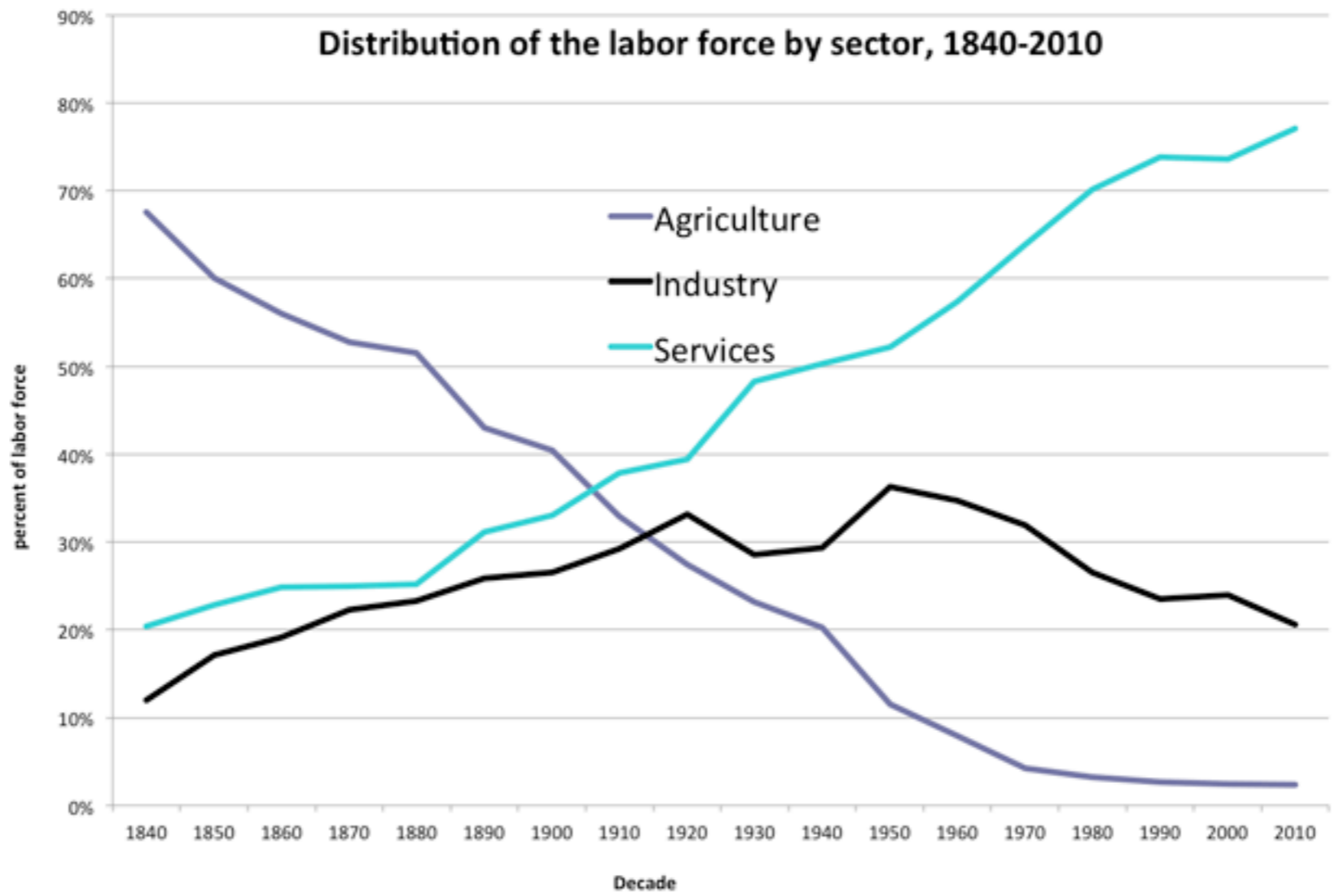


CLASS 2, APRIL 5 2017

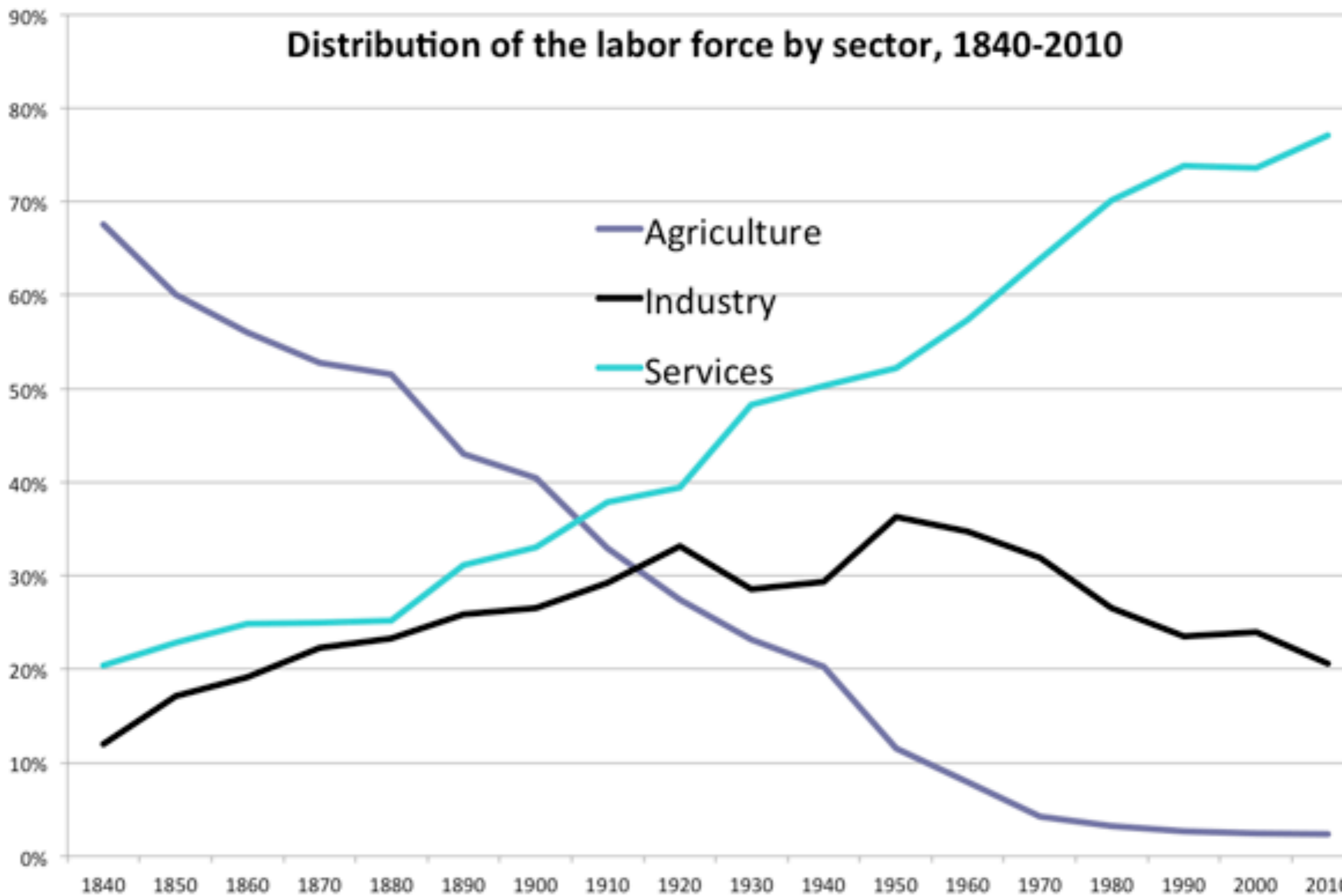
ROGER BOHN

