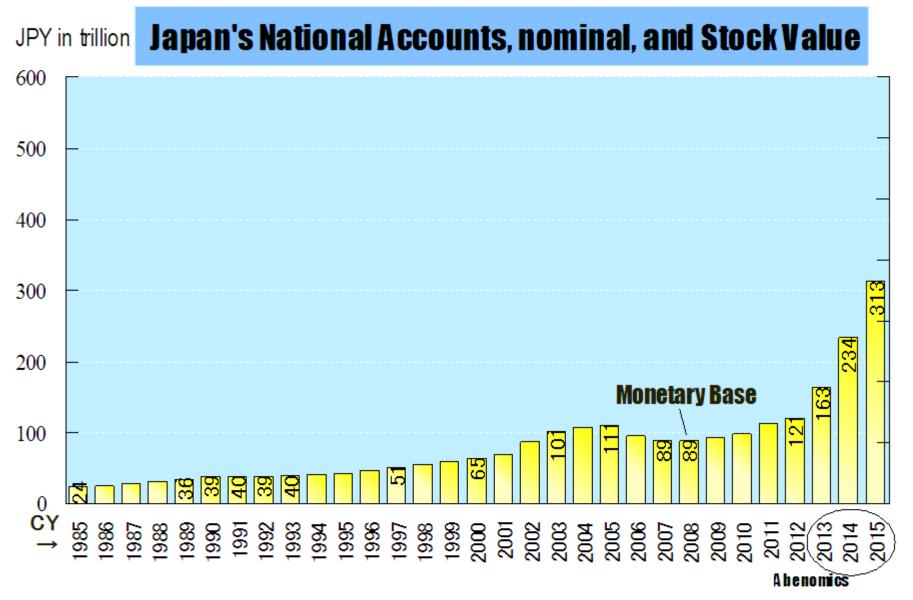
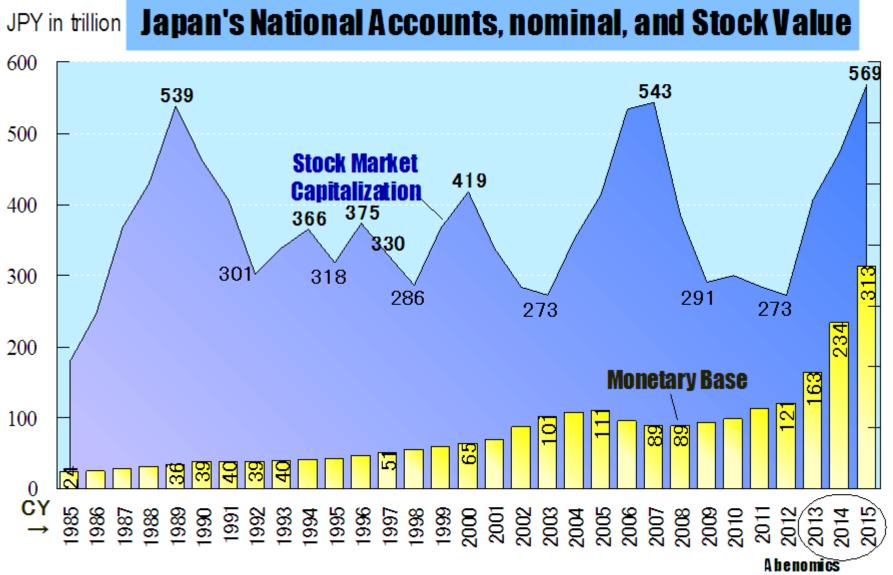
Forecasting the direction of Japan and World Economies - Absolute numbers tell near future-

January 20, 2016

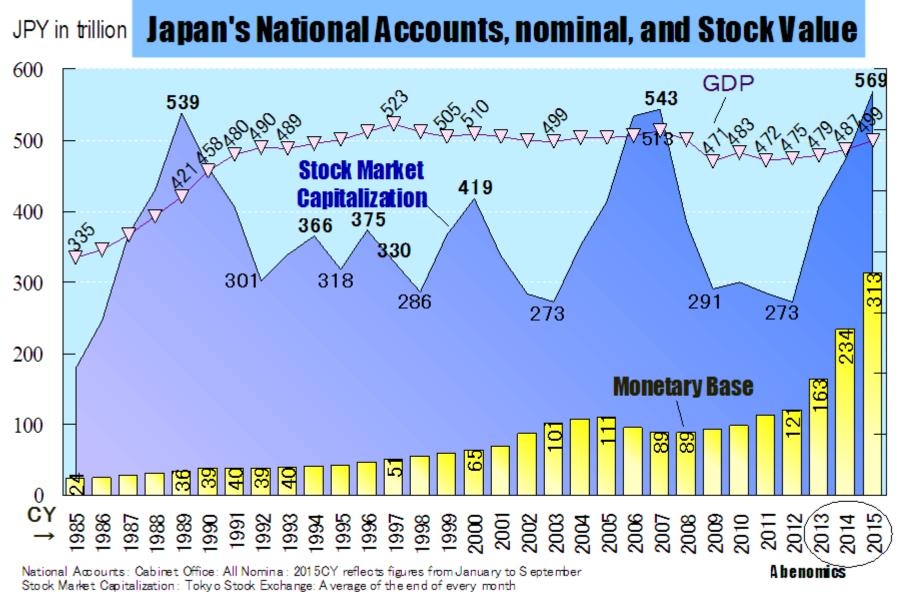
Kosuke Motani Chief Senior Economist Japan Research Institute, Limited kosuke@motani.com

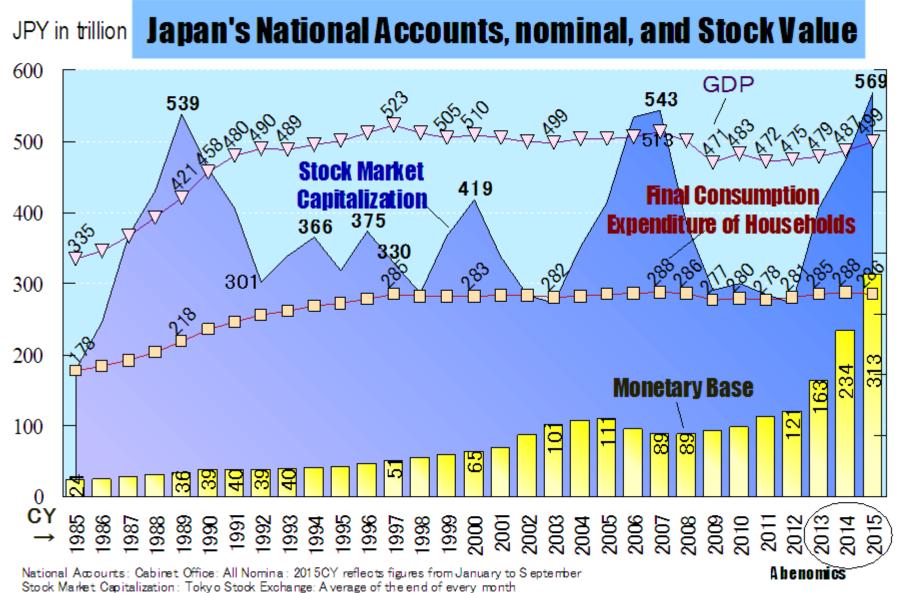


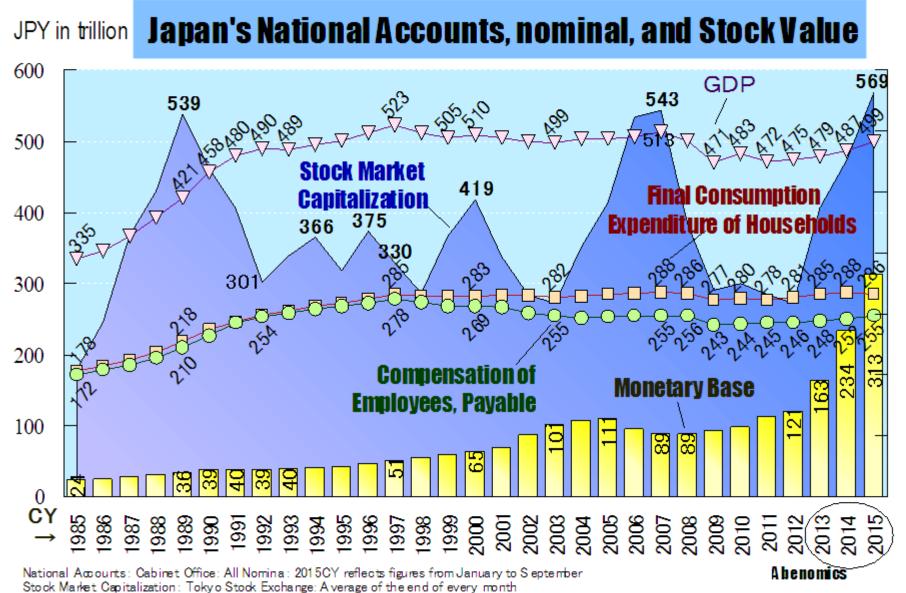


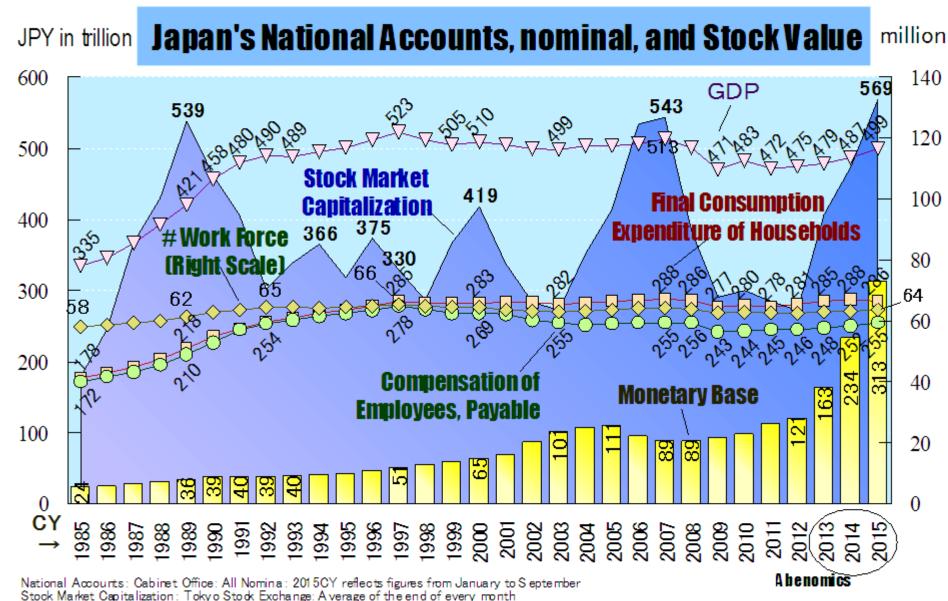


Stock Market Capitalization : Tokyo Stock Exchange: A verage of the end of every month Monetary Base: Ban k of Japan : Average of the figures at the end of every month









Monetary Base: Ban kof Japan: Average of the figures at the end of every month / #Labor Force: Statistics Bureau: Includes part-time workers

Not Economy But Working Age Population Decides # of Work Force in Japan



million

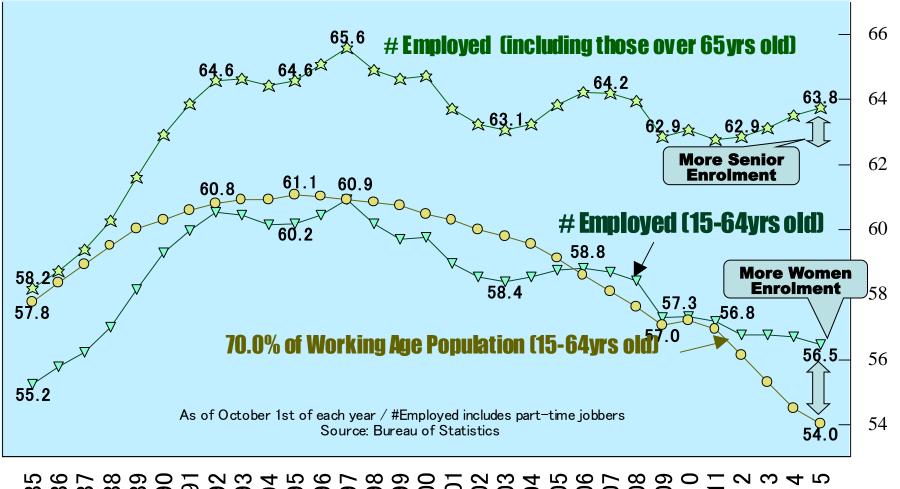


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Not Economy But Working Age Population Decides # of Work Force in Japan

Japan's Labor Force and Demography

million



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Declining Working Age Population Decreases Demand, not Supply

Not a General Theory, but a "Inconvenient Reality" in Japan

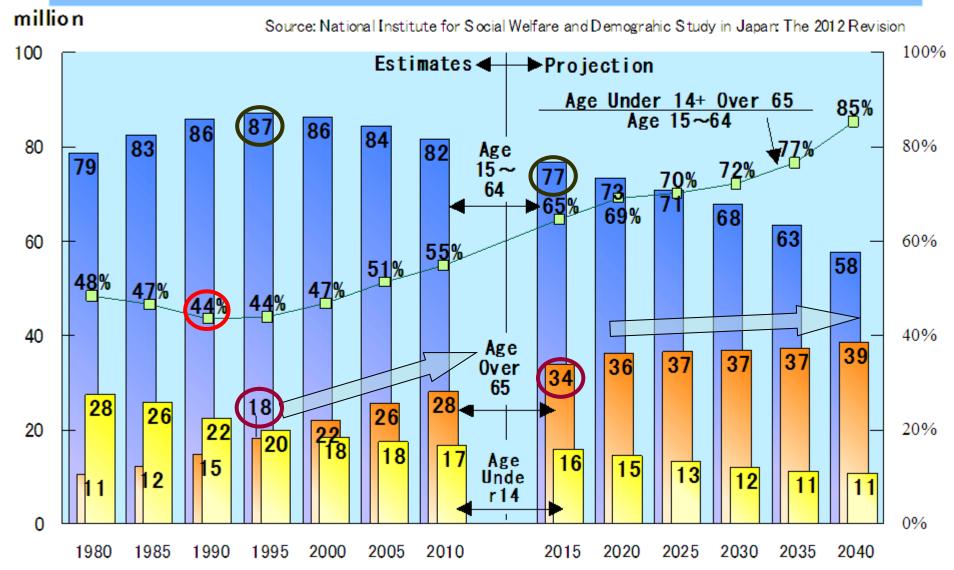
- ☆ Modern Machineries with IT substitute human labor, increase labor productivity and Export, while keeping production level.
- ★ Decreasing working age population ends in decreasing # of workers and less amount of gross wages, reducing the amount of commodities needed.
- ☆ Stable production and decreasing needs result in price drop and less demand.
- ★ Seniors who likely own 83% of \$14 trillion personal financial assets do not consume as much materials as youths do, but just enjoy saving.

