

# World War I

## Economic Causes and Burdens

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## Today's Lecture

International economy on the eve of 1914

Economic causes of the war?

War mobilization and economic performance

Economic costs of the war

Dec. 3 lecture: Economic Aftermath and Legacy

# International Economy, 1870-1914: Golden Age of Globalization

Growth of international trade

Growth of international investment

Heyday of the Gold Standard

Britain: dominant international economic power

Age of Imperialism

# Merchandise Exports of Advanced Nations

Millions of 1985 dollars and exchange rates

	1870	1913	Annual growth rates (%)	
			Exports	GDP
UK	8,424	27,087	2.7	1.9
Germany	3,755	21,213	4.0	2.9
US	2,498	19,216	4.7	3.9
France	2,035	6,542	2.7	1.4
Japan	36	1,203	8.2	2.4
All advanced	22,640	100,364	3.5	

Source: Angus Maddison, *Dynamic Forces in Capitalist Development*, 1991.

# Foreign Investments, 1913-1914

Billions of dollars

Creditor		Debtor	
UK	18.0	Europe	12.0
France	9.0	US and Canada	10.5
Germany	5.8	Latin America	8.5
US	3.5	Asia	6.0
Belgium, Netherlands, Switzerland	5.5	Africa	4.7
Other countries	2.2	Australia	2.3
Total	44.0	Total	44.0

Source: Gerd Hardach, *The First World War, 1914-1918*, p. 6.



## The Gold Standard



Paper currencies backed by gold

Nations pledge to redeem currency for gold at fixed price

Fixed exchange rates between currencies

Government issue of currency tied to holdings of gold

World money supply rises with new gold discoveries

If imports exceed exports, nation loses gold

→ money supply contracts, price level falls

→ stimulates exports, reduces imports

→ tends to rebalance trade

## Britain Dominant International Economic Power

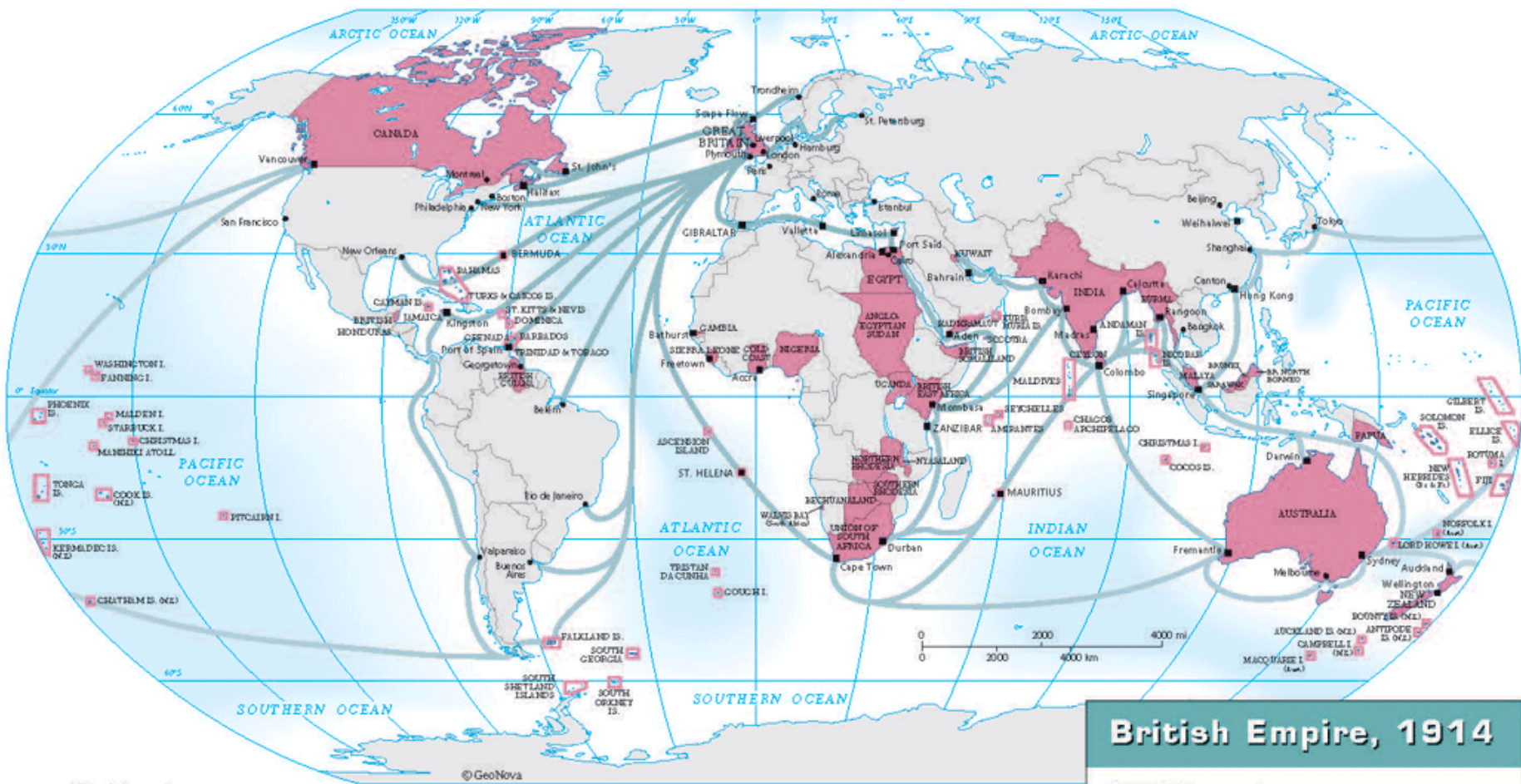
Largest empire: “Sun never sets on the British Empire”