EMPLOYMENT AND AUTOMATION: FIGURES

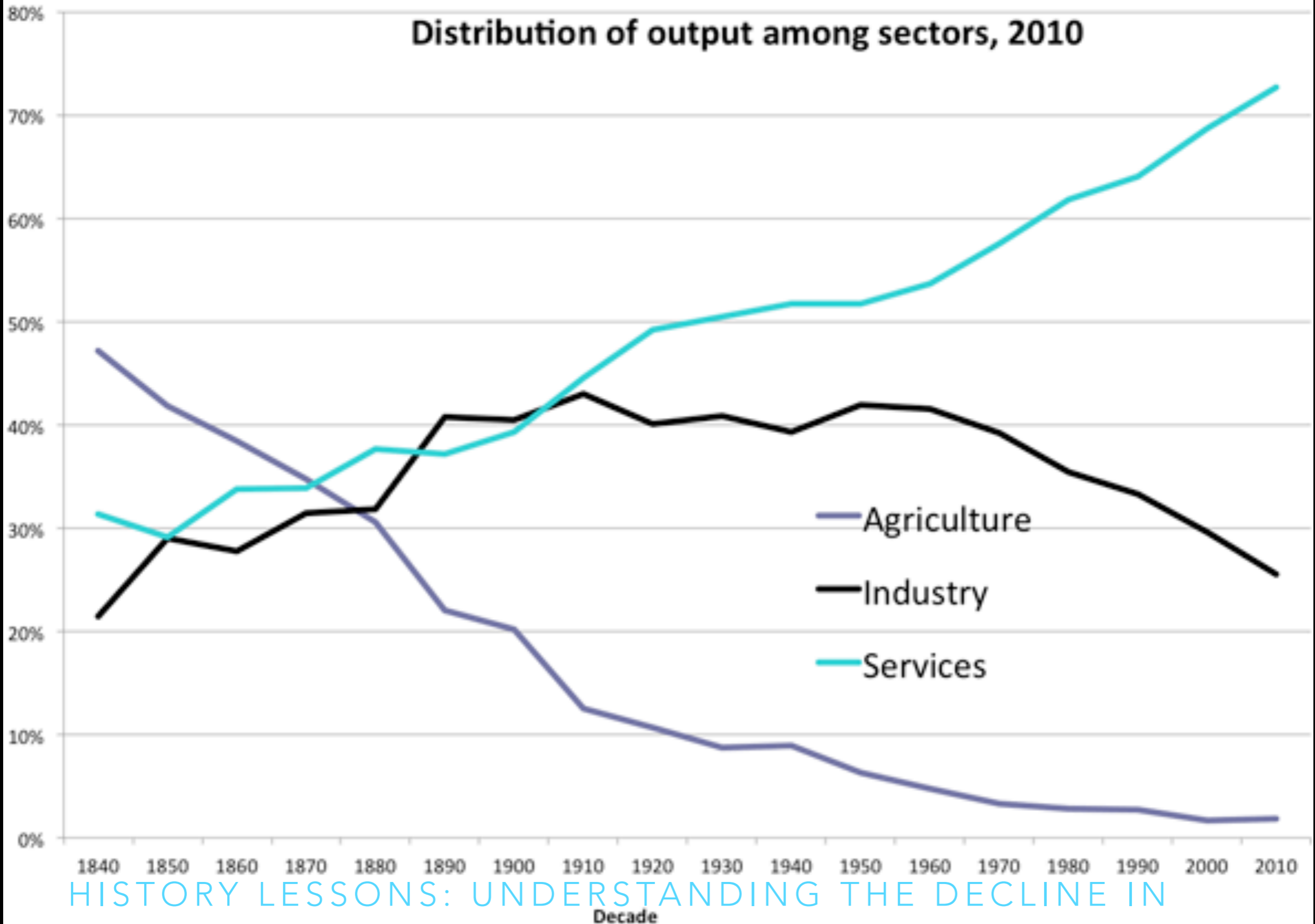
Distribution of the labor force by sector, 1840-2010



