

Economic Implication of Aging in Japan and East Asian Tigers

February 11, 2011

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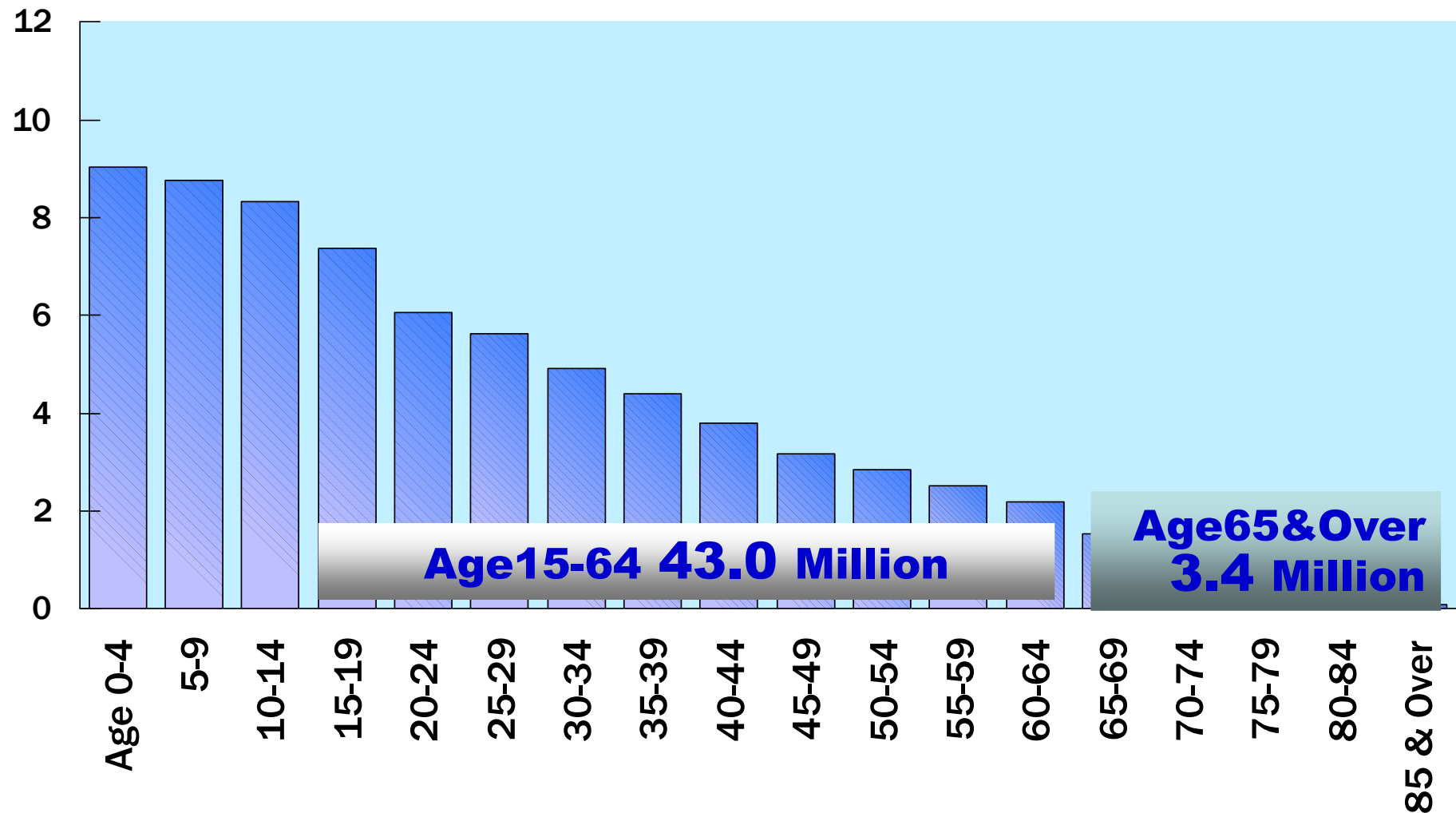


