast to coast reception is no unusual record for Radiola Grand!

Famous for true reception, undistorted. For keen sensitivity. And for beauty.

*"There's a Radiola for every purse"*  
at the nearest Radio or Electrical Dealer

Radio Corporation of America

Sales Dept., 221 Broadway, New York      District Sales Office,  
109 No. LaSalle St., Chicago, Ill.      435 California St., San Francisco, Cal.

RADIO CIRCUMLOCUTION OF AMERICA	
Dept. 3200 U.S.A. (Send letter to office locally from \$12 to \$30).	
Name	
Street address	
City	R.F.D.
State	

# Radiola

REG. U. S. PAT. OFF.



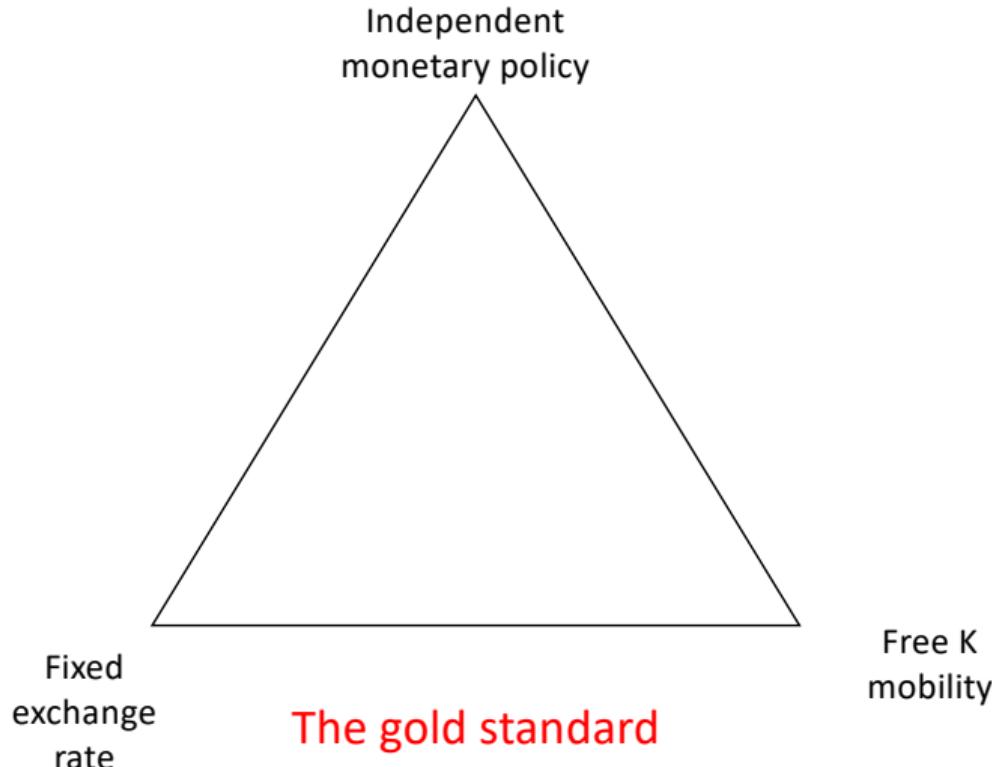


## Gold standard and the price-flow mechanism

---

- David Hume (1757).
- Current account deficits = gold outflows.
- Central bank intervention (rules of the game).
- **Deflation** (adjustment mechanism).
- Requirement: price stability.