Distribution of the labor force by sector, 1840-2010



Distribution of output among sectors, 2010



HISTORY LESSONS: UNDERSTANDING THE DECLINE IN MANUFACTURING

BY LOUIS D. JOHNSTON | 02/22/12

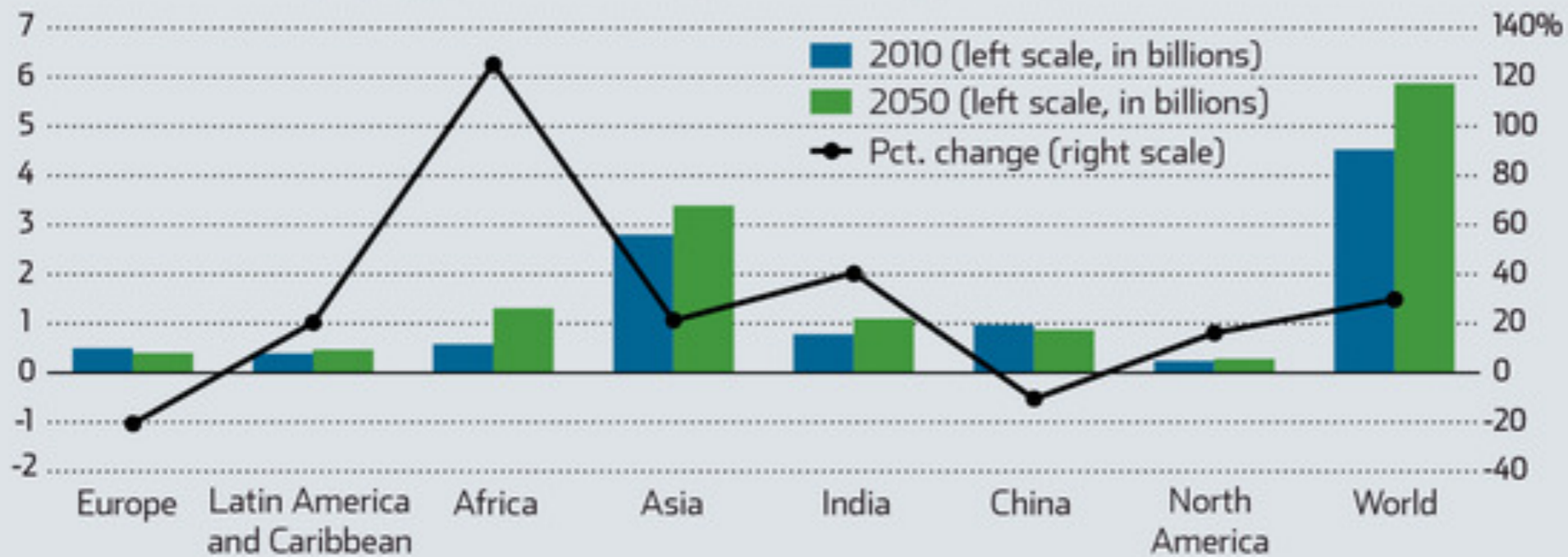
A World Transformed

How the nature of society and work has changed in the past two centuries...

	1800	2010
World population	978 million	6.9 billion
Urban share of total population	3%	49%