Four Suggestions Beyond "ABENOMICS"

- ★ Let younger generation get the financial assets; through accelerated inheritance with tax incentives, promoting consumption of rich seniors by innovative product development, and raising wages by cutting off dividends.
- ★ Let more women work, while raising their wages.
- ★ Let more foreigners come to Japan, not to work as cheap labor but to travel around, to stay in, to live on and to consume.
- ★ Reforms of the systems of pension, medical and care for senior citizens look urgent. Do not blame neither economy nor government, since the initial cause is the aging of all of us. Blaming without facing the fact delays our

Japan: Has Been Aging for Two Decades

Demographic Change of the Residents in Japan (1980-2040)

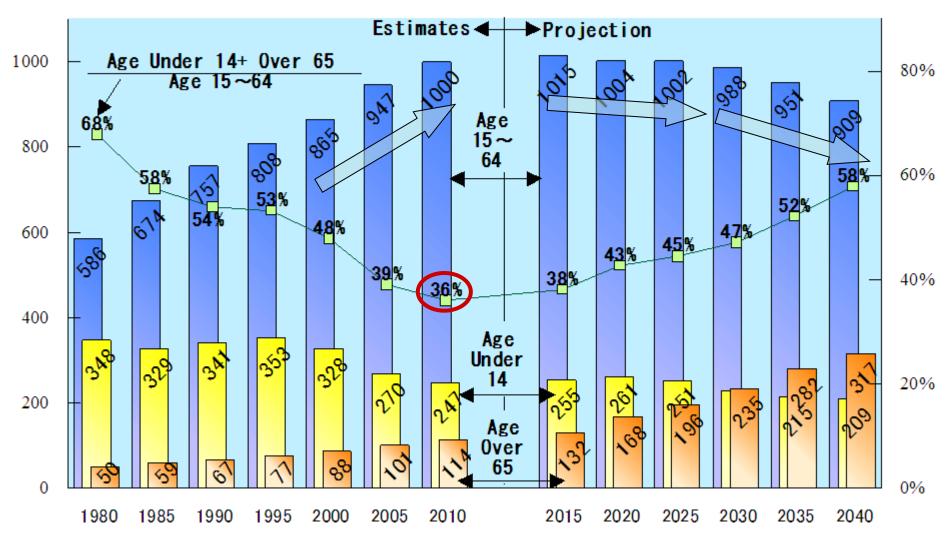


China: Now Turning the Critical Corner

Demographic Change of the Residents in China (1980-2040)

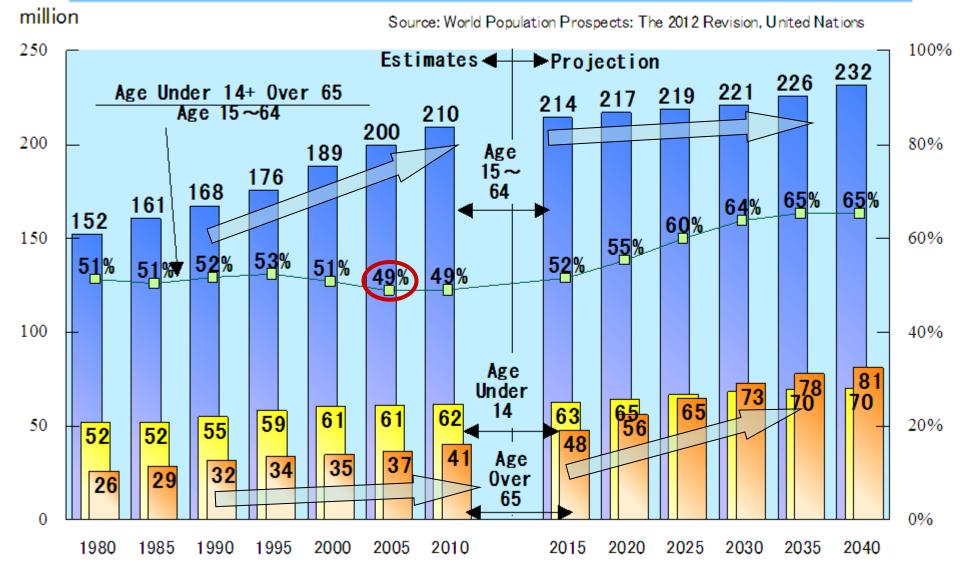
million

Source: World Population Prospects: The 2012 Revision, United Nations



USA: Seniors Increase Faster than Youths

Demographic Change of the Residents in USA (1980-2040)

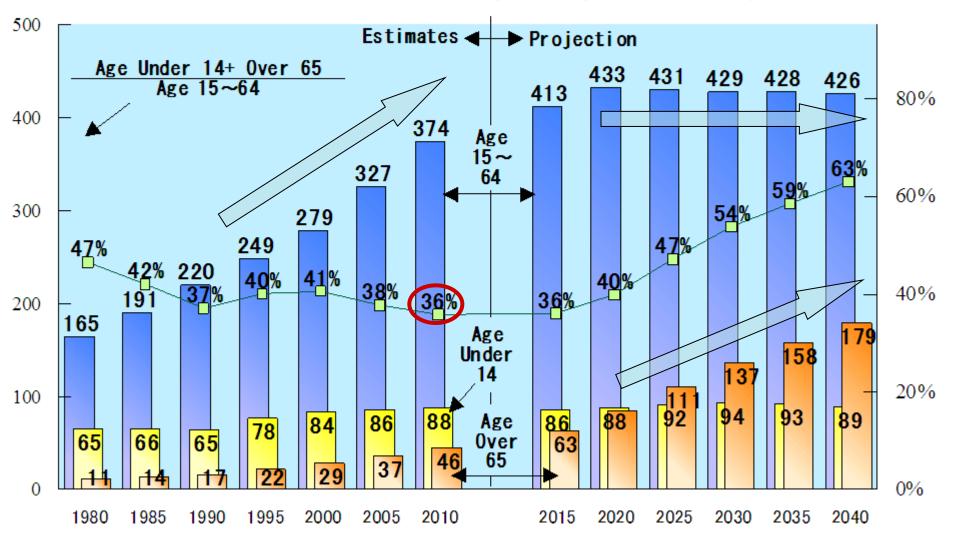


Singapore: How to Do with Aged Migrants?

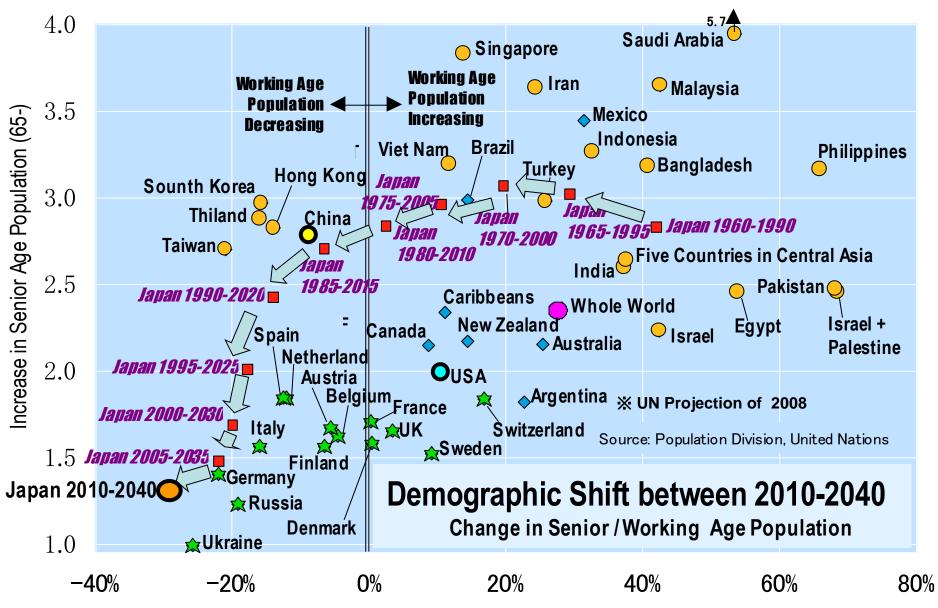
Demographic Change of the Residents in Singapore (1980-2040)

million

Source: World Population Prospects: The 2012 Revision, United Nations

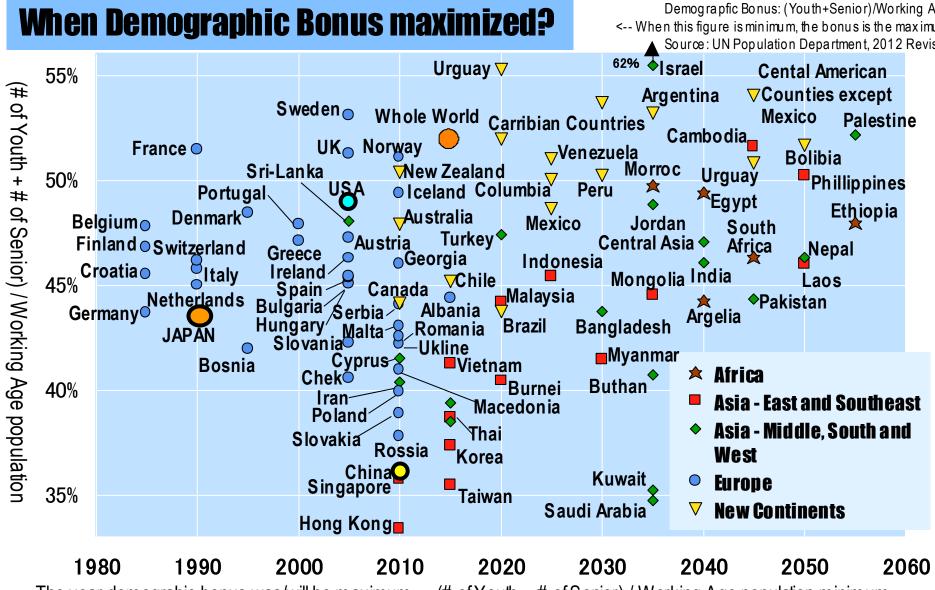


Aging World headed by Japan



Increase / Decrease in Working Age Population (15-64)

Aging World headed by Japan



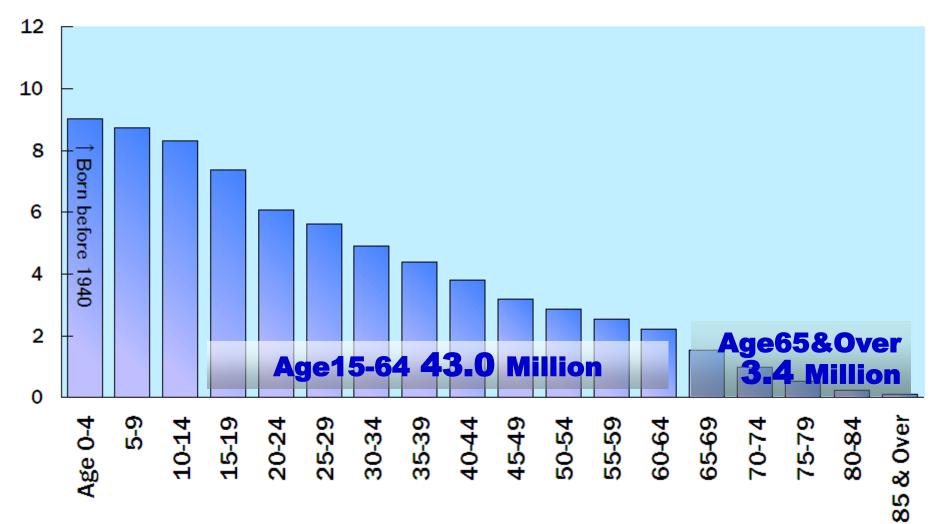
The vear demograhic bonus was/will be maximum = (# of Youth + # of Senior) / Working Age population minimum

