



May 5, 2011  
Bank of Japan

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**The Transition from High Growth to Stable Growth: Japan's  
Experience and Implications for Emerging Economies**

*Remarks at the Bank of Finland  
200<sup>th</sup> Anniversary Conference*

**Masaaki Shirakawa**  
*Governor of the Bank of Japan*

## **I. Introduction**

Thank you very much for inviting me to the Bank of Finland's 200th Anniversary Conference<sup>1</sup>. It is an honor to take part in this panel session.

After considering how I could contribute to the session "Global Shifts" as a discussant, I felt it would be best to compare the experience of the Japanese economy from its high-growth period onward, with that of the emerging economies which are currently growing at a very rapid pace. Although it is not well-known, Japan's automobile industry first ventured into the European markets through Finland back in 1962. At that time, Japanese automakers had little name recognition, and one firm, in order to prove the safety of its car to Finnish consumers, had the car driven off a ski-jumping hill. I have been informed that the car landed safely and the driver was not harmed. The 1960s, when such episodes of Japanese firms were born, was the heyday of the Japanese economic miracle.

Though needless to say, currently the emerging economies are the high-growth countries. In the past 10 years the global economy has grown at an annual rate of +3.6%. There is a large gap among countries. The BRIC countries have averaged +7.9% growth while non-BRIC countries have grown at +2.1% (Slide 1). If one simply extrapolates these numbers, by 2040 the BRIC countries would have more than an 80% share of the global economy, but we all know that is not realistic. As past economic history has shown, high-growth economies also begin to mature at some point in time. Japan was no exception.

## **II. Japan's patterns of economic growth**

### ***High-growth period***

Japan's post-war economic recovery began from a situation where capital stock equivalent to 86% of GDP had been lost due to World War II. It is usually understood that Japan's period of high growth began in the mid-1950s and ended in the early part of the 1970s. During this 15 year period, the average rate of economic growth was nearly +10% (Slide 2). Let me highlight three factors which I believe enabled such rapid growth.

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<sup>1</sup> The Conference was held on May 5<sup>th</sup> and 6<sup>th</sup> under the theme, "Monetary Policy under Resource Mobility". Please refer to, [http://www.suomenpankki.fi/en/tutkimus/konferenssit/tulevat\\_konferenssit/Pages/BOF200\\_2011.aspx](http://www.suomenpankki.fi/en/tutkimus/konferenssit/tulevat_konferenssit/Pages/BOF200_2011.aspx)

First, favorable demographics (Slide 3). Total population increased at an annual rate of +1% during this period and the relative youth of the working-age population supported both production and consumption. At the beginning of the economic boom period, the farming population reached approximately 40% of the total population and the migration of surplus labor from the rural areas to the cities enabled the rapid growth of a high productivity manufacturing sector.

Second, the use of competitive forces. It is sometimes pointed out that the government's industrial policy or so-called "Japan Incorporated" was the key factor behind Japan's economic miracle. I believe such public sector influence is overstated. When we look at the history of Japan's leading firms, it is not rare to find cases where they entered into new areas dissenting against the government's industrial policy or cases where they did not receive any favorable treatment. There are also examples where industries and firms which were well-protected gradually lost their vibrancy. Strong competition supported Japan's high-growth period by stimulating entrepreneurship and promoting technological innovation which enabled Japanese firms to catch-up with those in advanced economies.

Third, the benefits of global free trade. When one looks at the contribution of individual components to GDP growth, domestic demand is by far the main factor (Slide 4). However, this does not refute the important role that the overseas economy played. Japan produced large amounts of producer and consumer goods for the expanding global market, such as steel, electronic appliances and automobiles. The foreign exchange obtained through exports was used to import raw materials necessary to support domestic economic development. The basic condition which made such a growth model possible was the continued growth of the world economy and the maintenance of the global free trade system.

### ***The bubble and its collapse***

Japan's high-growth period ended in the early 1970s and the pace of growth gradually slowed. However, during the 70s and 80s, Japan still maintained a relatively high-growth rate when compared with other major advanced economies (Slide 5). Favorable

demographics and strong global competitiveness were the basic components which continued to support economic growth. However, after the collapse of the bubble and the ensuing financial crisis in the 1990s, the pace of growth fell below that of major advanced economies. Three elements led to the prolonged period of economic weakness following the collapse of the bubble.

First, of course, there was the direct effect of the collapse of the bubble. Balance sheet problems in the private sector constrained expenditures and the credit intermediation capabilities of the banking sector, saddled with non-performing loans, deteriorated. This led to weak growth during the 1990s, but was not the cause of the tepid growth during the past decade.

Second, the business model which had supported the strong growth of Japanese firms was no longer compatible with the changed economic environment. The strength of Japanese firms was the pursuit of operational efficiency enabled by large scale production and sales. You all know the detailed management of production and inventories through the “just-in-time process” and the “Kaizen system” which has become a part of the English language. Such pursuit of efficiency gains is naturally important. But as other countries such as the Asian emerging economies rapidly catch-up with advanced economies through technological progress, global competition becomes more intense and increased profits cannot be generated simply through such efficiency gains. According to a study which analyzed the production costs of iPhones (Slide 6), of the 500 dollar sales price of the iPhone, component costs add up to 173 dollars and assembly costs account for only 6.5 dollars. Accordingly, gross profits reach 321 dollars. In other words, the added value for coming up with a product concept and developing it into a product is now quite significant.

Third, demographics have changed (Slide 7). Our country’s working-age population, in other words population between the ages of 15 and 64, began to decrease in the mid-1990s. Our society is ageing at a very rapid pace. The share of people 65 and above went from 9% in 1980 to 23% in 2009. Such rapid ageing has never been seen in past economic history. Japan had experienced the “population bonus” based on working-age population

during the high-growth period. But now it has entered the “population onus” stage<sup>2</sup>.