Largest exporter

Largest foreign investor

Center of merchant and commercial banking: London

Largest navy



## British Empire, 1914

<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #e91e63; border: 1px solid black; margin-right: 5px;"></span> British possessions 1914</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #000; border: 1px solid black; margin-right: 5px;"></span> Major British bases or coaling stations</li> </ul>	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #000; border: 1px solid black; margin-right: 5px;"></span> Major cities</li> <li><span style="display: inline-block; width: 15px; border-bottom: 2px solid #808080; margin-right: 5px;"></span> Major British trade routes</li> </ul>
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# Naval Forces, 1914

	German	Austrian	British	French	Russian	US*
Battleships (Dreadnoughts)	13	3	24	4	2	14
Battleships (pre-Dreadnoughts)	30	12	38	21	11	23
Battlecruisers	6	--	10	--	--	--
Cruisers	14	3	47	19	8	21
Light cruisers	35	4	61	6	5	10
Destroyers	152	18	225	81	106	50
Submarines	30	14	75	67	36	39

\* Estimates for 1917.

# Age of Imperialism

## Purposes of empire

- Ports and refueling stations for trade

- Monopoly access to food and resources

- Secure markets for exports

- Lenin: Foreign investments sustain capitalists' profits

Germany late to game

Austro-Hungarian Empire mainly European

Capitalist war over resources and markets?





# Franz Joseph I

Emperor of Austria  
and  
King of Hungary and  
Croatia  
and  
King of Bohemia

1848-1916



# Austria-Hungary: A Multiethnic Mélange

## Percentage Distribution of Population, 1914

German	24	Croatian	5
Hungarian	20	Serbian	4
Czech	13	Slovakian	3
Polish	10	Slovenian	3
Ukranian	8	Italian	3
Rumanian	6		

Source: Census of 1910, Freytag & Berndt (1911).



George Grosz, 1893-1959

*Germany Above All* (1920)



worldatlas

Portugal

Spain

Med. Sea

Strait of Gibraltar

Gibraltar

Tangier

Tetouan

Atlantic Ocean

© GraphicMaps.com

Er Rif

Oujda

Rabat

Sale

Fes

Moulouya River

Casablanca

Khouribga

Figuig

Safi

Atlas Mts.

Marrakech

Algeria

Canary Islands (Spain)