Silver Tsunami, or Aging Baby Boomers

Structural Change of Japan's Population: as of 1940

Population in Million, including Foreign Residents

Source: National Census

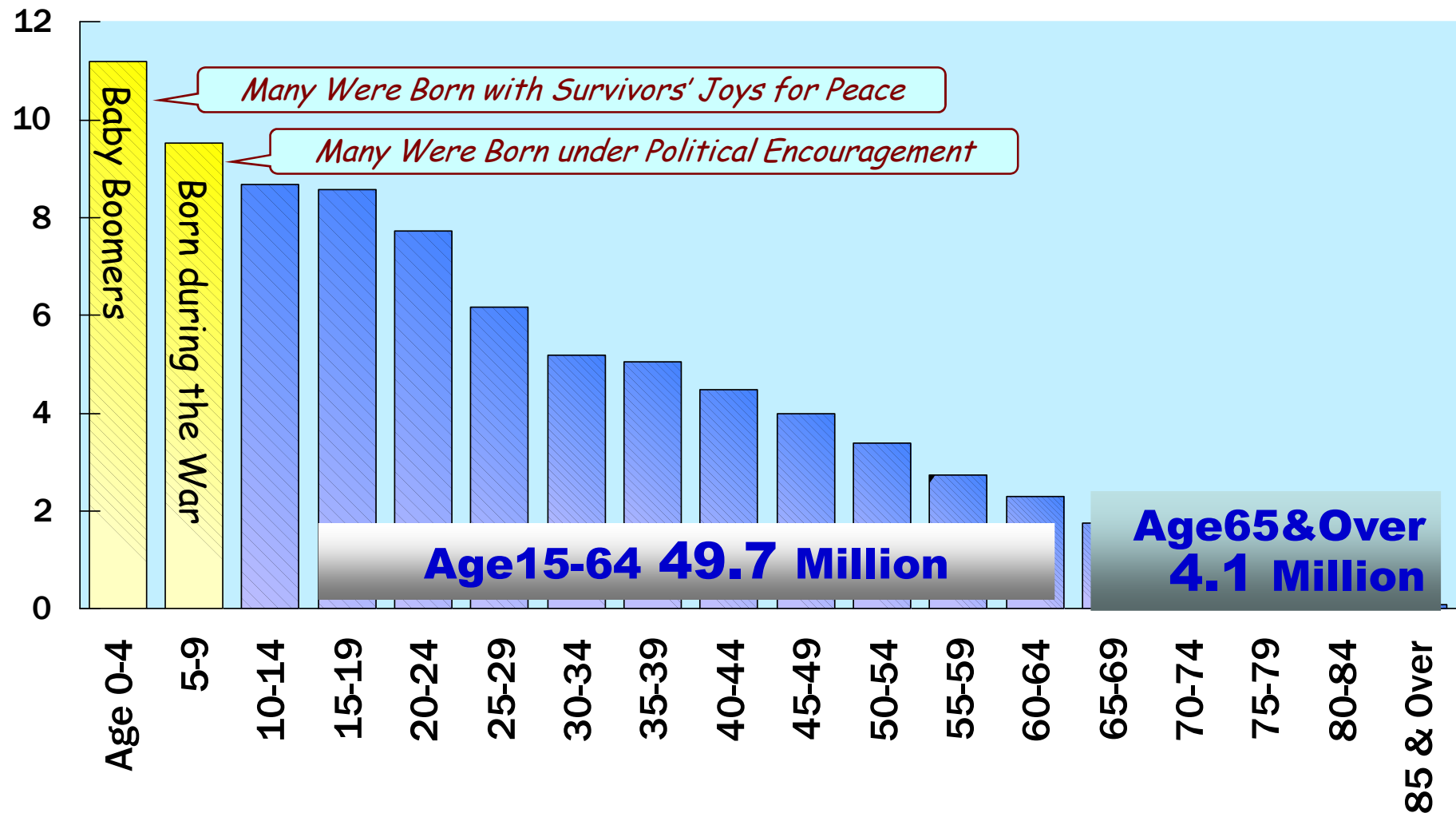


Silver Tsunami, or Aging Baby Boomers

Structural Change of Japan's Population: as of 1950

Population in Million, including Foreign Residents

Source: National Census

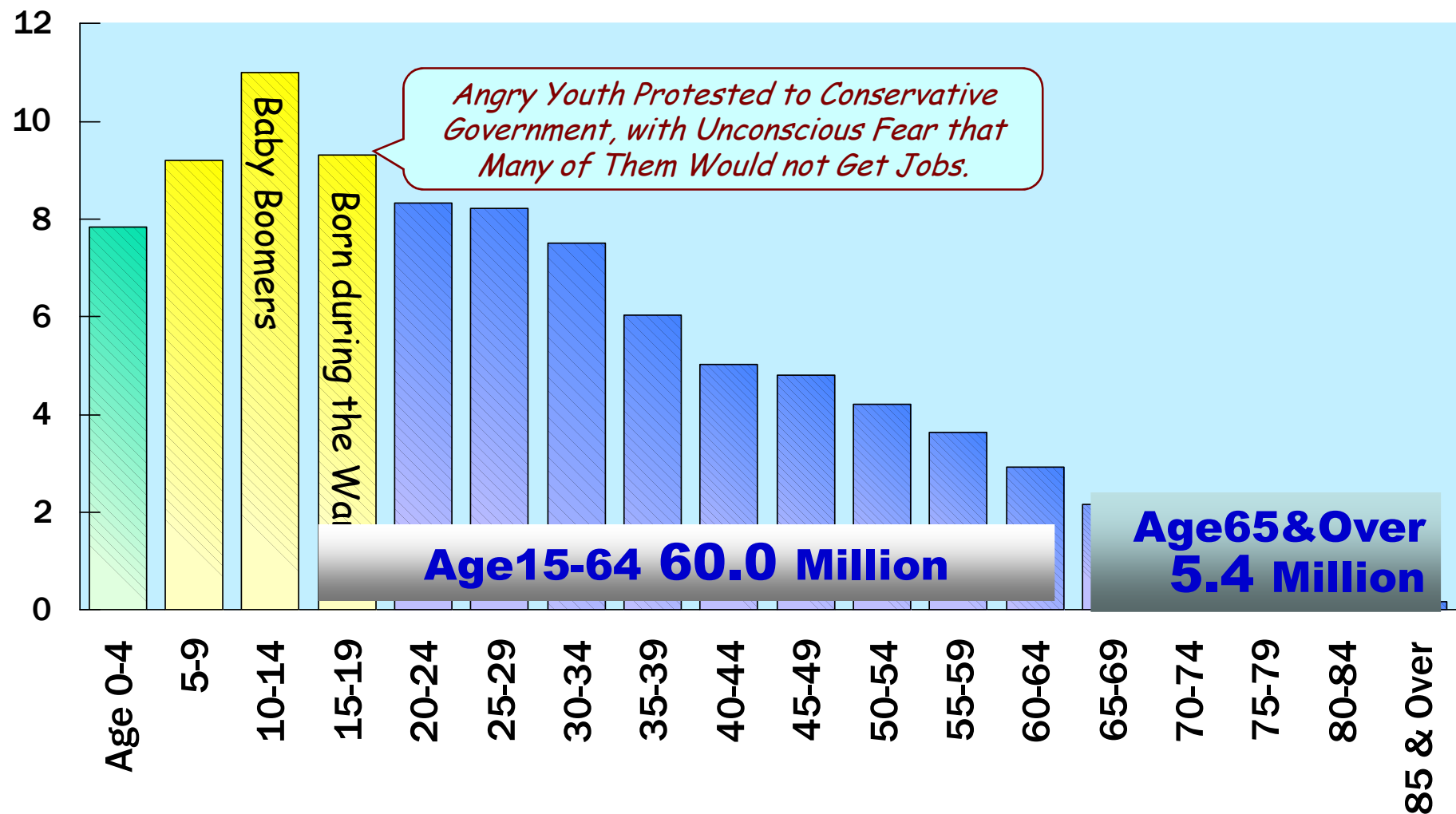


Silver Tsunami, or Aging Baby Boomers

Structural Change of Japan's Population: as of 1960

Population in Million, including Foreign Residents

Source: National Census

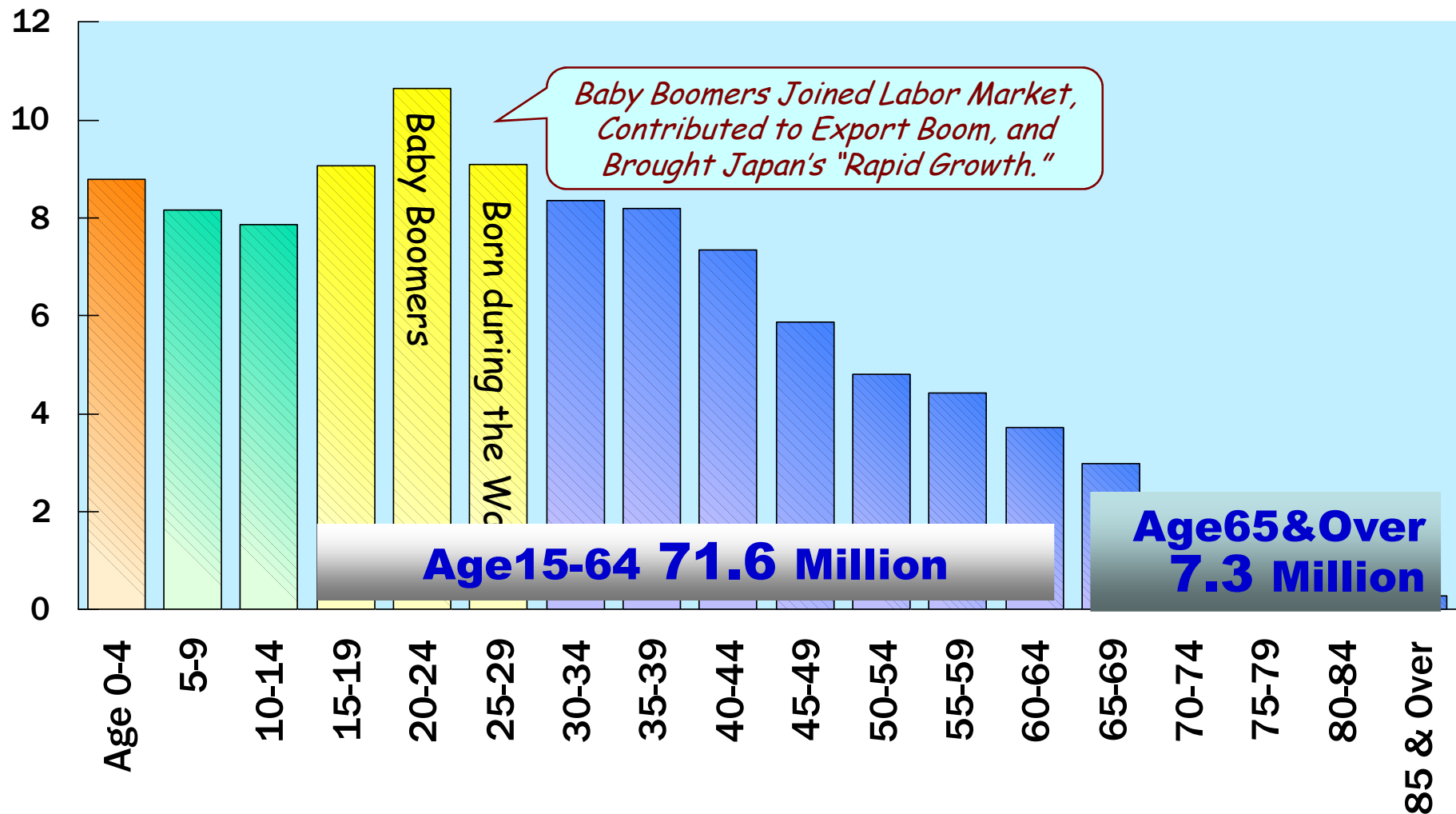


Silver Tsunami, or Aging Baby Boomers

Structural Change of Japan's Population: as of 1970

Population in Million, including Foreign Residents

Source: National Census

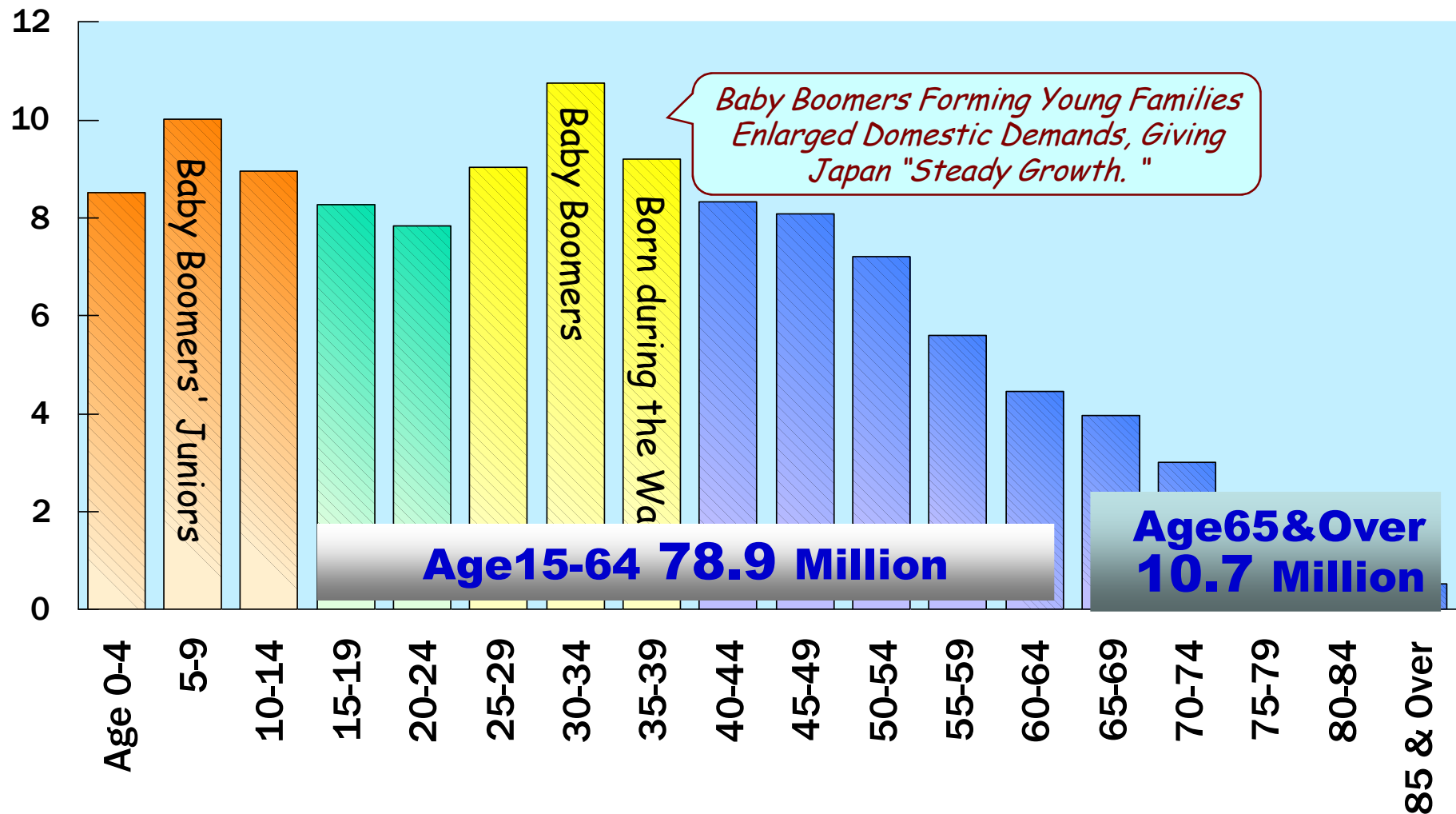


Silver Tsunami, or Aging Baby Boomers

Structural Change of Japan's Population: as of 1980

Population in Million, including Foreign Residents

Source: National Census

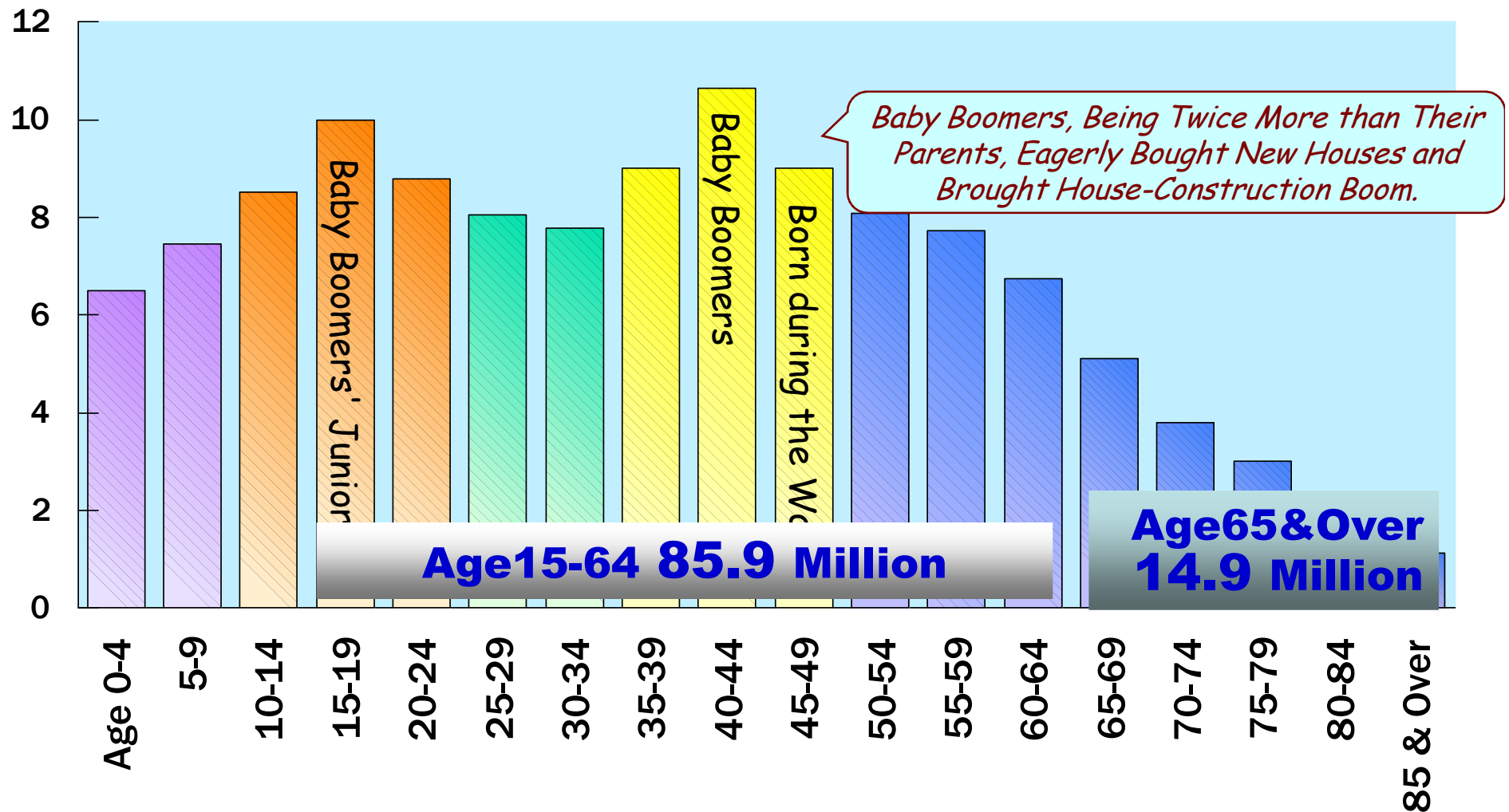


Silver Tsunami, or Aging Baby Boomers