### **III. Comparison of high-growth periods: Japan and emerging economies**

Based on such an understanding of Japan’s growth pattern, I would next like to conduct a simple comparison of the high growth that China and India are currently undergoing with Japan’s past experience (Slide 8). China’s rapid growth started at the beginning of the 1990s and the pace of growth for the first 15 years is almost exactly the same as Japan. The difference is that China has continued to grow on average at a pace above +10%. With regard to India, the growth rate is slightly lower than that of current China, or Japan during its boom period. This is perhaps because India has yet to enter the population bonus stage (slide 9).

During a high-growth period, the supply of labor from rural areas plays a key role. When we compare the urban population rate of Japan and China, China’s current level is roughly similar to Japan’s level in the 1960s. Looking at the car ownership rate as a reflection of a consumption boom due to strong household income growth, once again China’s level is similar to that of Japan in the 1960s. When seen from this simple comparison, I believe that the Chinese economy will continue its high growth for some time. With regard to India, the population bonus period will arrive around 2015, so its growth rate may accelerate further<sup>3</sup>.

However, as Japan’s experience shows, when income levels increase together with strong economic growth, each society faces various new challenges. A smooth transition from high growth to stable growth is quite a challenge. From the perspective of a country which has been facing these challenges for some time, I would like to share with you some of the lessons we have learned.

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<sup>2</sup> There is no consensus on the definition of “population bonus period” and “population onus period”. Government reports and academic papers on demographic studies often focus on the level of the working age population ratio, and when it is above 65%, it is considered to be the bonus period and when it is below 65%, the onus period. On the other hand, economic literature often focuses on the change in the working age population ratio. When it is rising, it is considered to be the bonus period and when it is falling, the onus period.

<sup>3</sup> According to forecasts by the United Nations, India will overtake China to become the world’s most populated country in the middle of 2020s.

### ***Preventing bubbles***

The first challenge is preventing the emergence of bubbles. When an economy experiences strong growth over an extended period, society often becomes over-confident. This seems to be human nature. Japan's bubble during the latter half of the 1980s, was the result of a complex interaction among multiple factors. However, the fundamental reason was the over-confidence which cloaked the entire country and the ensuing dramatically aggressive economic behavior. At that time, Japan's growth rate was higher than other advanced economies and the inflation rate was quite subdued. Japan was the perfect model student (Slide 10). It may sound ridiculous, but according to an estimate released at that time, the aggregate value of land in central Tokyo was equivalent to that of the entire United States.

Financial supervision was also insufficient. Lending to real estate, construction and non-bank financial sectors increased sharply and lending conditions softened including the evaluation of collateral. The prolonged period of monetary accommodation also played a role. One reason why accommodative monetary conditions continued was the low inflation rate. The other reason was the serious concerns toward a stronger yen and the strong overseas pressure to reduce the current account surplus. A strong argument was put forward that accommodative monetary policy was crucial in order to prevent a stronger yen and to bring down the current account surplus.

### ***Reviewing business models***

The second challenge is what we may call the review of business models. There is no universally optimal business model which is continuously applicable across time and borders. It is true that, during the economic boom period, the business model of Japanese firms matched the conditions of the world economy at that time. However, once a business model is successful, it is not easy for both the country and the firm to review it in line with changes in the environment. What is important is that regardless of whether it is a country or a firm, the ability to reinvent itself reflecting its stage of development plays a key role.

### ***Preparing for demographic change***

The third challenge is preparing for changes in demographics. Rapid ageing of the population would reduce labor supply and lead to a drop in the growth rate. A drop in domestic demand would be unavoidable. From a fiscal perspective, as long as the costs of public pensions, health care and nursing are covered by contributions from the working generation, and if the benefit levels for the elderly are not adjusted, ageing will lead to higher fiscal deficits. Concerns about demographic changes were already raised in the late 1980s, but at that time it was only considered vaguely as an issue for the distant future. However, as our experience shows, ageing has huge implications. It is evident that the vibrant emerging economies in Asia will age in the not-too-distant future (Slide 11). In the short run, demographics of the elderly are a given. Thus, reviewing the current social welfare framework in order to make it viable on a sustainable basis, taking into consideration the longer-term changes in demographics, is an enormous challenge.

### **IV. Conclusion**

When one looks back into history, the “Global Shifts” examined by Professor Eichengreen are happening continuously. I believe Japan’s catching-up with the advanced economies through its post-war miracle and its ensuing transition to slow growth, as well as the current high growth of China and India, can be understood as examples of the “Global Shifts” (Slide 12). High growth cannot last forever. In concluding, I would like to emphasize that what is important here is to introduce a smooth transition from high growth to stable growth. Even emerging economies which are currently enjoying high growth will likely face, in the future, the same challenges that Japan is currently struggling with. For this, preventing bubbles, reviewing business models and preparing for changes in demographics are especially important.

Thank you for your attention.