Agadir

MOROCCO

300 mi

Tafraout

300 km

SAHARA

Western Sahara

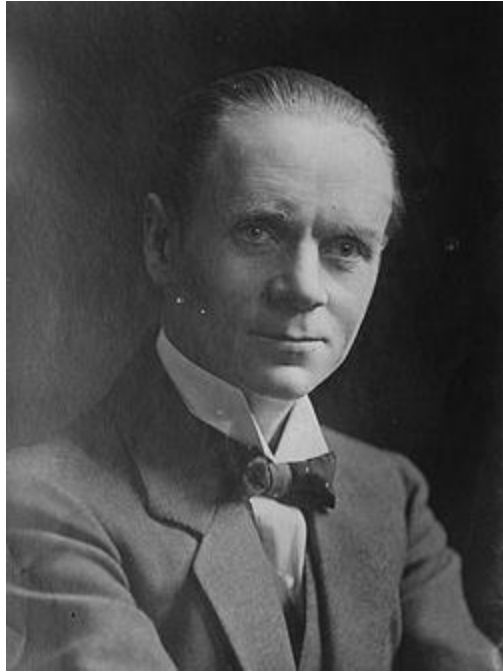
Mauritania

MOROCCO

- DESSERT/LOW/HILLS/MTNS
- COASTAL LOWLANDS

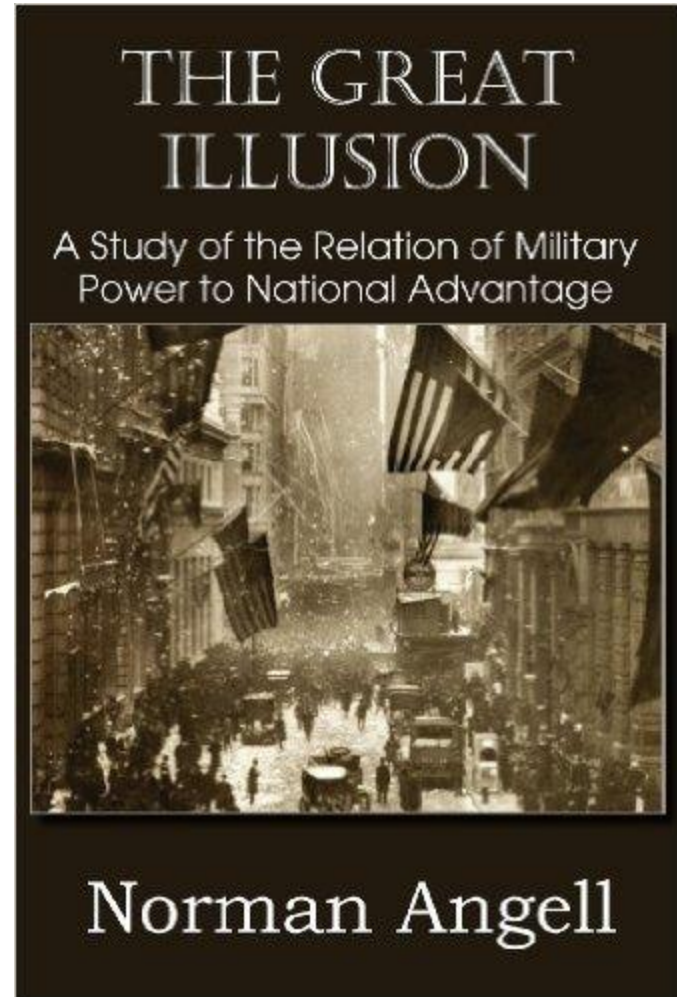






Norman Angell, 1872-1967

Awarded Nobel Peace Prize, 1933



First published 1910

# Populations and Armies

## Millions

### Central Powers

### Allied Powers

	1914 pop.	Mobilized			1914 pop.	Mobilized	
Austria-Hungary	48.5	8.0	16%	Serbia	4.5	0.7	16%
Germany	67.0	11.0	16%	Belgium	7.6	0.3	4%
Bulgaria (1915)	4.6	0.9	20%	France	39.6	8.7	22%
Ottoman Empire	22.0	2.9	13%	UK	46.0	4.0	11%
				Russia	167.0	15.0	9%
				Italy (1915)	36.0	5.6	16%
				US (1917)	103.8	4.7	5%
<u>Total</u>	<u>142.1</u>	<u>22.8</u>	<u>16%</u>	<u>Total</u>	<u>404.5</u>	<u>39.0</u>	<u>10%</u>



