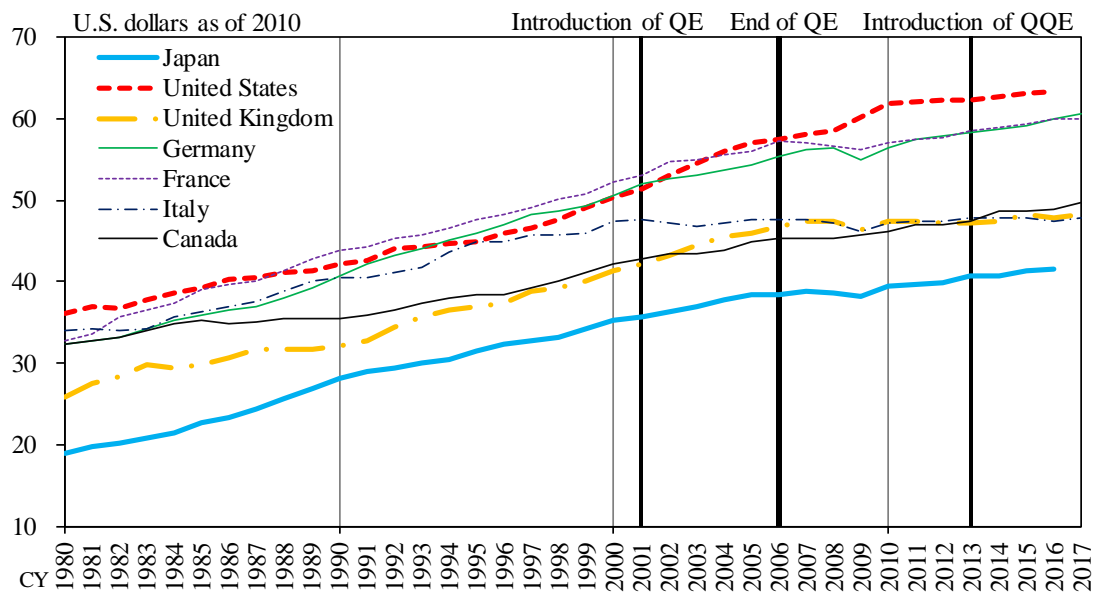


Chart 1 Productivity of Major Economies



Note: Productivity is represented by real GDP per hour worked, converted by purchasing power parity exchange rates in 2010.

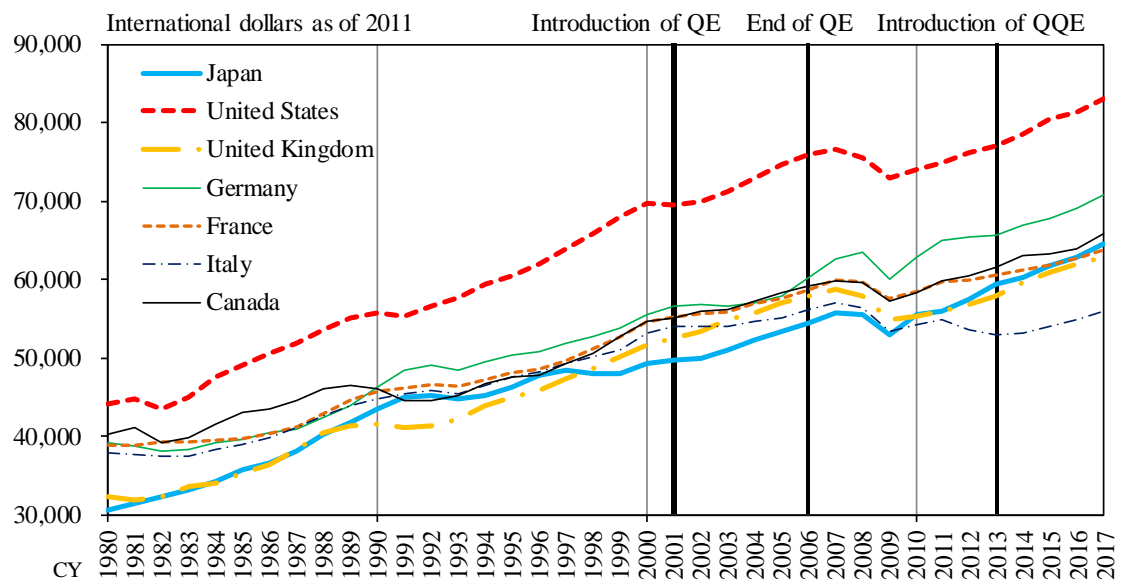
Source: OECD, "Level of GDP per capita and productivity."