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5 May 2011

Bank of Finland 200th Anniversary Conference

**Masaaki Shirakawa**  
 Governor of the Bank of Japan

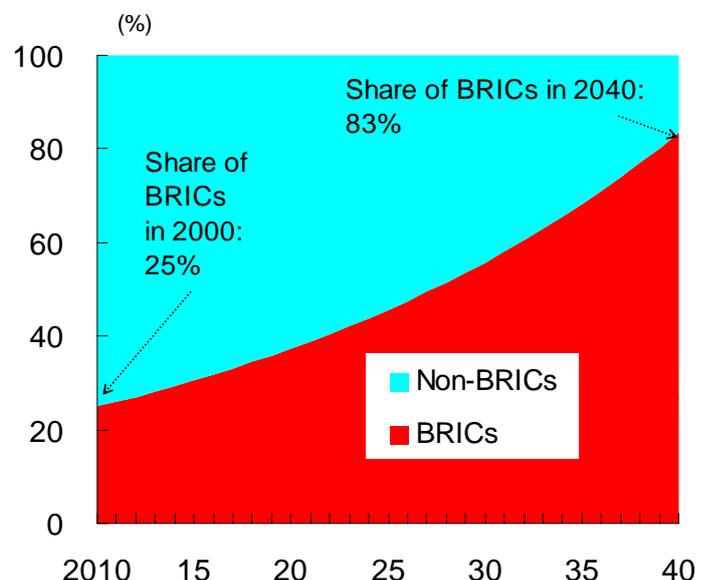
Slide 1

## Contribution of BRICs to the World Economy

Average Growth Rate in the 2000s

	Average Growth between 2000-09
World	<b>+3.6%</b>
BRICs	<b>+7.9%</b>
Non-BRICs	<b>+2.1%</b>

GDP Share Extrapolated with  
 Average Growth Rate in the 2000s



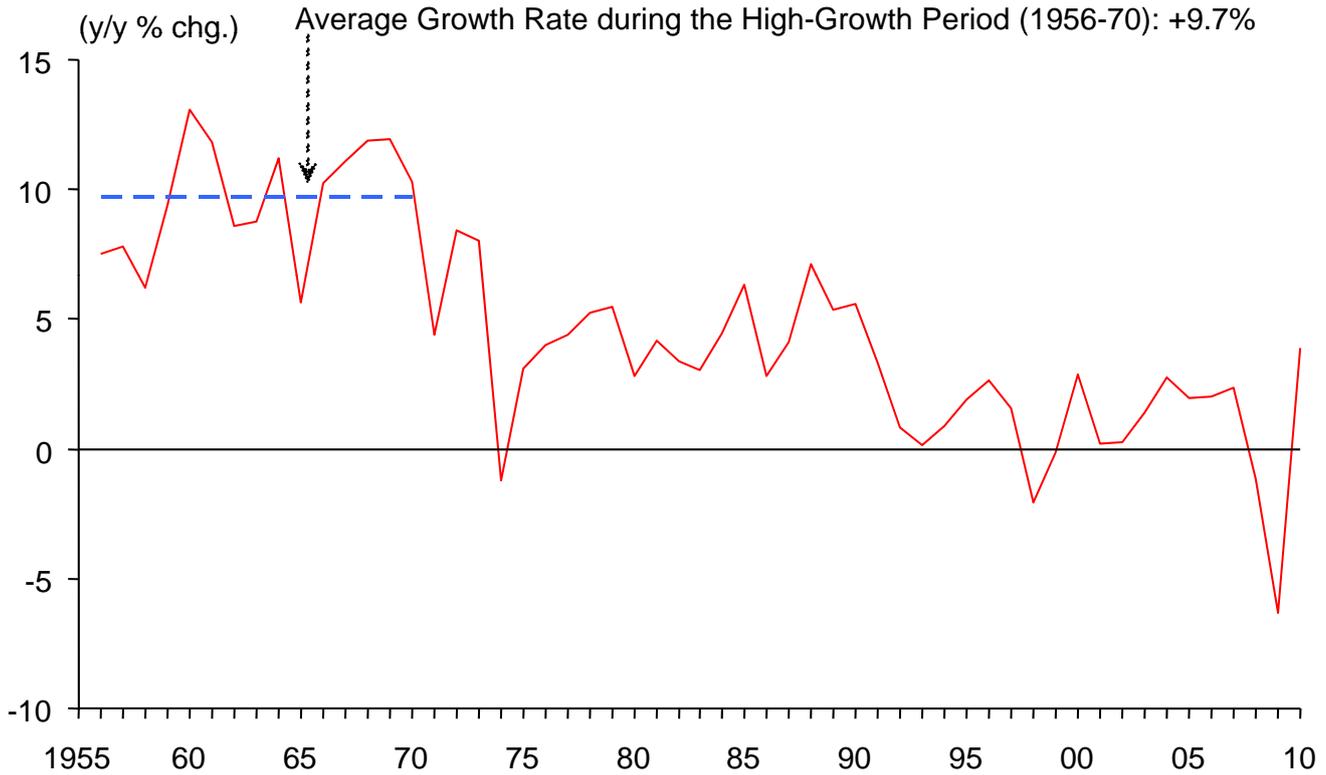
Note: 1. BRICs includes Brazil, Russia, India, and China.

2. Average growth rate is calculated as the PPP-based weighted average of each country's real GDP growth rate.

3. In the right figure, the GDP share of BRICs after 2011 is extrapolated with the average growth rates of World and BRICs in the 2000s.

Source: International Monetary Fund, *World Economic Outlook*

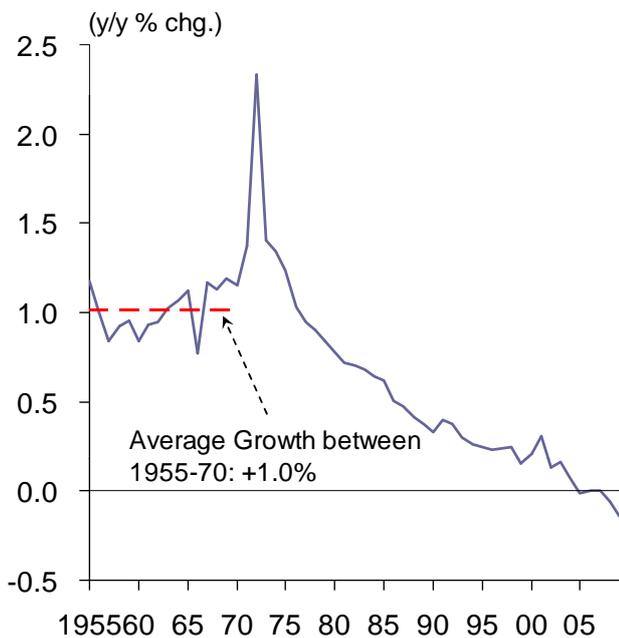
## Japan's Real GDP Growth since the High-Growth Period