Structural Change of Japan's Population: as of 1990

Population in Million, including Foreign Residents

Source: National Census

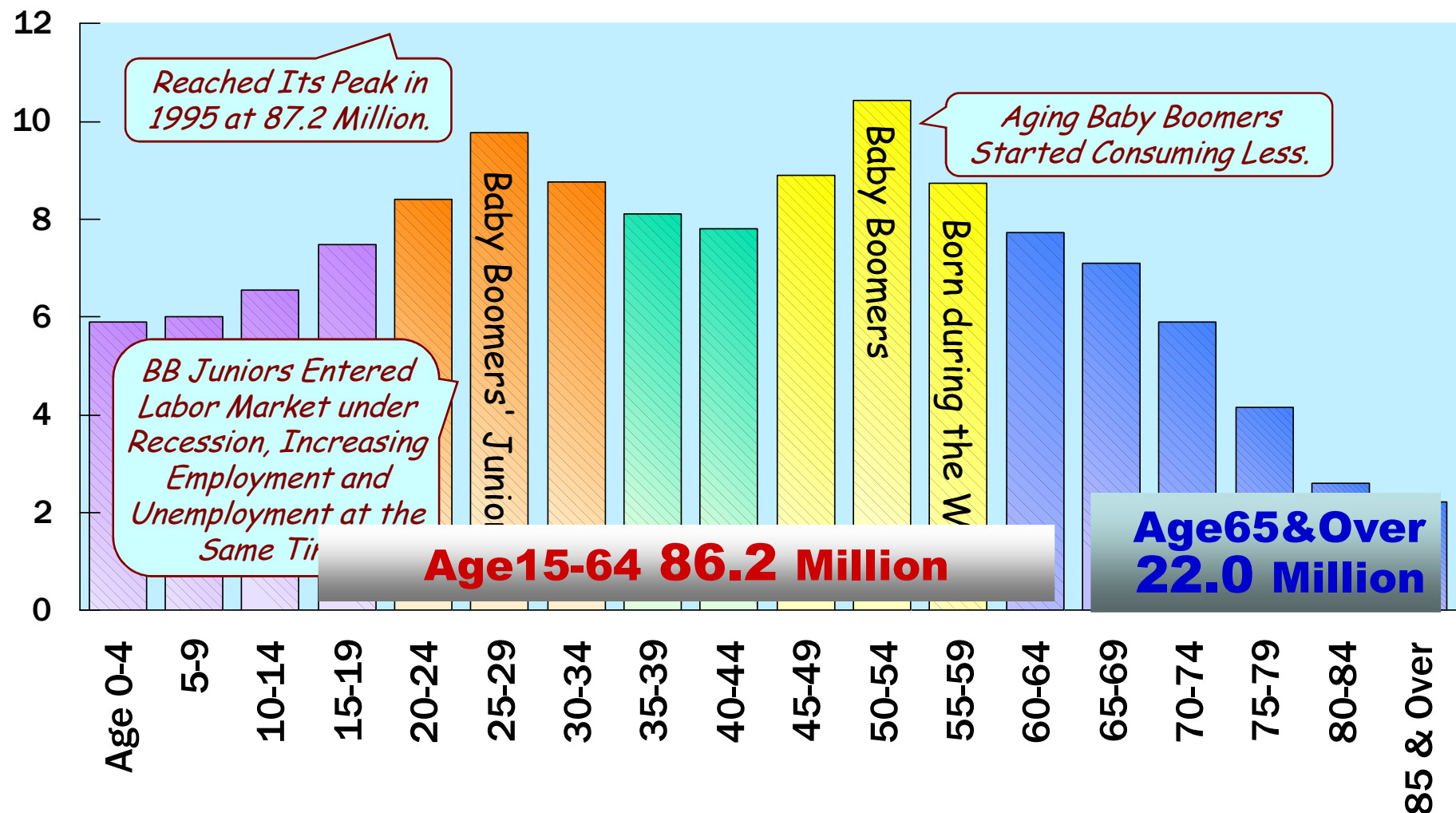


Silver Tsunami, or Aging Baby Boomers

Structural Change of Japan's Population: as of 2000

Population in Million, including Foreign Residents

Source: National Census

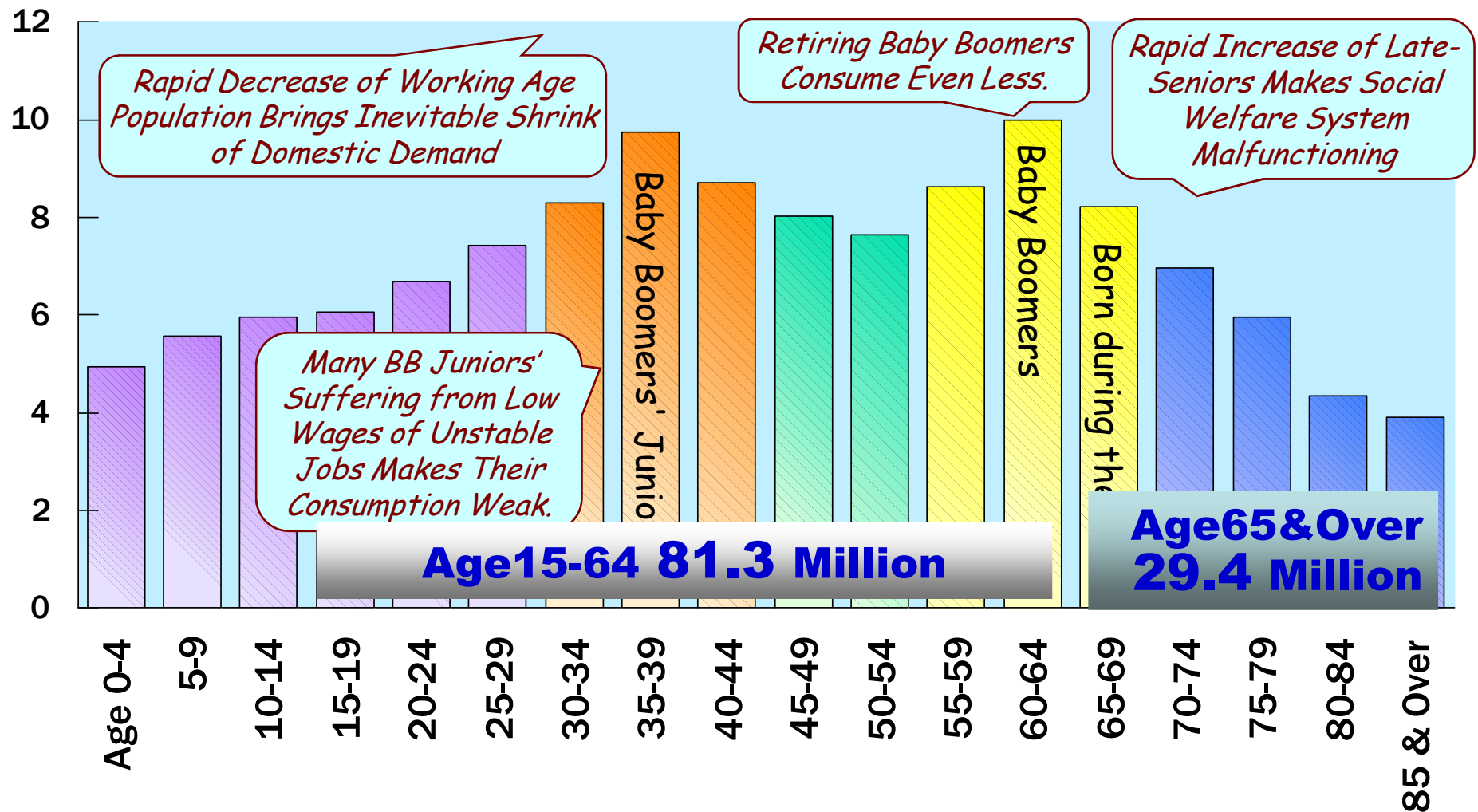


Silver Tsunami, or Aging Baby Boomers

Structural Change of Japan's Population: as of 2010

Population in Million, including Foreign Residents

Source: Prospects of NRI-SWP

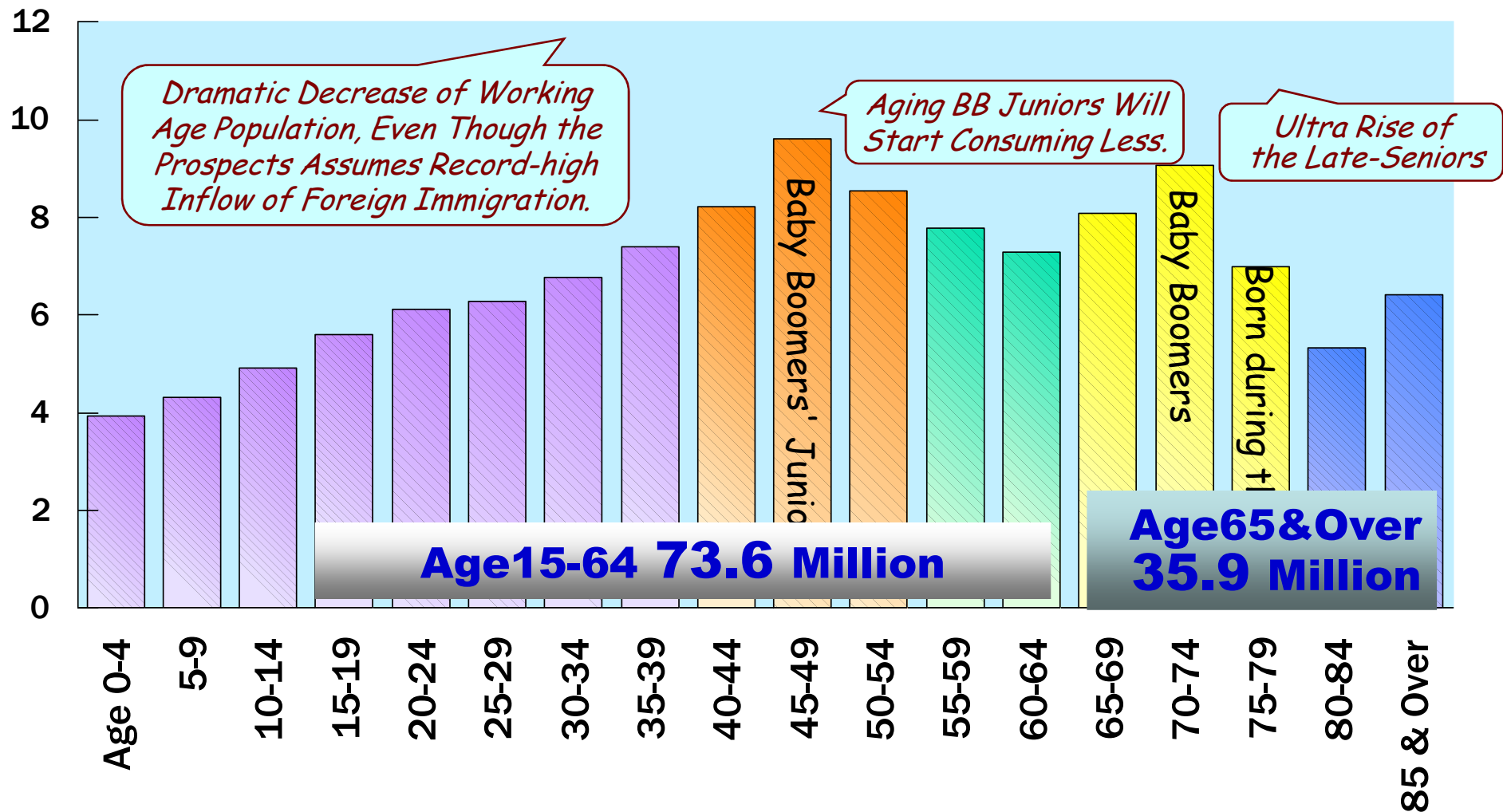


Silver Tsunami, or Aging Baby Boomers

Structural Change of Japan's Population: as of 2020

Population in Million, including Foreign Residents

Source: Prospects of NRI-SWP

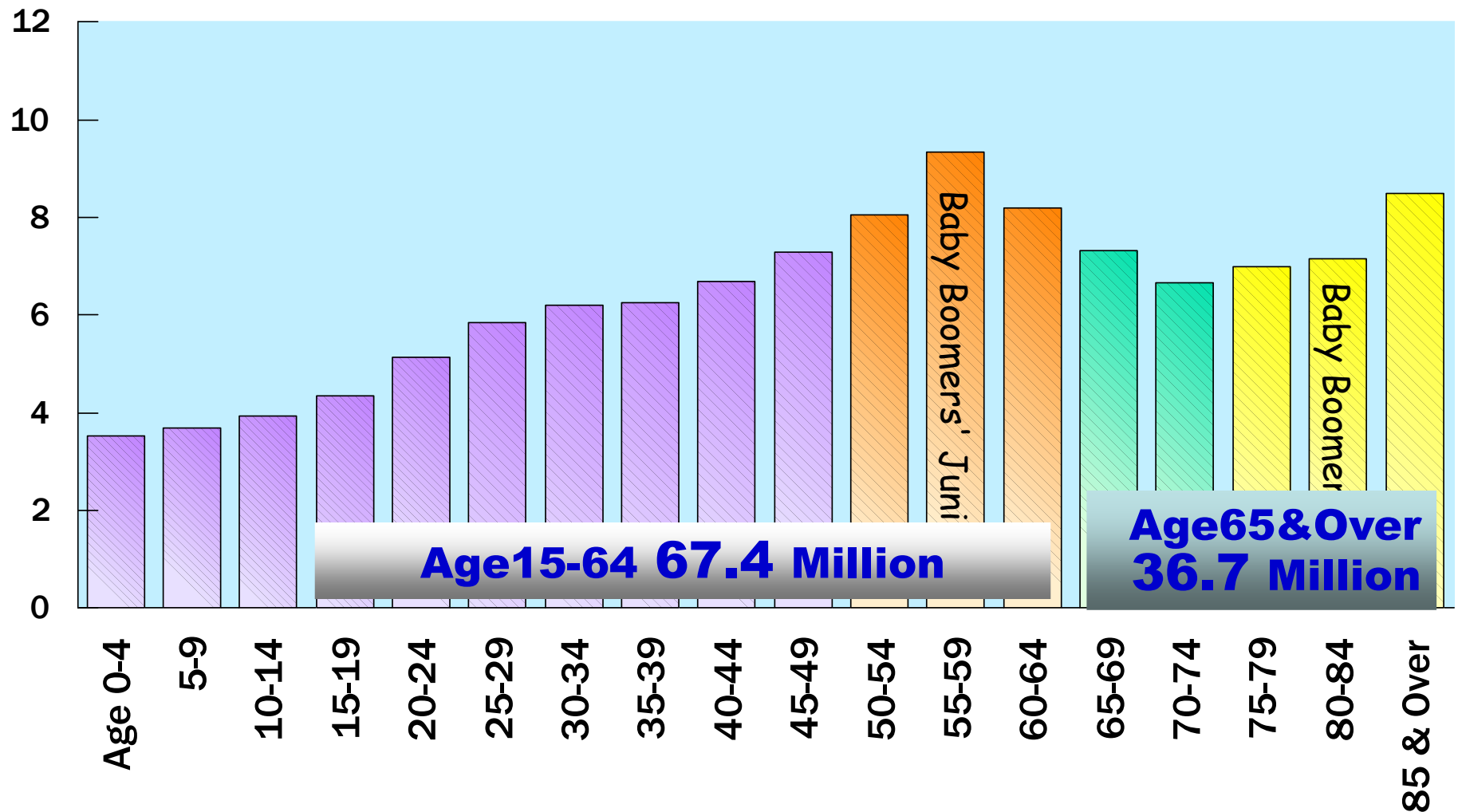


Silver Tsunami, or Aging Baby Boomers

Structural Change of Japan's Population: as of 2030

Population in Million, including Foreign Residents

Source: Prospects of NRI-SWP

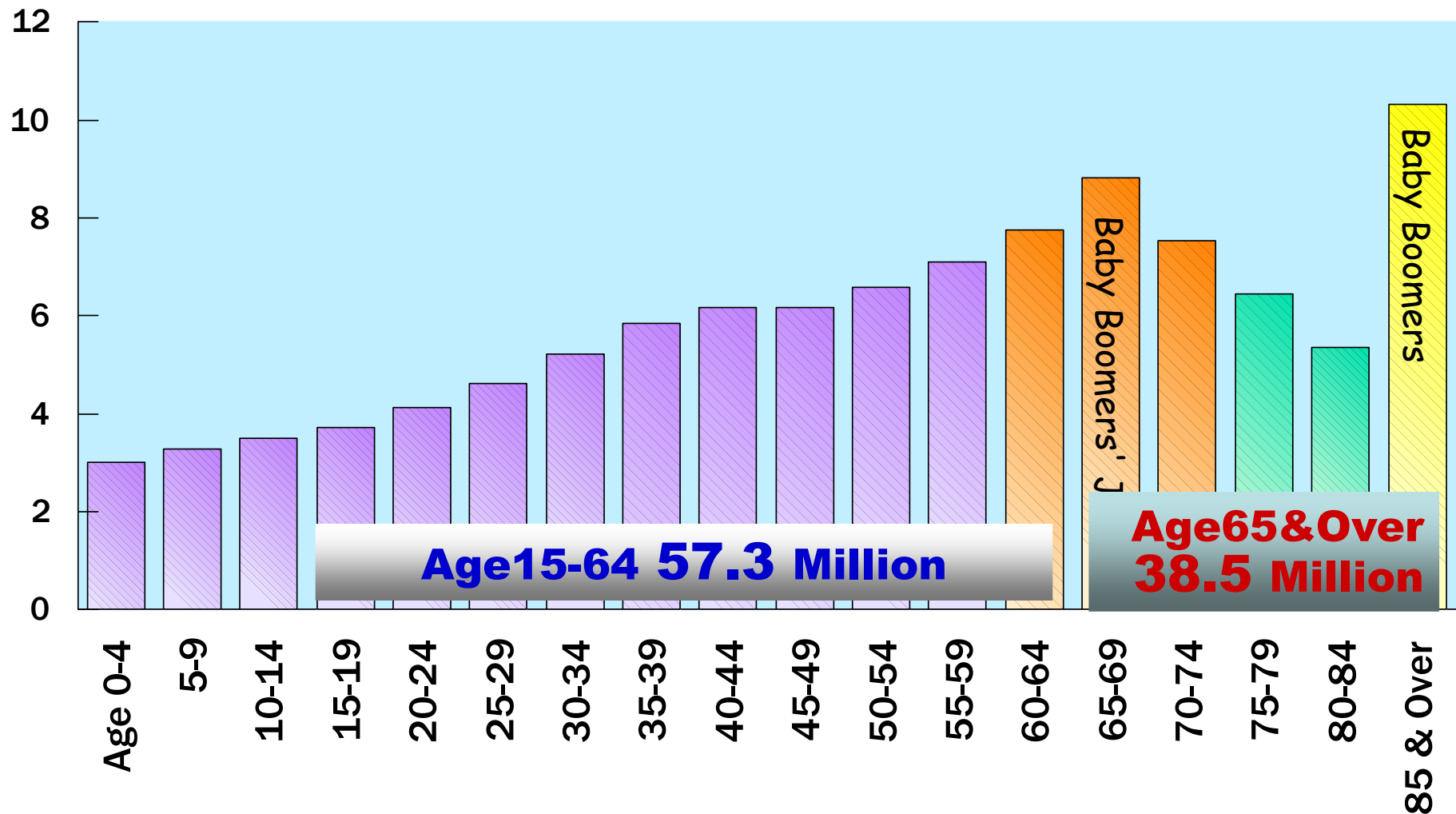


Silver Tsunami, or Aging Baby Boomers