# Monetary Policy Trilemma (Mundell-Fleming model)



## The classical gold standard (1870-1914)

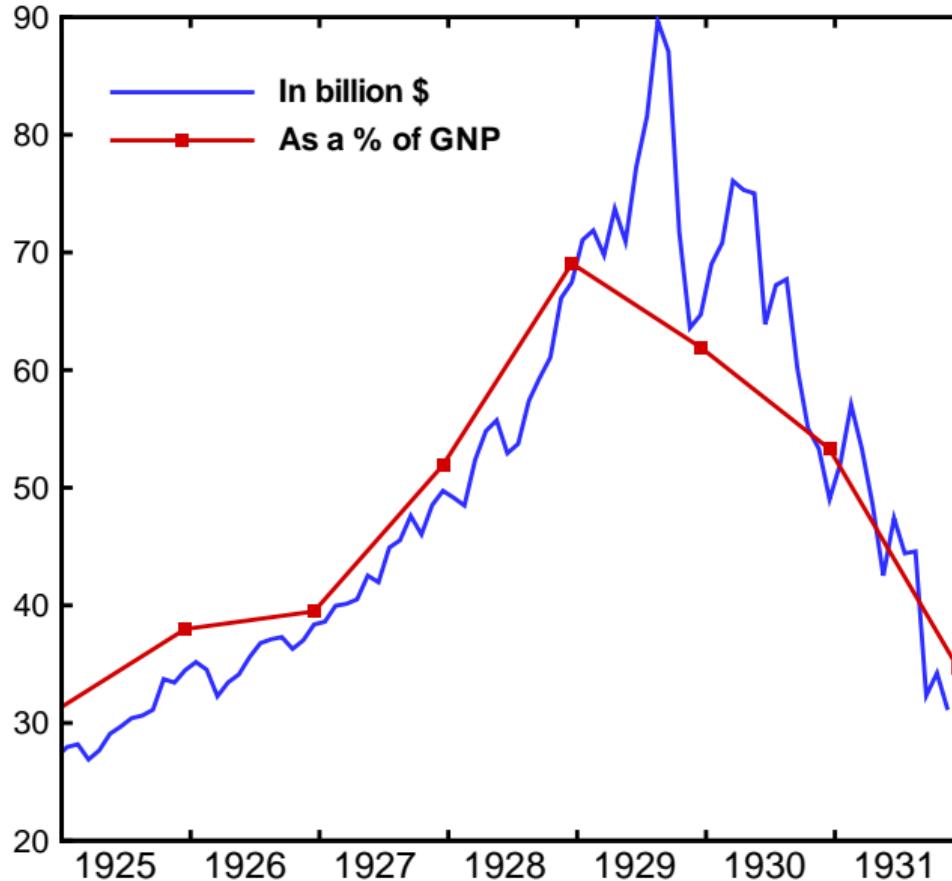
---

- Globalization (trade, finance, and labor).
- Economic growth.
- International cooperation.
- Bank of England.

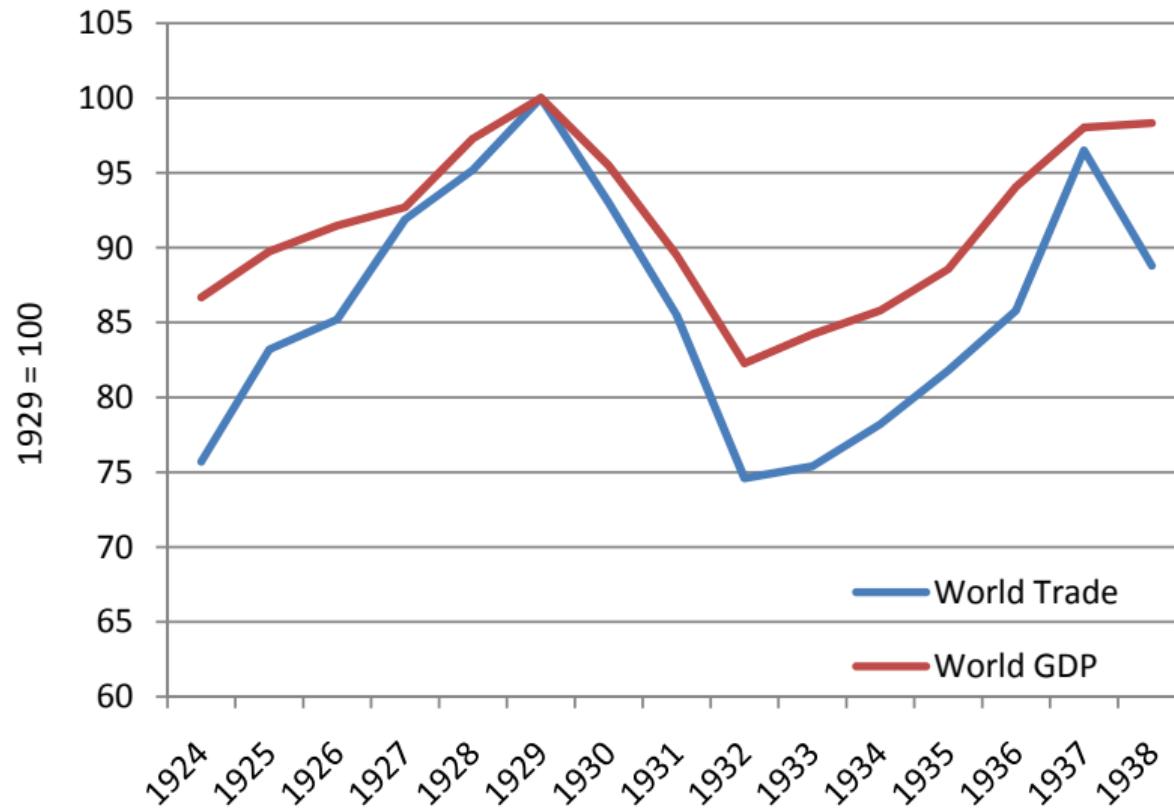
## Great Depression

- In the summer of 1929, the U.S. economy enters into a recession.
- Black Tuesday (October 29, 1929) signals the start of the stock market's collapse.
- Quickly, the collapse in economic activity extends worldwide. Credit Anstalt, in Austria, was revealed to be bankrupt in May 1931.
- By the end of 1931, it engulfs most world countries.
- Worst recession ever, changed events decisively.
- It is hard to see the NSDAP reaching power in Germany without the Great Depression or Japan attempting to conquer East Asia.