Learn from Japan's Experiences

- ☆ Don't be too naïve to believe in conventional macro economic theories. Their underlying premises may be contradictory to our reality.
- ★ Prepare for the increase of the absolute number of seniors. Avoid being deceived by aging ratio that can look lower due to increasing youths.
- ★ Declining working age population decreases the quantity needed, not that produced. Compensate the loss by digging the need of seniors and riches.
- ★ Though 20 years ahead of the other advanced economies in terms of aging, Japan has been surviving as both an innovative manufacturer and a creative explorer of senior market. <u>Do</u> not undervalue its outstanding economic

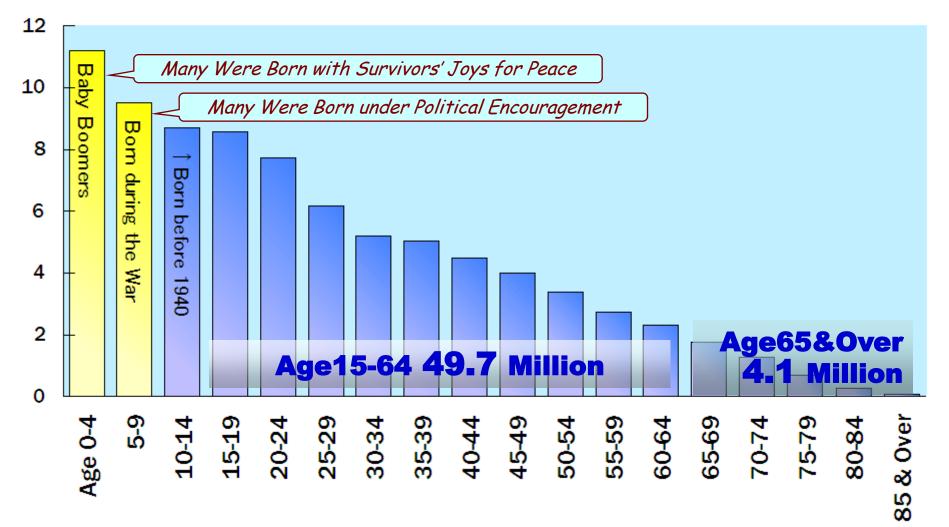
Structural Change of Japan's Population: as of 1940

Population in Million, including Foreign Residents



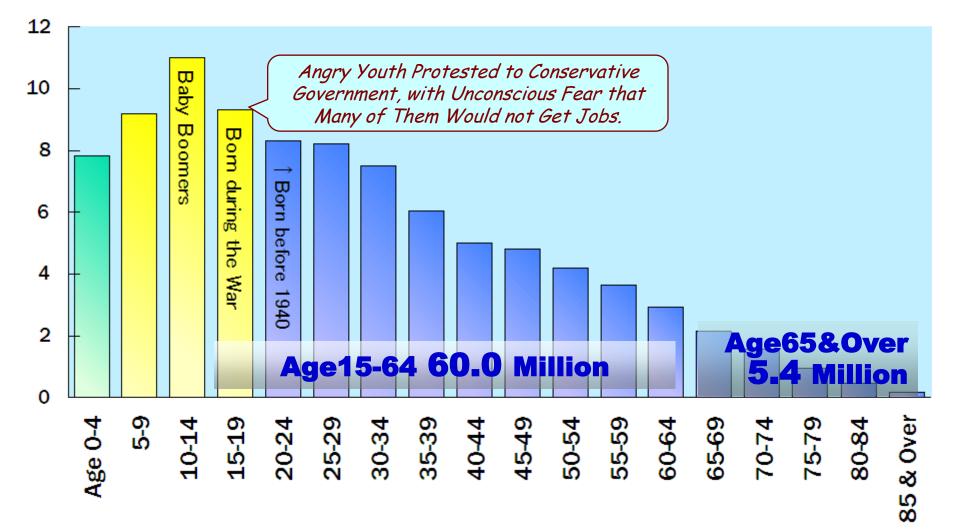
Structural Change of Japan's Population: as of 1950

Population in Million, including Foreign Residents



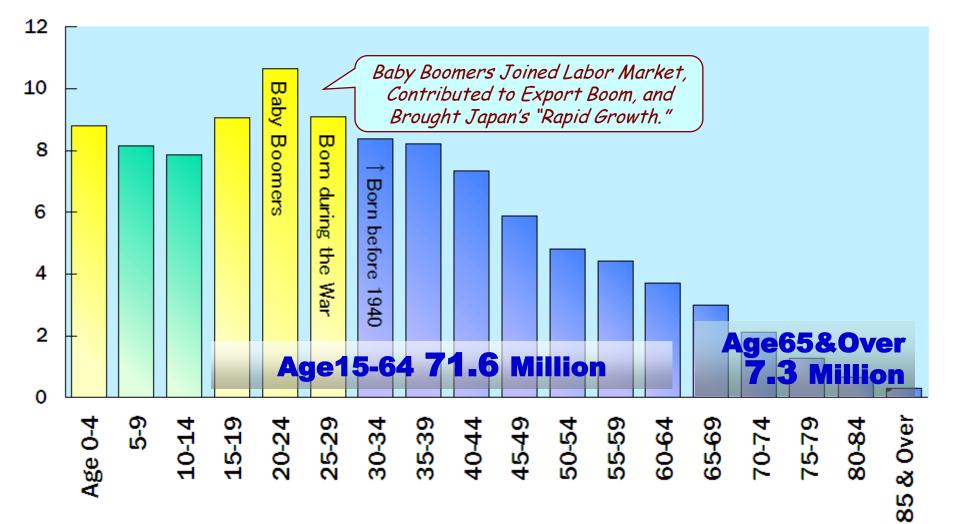
Structural Change of Japan's Population: as of 1960

Population in Million, including Foreign Residents



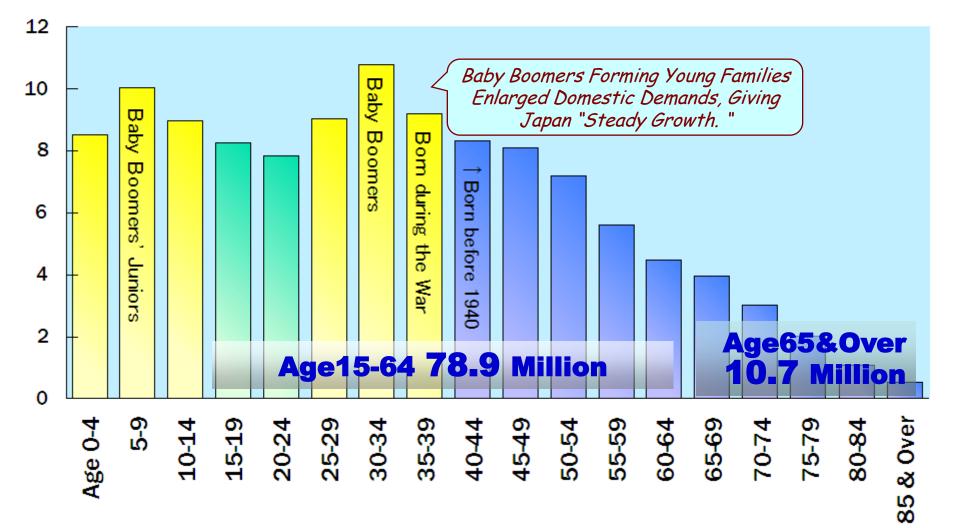
Structural Change of Japan's Population: as of 1970

Population in Million, including Foreign Residents



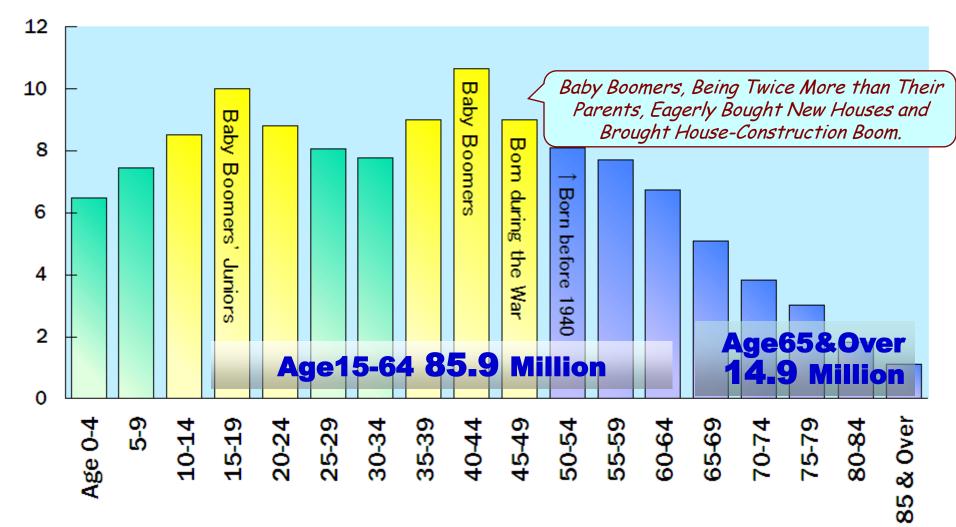
Structural Change of Japan's Population: as of 1980

Population in Million, including Foreign Residents



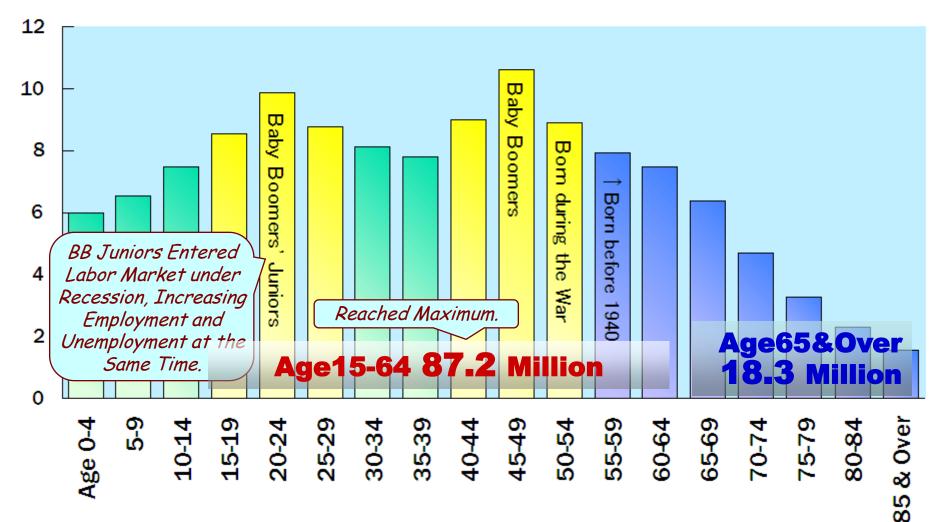
Structural Change of Japan's Population: as of 1990

Population in Million, including Foreign Residents



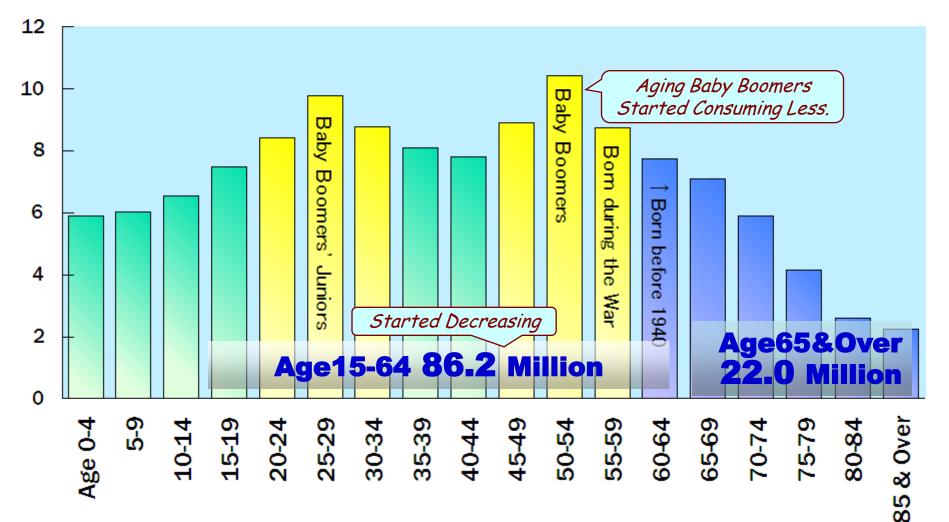
Structural Change of Japan's Population: as of 1995

Population in Million, including Foreign Residents



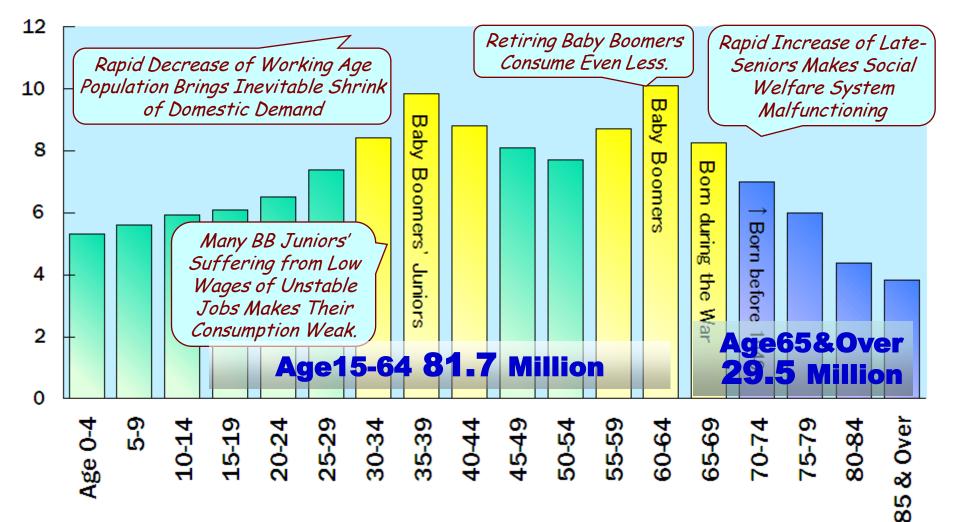
Structural Change of Japan's Population: as of 2000