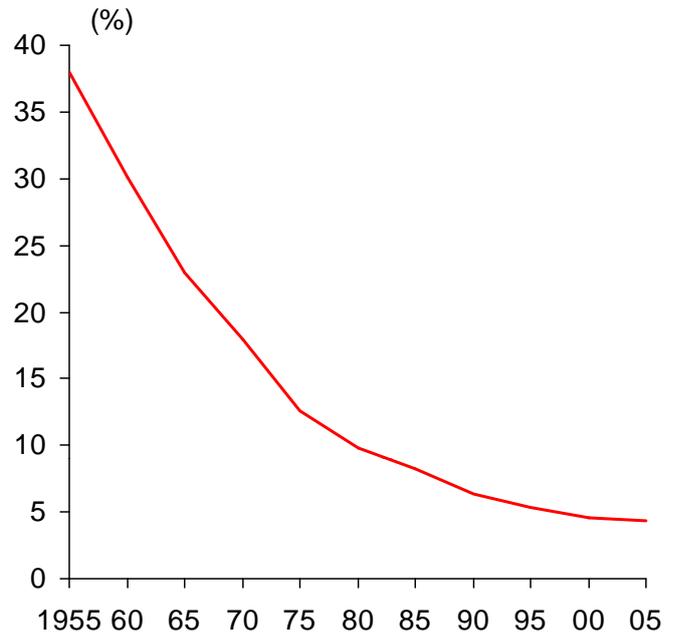
Source: Cabinet Office, *National Accounts*