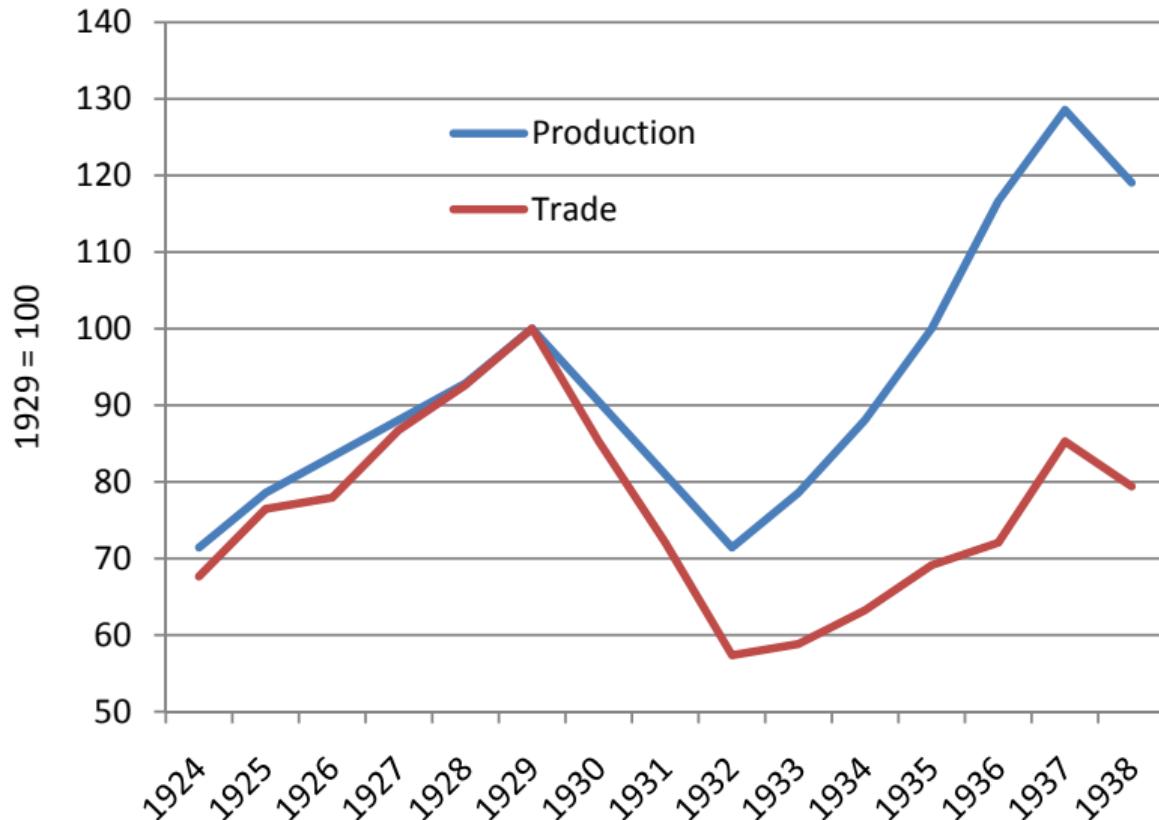
## Market Value of Companies on the NYSE, 1925-31