Population in Million, including Foreign Residents



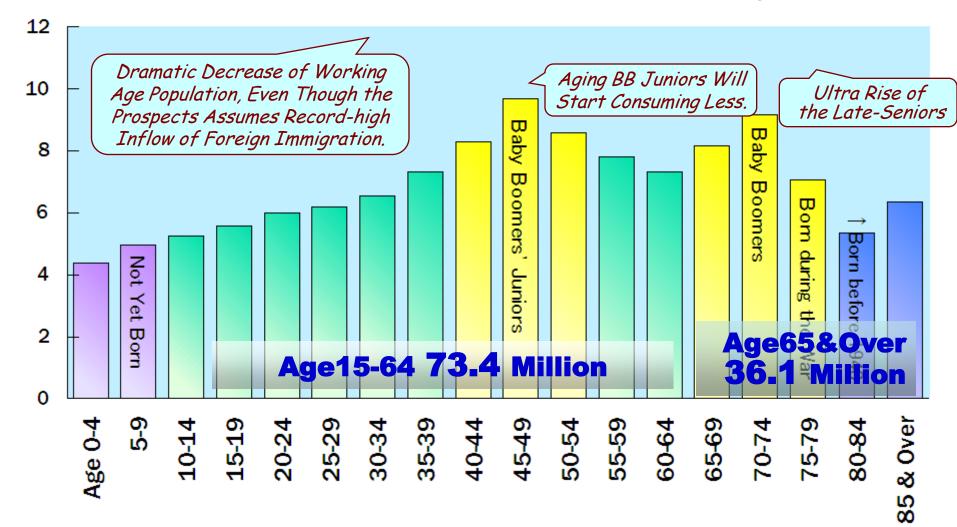
Structural Change of Japan's Population: as of 2010

Population in Million, including Foreign Residents



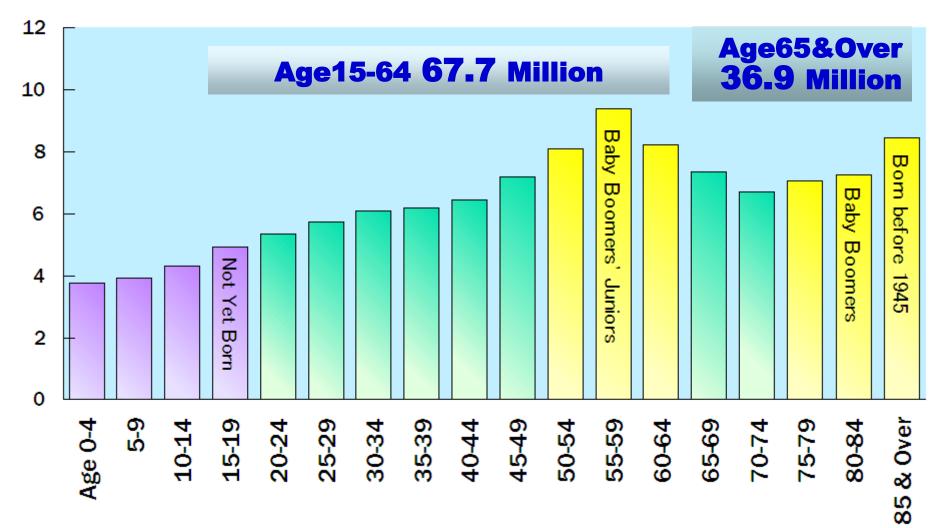
Structural Change of Japan's Population: as of 2020

Population in Million, including Foreign Residents



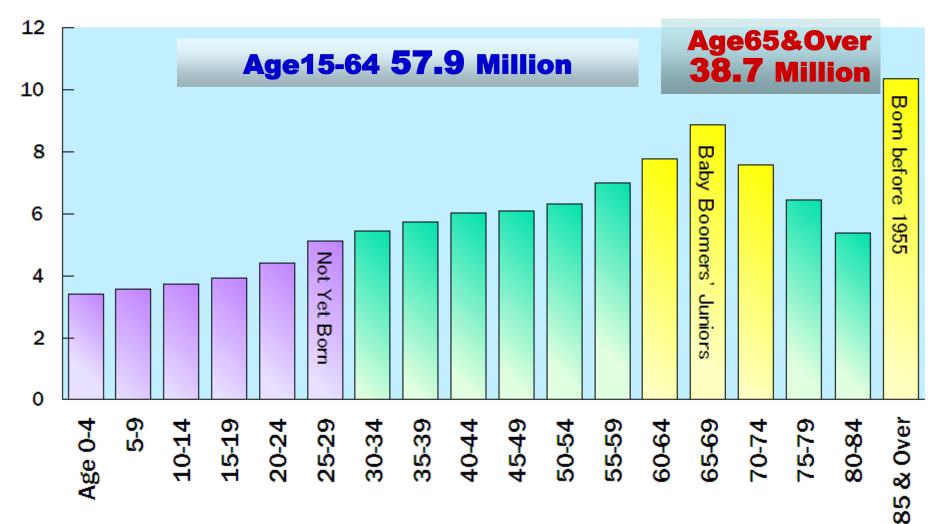
Structural Change of Japan's Population: as of 2030

Population in Million, including Foreign Residents



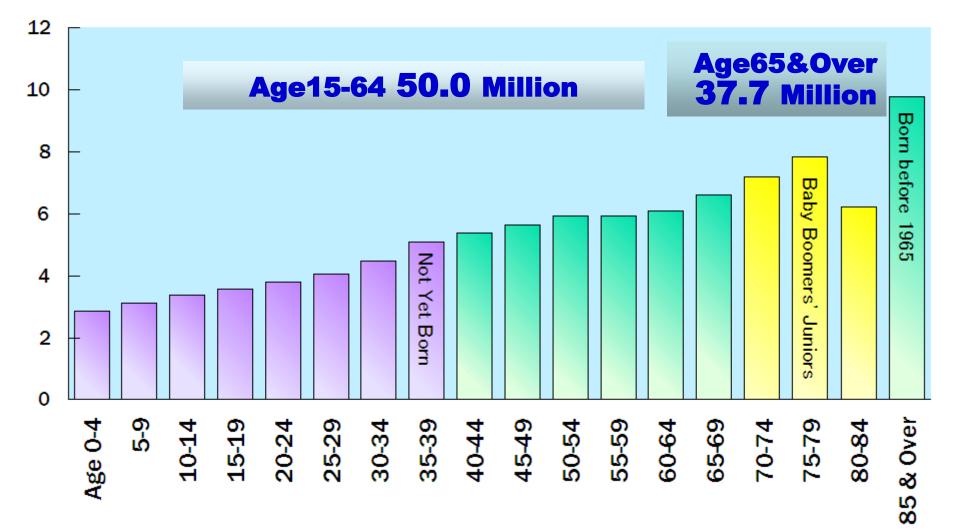
Structural Change of Japan's Population: as of 2040

Population in Million, including Foreign Residents



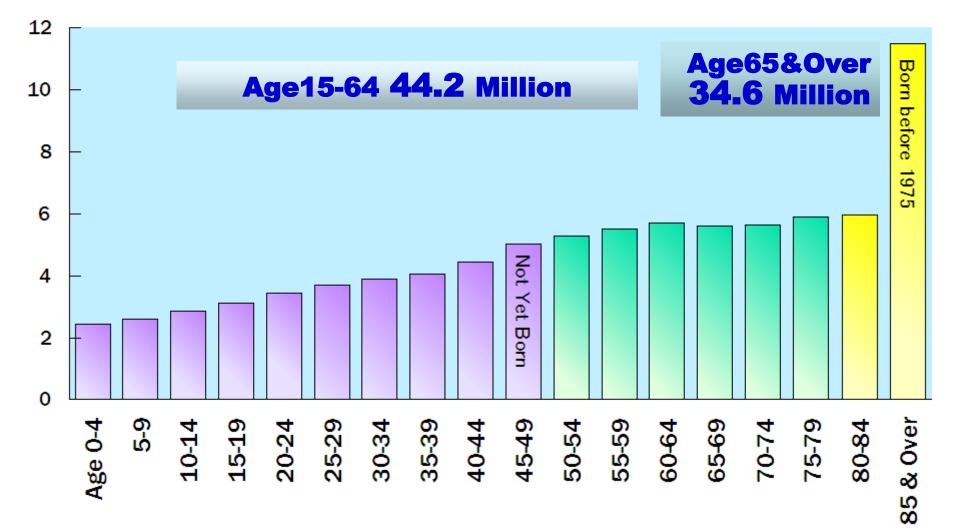
Structural Change of Japan's Population: as of 2050

Population in Million, including Foreign Residents



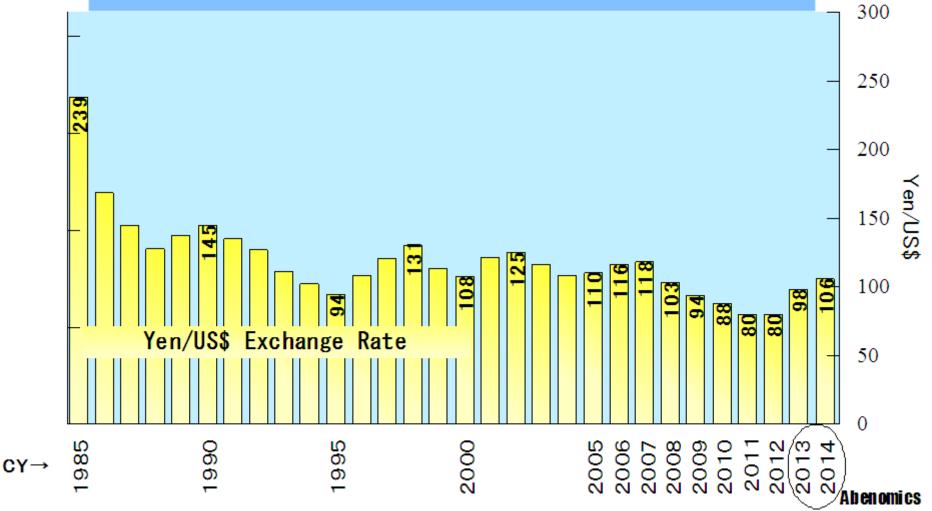
Structural Change of Japan's Population: as of 2060

Population in Million, including Foreign Residents

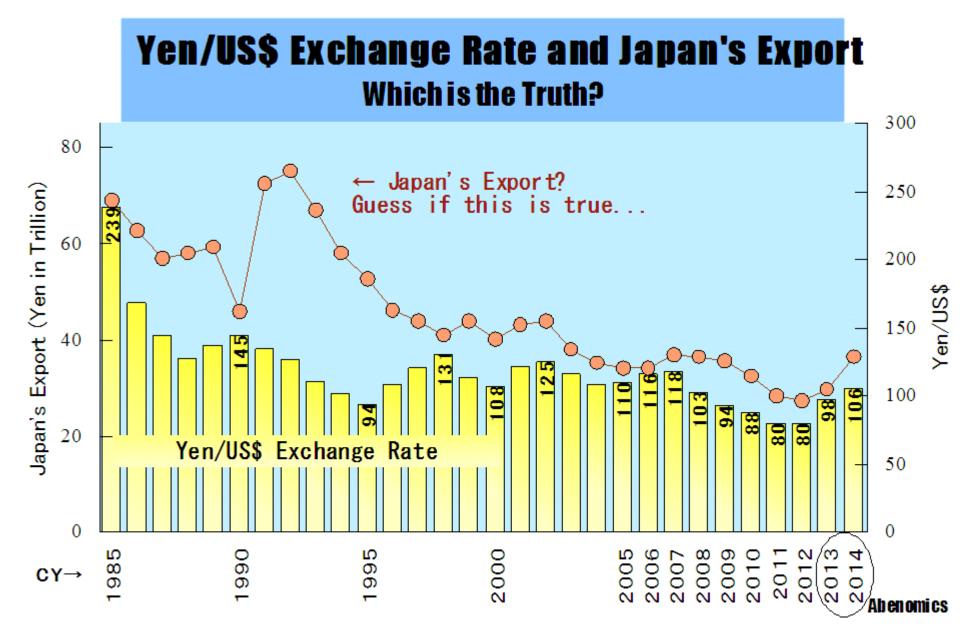


Yet Powerful in Global Competition?