Life expectancy	29 years	67 years
Work is mainly...	Land-based	People- and society-based
And it involves...	Manual labor	Mechanized and automated work
Pct. of global workforce in agriculture	85%	33.5%*
World trade as pct. of global GDP	3% of global GDP	27% of global GDP

*5% in OECD, 2% in U.S. and U.K.

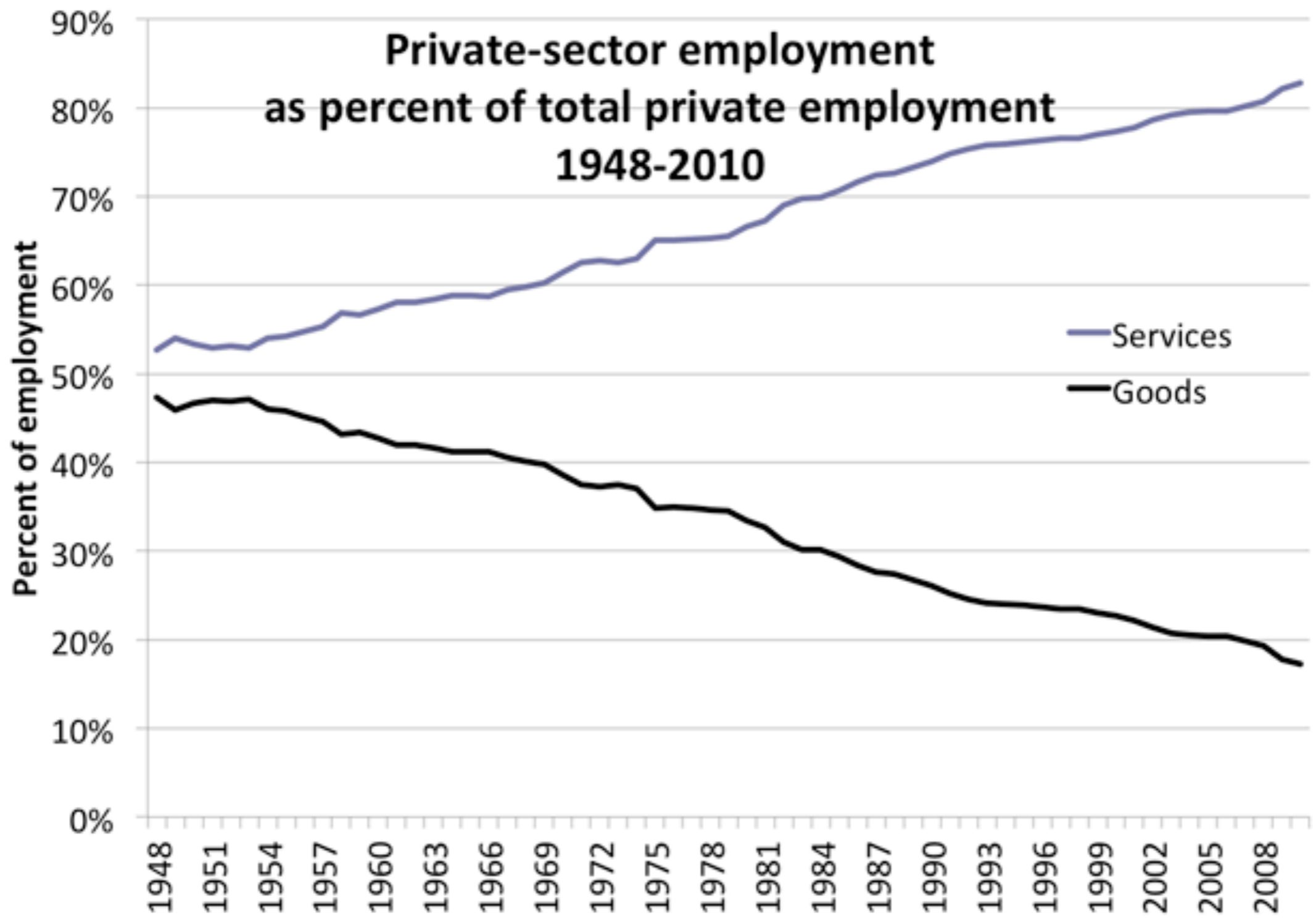
And how the working-age population will change in the coming decades