## Japan's Demographics

Population Growth

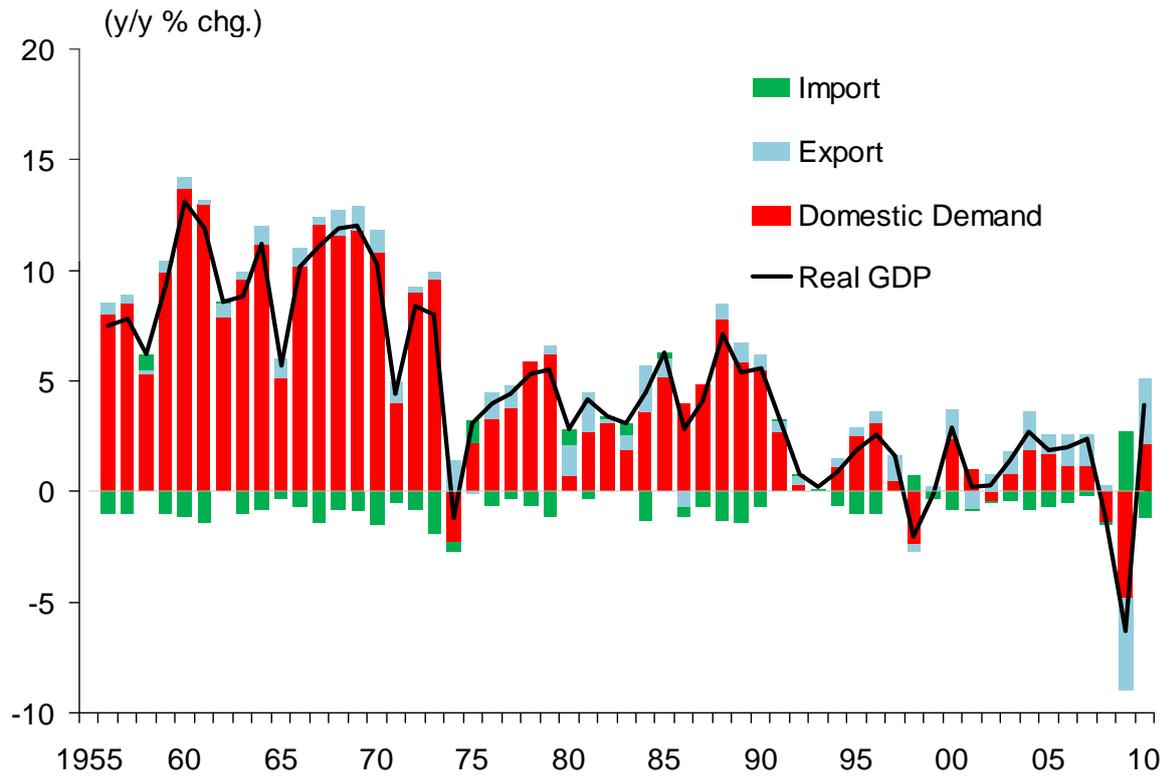


Share of Agricultural Population



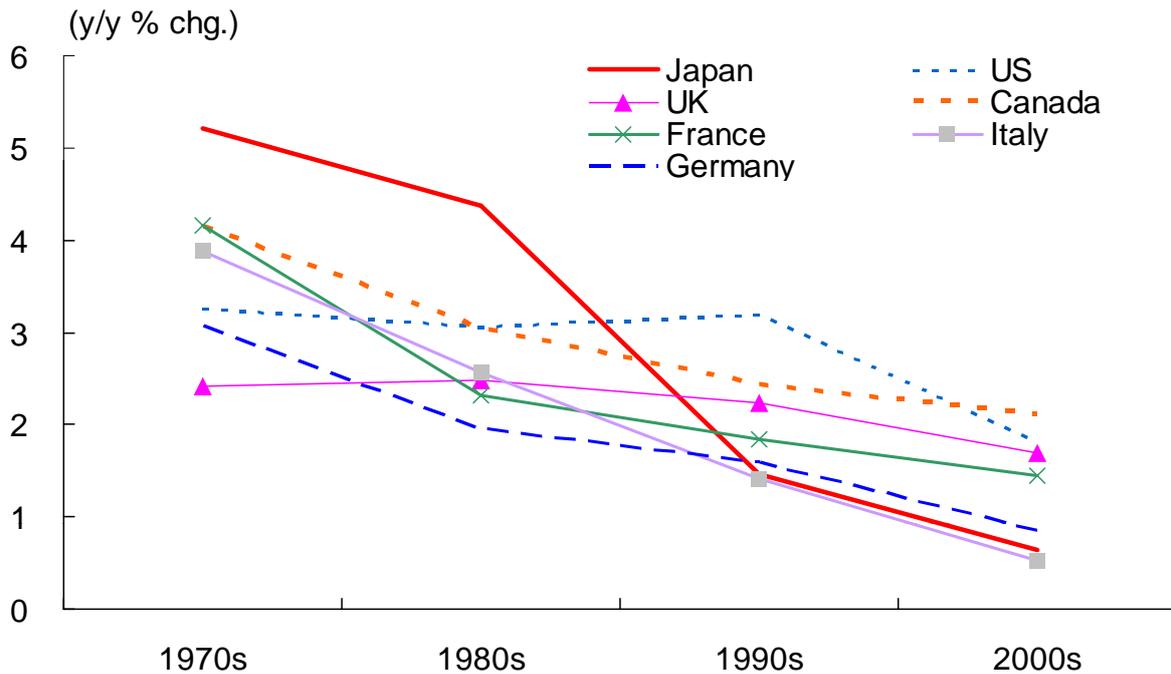
Source: Ministry of Internal Affairs and Communications, *Population Census*

# Japan's Real GDP Growth : Contributions of Domestic and External Demand



Source: Cabinet Office, National Accounts

# Comparison of Real Growth Rate across Advanced Economies



Source: Organization for Economic Co-operation and Development and other governmental statistics

## Production Costs of iPhone

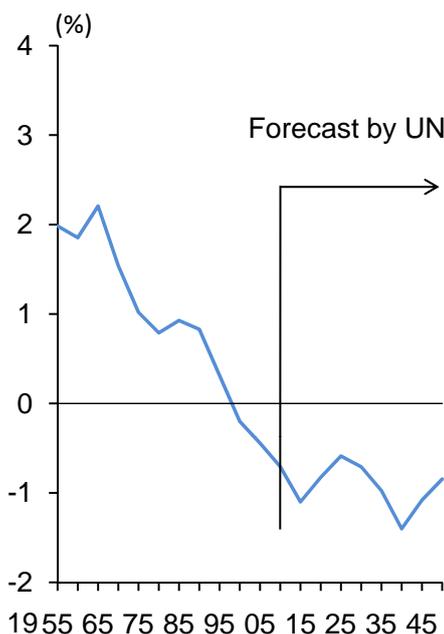
Manufacturer	Component	Amount of money per unit (US\$)
Toshiba, Murata (Japan)	Flash Memory, Touch Screen, FEM, etc.	60.6
Samsung (Korea)	SDRAM, Application Processor, etc.	23.0
Infineon, Dialog Semiconductor (Germany)	Camera Module, GPS, Power IC, etc.	30.2
Broadcom, Numonyx, Cirrus Logic (US)	Bluetooth, Memory MCP, etc.	10.8
Cost of Other Components		48.0
Total Cost of All Components		172.5
Manufacturing Cost in China		6.5
Gross Profit Margin		321.0
Price		500.0

Note: The numbers are based on iPhone 3G in 2009.

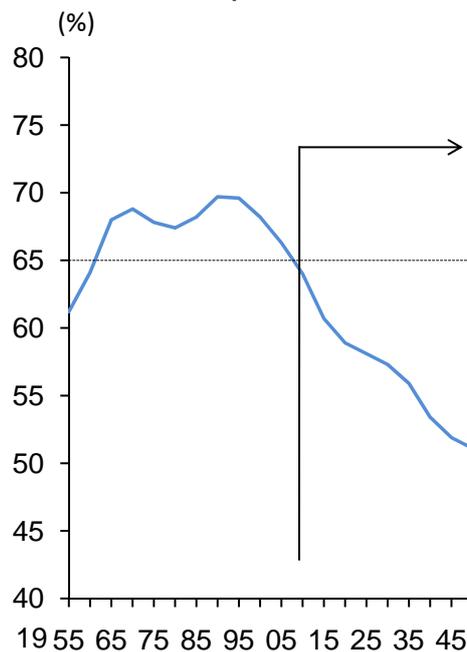
Source: Xing and Detert, "How the iPhone Widens the United States Trade Deficit with the People's Republic of China," ADBI Working Paper Series, No. 257, December 2010.