Ravenna, Italy  
May 24, 2015

100<sup>th</sup> Anniversary  
Italy's Entering War World I



# Economic Bases: 1913 GNP's

1960 US dollars

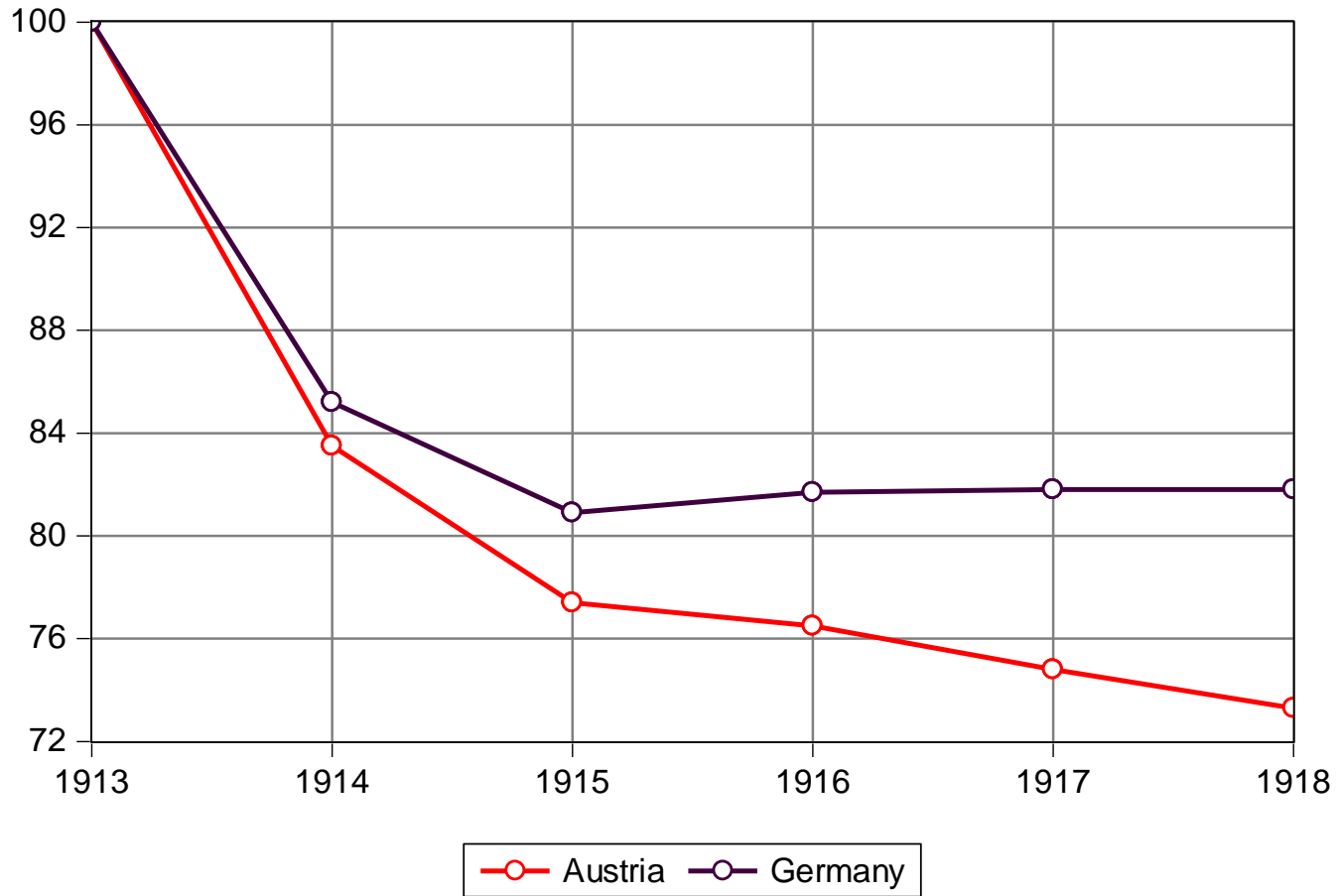
## Central Powers

## Allied Powers

	GNP millions	GNP/N thous.		GNP millions	GNP/N thous.
Austria-Hungary	26,050	498	Serbia	723	284
Germany	49,760	743	Belgium	6,794	894
Bulgaria (1915)	1,260	263	France	27,401	689
Ottoman Empire	6,850	230	UK	44,074	965
			Russia	52,420	326
			Italy	15,624	441
			US	102,291	1,048
<u>Total</u>	<u>83,920</u>	<u>546</u>	<u>Total</u>	<u>249,327</u>	<u>640</u>