Structural Change of Japan's Population: as of 2040

Population in Million, including Foreign Residents

Source: Prospects of NRI-SWP

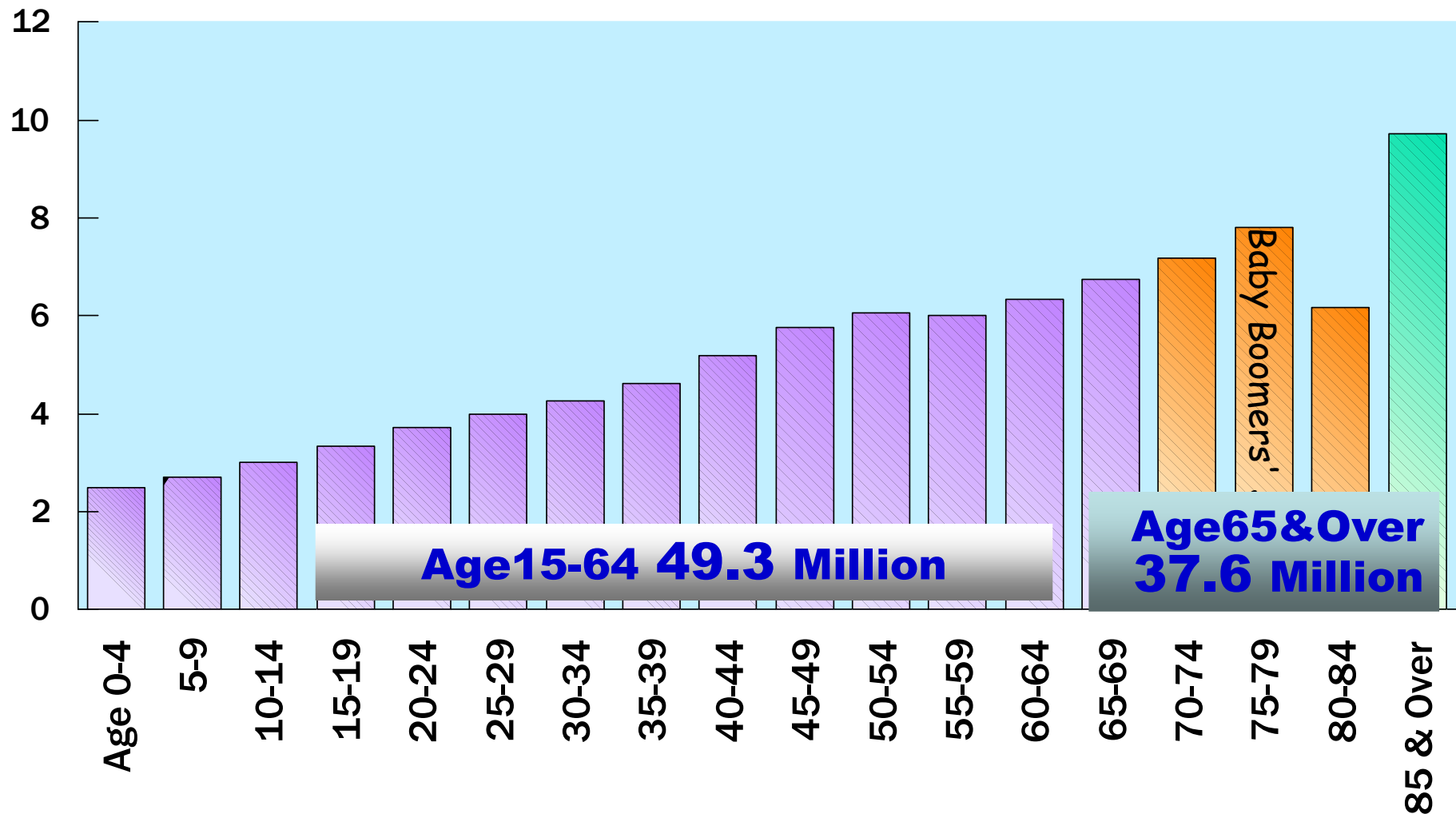


Silver Tsunami, or Aging Baby Boomers

Structural Change of Japan's Population: as of 2050

Population in Million, including Foreign Residents

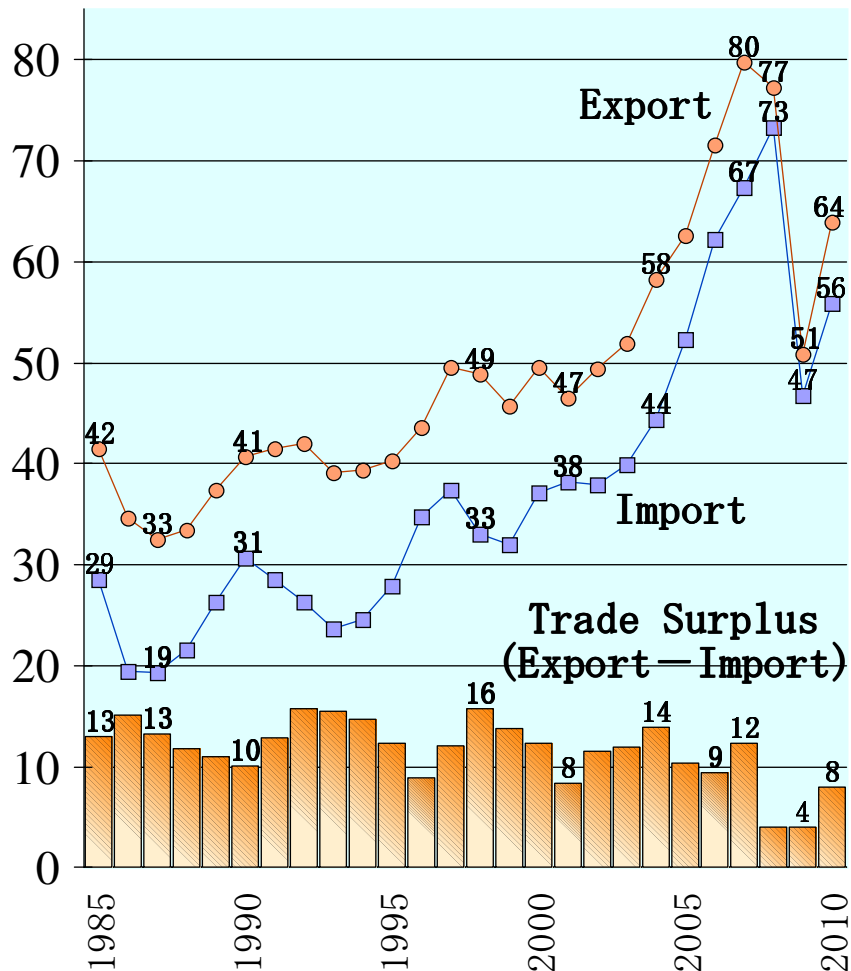
Source: Prospects of NRI-SWP



International Balance of Japan

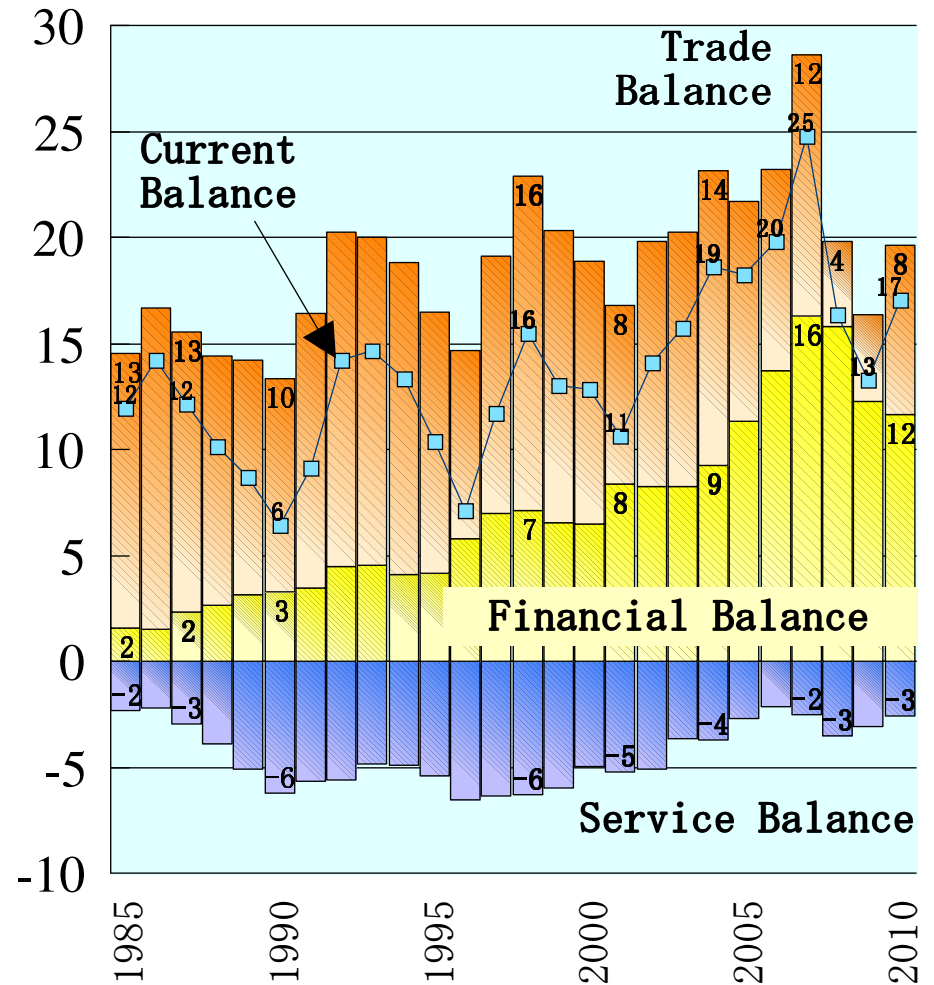
Increasing Productivity and Weakening Domestic Demand End in Surplus

JPY trillion **Japan's Export and Import**



Source: Ministry of Finance Calendar Year

JPY trillion **Japan's International Balance**

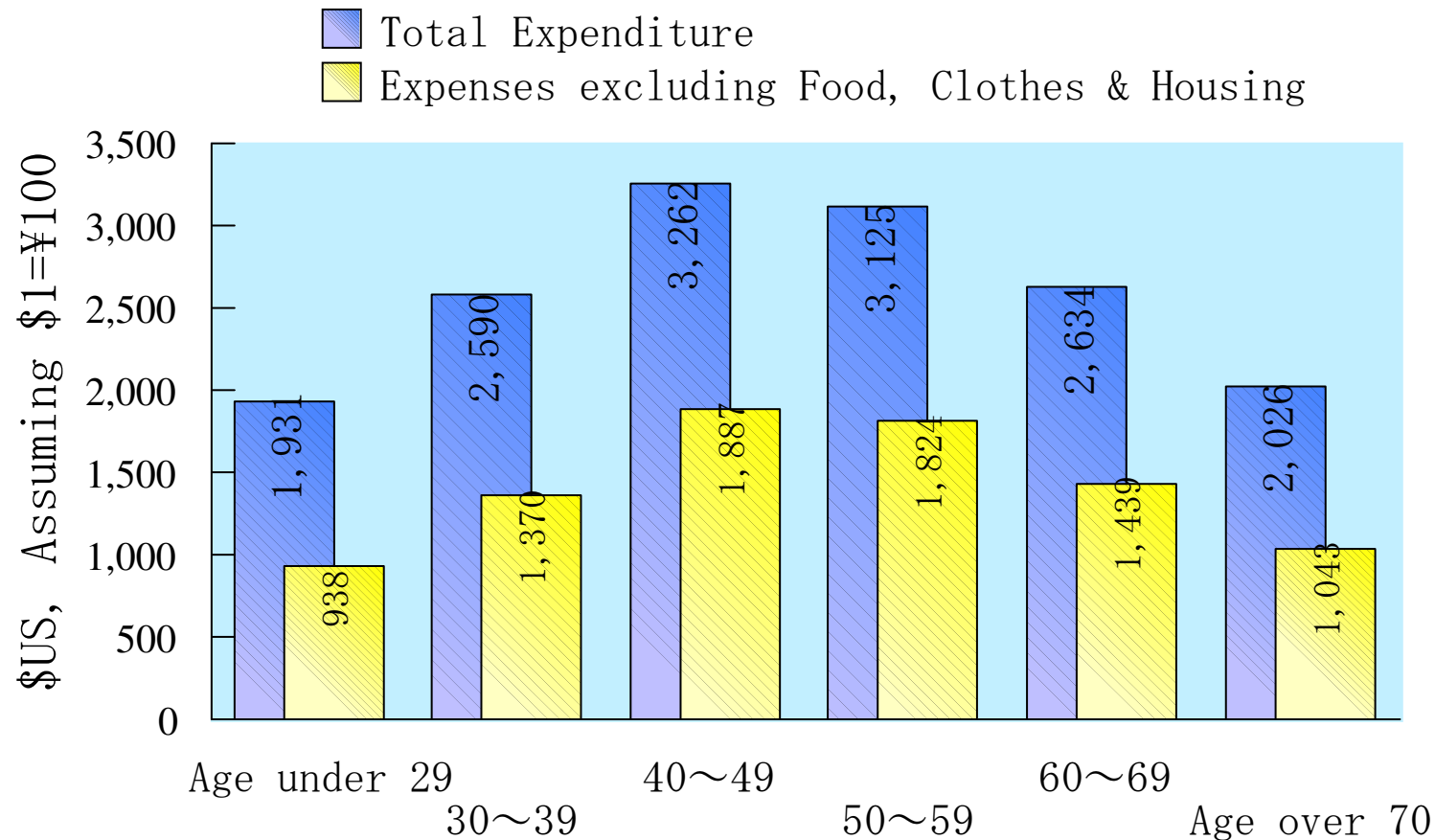


Source: Ministry of Finance Calendar Year

Consumption and Aging: Basic Facts

Senior Citizens in Japan Do Not Consume as They Did When Young

Monthly Expenditure of a Household in Japan (2000)

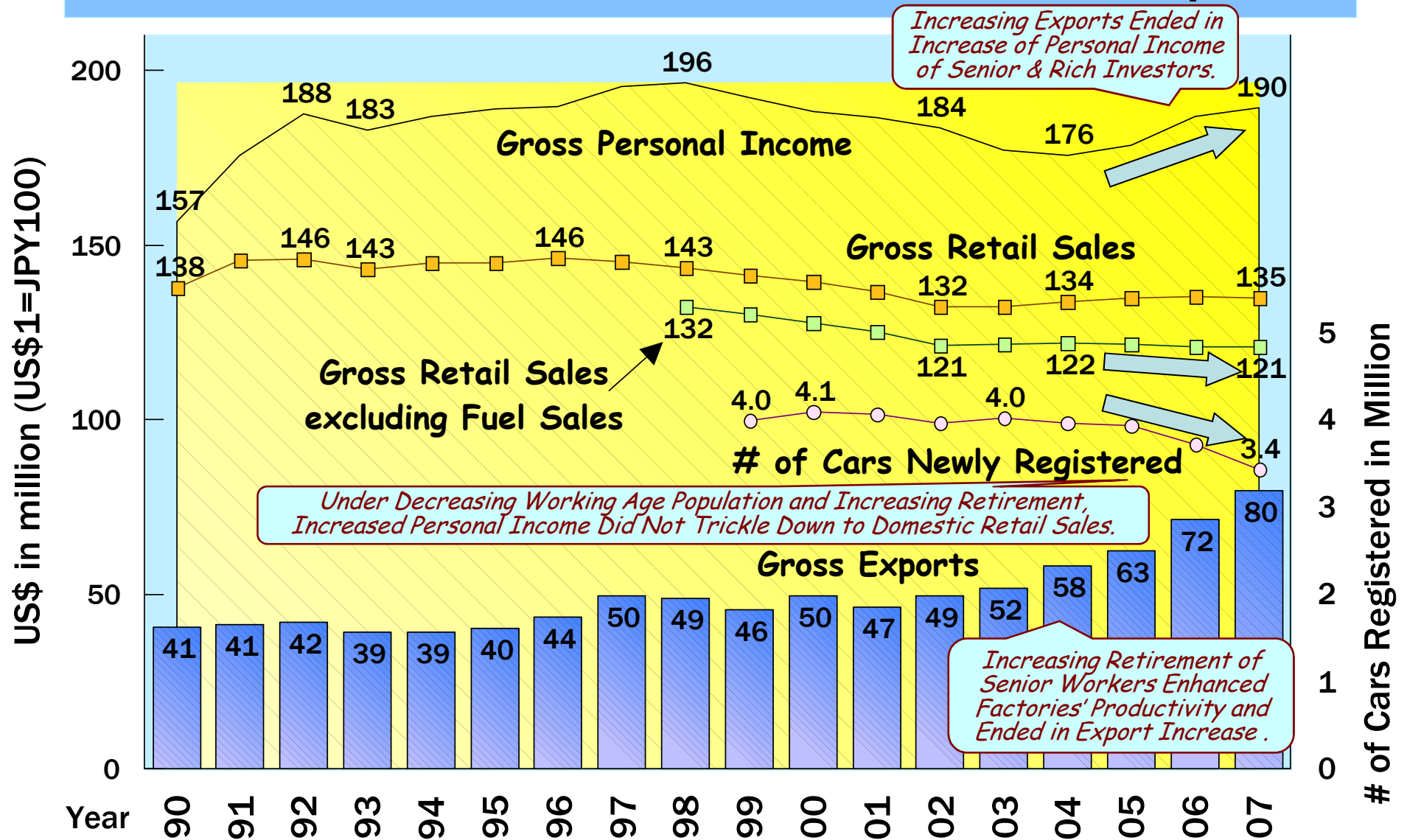


Principle Person's Age of the Household

Source: Department of Statistics, Ministry of Internal Affairs and Communications