## Japan's Demographic Changes

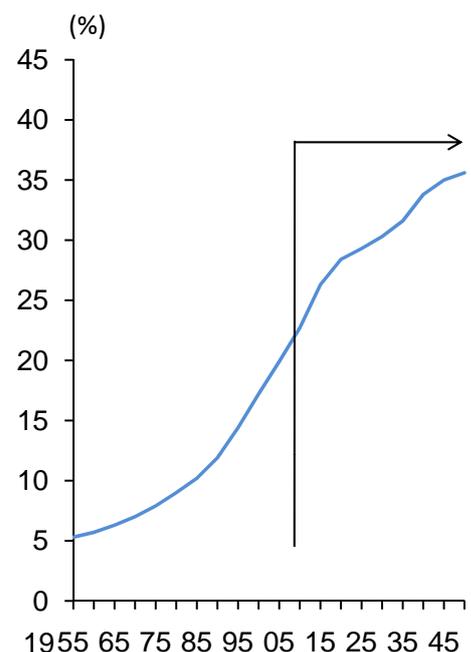
### Growth of Working Age Population



### Share of Working Age Population



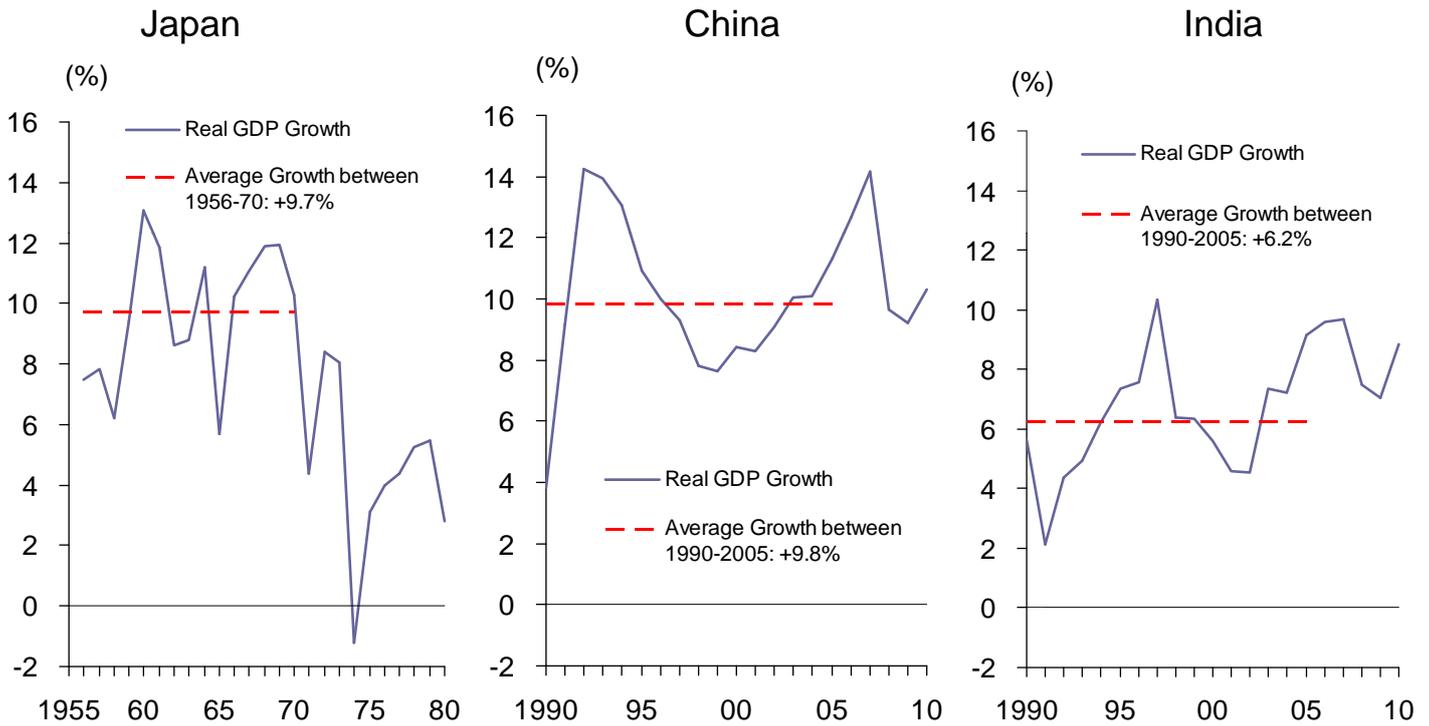
### Share of Population Aged over 65



Note: Working age population means the population aged between 15 and 64.