Average Growth Rate of Productivity (%)

Period	Japan*	United States*	United Kingdom	Germany	France	Italy	Canada
2012-2017	1.0	0.4	0.5	0.9	0.8	0.2	1.2
2002-2012	0.9	1.6	0.9	0.9	0.5	0.0	0.8
1992-2012	1.5	1.7	1.6	1.5	1.2	0.7	1.3

*The data for the period 2012 through 2016 are used instead of the data for 2012 through 2017.

Chart 2 Real PPP GDP per Working-Age Person of Major Economies



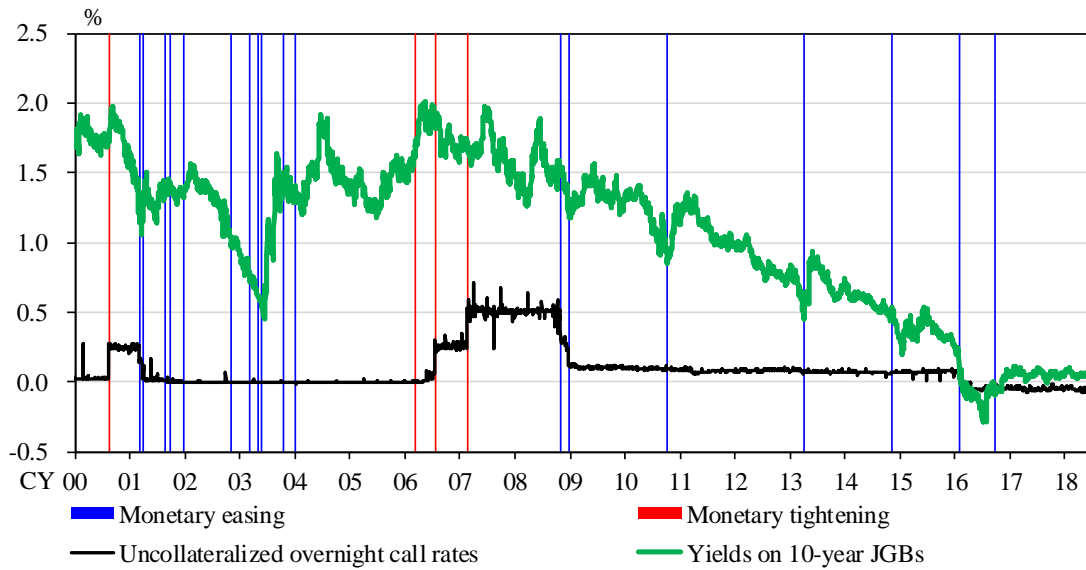
Note: Annual figures for working-age person are obtained by linear interpolation of data for every five years. Figures for Germany through 1990 are those for West Germany. Real GDP is converted by purchasing power parity (international dollars as of 2011).

Sources: IMF, "World Economic Outlook Database";
United Nations, "World Population Prospects: 2017 Revision."

Average Growth Rate of the Real PPP GDP per Working-Age Person (%)