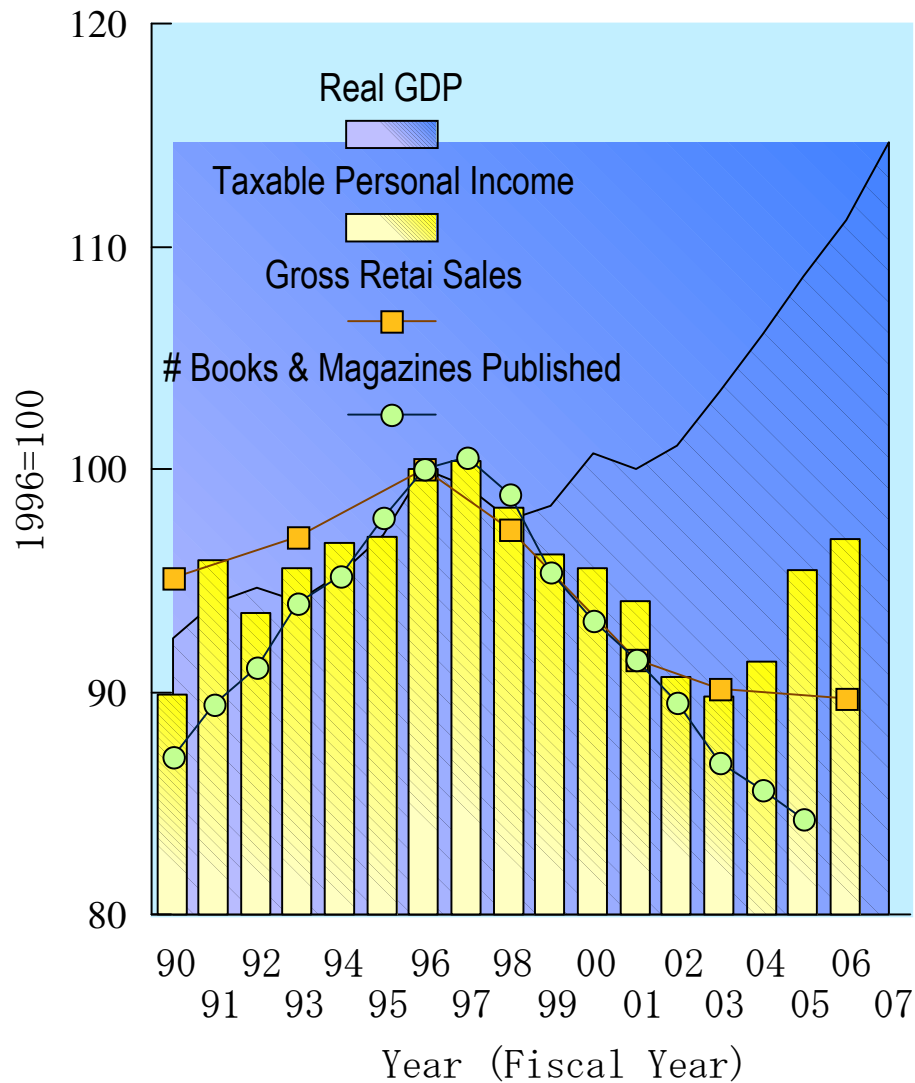
Disparity between Income and Consumption