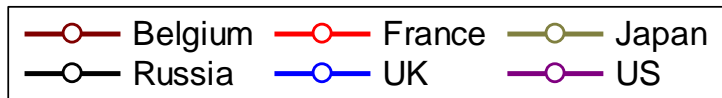
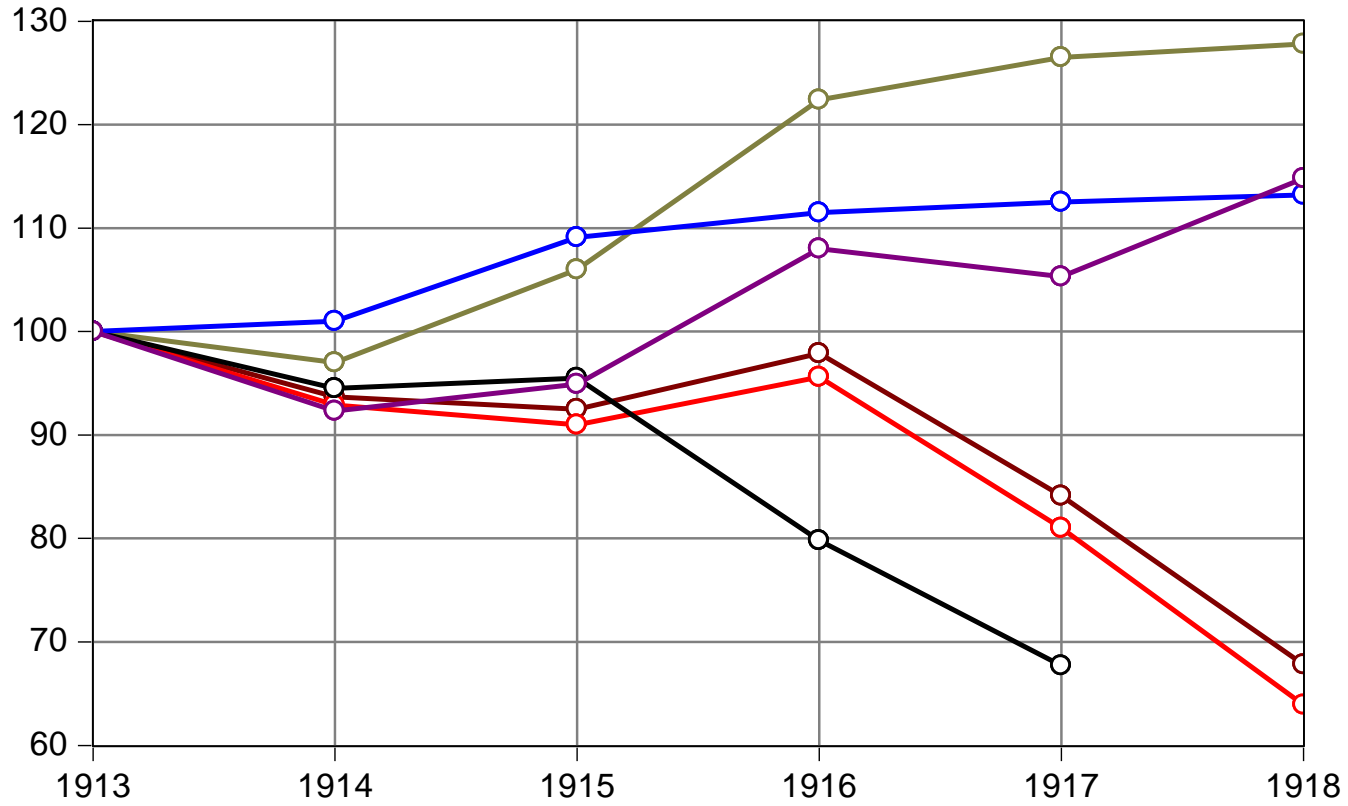
# Real GDP: Central Powers, 1913-1918