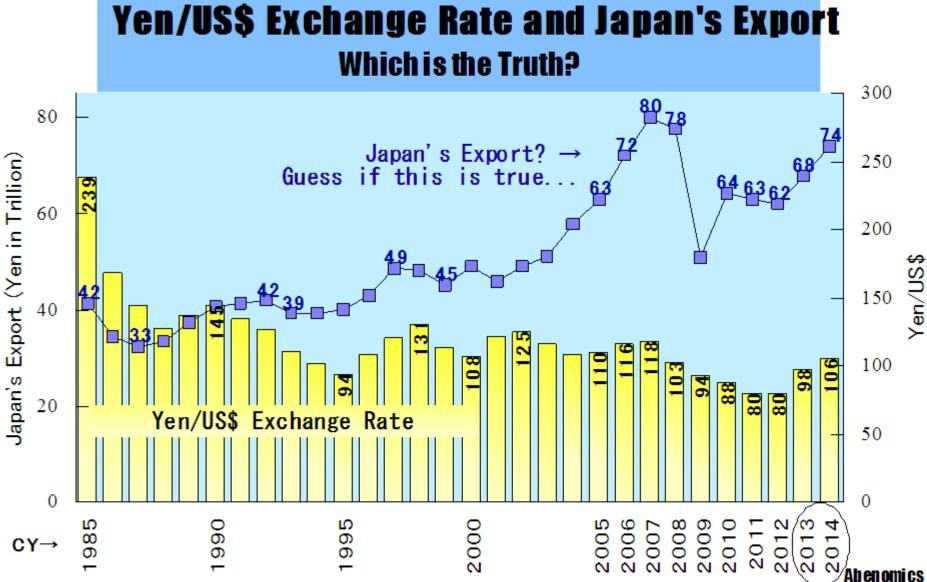
Yen/US\$ Exchange Rate and Japan's Export Which is the Truth?



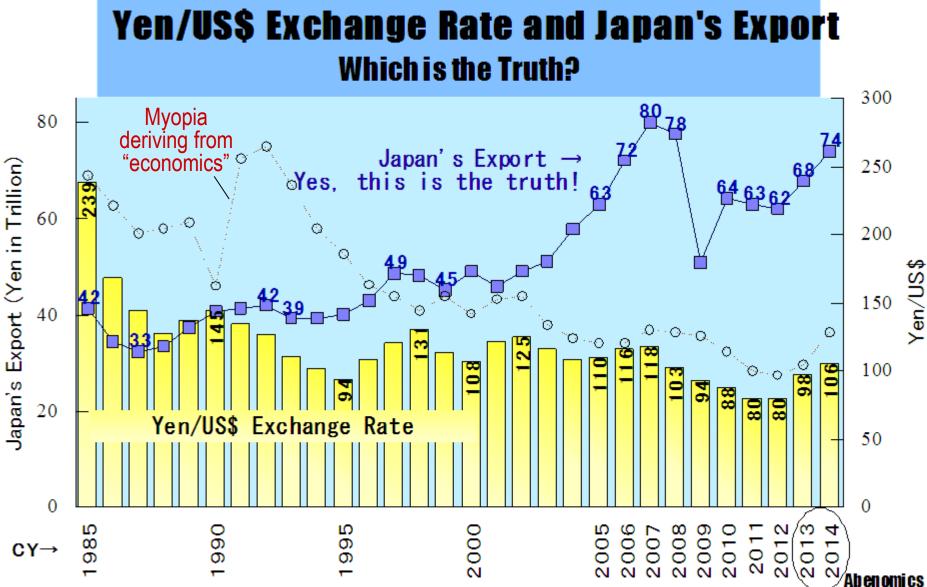
Yet Powerful in Global Competition?



Yet Powerful in Global Competition?

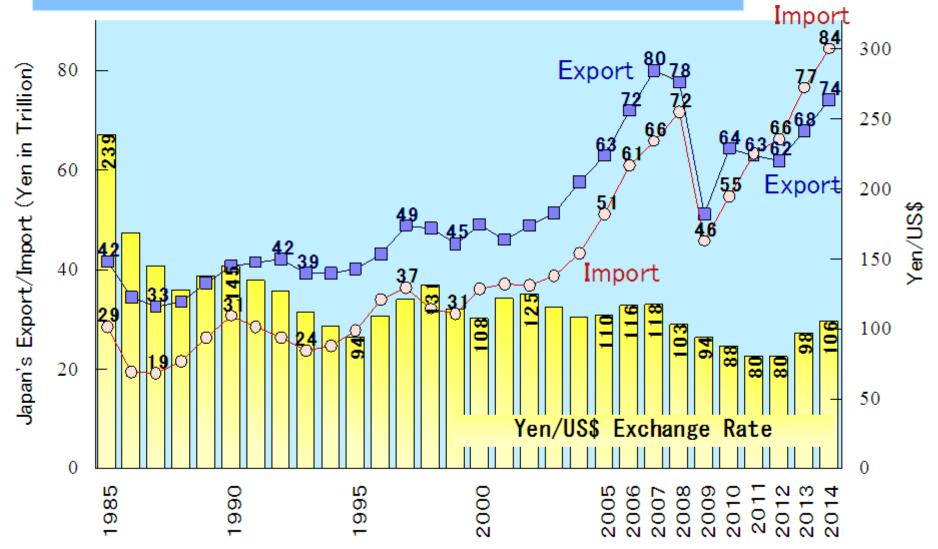


Yet Powerful in Global Competition!

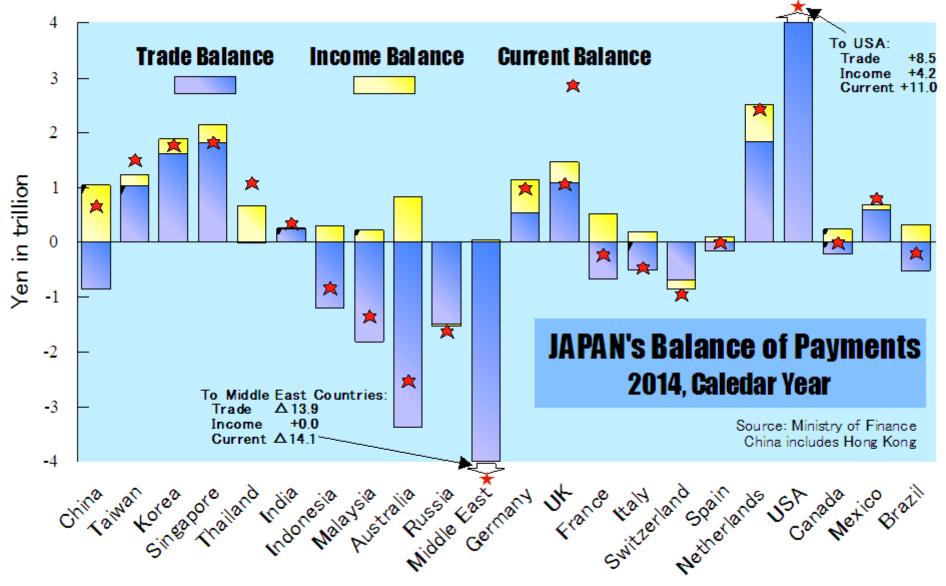


Yen Depreciation Worsen the Trade Balance Yen/\$ Exchange Rate and Japan's Export, Import

Yen/US\$ Exchange Rate and Japan's Export

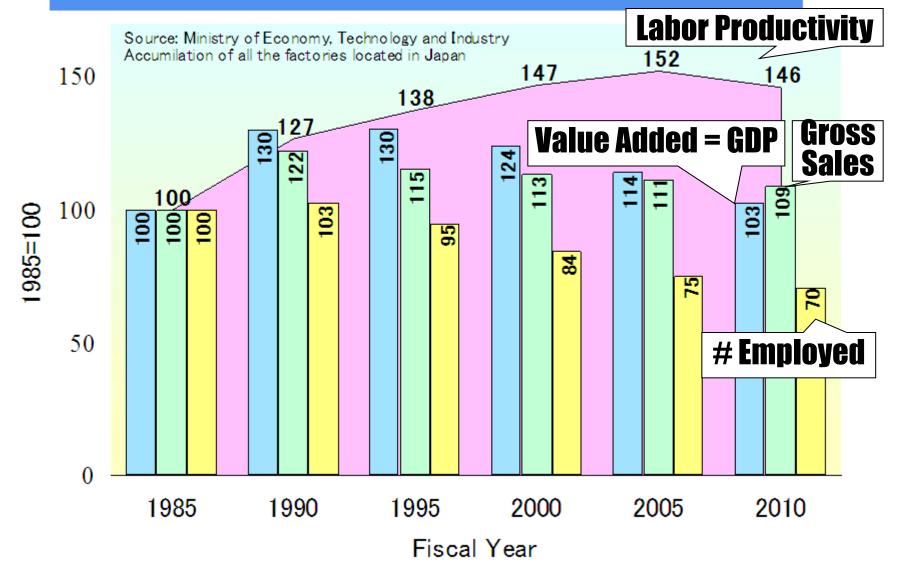


Yet Powerful in Global Cometition Japan's International Balances with Major Competitors



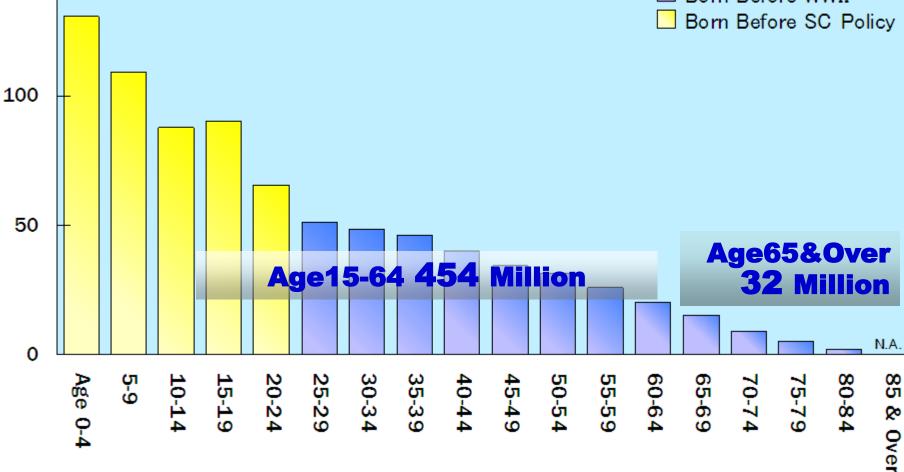
Less Labor, More Productivity, Less GDP

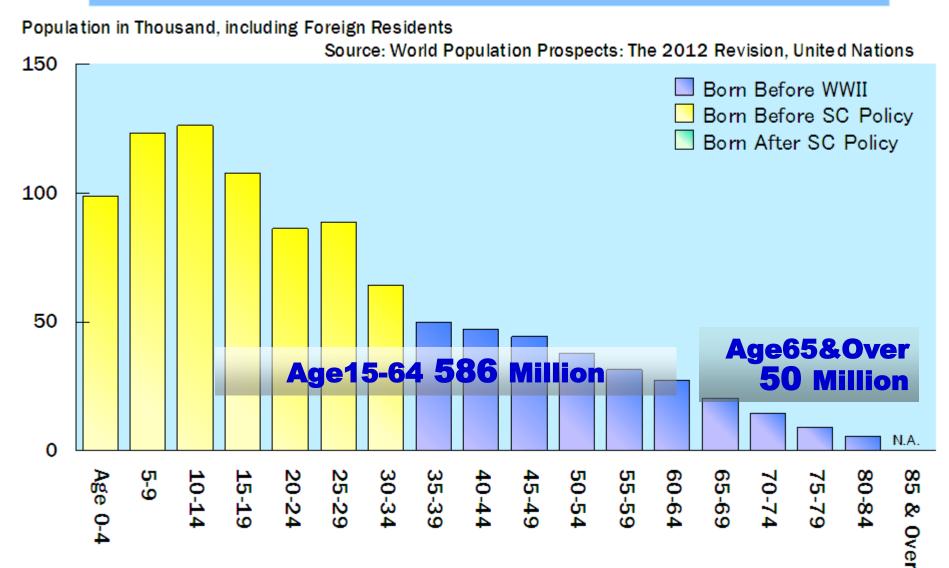
Performances of Japan's Domestic Manufacturing

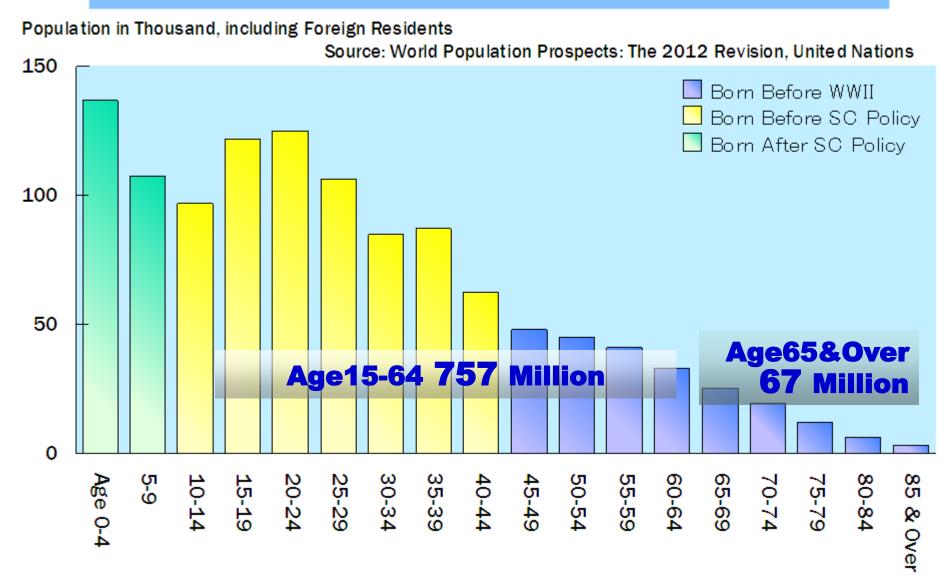


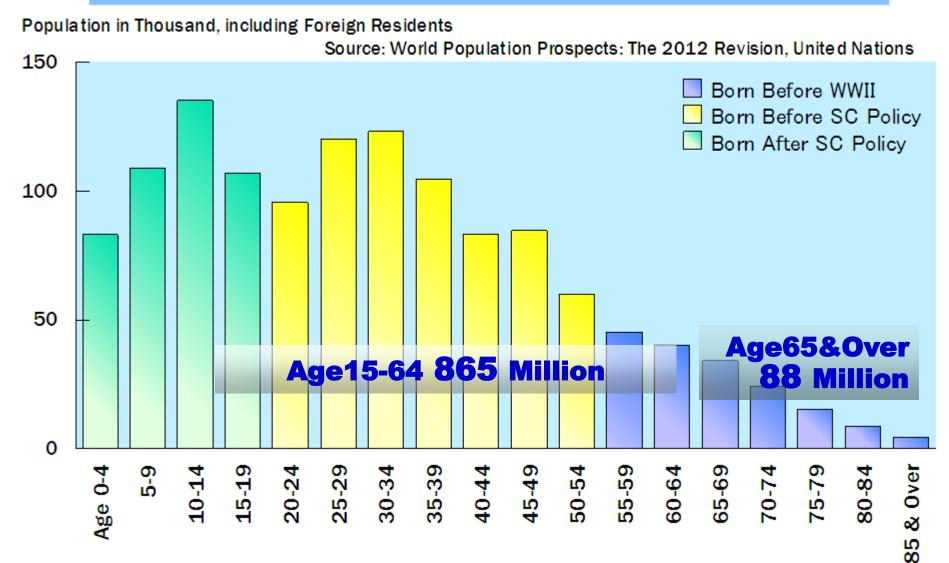
Mainland China Population Structure as of 1970