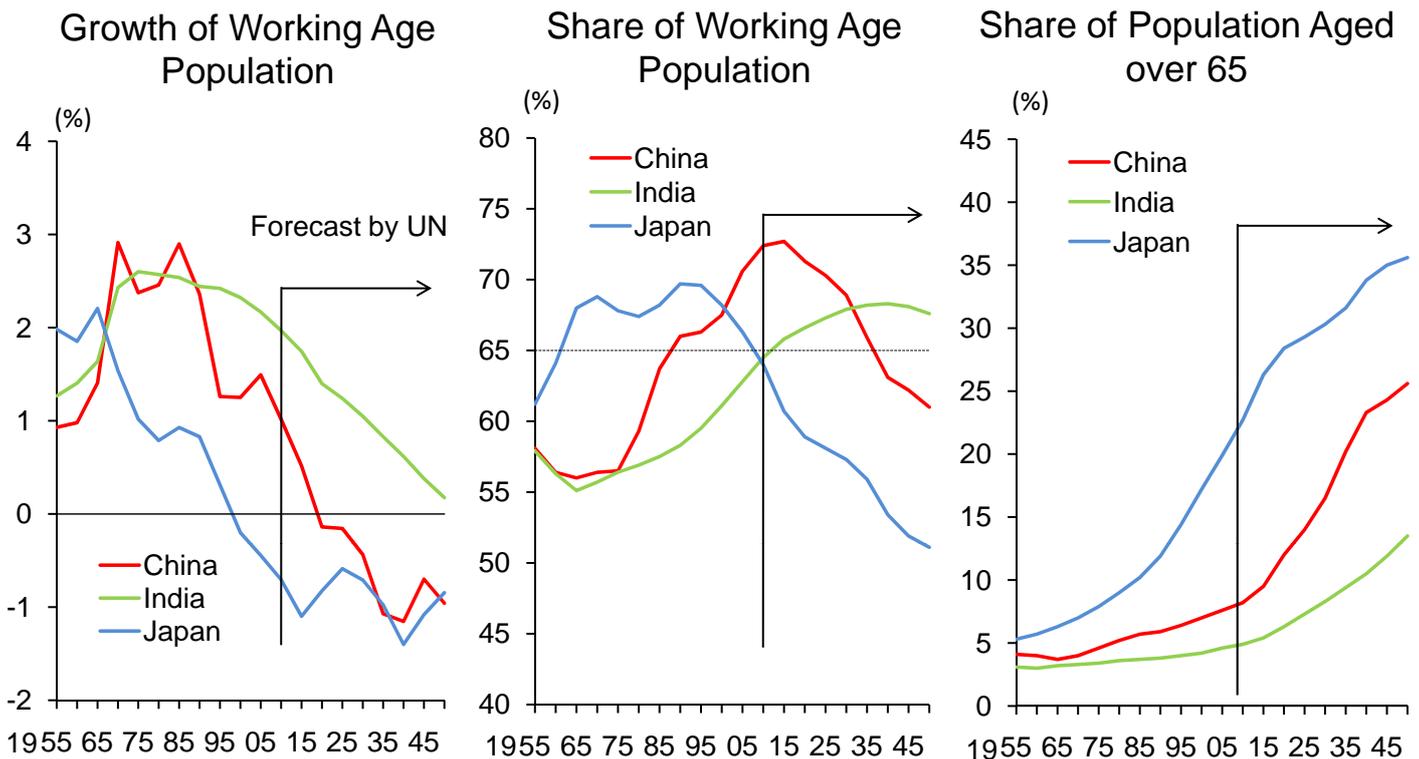
Source: United Nations, *World Population Prospects: The 2010 Revision*

# Real GDP Growth in Japan, China, and India during the High-Growth Periods



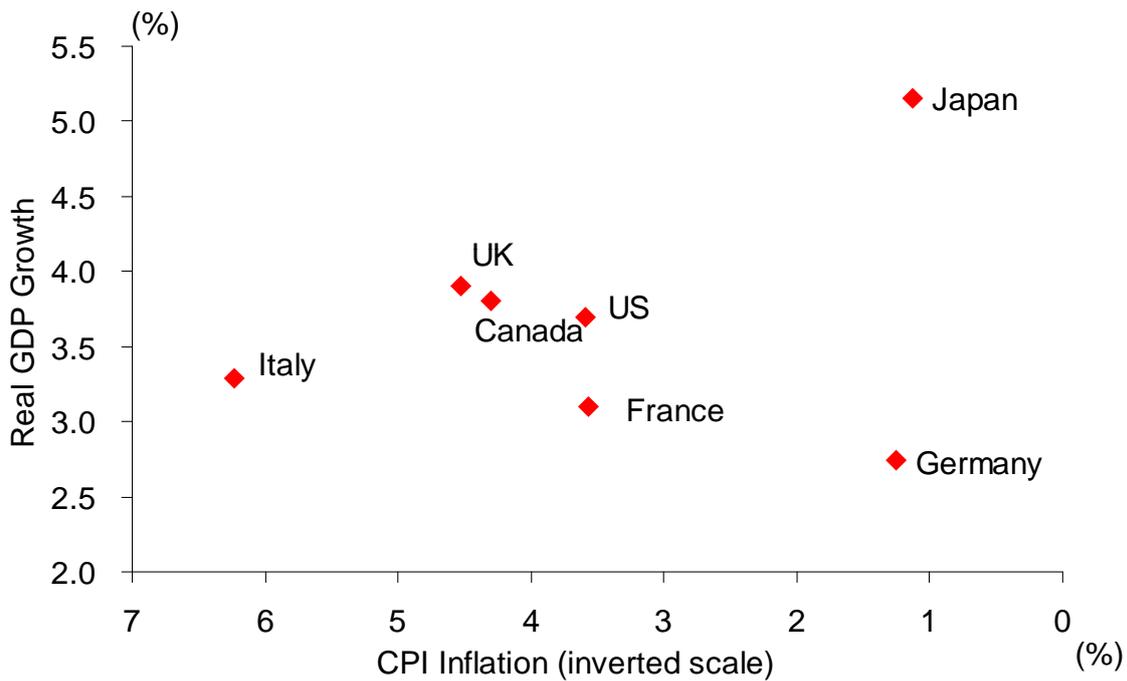
Source: Cabinet Office, *National Accounts*; National Bureau of China, *China Statistical Yearbook*; International Monetary Fund, *World Economic Outlook*; CEIC