Gross Personal Income and Gross Retail Sales in Japan

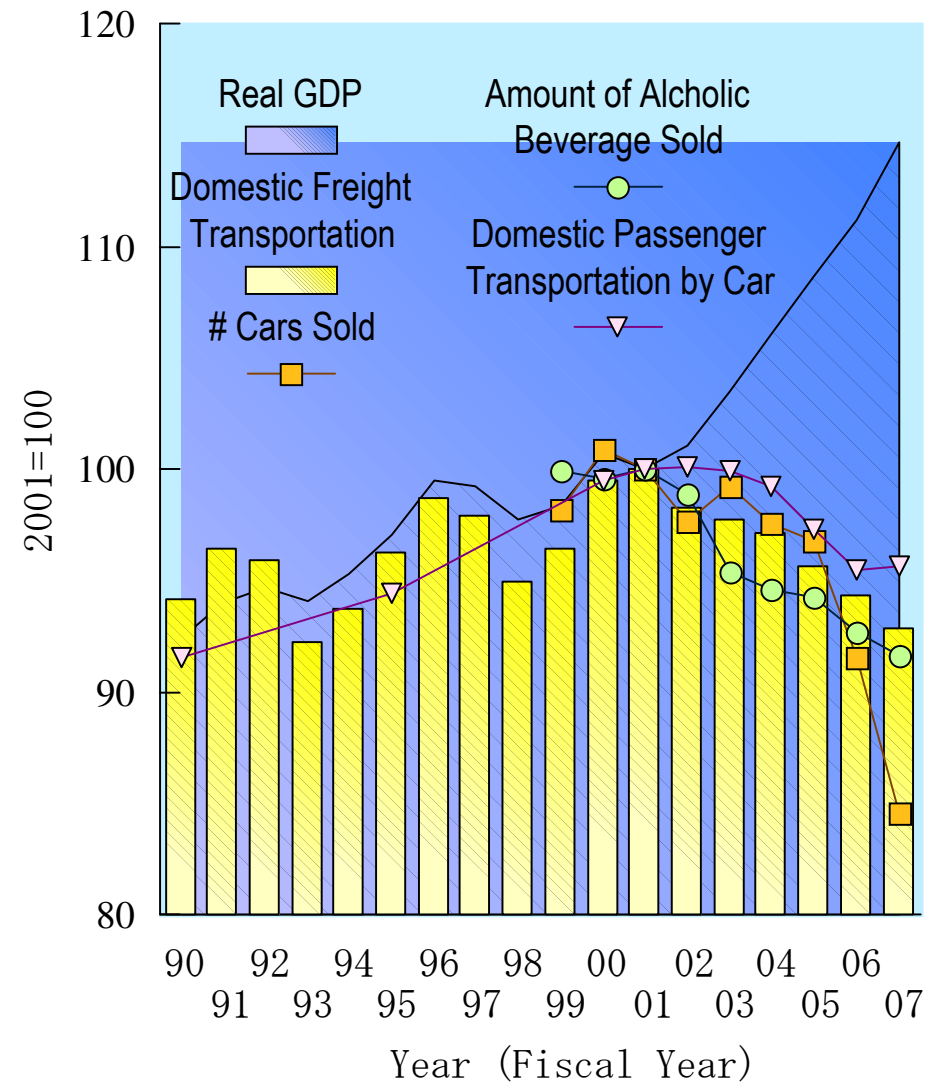


Saturating Domestic Market in Japan

Disparity between GDP & Domestic Economy -1

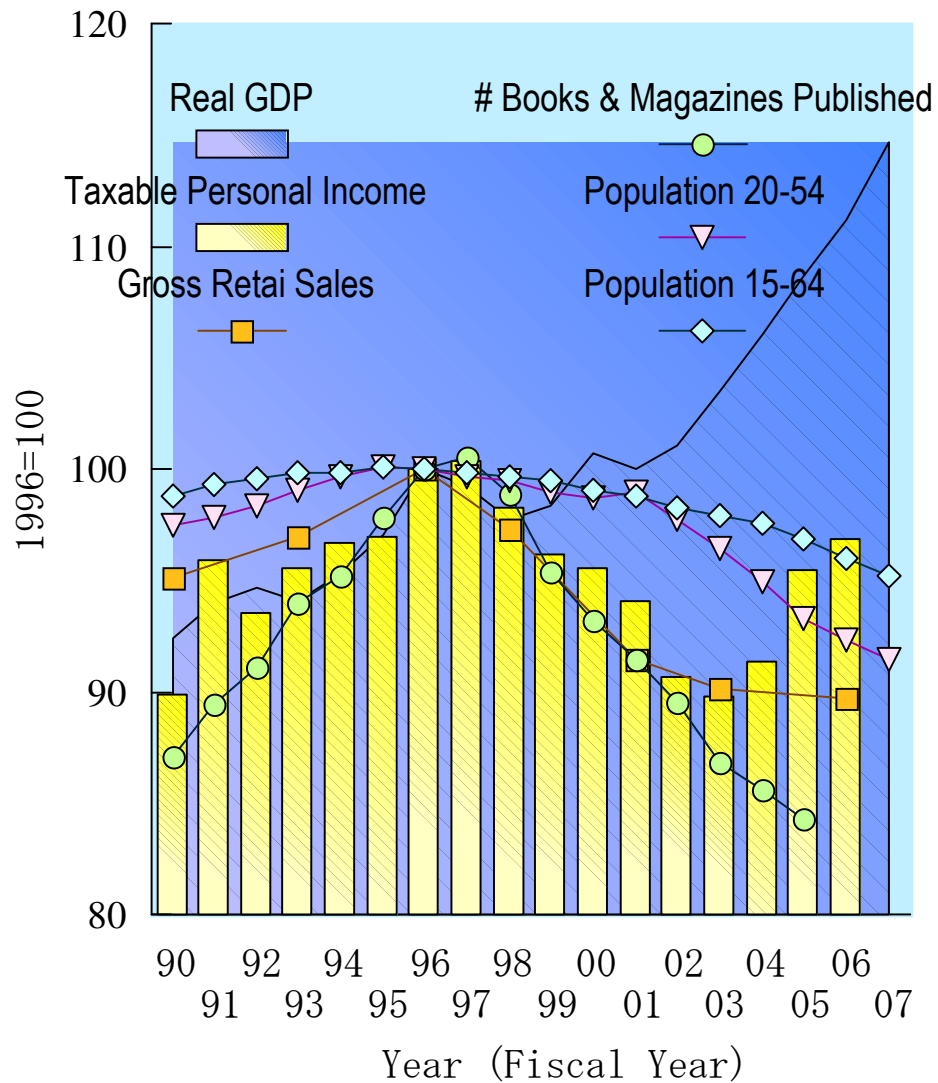


Disparity between GDP & Domestic Economy -2

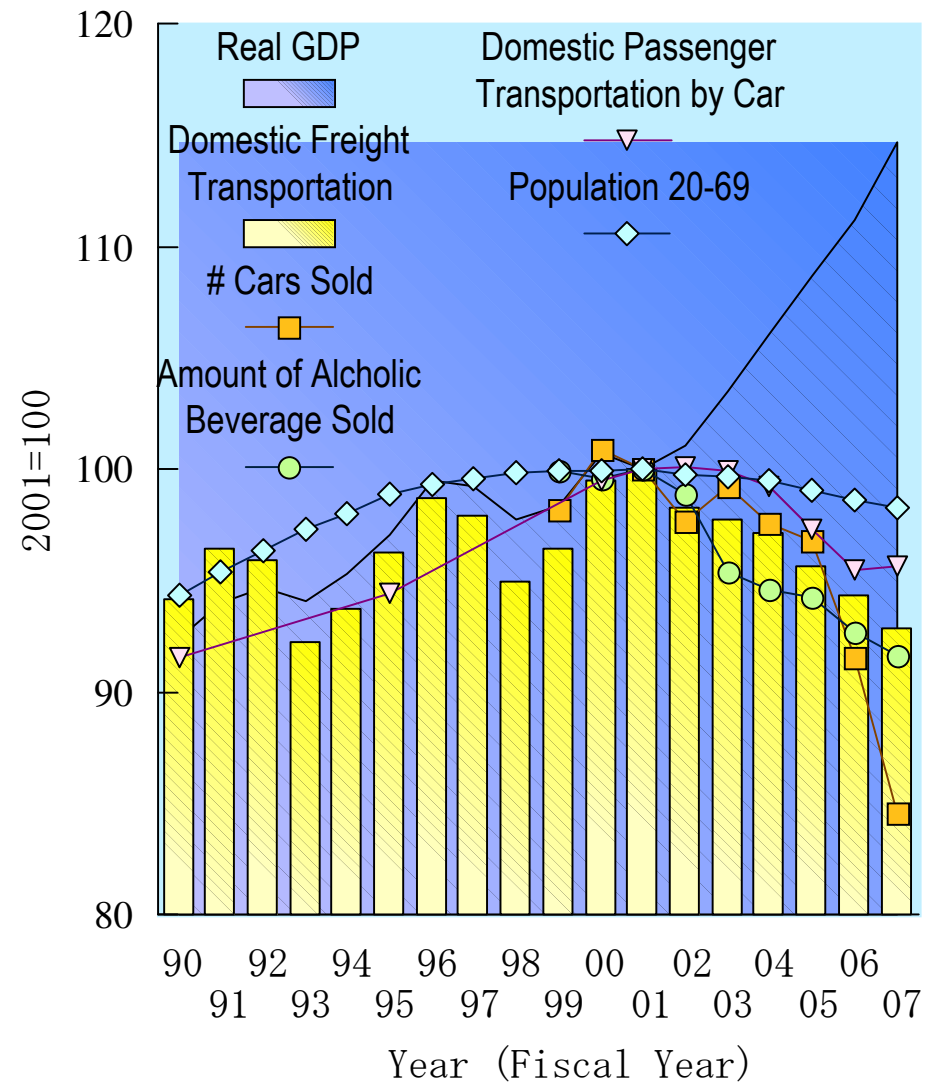


Saturating Domestic Market in Japan

Disparity between GDP & Domestic Economy -1



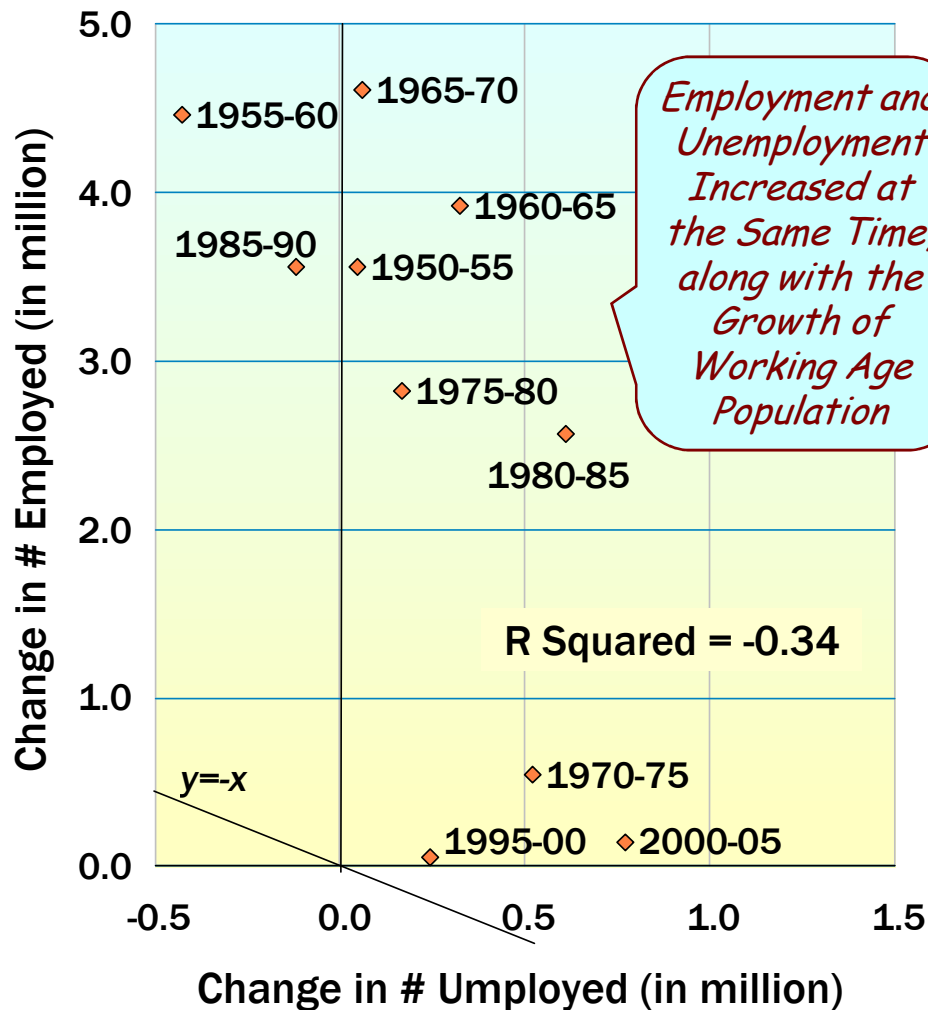
Disparity between GDP & Domestic Economy -2



Employment Correlating to Working Age Population, Not to Unemployment

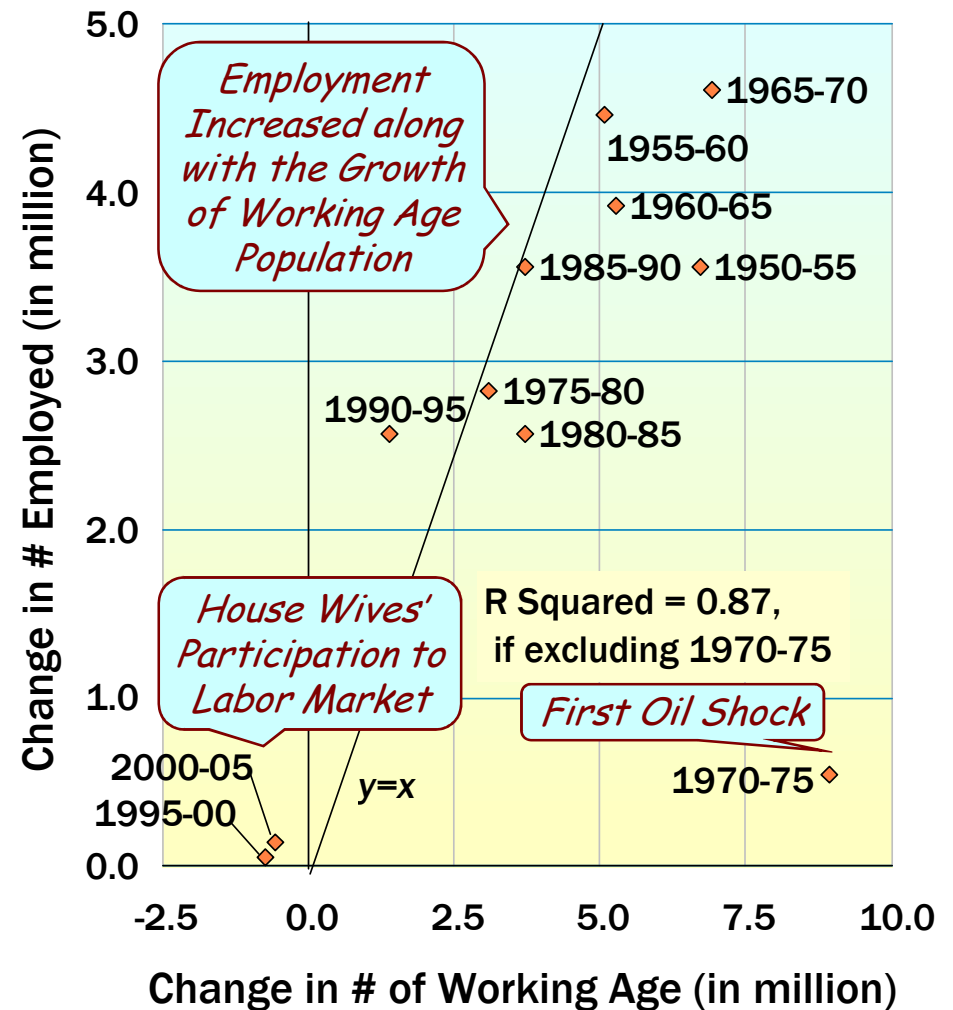
Unemployed & # Employed

Source: National Census



Working Age Popltn & # Employed

Source: National Census

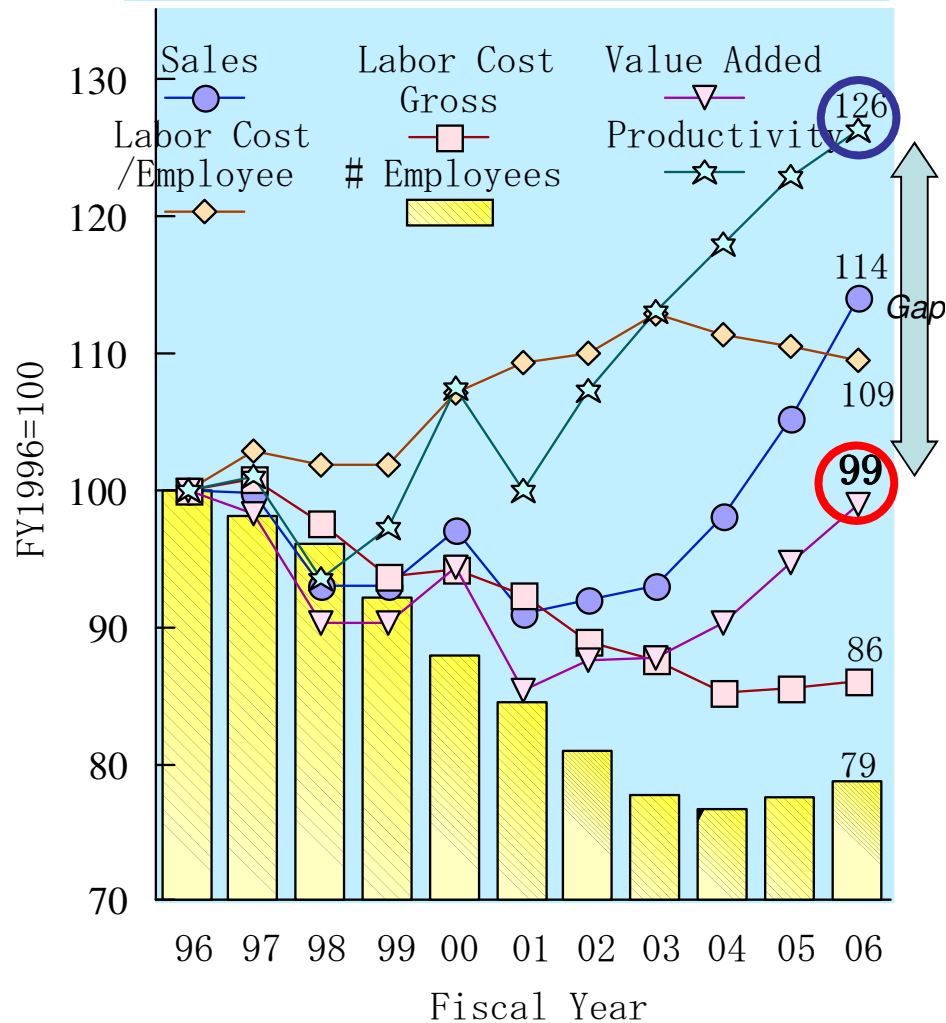


Labor Productivity Increase ≠ GDP Increase

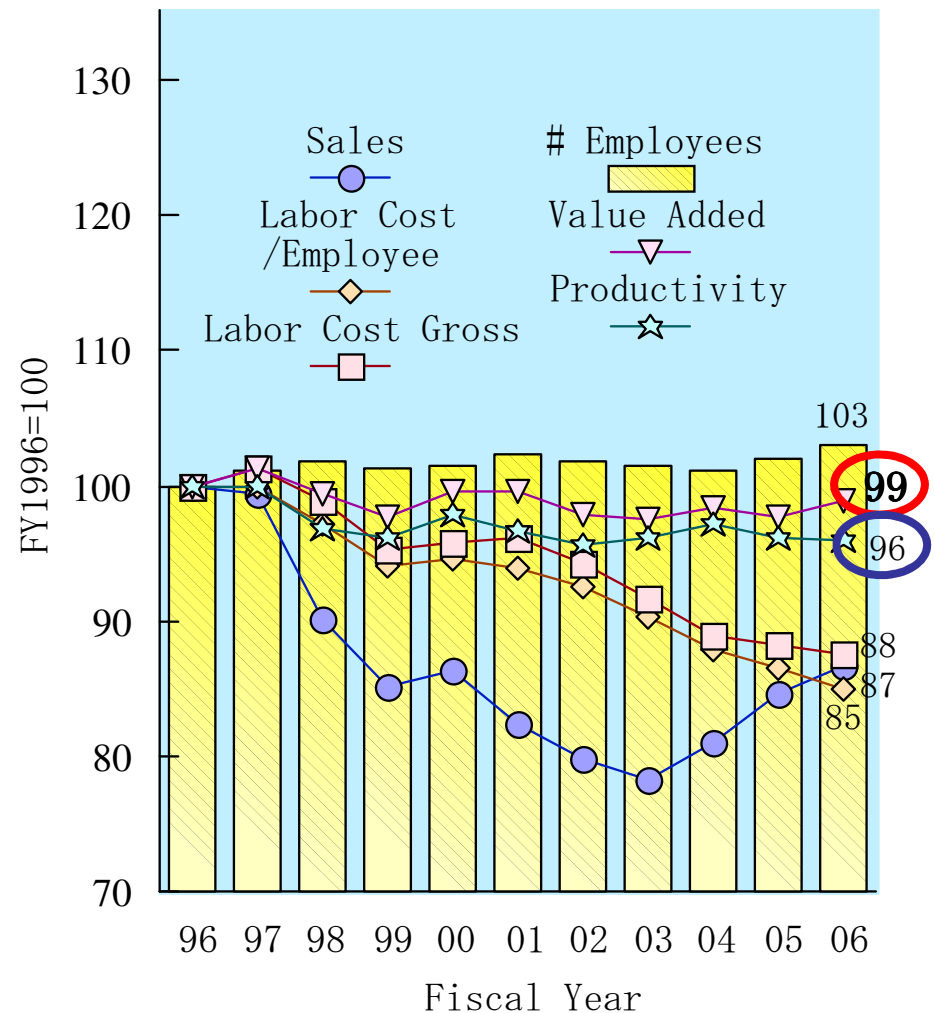
Labor Productivity = Value Added / # Employee