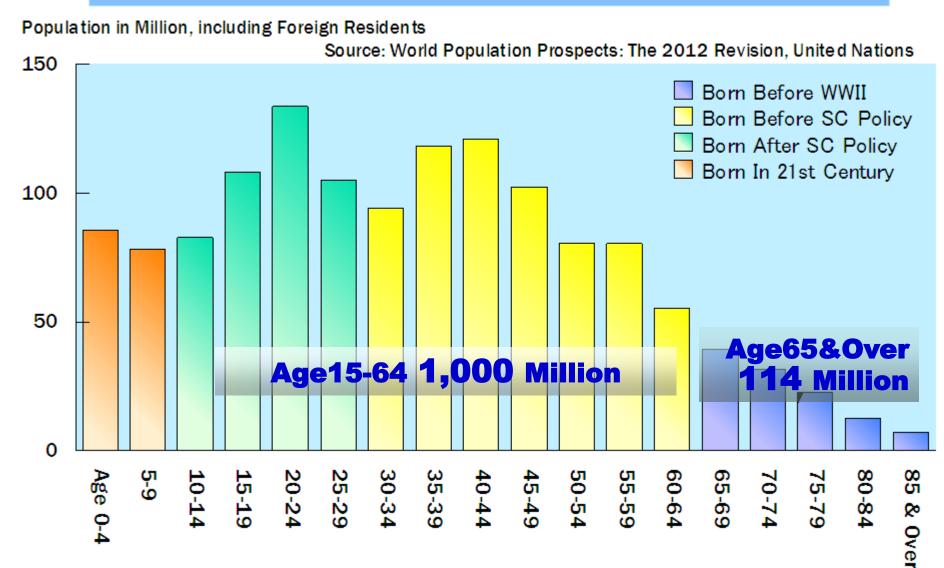
Population in Million, including Foreign Residents Source: World Population Prospects: The 2012 Revision, United Nations Born Before WWII





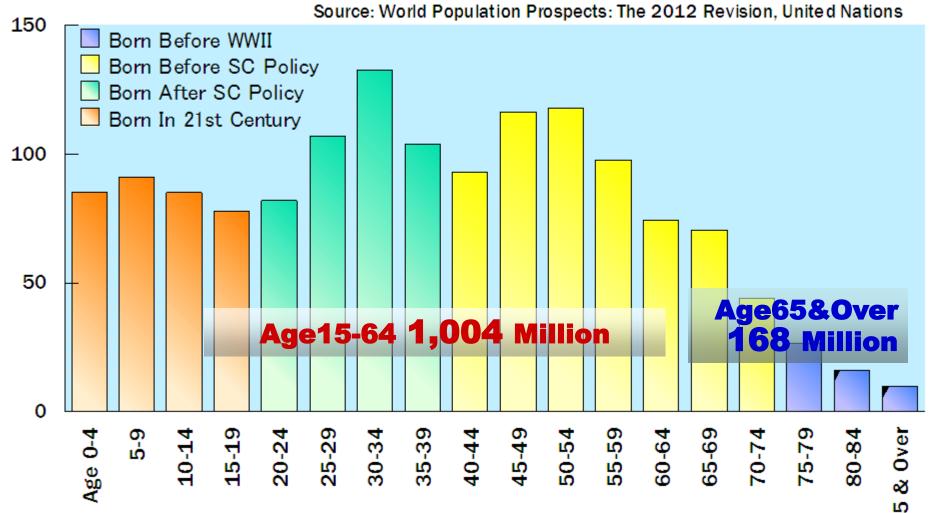






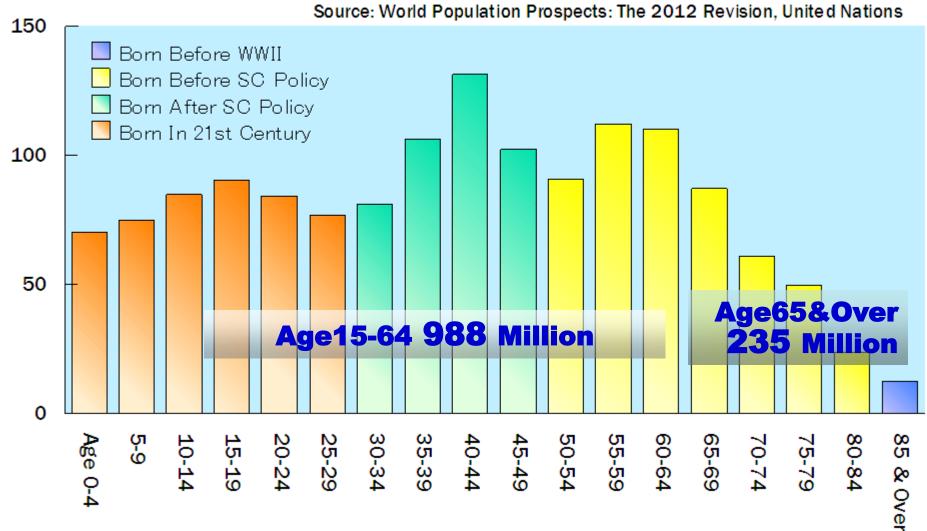
Mainland China Population Structure as of 2020

Population in Million, including Foreign Residents



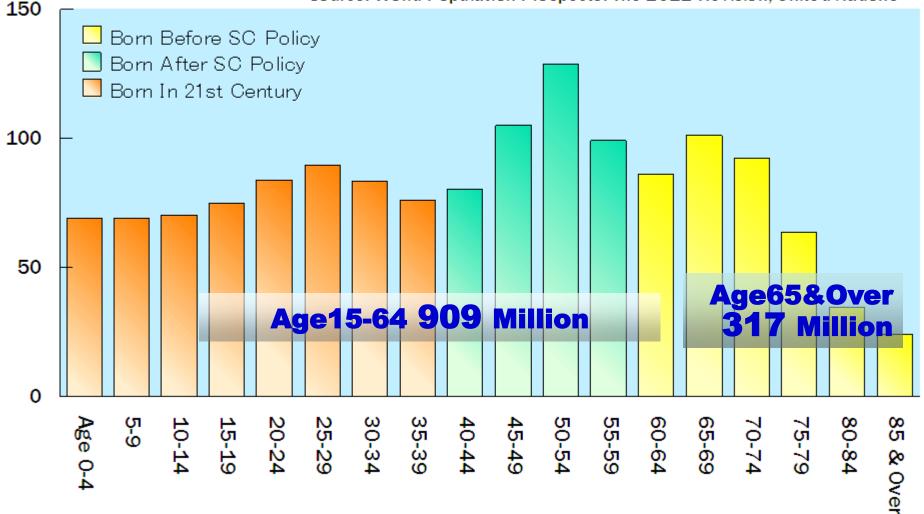
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Mainland China Population Structure as of 2030



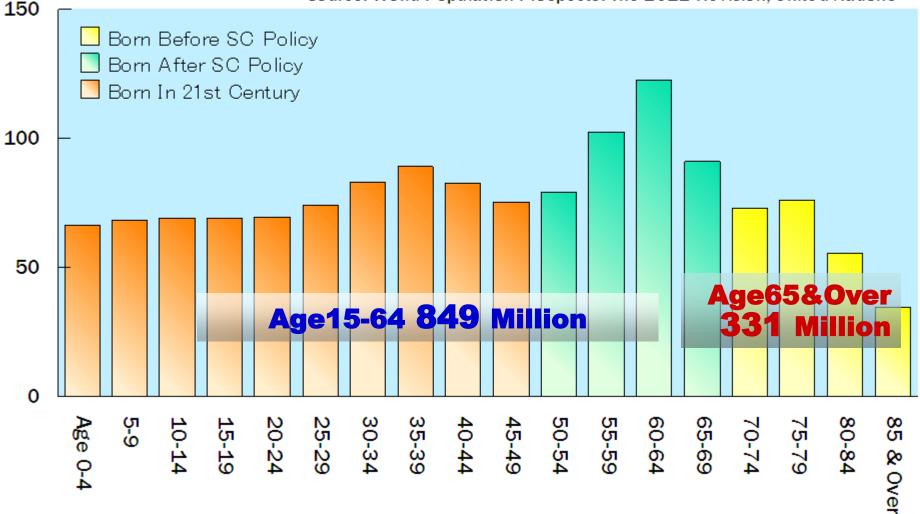
Mainland China Population Structure as of 2040

Population in Million, including Foreign Residents



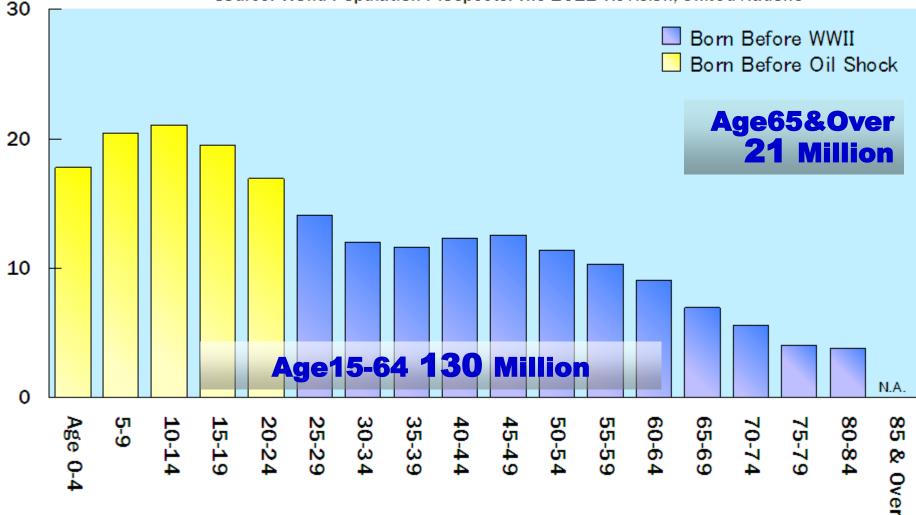
Mainland China Population Structure as of 2050

Population in Million, including Foreign Residents

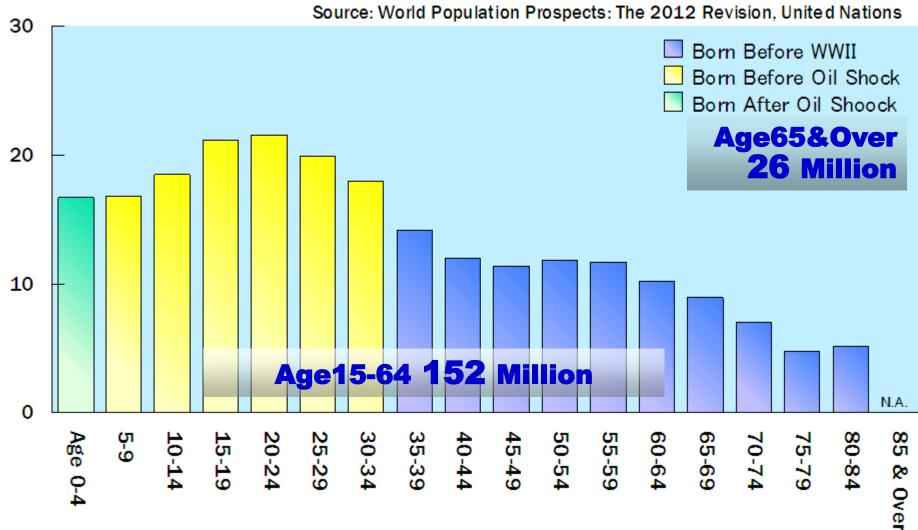


USA Population Structure as of 1970

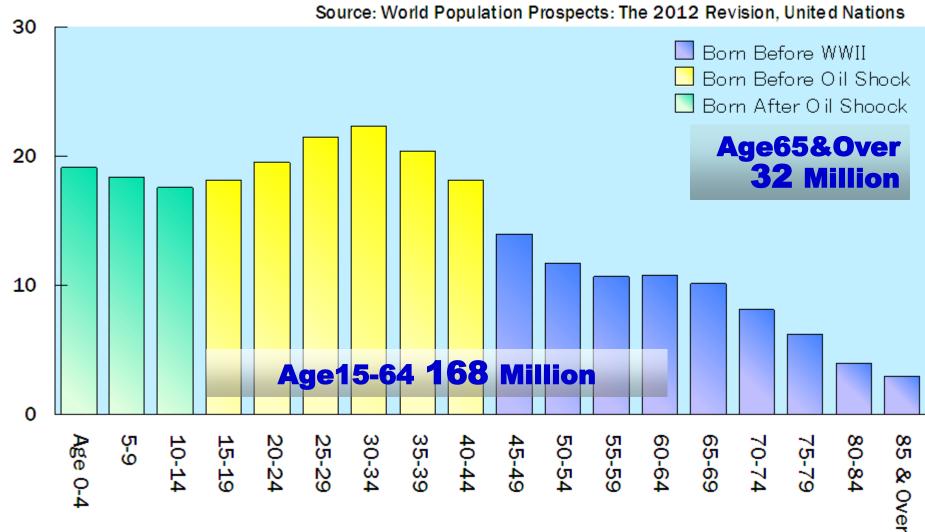
Population in Million, including Foreign Residents