Index, 1913=100



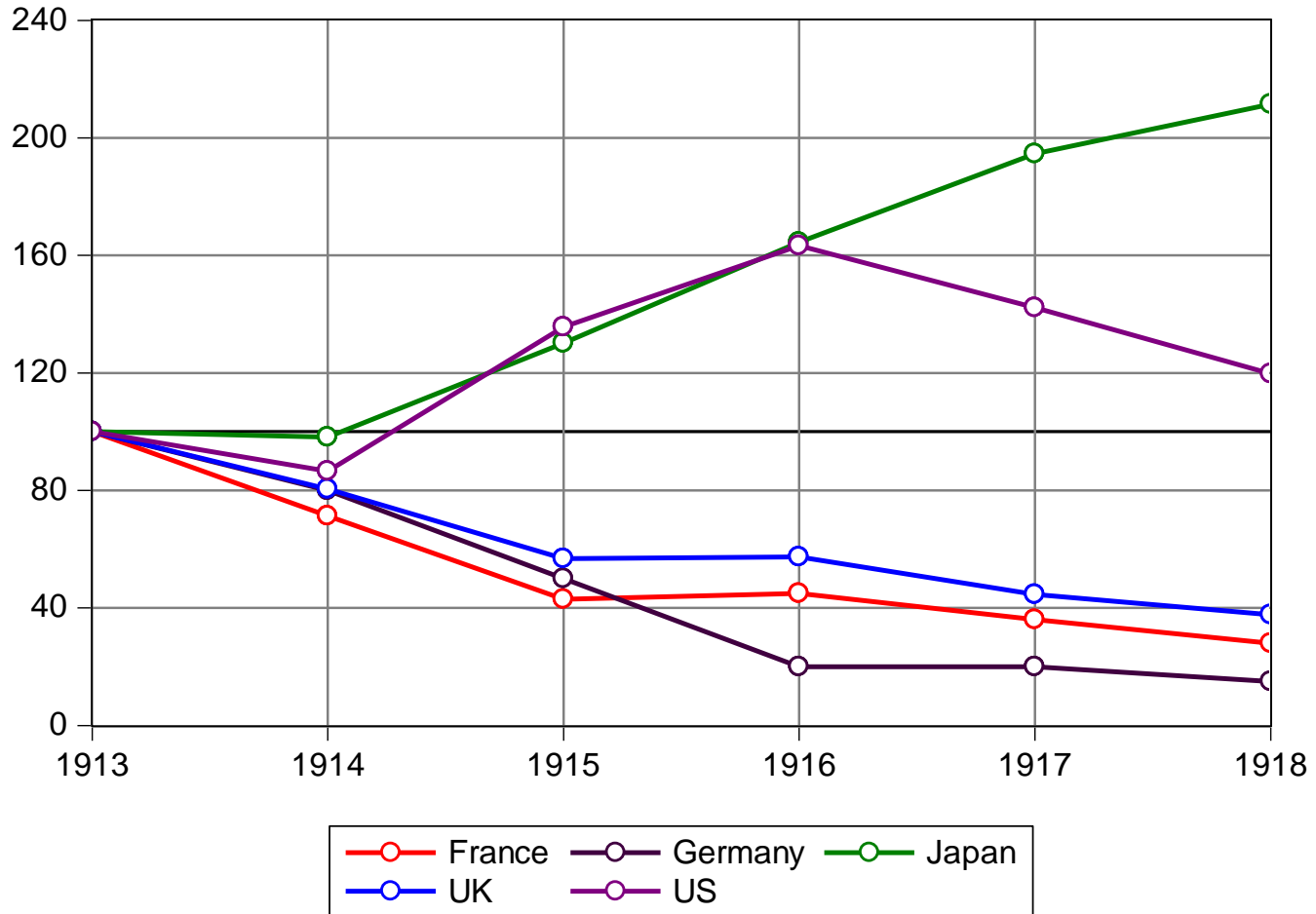
# Real GDP: Allied Powers, 1913-1918

Index, 1913=100



# Real Exports: Allied Powers and Germany, 1913-1918

Indexes, 1913=100



# U.S. Ship and Aircraft Production, 1913-1918

Year	Shipbuilding Gross tons	Number of Aircraft	
		Military	Civil
1913	346,155	14	29
1914	316,250	15	34
1915	225,122	26	152
1916	325,413	142	269
1917	664,479	2,013	135
1918	1,300,868	13,991	29

Source: Historical Statistics of the U.S., <http://hsus.cambridge.org/SeriesDf578-864, Df1173-74>.



# Government Expenditure as Percent of GDP

Year	Austria-H	Germany	France	UK	US
1913	4.3	9.8	10.0	8.1	1.8
1914		23.9	22.3	12.7	1.9
1915	30.2	43.8	46.4	33.3	1.9
1916	26.8	50.3	47.2	37.1	1.5
1917	22.2	59.0	49.9	37.1	3.2
1918	17.2	50.1	53.5	35.1	16.6

Source; S. Broadberry and M. Harrison, *The Economics of World War I*, 2005, pp. 14 and 84.