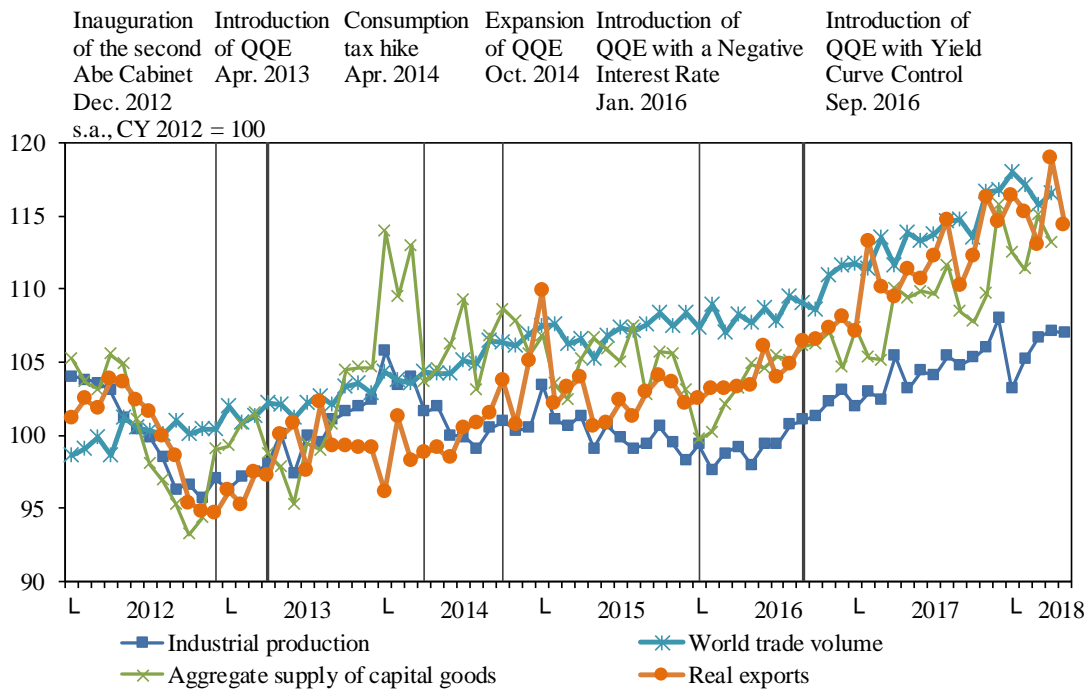
Period	Japan	United States	United Kingdom	Germany	France	Italy	Canada
2012-2017	2.3	1.7	2.1	1.6	1.2	0.9	1.7
2002-2012	1.4	0.8	0.6	1.4	0.8	-0.1	0.8
1992-2012	1.2	1.5	1.6	1.4	1.3	0.8	1.5

Chart 3 Short-Term and Long-Term Interest Rates



Source: Bloomberg.

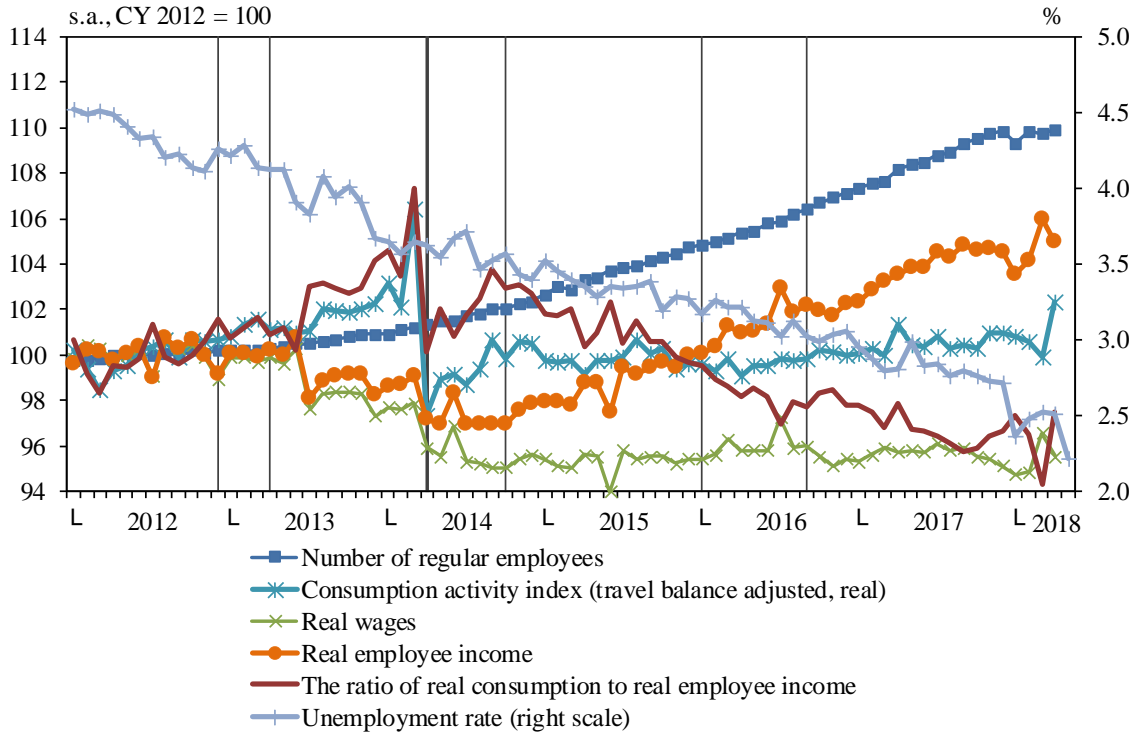
Chart 4 Production, Investment, Exports, and World Trade



Sources: Ministry of Economy, Trade and Industry, "Indices of Industrial Production," "Indices of Industrial Domestic Shipments and Imports"; CPB Netherlands Bureau for Economic Policy Analysis, "CPB World Trade Monitor"; Bank of Japan, "Developments in Real Exports and Real Imports."