Value Added = Profit + Labor Cost + Capital Investment

Productivity and Value Added
Listed Japanese Manufacturing Companies



Productivity and Value Added
Ltd Japanese Non-Manufacturing Companies



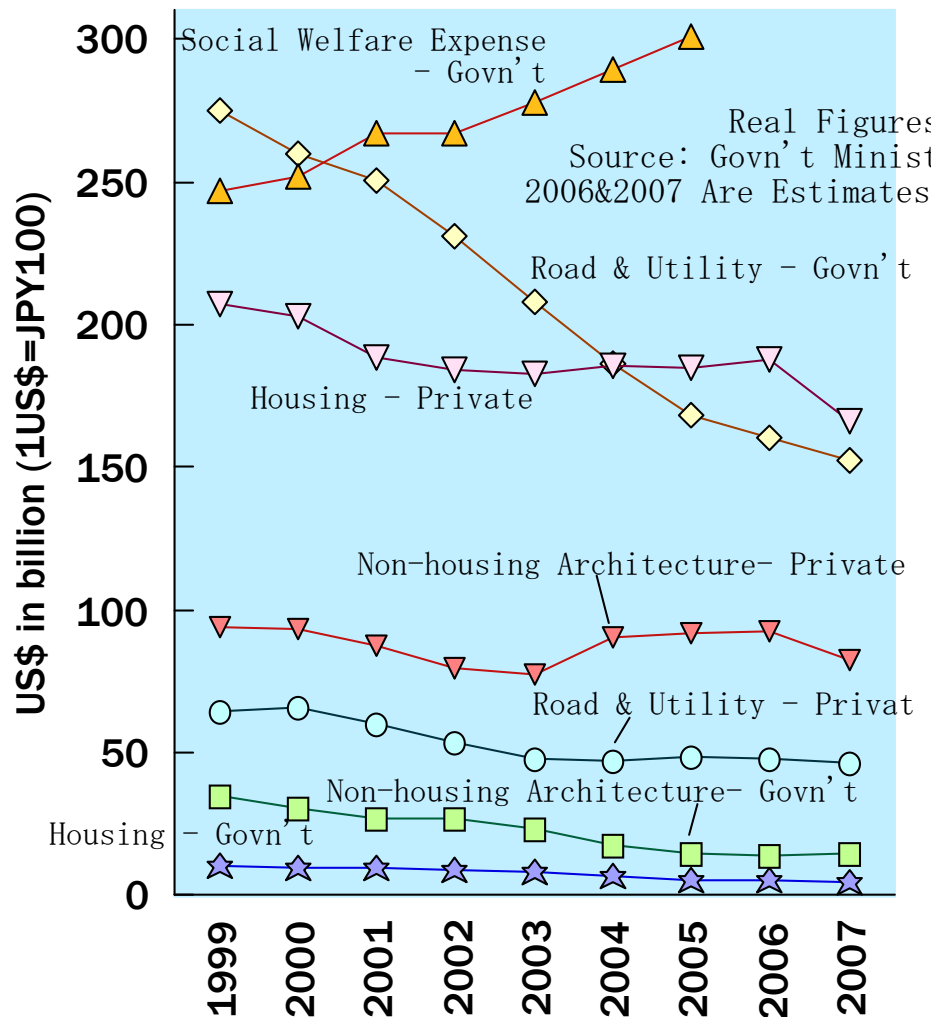
Dropping Construction Investment

21

Private: Structural Adjustment Period to Resolve Overcapacity

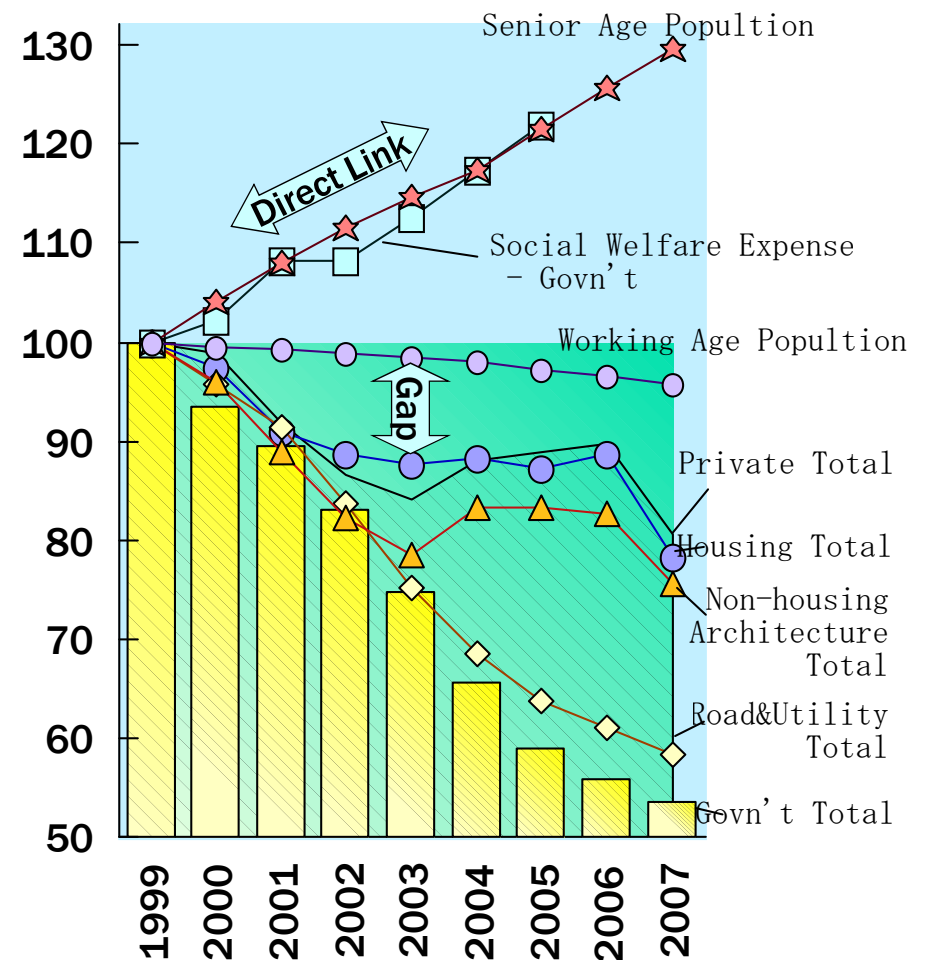
Government: Shifting Focus to Social Welfare for Elders

Construction Investment in Japan



Construction Investment in Japan

Amount (1999=100)



Declining Working Age Population Decreases Demand, not Supply

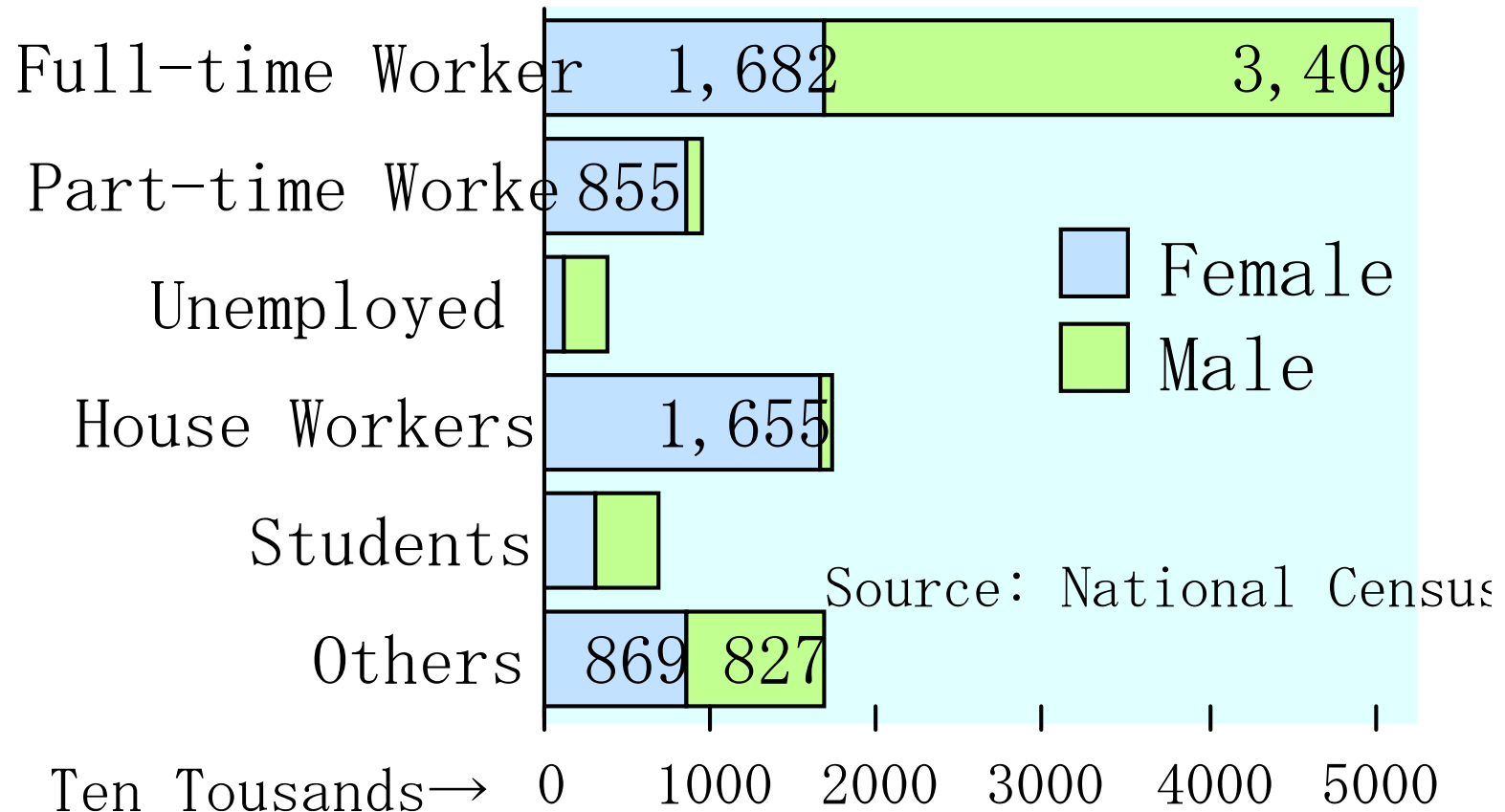
Not a General Theory, but a “Inconvenient Reality” in Japan

- ☆ Modern Machineries with IT substitute human labor in factories, increase labor productivity and keep 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 own 83% of \$14 trillion personal financial assets do not consume as much materials as youths do, but just enjoy saving.

Unemployed Female

Senior Citizens in Japan Do Not Consume as They Did When Young

of Labors in Japan
2005, Including Foreigners

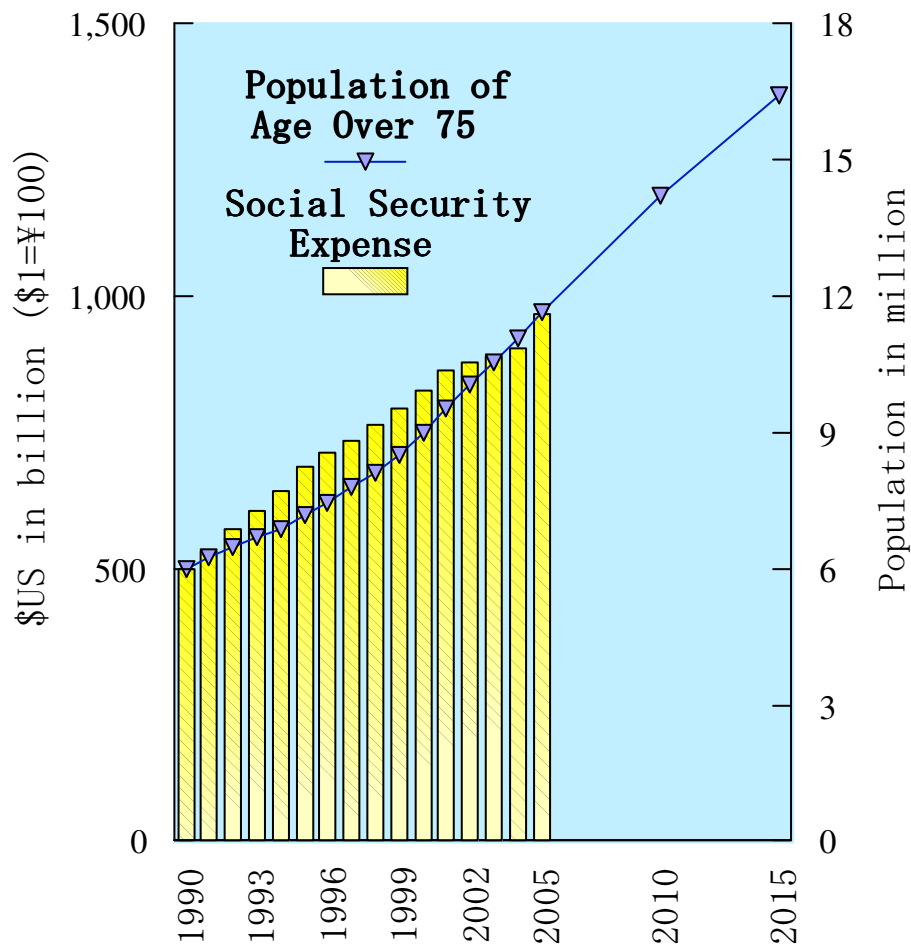


Social Security Expense and Aging

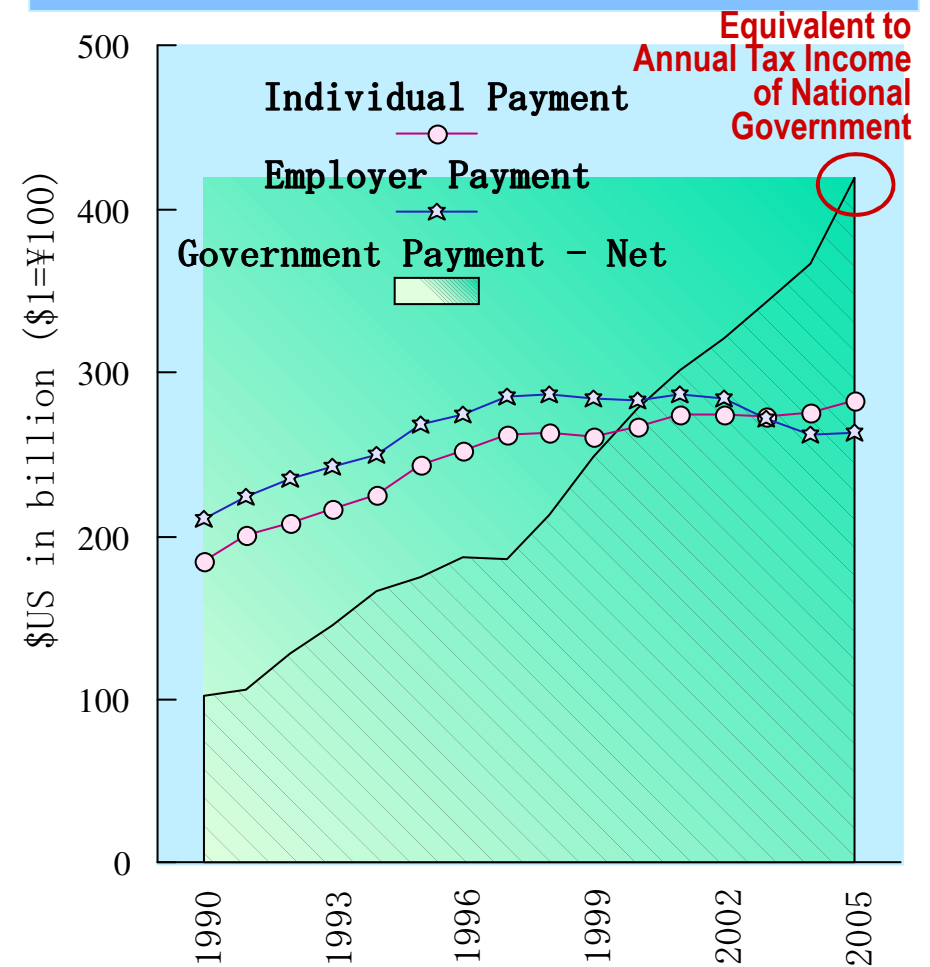
Total Expense: Exact Correlation to Late Senior Age Population