## A. Volume of World Trade and World GDP

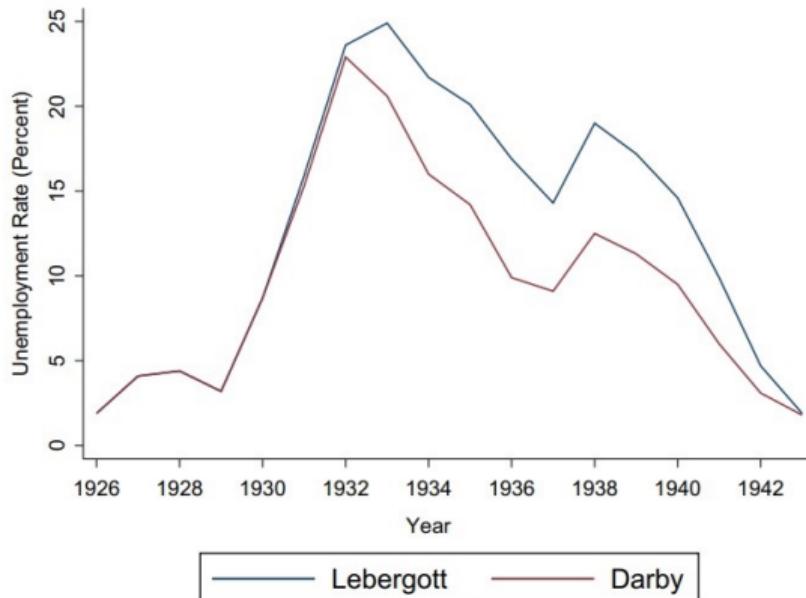


## B. Manufactured Goods: Volume of World Trade and Production



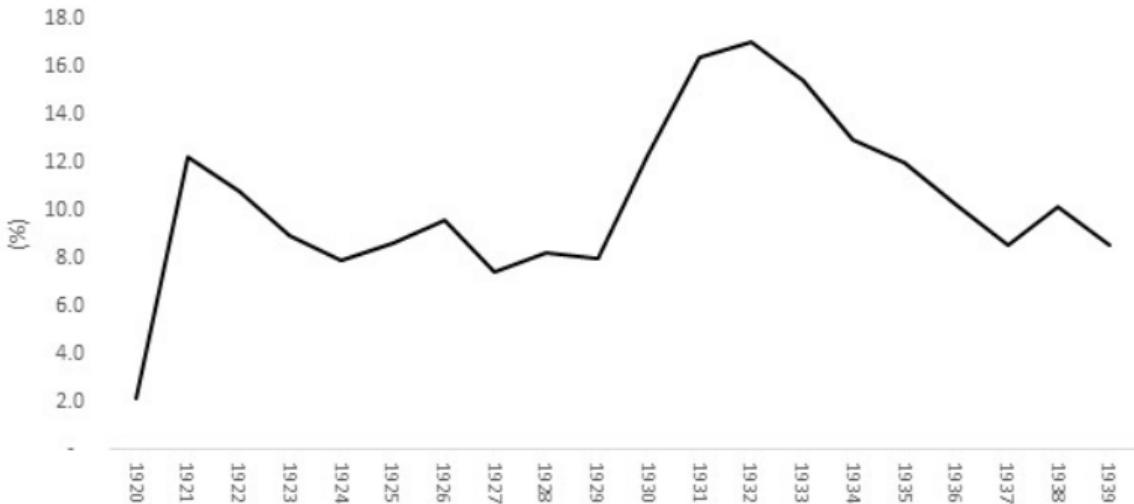
# US unemployment rate 1926-1943

(a)



Source: Mathy (2016)

# UK unemployment rate 1920-1939



Source: Boyer and Hatton (2002)

# Regional unemployment rate UK July 1926



Source: Luzardo-Luna (2020)

## Why?

---

- One of the most disputed issues in macroeconomics.
- The answer to the question colors our understanding of how to conduct economic policy.
- A relatively “mainstream” view: a severe, but not exceptional, recession was transformed into a great depression by policy mistakes.
- Some of those were avoidable: the behavior of the Federal Reserve System in the U.S. ([Friedman and Schwartz, A Monetary History of the U.S.](#)).
- Some of those were unavoidable: came from the world economic organization created by Versailles.



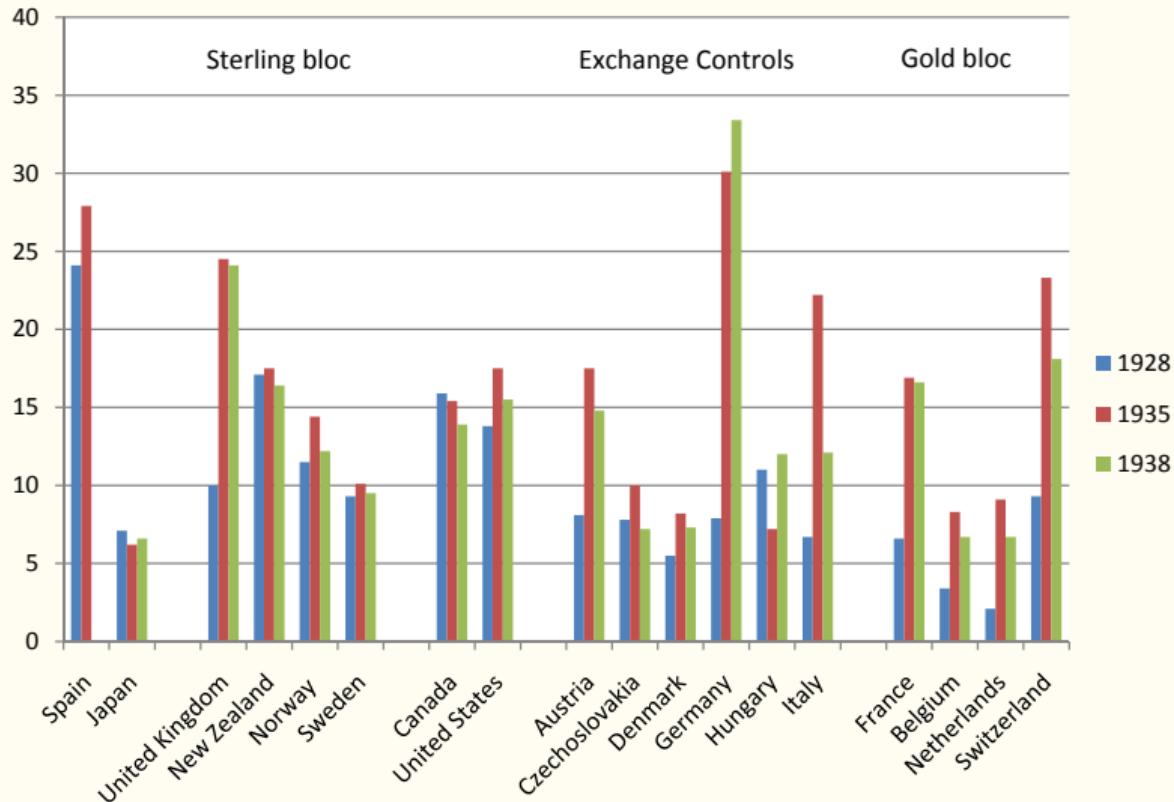
**Table 1: Exchange Rate and Payments Regimes, Sample Countries, 1929-1936**