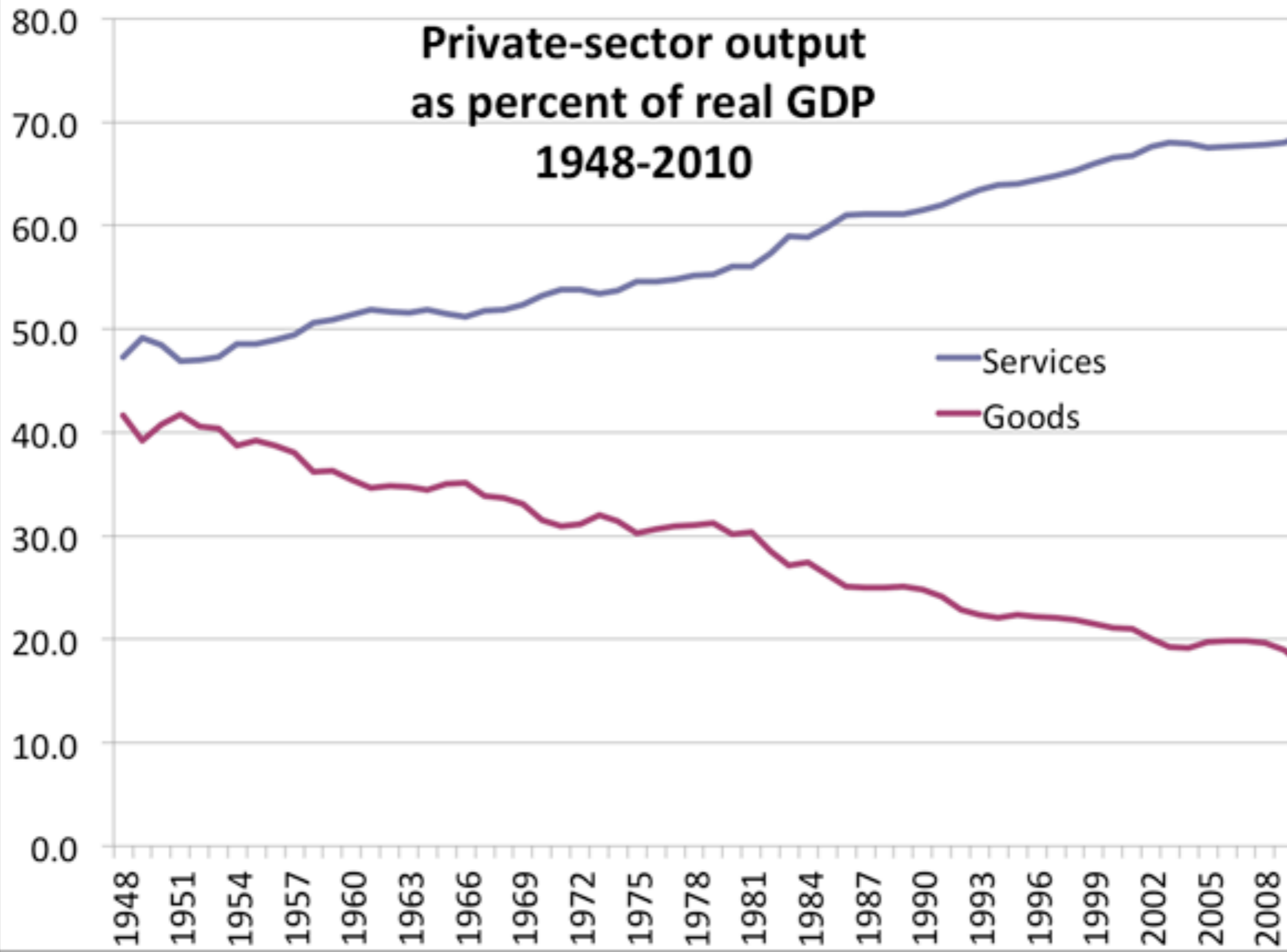
Sources: Sustainability Journal (1800-2010 comparison); United Nations Department of Economic and Social Affairs (2010-2050 population)