Chart 5 Employment, Income, and Consumption

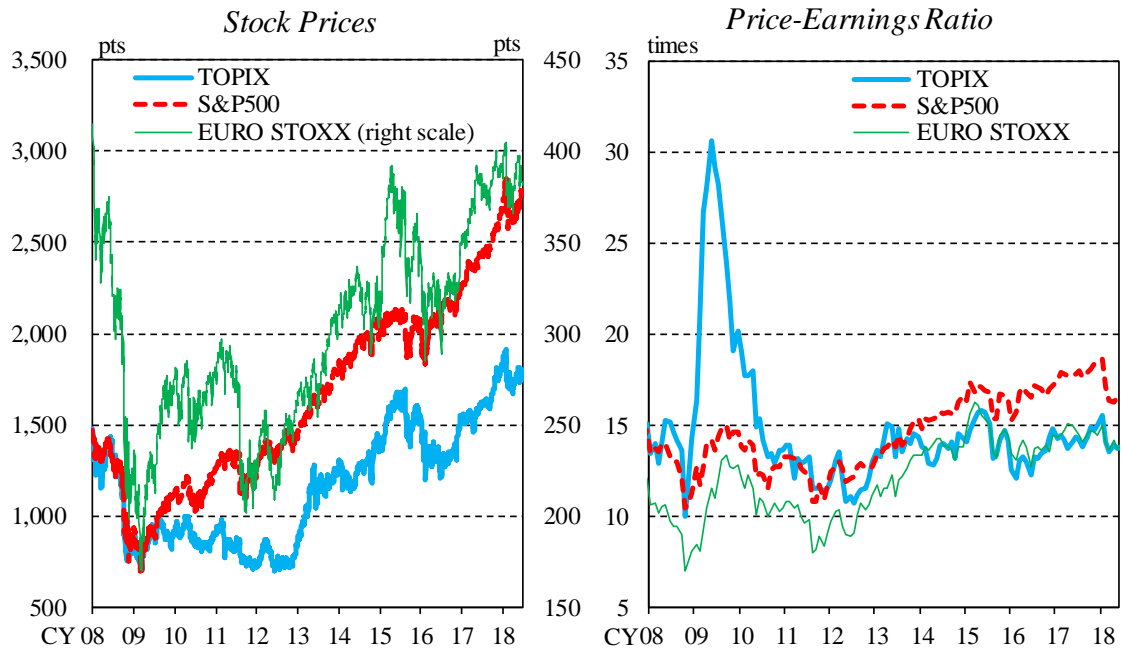
Inauguration of the second Abe Cabinet Dec. 2012 Introduction of the second of QQE Apr. 2013 Consumption tax hike Apr. 2014 Expansion of QQE Oct. 2014 Introduction of QQE with a Negative Interest Rate Jan. 2016 Introduction of QQE with Yield Curve Control Sep. 2016



Note: Real employee income is calculated as the number of regular employees multiplied by real wages which is the total cash earnings deflated by the CPI (all items less imputed rent). The ratio of real consumption to real employee income is calculated as the consumption activity index (travel balance adjusted, real) divided by real employee income.