# Demographic Changes in Japan, China, and India



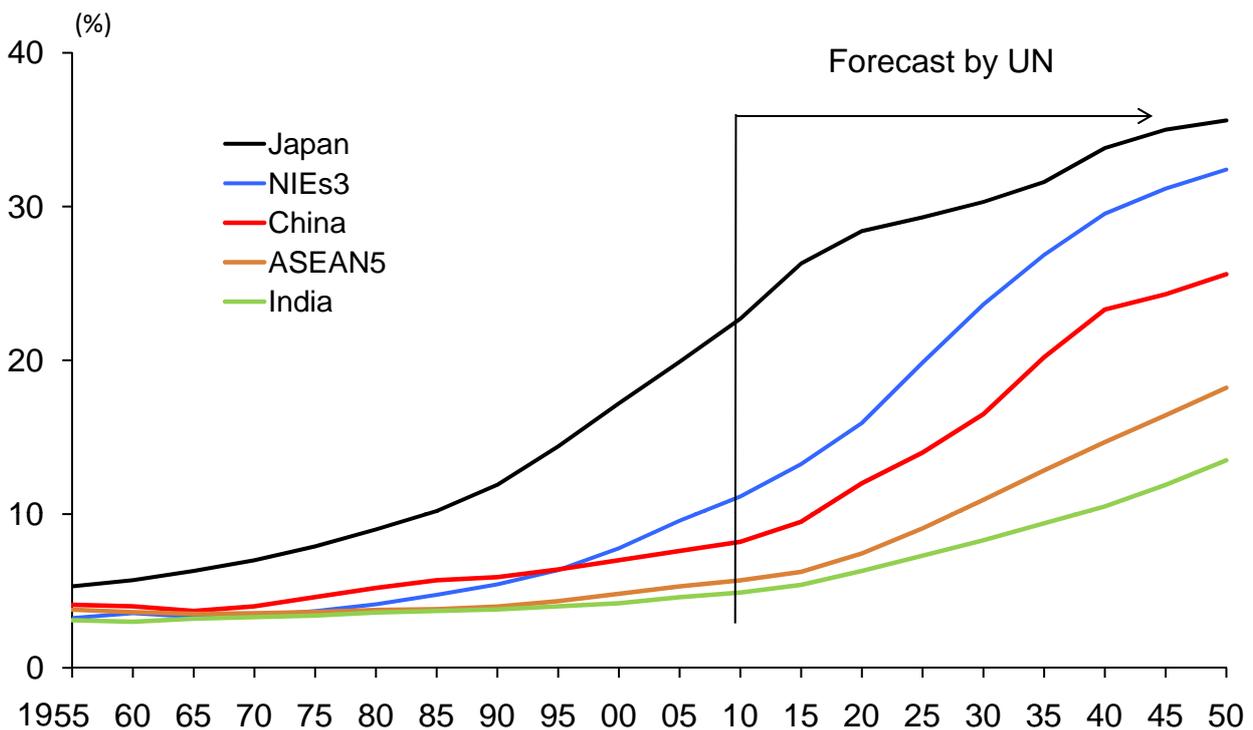
Note: Working age population means the population aged between 15 and 64.  
 Source: United Nations, *World Population Prospects: The 2010 Revision*

## Real GDP Growth and CPI Inflation across Major Advanced Economies during the Latter Half of the 1980s



Note: The figure plots the average change of real GDP and CPI between 1985 and 1989 in each country.  
 Source: International Monetary Fund, *World Economic Outlook*.

## Share of Population Aged over 65 in Asian Countries

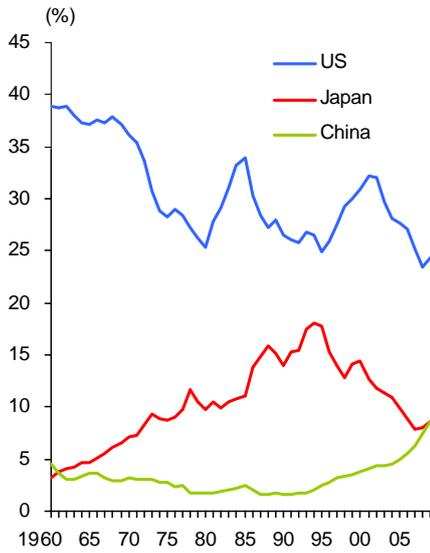


Note: NIEs3 includes South Korea, Hong Kong, and Singapore. ASEAN5 includes Indonesia, Malaysia, Thailand, the Philippines, and Viet Nam.

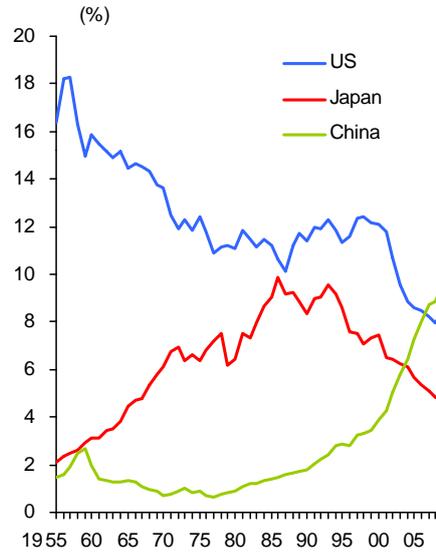
Source: United Nations, *World Population Prospects: The 2010 Revision*

# Global Presence of Japan, US, and China

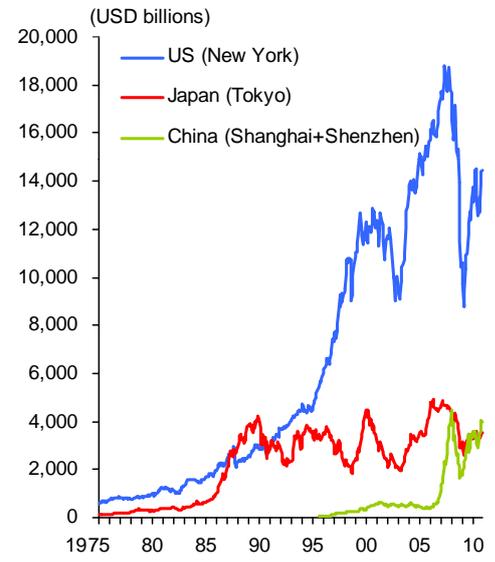
Nominal GDP  
(Share in the World Total)



Export  
(Share in the World Total)



Stock Market Capitalization



Source: Bureau of Economic Analysis, *National Economic Accounts*; Cabinet Office, *National Accounts*; National Bureau of Statistics of China, *China Statistical Yearbook*; World Bank, *World Development Indicators*