The Wall Street Journal

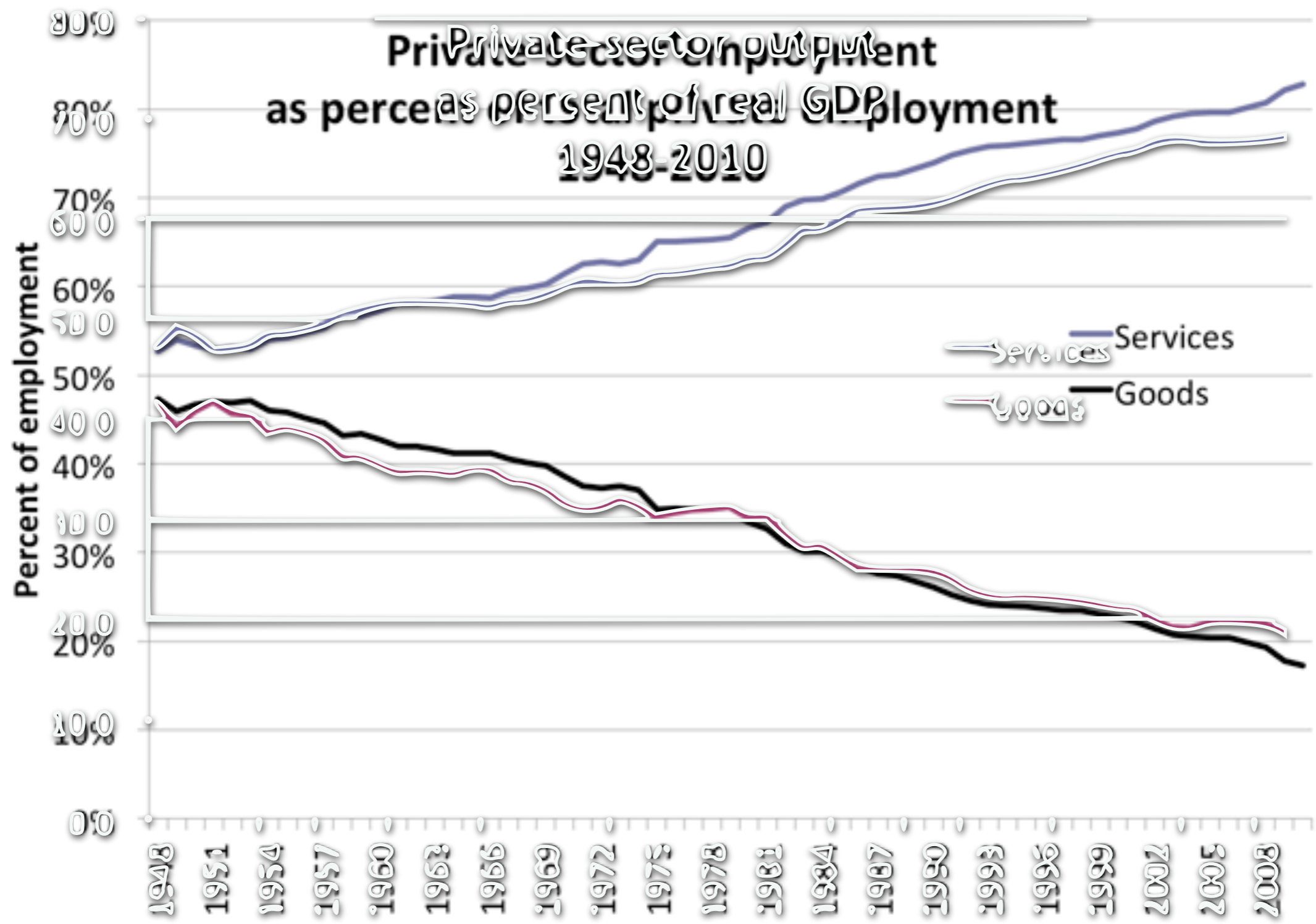
Private-sector employment as percent of total private employment 1948-2010



Private-sector output as percent of real GDP 1948-2010



Private sector output as percent of real GDP employment 1948-2010



The Big Picture

From Factories to Cubicles

An American economy that used to be built on making stuff is now built on shuffling paper instead. From 1947 to 2009, manufacturing shrank from more than a quarter of the gross domestic product to just a ninth of it. Meanwhile, white-collar work grew from less than a fifth of GDP to nearly half of it (counting finance, insurance, real estate, professional and business services, information, education, and health care).