# Methods of War Finance

Note aim: Shift resources from civilian to military use,  
or obtain resources from abroad

Conscript, cajole, ration

Taxation

Borrowing

From domestic households and businesses lenders

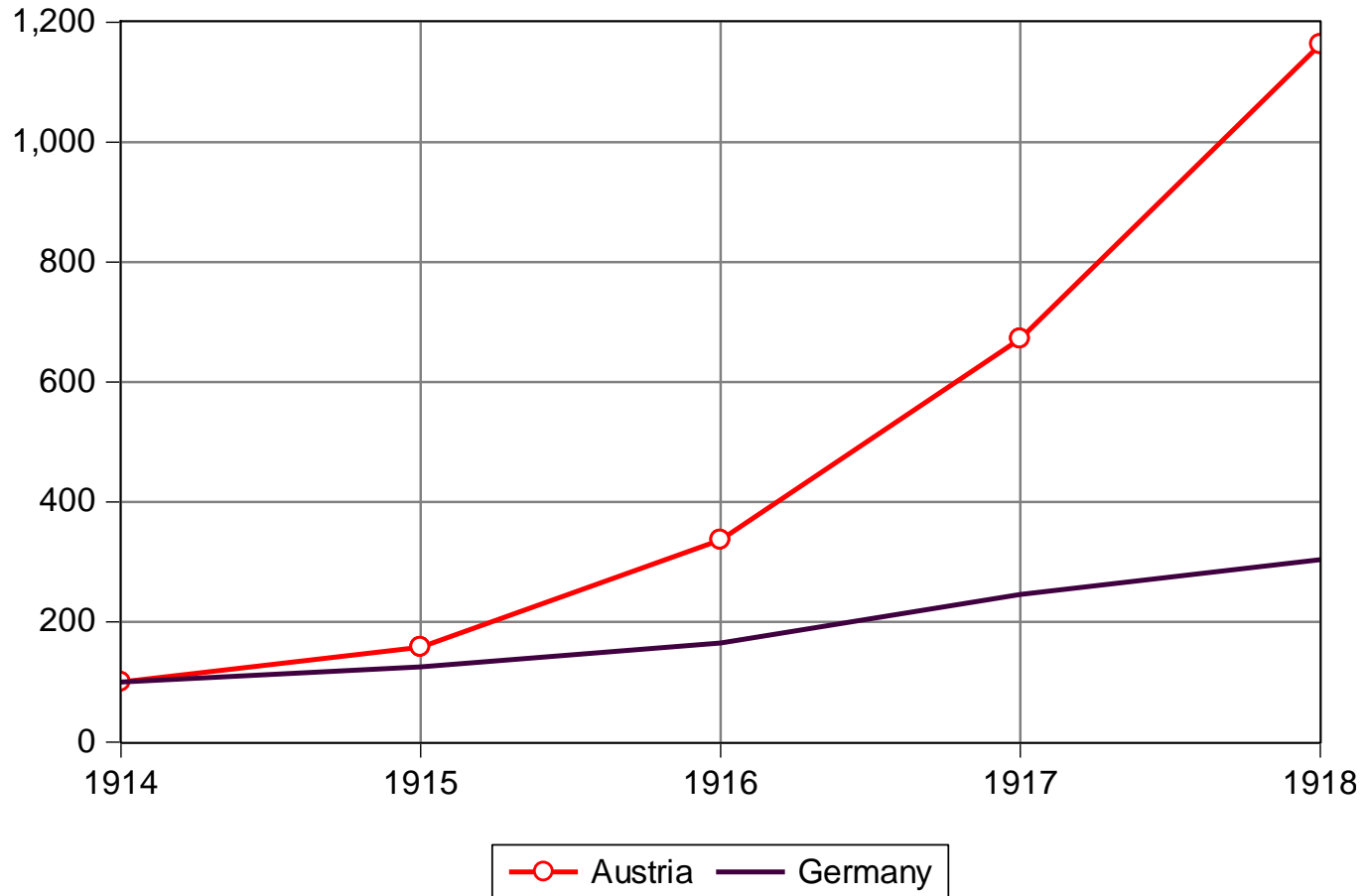
From foreigners (including governments)