	Sterling bloc countries	Gold bloc countries	Exchange Controls	Others with Depreciated Currencies
1929	Argentina, Australia			Canada, Brazil, Spain, Uruguay
1930	New Zealand			Peru, Turkey
1931	Denmark, Egypt, Finland, Norway, Japan, India, Sweden, United Kingdom, Portugal, Thailand		Austria, Bulgaria, Czechoslovakia, Denmark, Germany, Hungary	Colombia, Mexico
1932			Romania	Chile, Greece
1933	South Africa			Cuba, United States, Philippines
1934			Italy	
1935		Belgium		
1936		France, Netherlands, Switzerland	Poland	Indonesia

Note: Year of departure from the gold standard for columns 1, 2, and 4. Year of imposition of exchange controls for column 3.

**Figure 2: Average Percentage Tariff Rate on Imports, various countries, 1928, 1935, 1938**

Source: see text.



# GOLDEN FETTERS

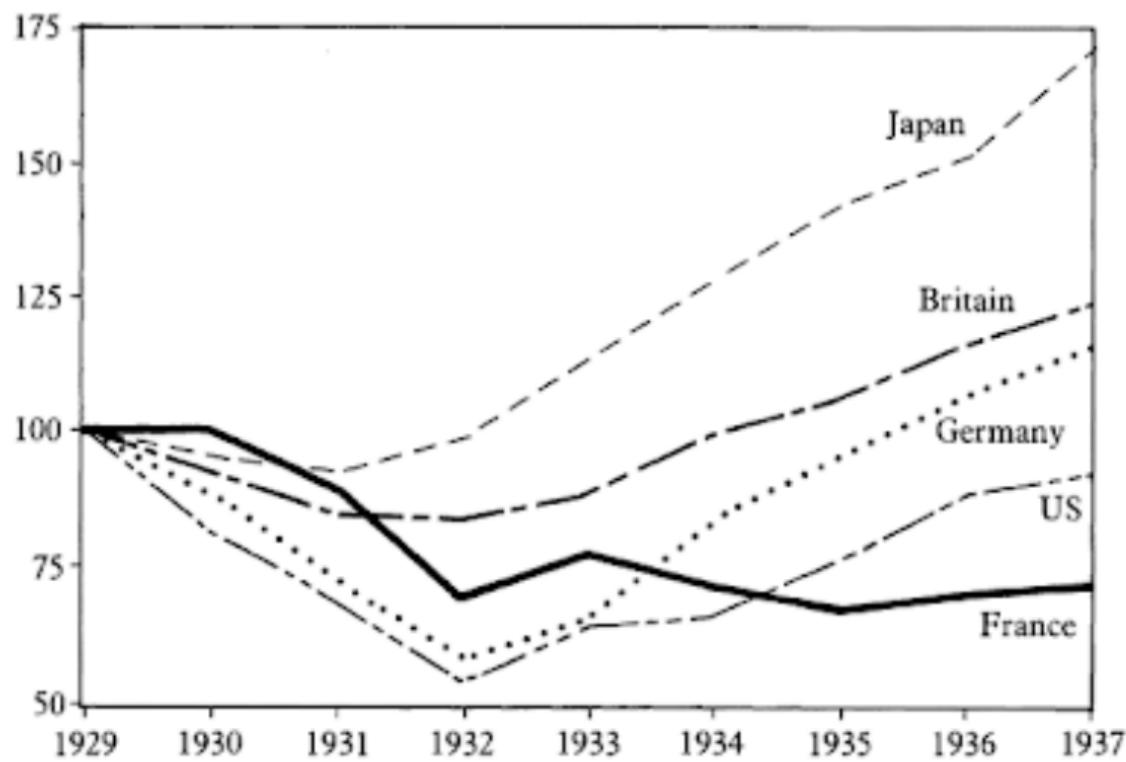


THE GOLD STANDARD  
AND THE GREAT DEPRESSION  
1919-1939

BARRY EICHENGREEN

## Industrial production, 1929=100

Reproduced from Eichengreen, 'Origins', 1992.