Government's hand has barely grown heavier. The share of GDP accounted for by government at all levels peaked at 15.3 percent in 1971, though it's been growing slowly again since 2006.

Manufacturing's role in the economy crested in 1953, when factories contributed 28.3 percent of GDP. Since 1977, its share has declined every year except 1988 and 2004.

Education's share of the economy has nearly quadrupled (to 1.1 percent). Health care and social services' share has nearly quintupled (to 7.3 percent) as a proportion of GDP.

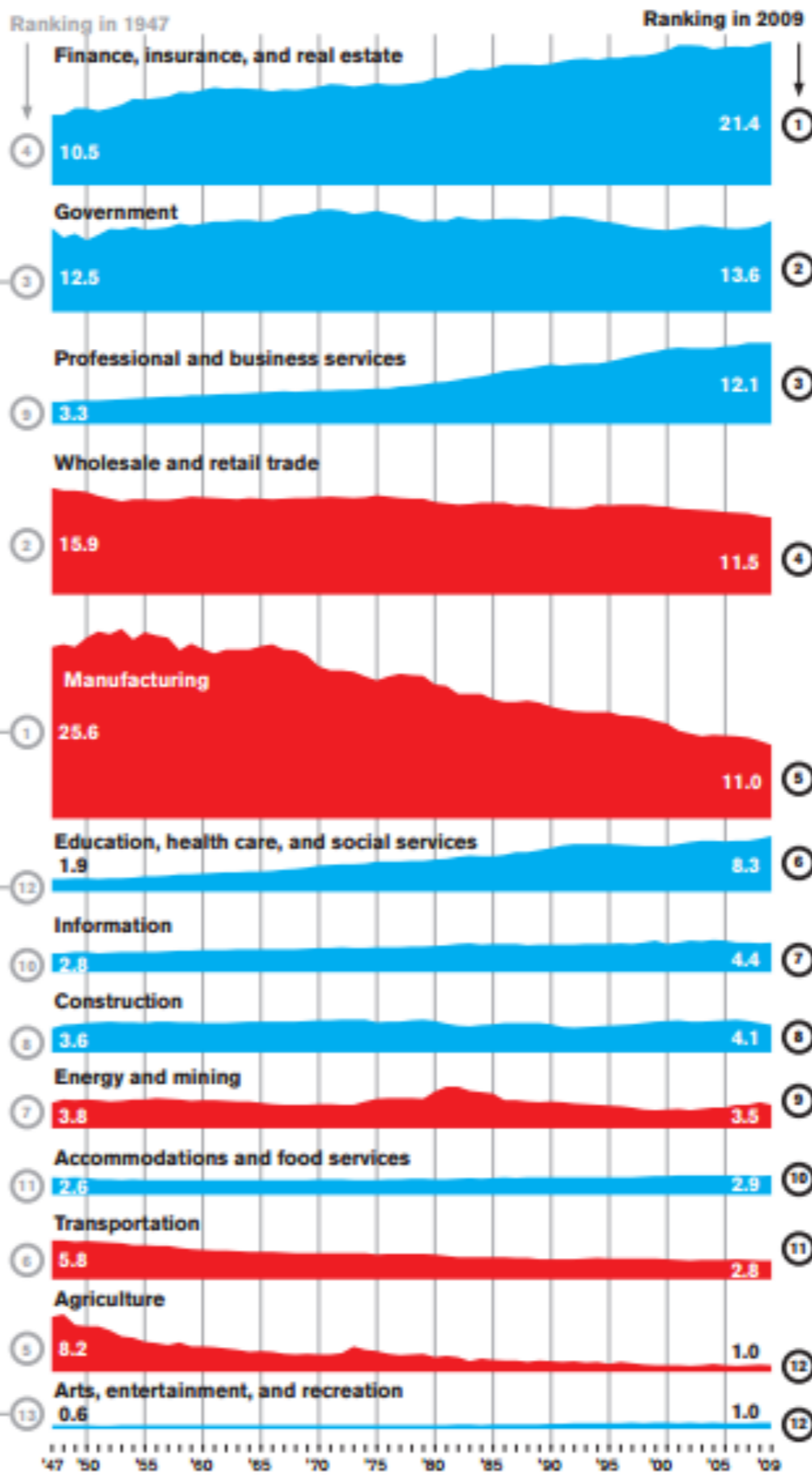
Arts, entertainment, and recreation began a slow-though-steady rise during a former Screen Actors Guild president's presidency, but have stagnated at about 1 percent of GDP since the mid-1990s.