USA Population Structure as of 1980



USA Population Structure as of 1990



USA Population Structure as of 2000

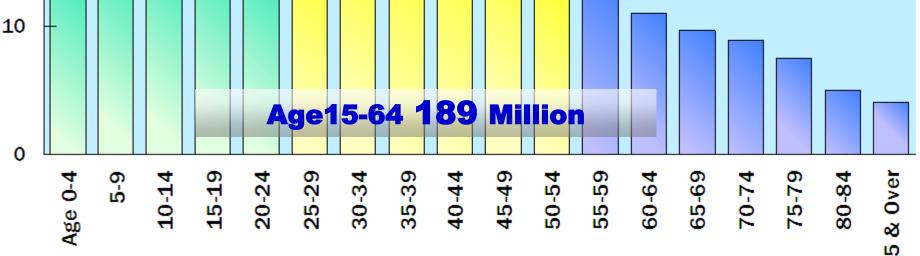
Population in Thousand, including Foreign Residents

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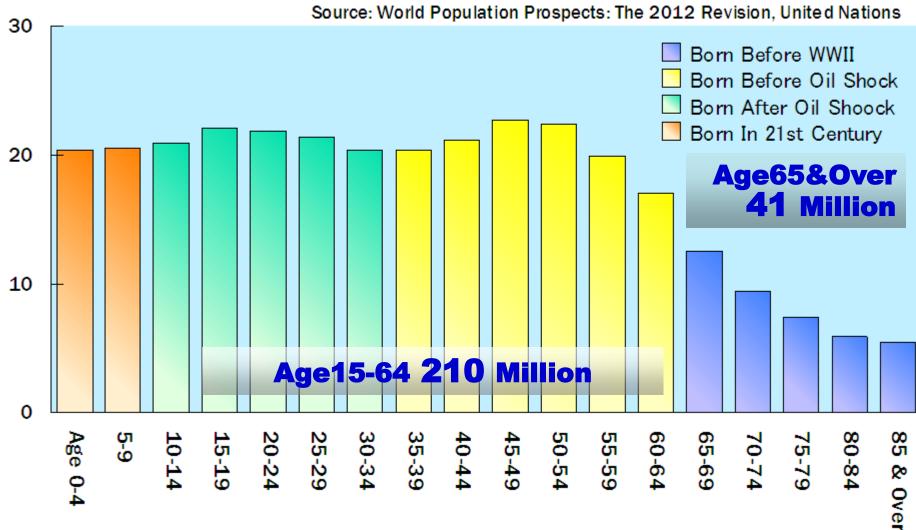
Source: World Population Prospects: The 2012 Revision, United Nations

Born Before WWII
Born Before Oil Shock
Born After Oil Shock
Age65&Over
35 Million

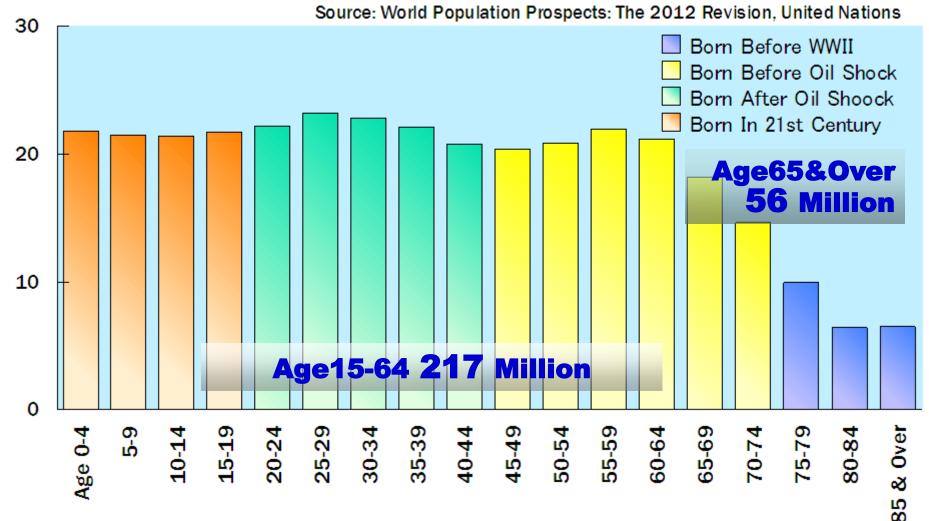


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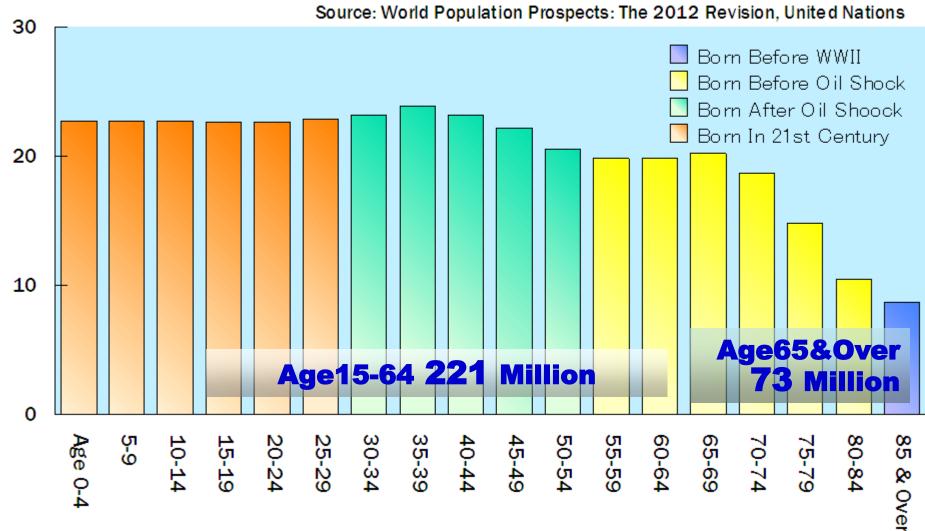
USA Population Structure as of 2010



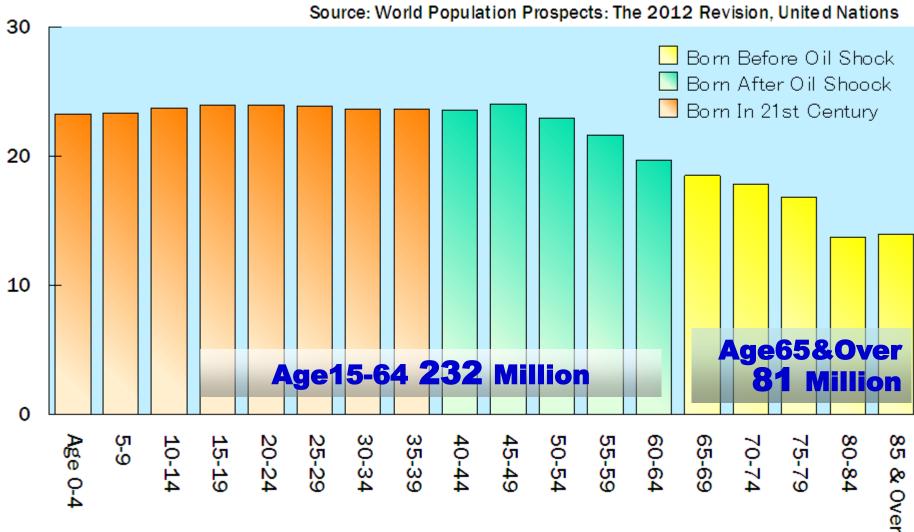
USA Population Structure as of 2020



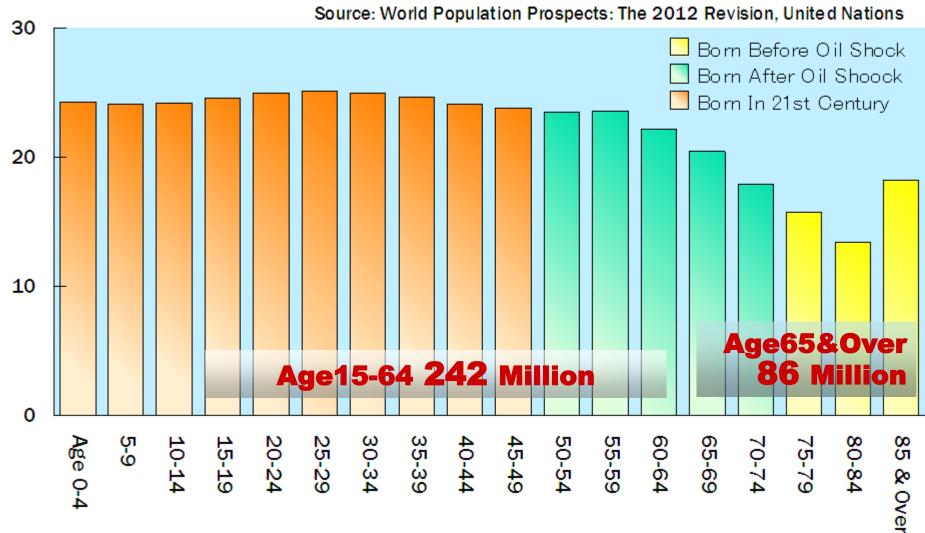
USA Population Structure as of 2030



USA Population Structure as of 2040

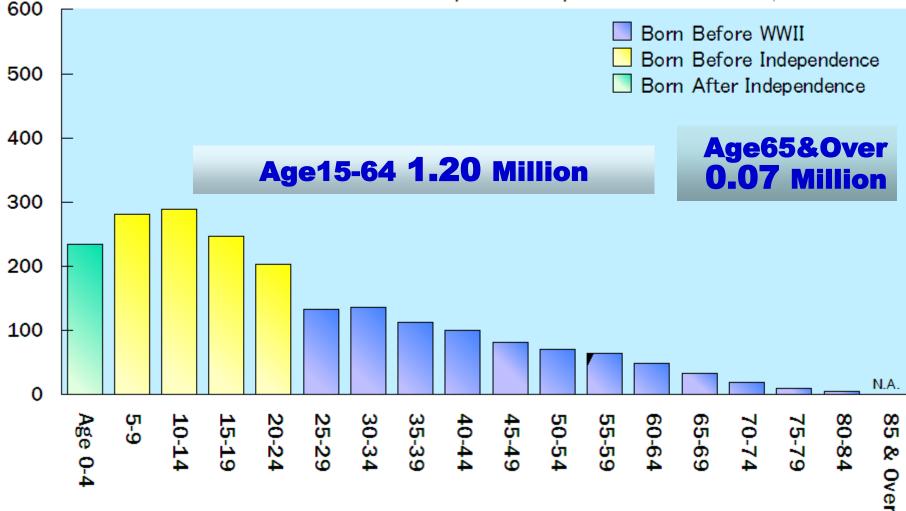


USA Population Structure as of 2050

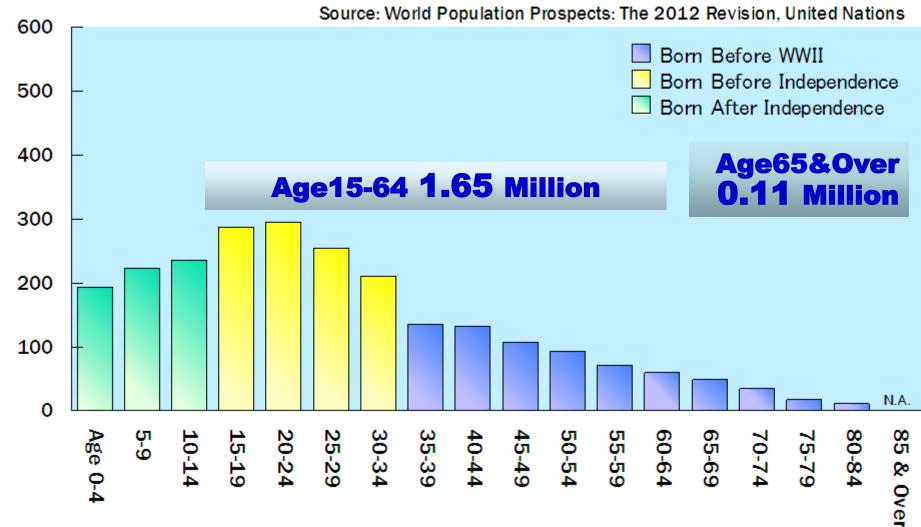


Singapore Population Structure as of 1970

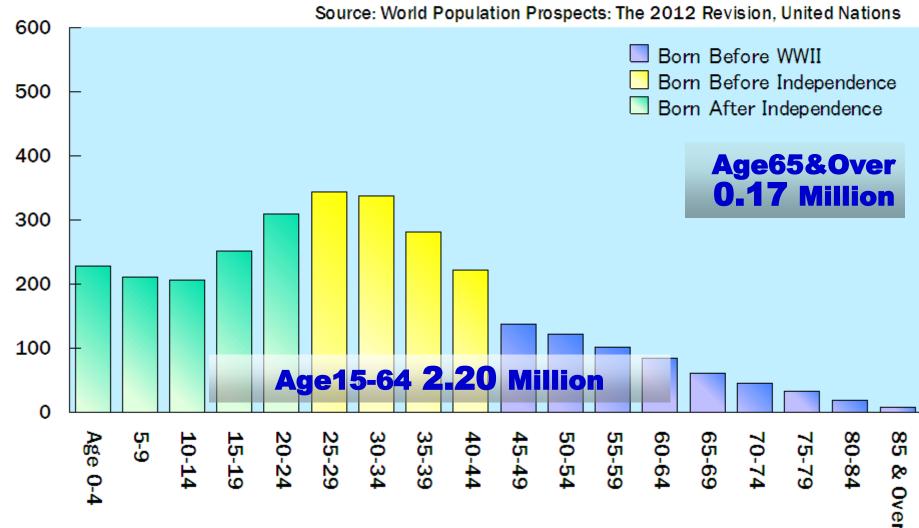
Population in Thousand, including Foreign Residents Source: World Population Prospects: The 2012 Revision, United Nations