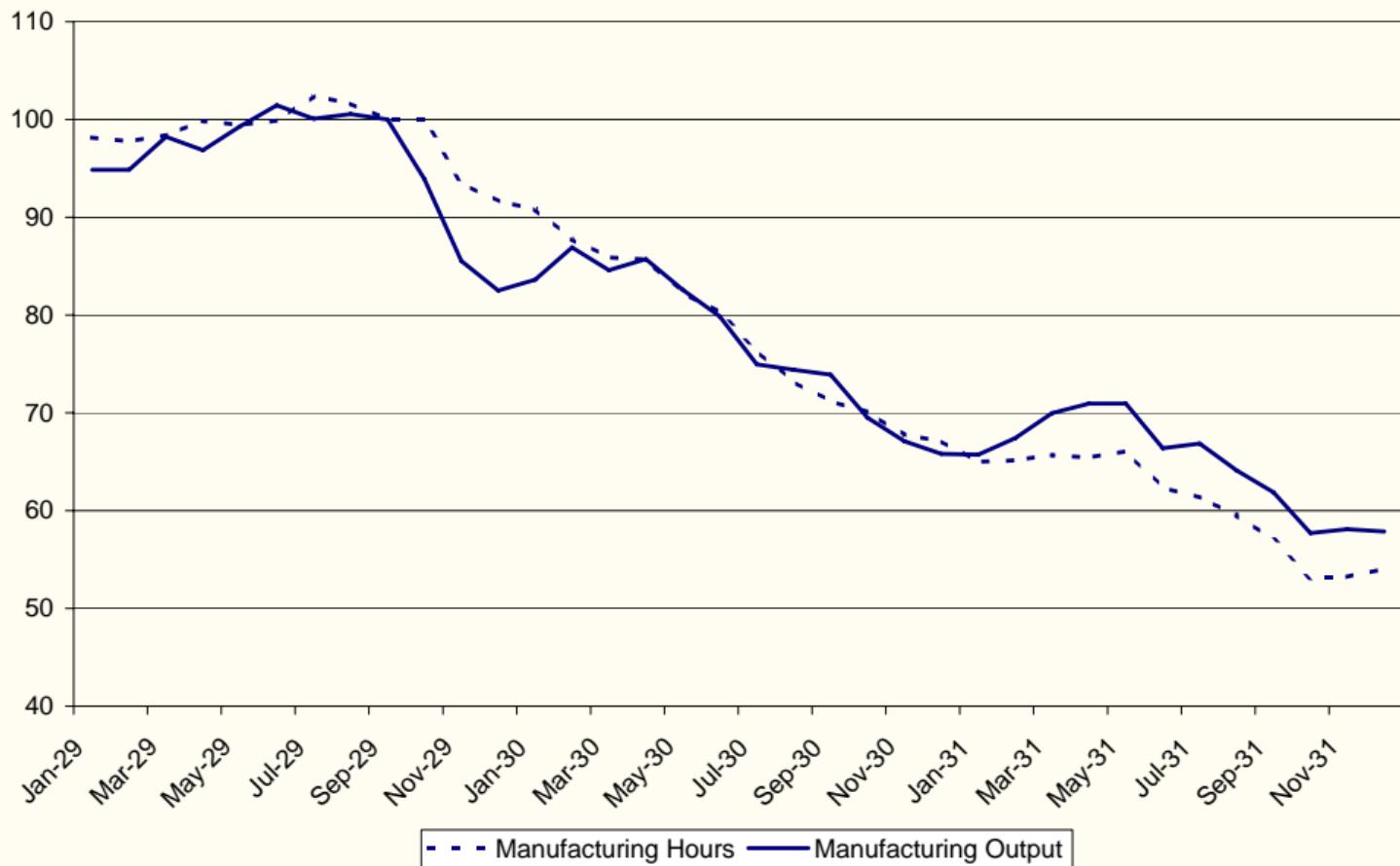


## Responses: U.S.

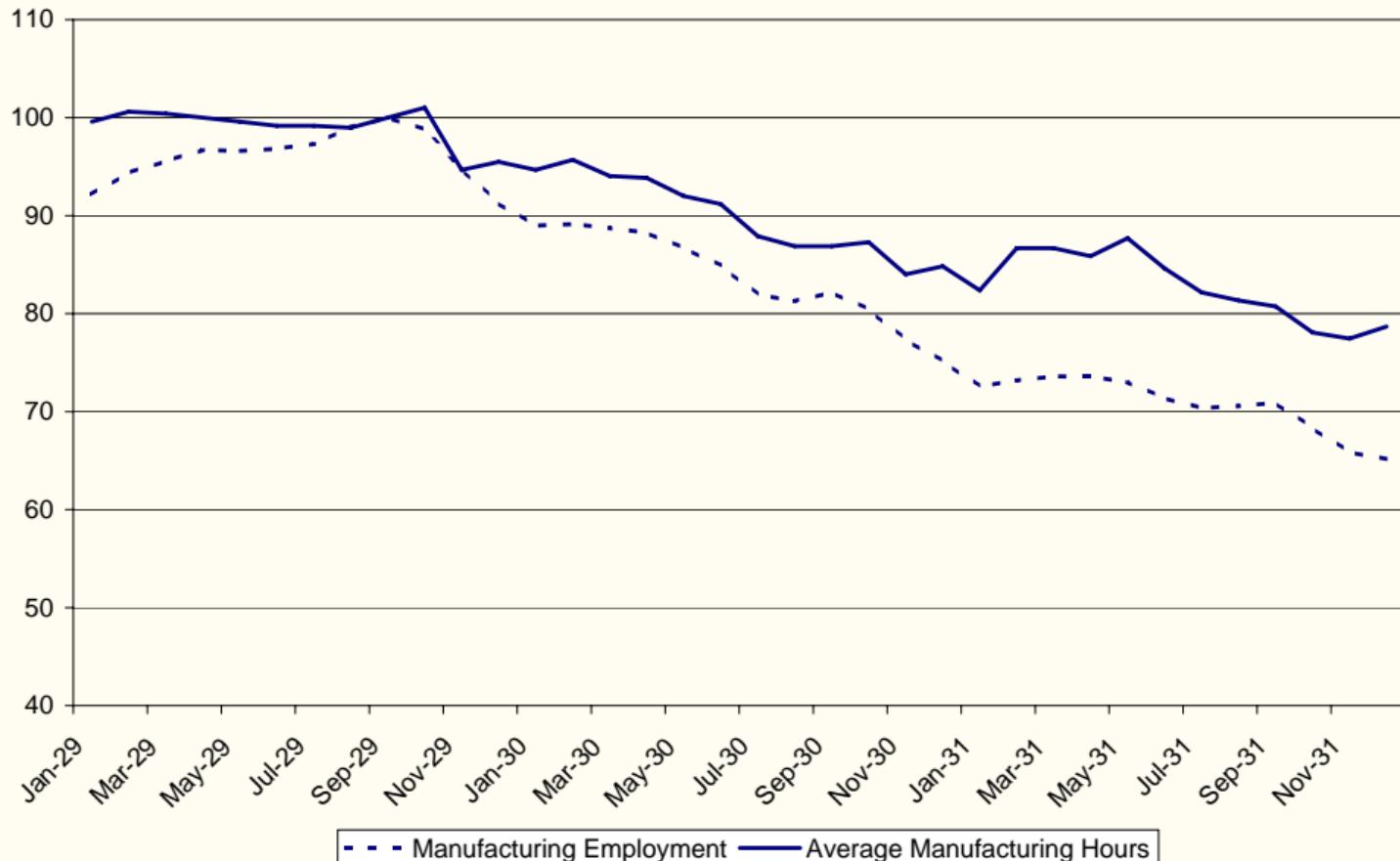
---

- The Hoover administration attempts to maintain high wages. Why?
- Roosevelt's New Deal.
- Large package of measures.
- First New Deal:
  1. National Industrial Recovery Act.
  2. Glass–Steagall Act: FDIC.
  3. Gold Reserve Act. \$20.67 per troy ounce to \$35.
  4. TVA, CCC,...
- Second New Deal:
  1. Social security.
  2. National Labor Relations Board.