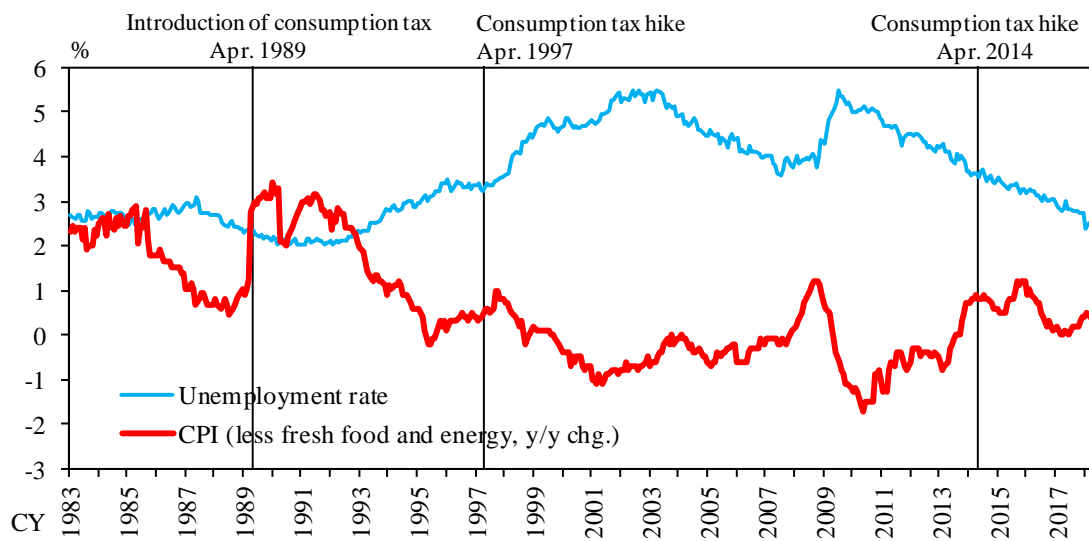
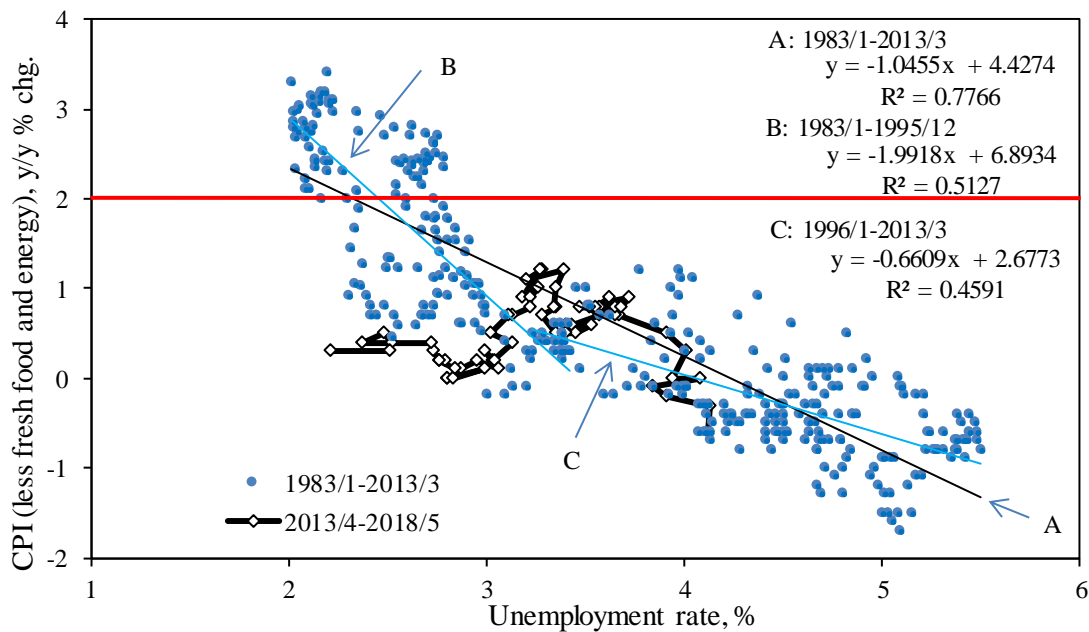
Sources: Ministry of Health, Labour and Welfare, "Monthly Labour Survey"; Ministry of Internal Affairs and Communications, "Consumption Price Index," "Labour Force Survey"; Bank of Japan, "Consumption Activity Index."

Chart 6 Stock Prices and Price-Earnings Ratio



Sources: Bloomberg; Thomson Reuters.

Chart 7 Phillips Curve



Note: The CPI figures are adjusted for changes in the consumption tax rate.

Sources: Ministry of Internal Affairs and Communications; Ministry of Health, Labour and Welfare.

	Formula	Estimate of the unemployment rate corresponding to 2% (%)	Avg. growth rate of the observed CPI (annualized, %)
A	$CPI = -1.05 \times \text{unemployment rate} + 4.43$	2.3	0.5
B	$CPI = -1.99 \times \text{unemployment rate} + 6.89$	2.5	1.6
C	$CPI = -0.66 \times \text{unemployment rate} + 2.68$	1.0	-0.3