Graphic by BRIAN McGILL
 Research by PETER BELL
 Sources: Bureau of Economic Analysis;
 Bureau of Labor Statistics

Value Added to the U.S. Economy by Industry

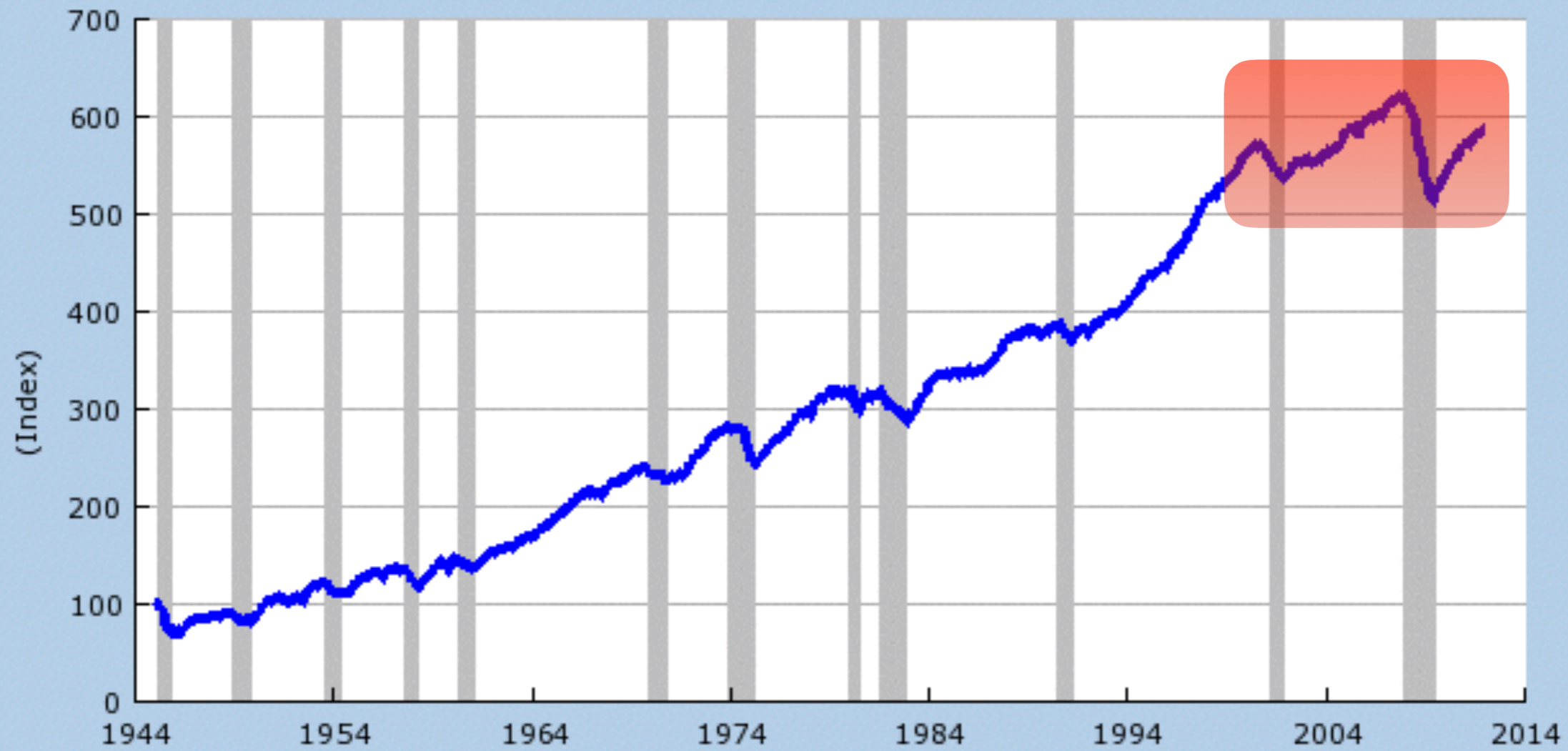
(Percentage of total gross domestic product, 1947 to 2009)

● Proportion of GDP, increasing ● Proportion of GDP, decreasing



Graphic by BRIAN
 McGILL
 Research by PETER
 BELL
 Sources: Bureau of
 Economic Analysis;
 Bureau of Labor
 Statistics

Industrial Production Index (INDPRO)
Source: Board of Governors of the Federal Reserve System



FRED 

Shaded areas indicate US recessions.
2012 research.stlouisfed.org

— INDPRO, 1945-02=100