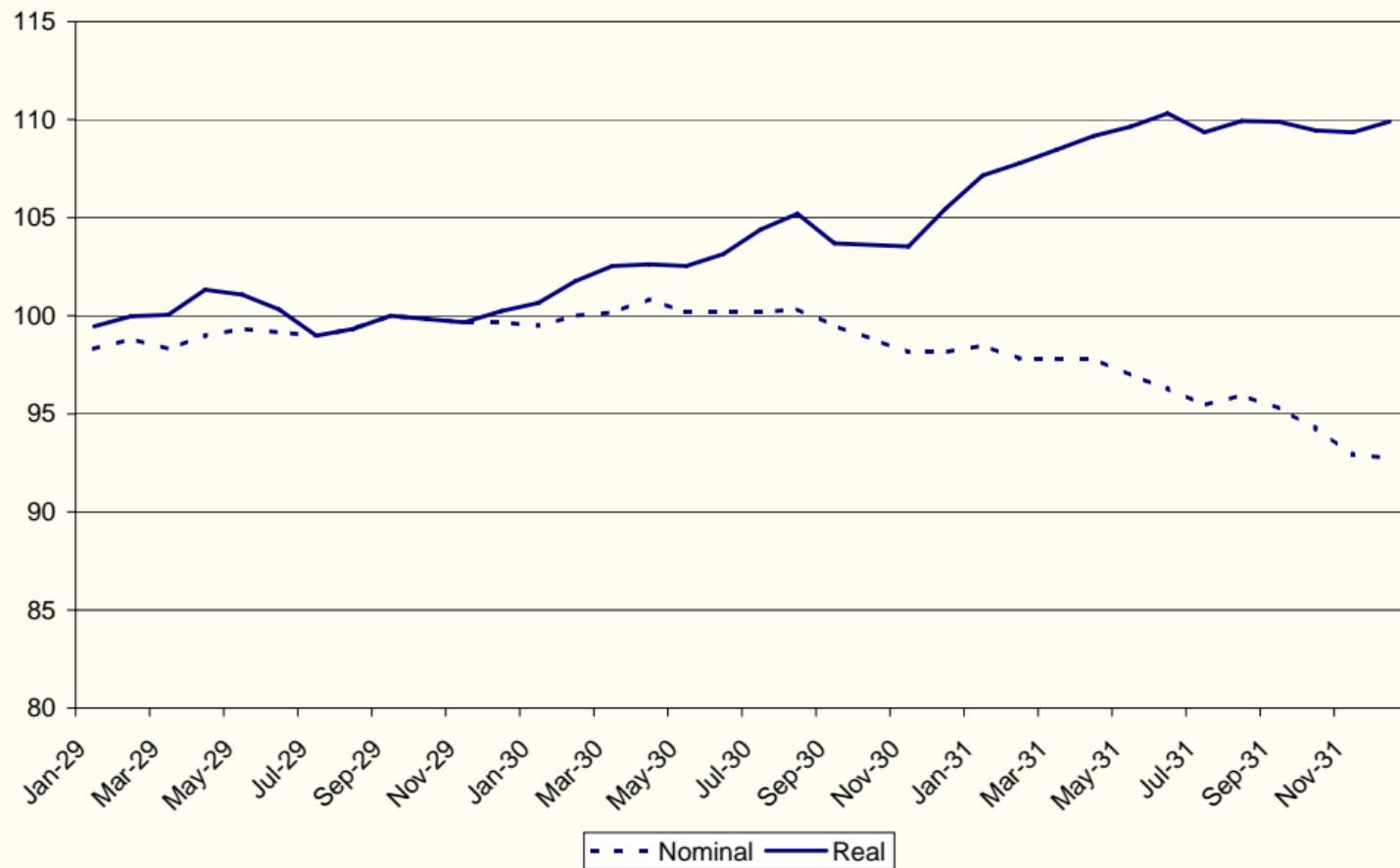
**Figure 1 - Industrial Output and Hours**  
(Sept 1929 = 100)



**Figure 2 - Manufacturing Employment and Hours per Worker**  
(Sept 1929 = 100)



**Figure 3 - Manufacturing Wages**  
(Sept 1929 = 100)





## Responses: Other countries

---

- U.K.: tariff, depreciation.
- France: initial reluctance to change, the victory of the Popular Front in 1936.
- Scandinavian countries: aggregate demand management, construction of the modern welfare state.
- Latin America countries: start of import substitution.
- Germany, Italy: false hopes...

## World War II

---

- War in Europe starts on September 1, 1939, when Germany invades Poland.
- But war in Asia had started on July 7, 1937, with the Marco Polo Bridge Incident. China suffered nearly as many deaths (15-20 million) as the Soviet Union (20-27 million).
- Most destructive conflict in history.
- Furthermore, a war where economic forces play a vital role:
  1. Decision to go to war by Germany (running out of time and foreign reserves).
  2. Production of weaponry. U.S. immense business power proves decisive.
- First war where economists determined much of the strategy: the U.S. and the U.K. In the case of the U.S.: 90 divisions gamble.

Copyrighted Material



# THE ECONOMICS OF WORLD WAR II

*Six great powers in  
international comparison*

Edited by MARK HARRISON

Copyrighted Material

# Wartime GDP of the main belligerents, 1939-45

## International 1990 dollars (billions)

Allied							
Country	1939	1940	1941	1942	1943	1944	1945
USA				1,235	1,399	1,499	1,474
UK	287	316	344	353	361	346	331
France	199	82					101
Italy						117	92
USSR			359	318	464	495	396
Allied Total	486	398	703	1,906	2,224	2,457	2,394

Axis							
Country	1939	1940	1941	1942	1943	1944	1945
Germany	384	387	412	417	426	437	310
France		82	130	116	110	93	
Austria	27	27	29	27	28	29	12
Italy	151	147	144	145	137		
Japan				197	194	189	144
Axis Total	562	643	715	902	895	748	466

Source: Harrison (1998)

NEW YORK TIMES BESTSELLER

HOW AMERICAN BUSINESS  
PRODUCED VICTORY IN WORLD WAR II

# FREEDOM'S FORGE



**ARTHUR HERMAN**

AUTHOR OF *GANDHI & CHURCHILL*, FINALIST FOR THE PULITZER PRIZE

"A rambunctious book that is itself alive with the animal spirits of the marketplace." —The Wall Street Journal