Singapore Population Structure as of 1980

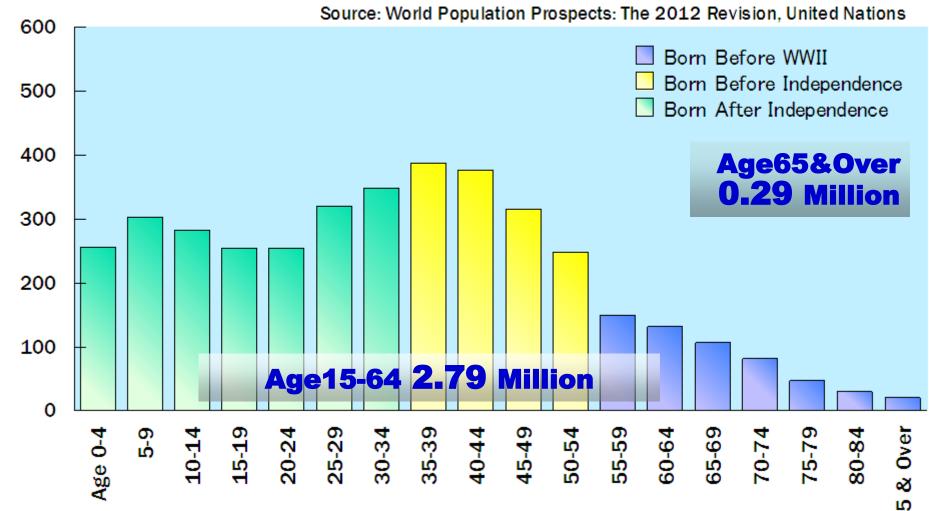


Singapore Population Structure as of 1990



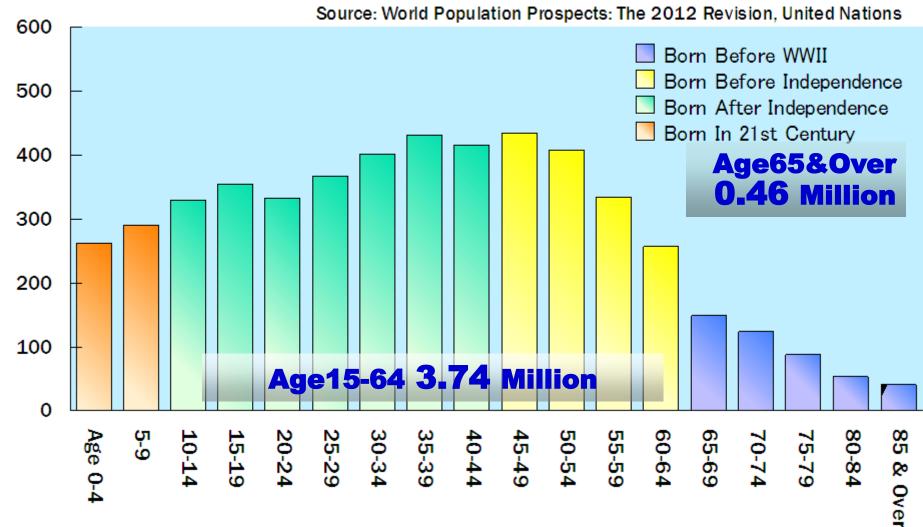
Singapore Population Structure as of 2000

Population in Thousand, including Foreign Residents

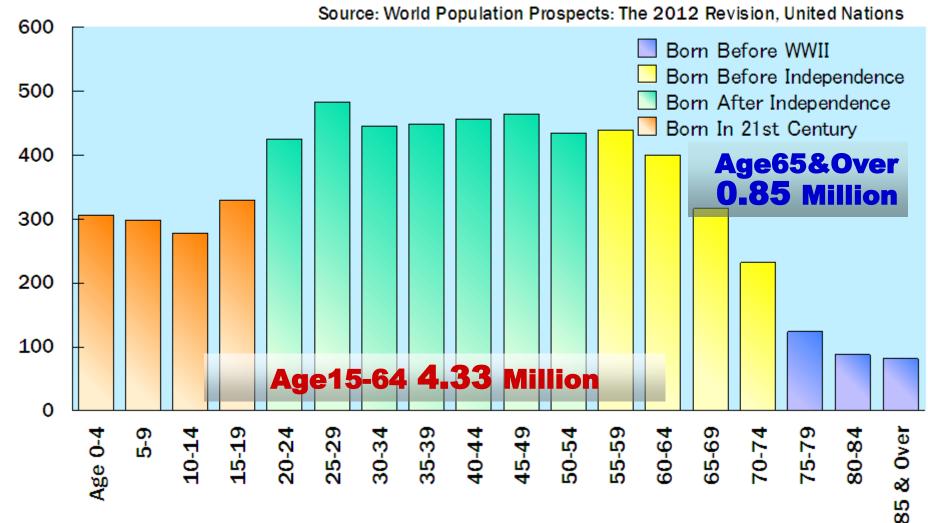


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Singapore Population Structure as of 2010

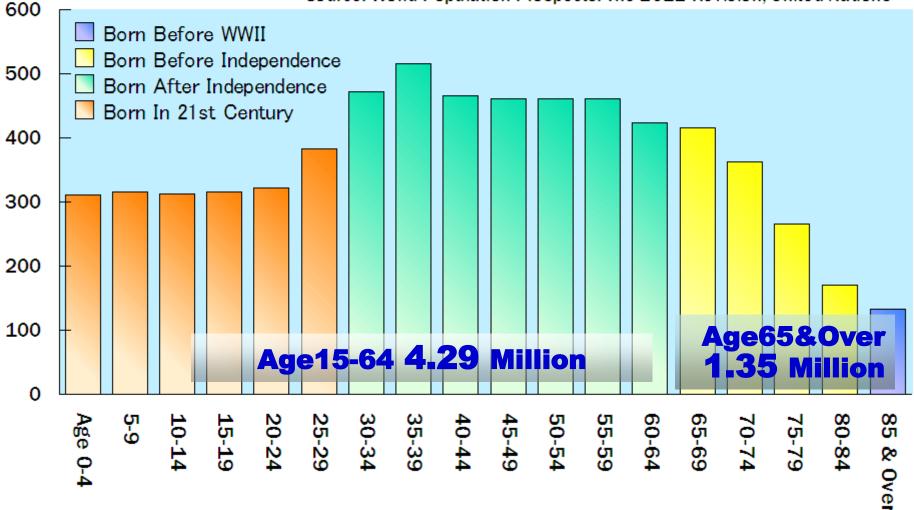


Singapore Population Structure as of 2020



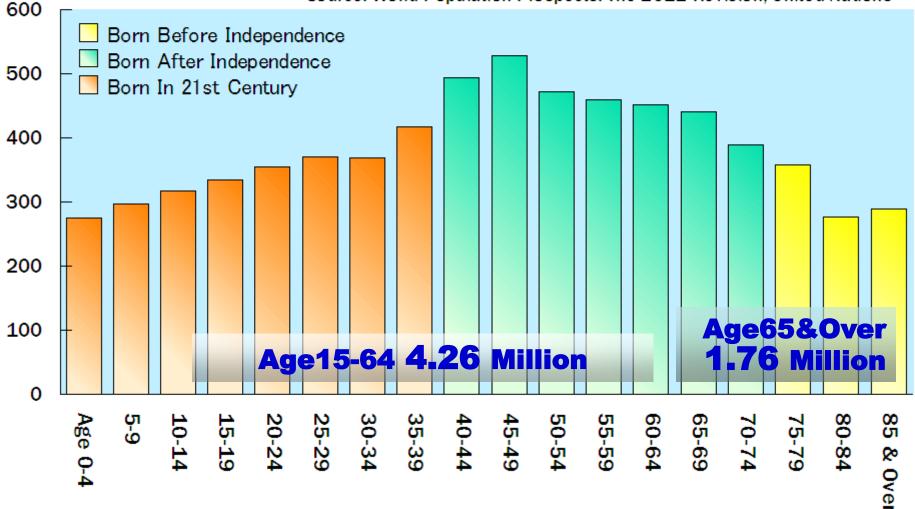
Singapore Population Structure as of 2030

Population in Thousand, including Foreign Residents



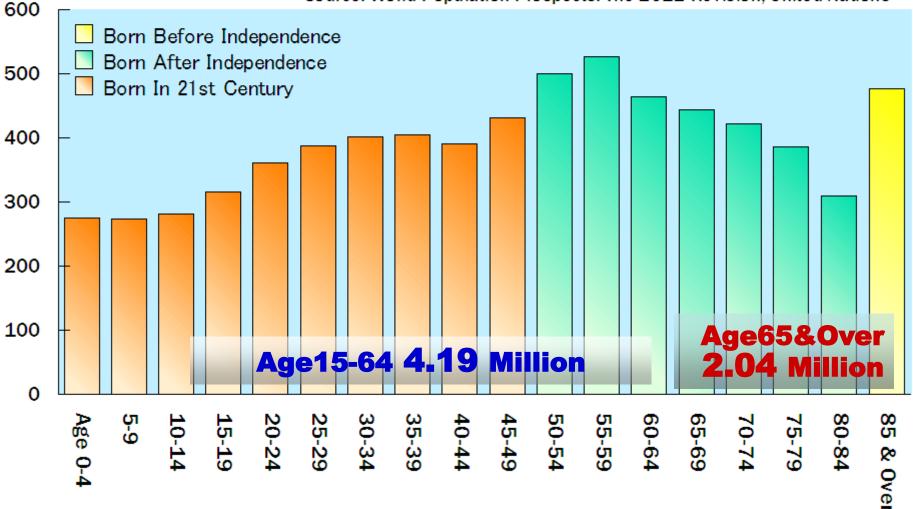
Singapore Population Structure as of 2040





Singapore Population Structure as of 2050

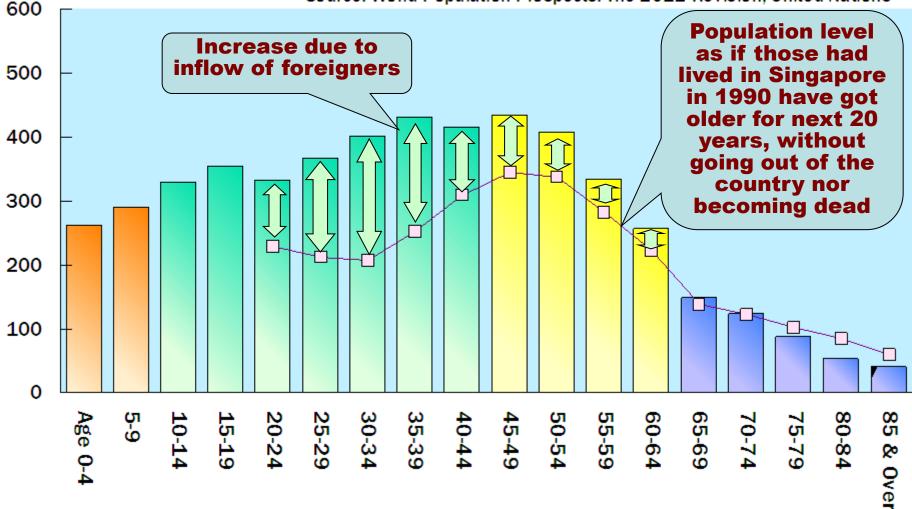
Population in Thousand, including Foreign Residents



Foreign Immigrants Will Also Get Aged

Singapore Population Structure as of 2010

Population in Thousand, including Foreign Residents



Foreign Immigrants Will Also Get Aged

Singapore Population Structure as of 2040

Population in Thousand, including Foreign Residents Source: World Population Prospects: The 2012 Revision, United Nations