Print money

Borrowing from central bank similar outcome

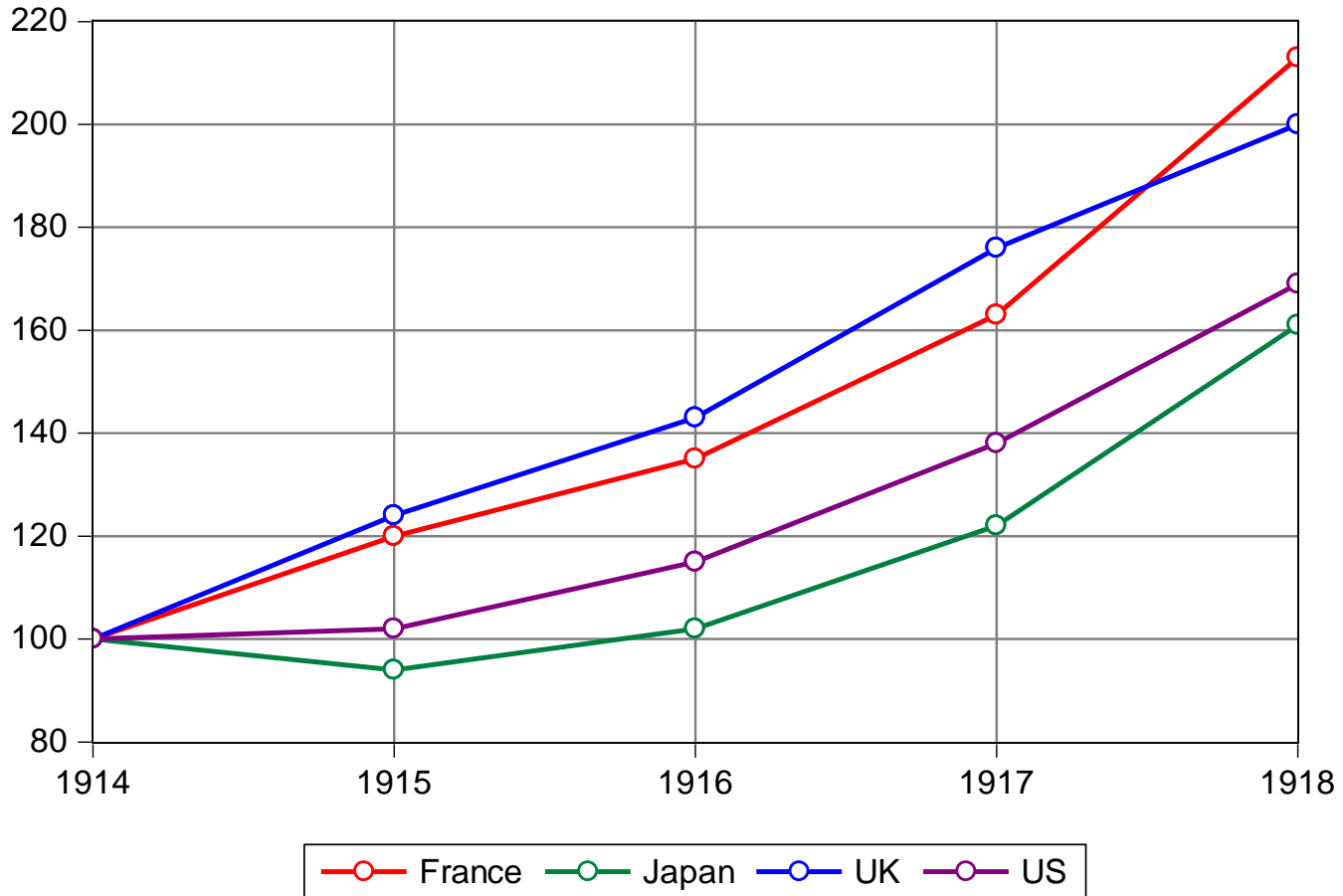
# Consumer Price Index: Central Powers, 1914-1918

Index, 1914=100



# Consumer Price Index: Allied Powers, 1914-1918

Index, 1914=100



# Inter-Allied Government Debts at Time of Armistice

Millions of dollars

Debtors	----- Creditors -----			Total
	US	UK	France	
UK	3,696	--	--	3,696
France	1,970	1,683	--	3,653
Russia	188	2,472	955	3,615
Italy	1,031	1,855	75	2,961
Belgium	172	434	535	1,141
Others	21	570	672	1,263
<b>Total</b>	<b>7,078</b>	<b>7,014</b>	<b>2,237</b>	<b>16,329</b>

Source; G. Hardach, *The First World War 1914-1918*, 1977, p.148.

# Battle and Non-Battle Deaths of Military Personnel in WWI

Central Powers			Allied Powers		
	thous.	%pop		thous.	%pop
Austria-Hungary	1,100	1.9	Serbia	278	5.7
Germany	2,037	3.0	Belgium	38	0.5
Bulgaria	88	1.9	France	1,327	3.4
Turkey	804	3.7	UK	715	1.6
			Russia	1,811	1.1
			Italy	578	1.6
			US	114	0.1
<u>All Central</u>	<u>4,029</u>	<u>2.6</u>	<u>All Allied</u>	<u>5,413</u>	<u>0.7</u>

**THE END**