Government Spending: Rapid Rise due to Working Age Pop. Decline

Social Security Expense - Total
JAPAN 1990-2005



Social Security Expense - Bearers
JAPAN 1990-2005

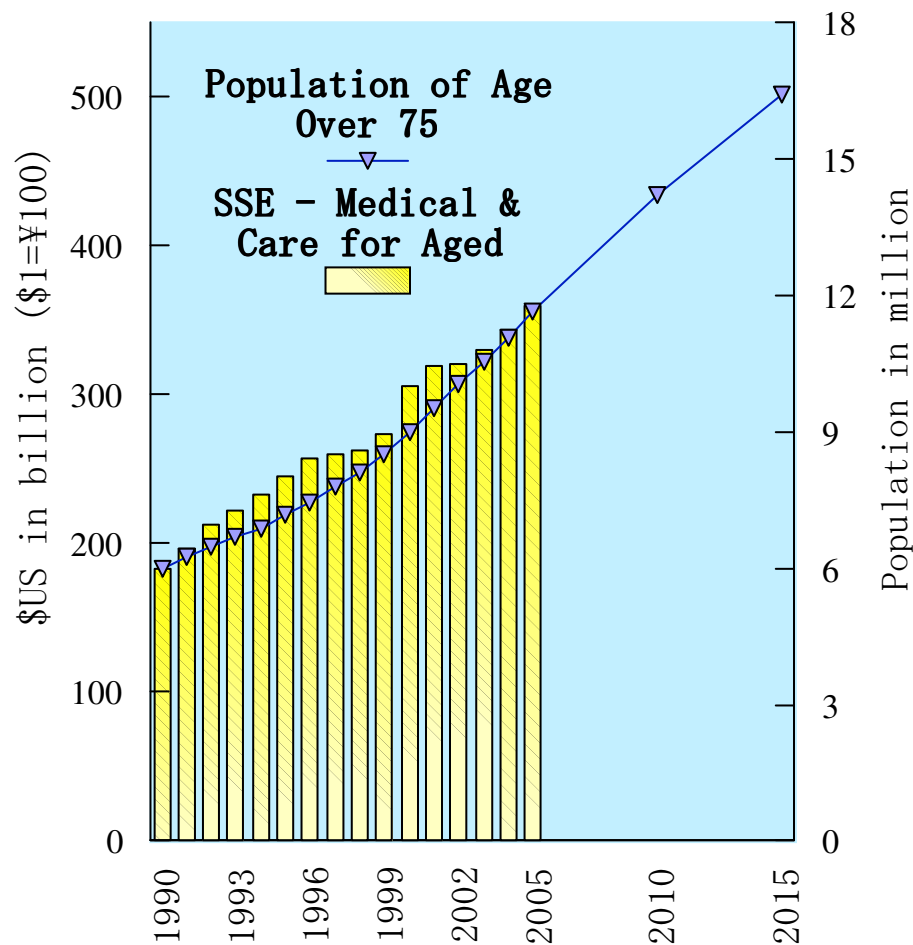


Medical and Care for Aged Expense

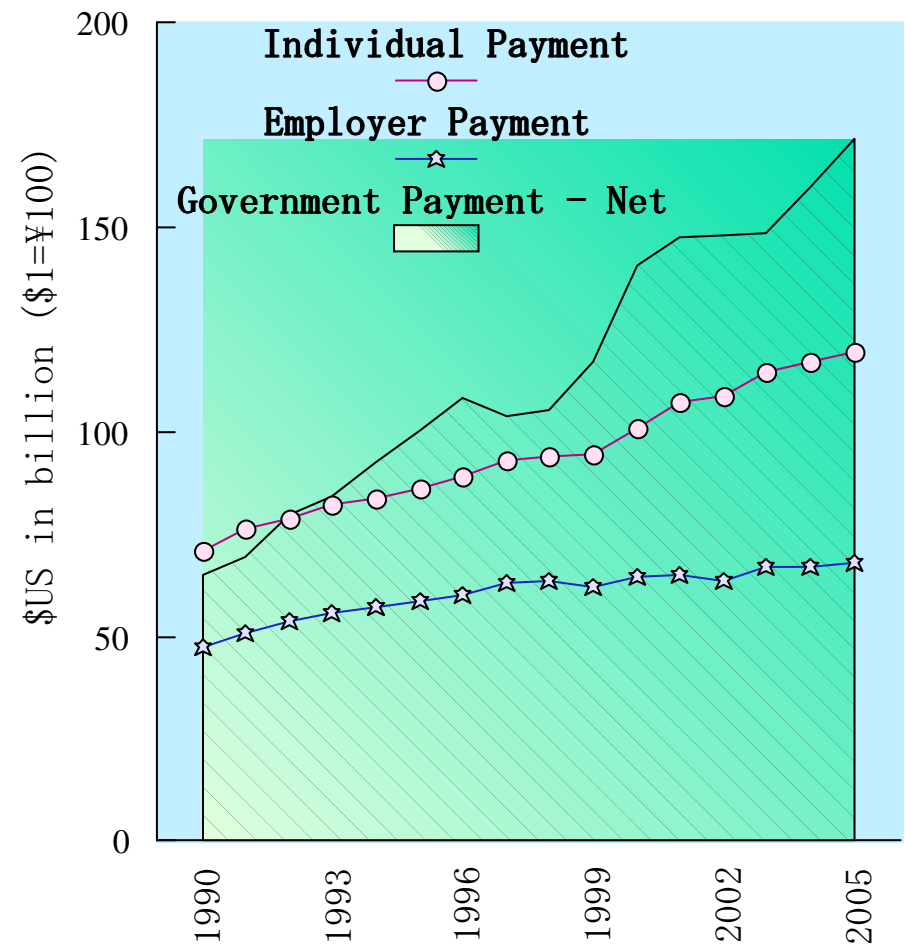
Total Expense: Exact Correlation to Late Senior Age Population

Government Spending: Rise due to Working Age Pop. Decline

SSE - Medical & Care for Aged JAPAN 1990-2005



SSE Beares - Medical & Care for Aged JAPAN 1990-2005

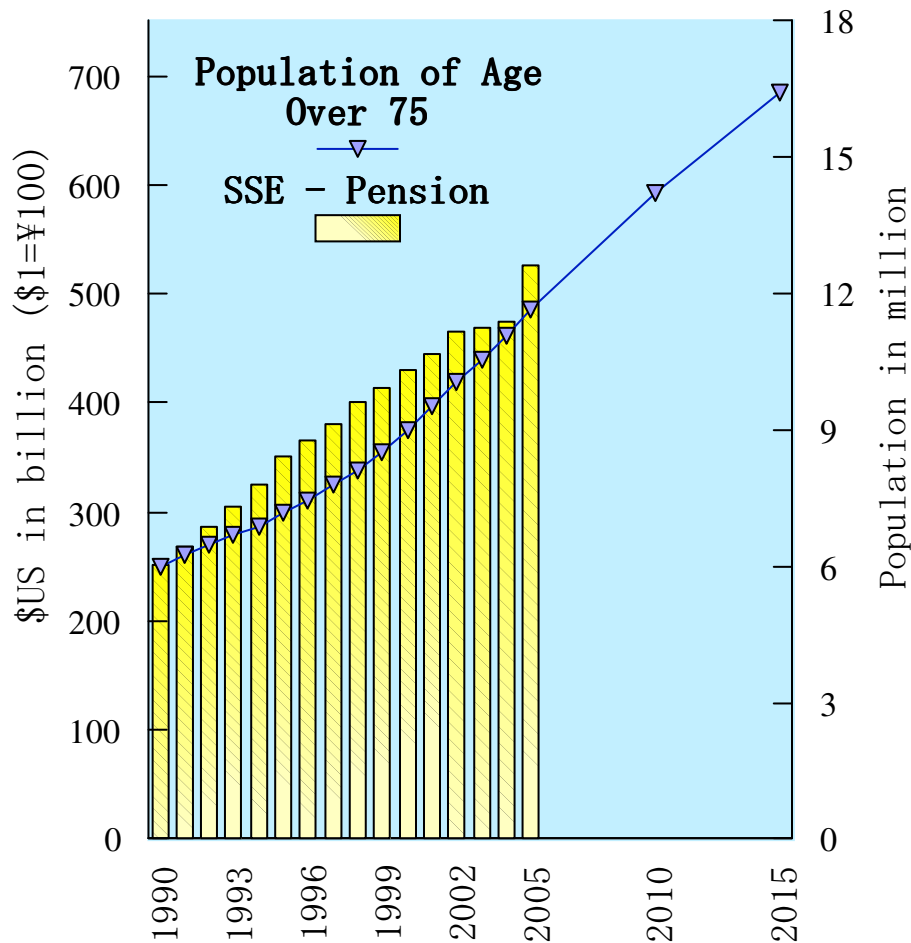


Medical and Care for Aged Expense

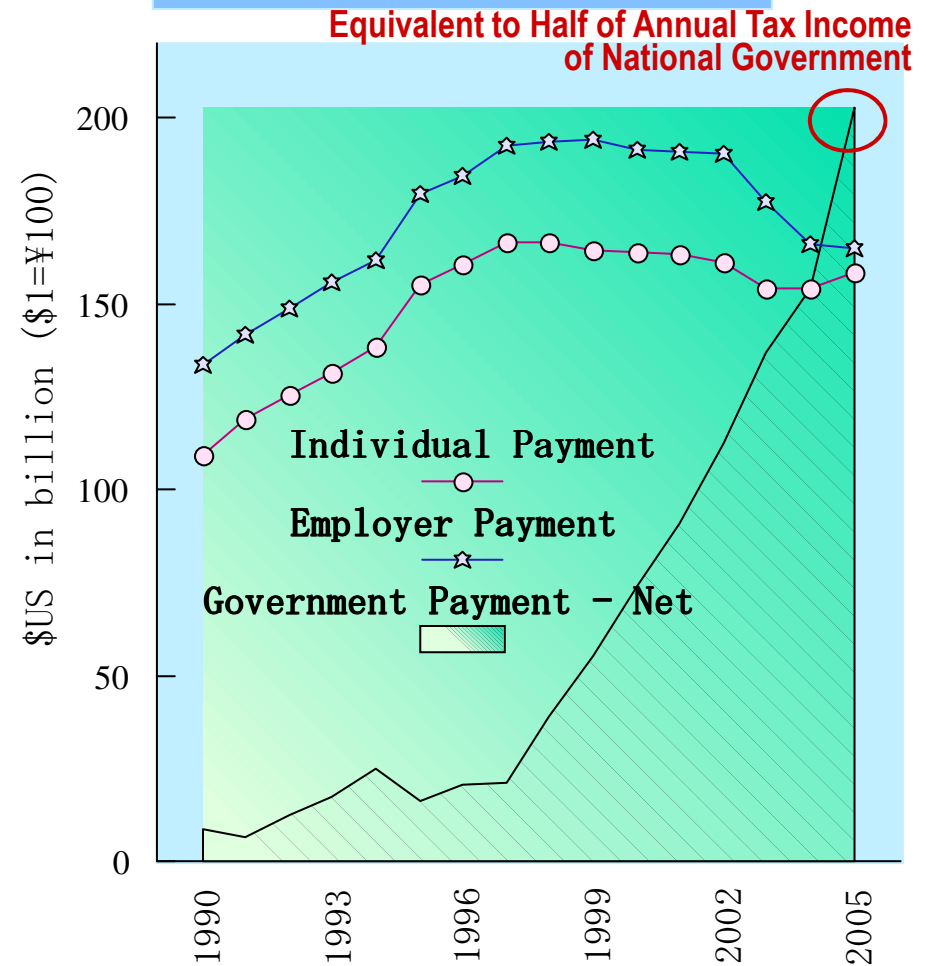
Total Expense: Increasing Faster than Late Senior Age Population

Government Spending: Rocket Rise due to Wrkng Age Pop. Decline

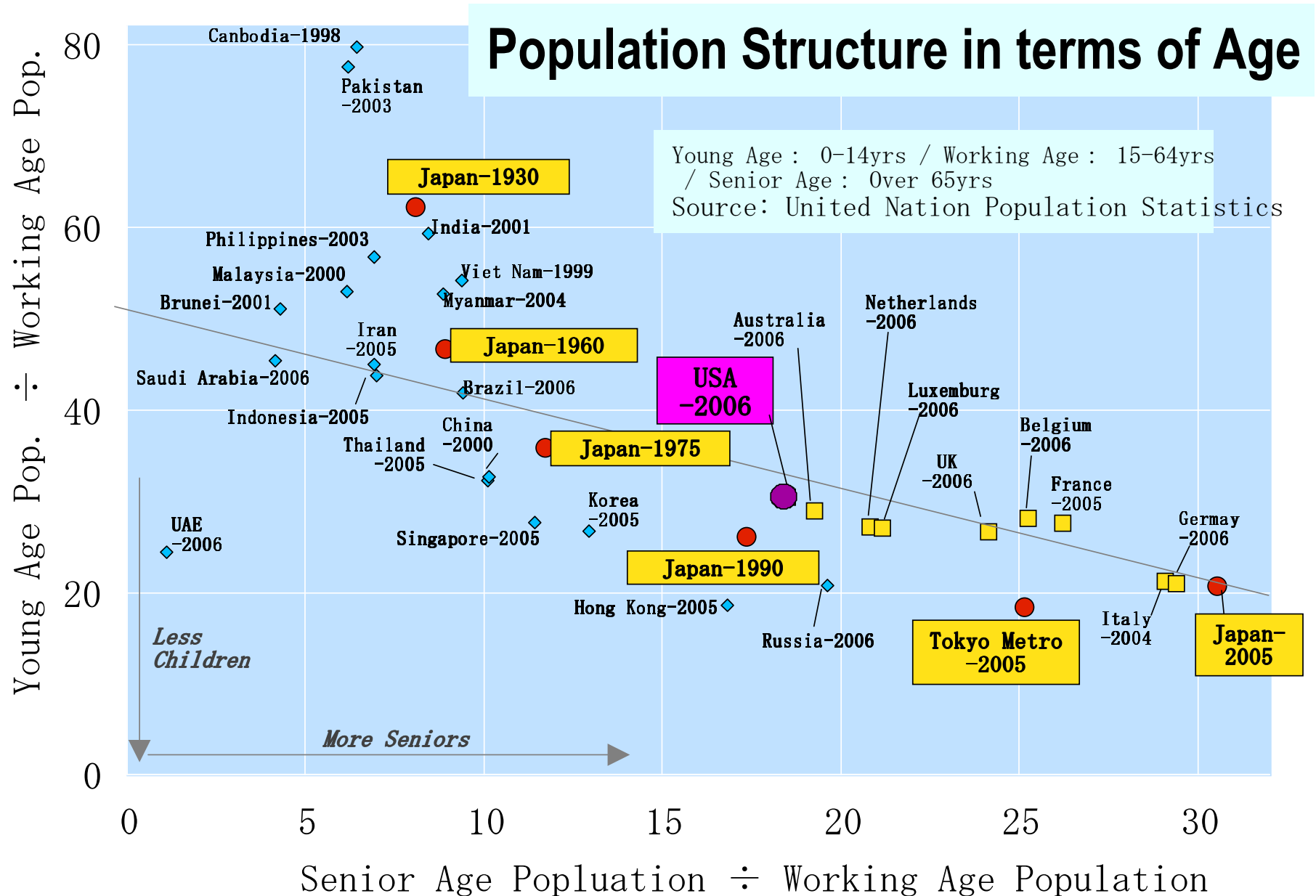
SSE - Pension
JAPAN 1990-2005



SSE Beares - Pension
JAPAN 1990-2005



Is Japan an Isolated Case?

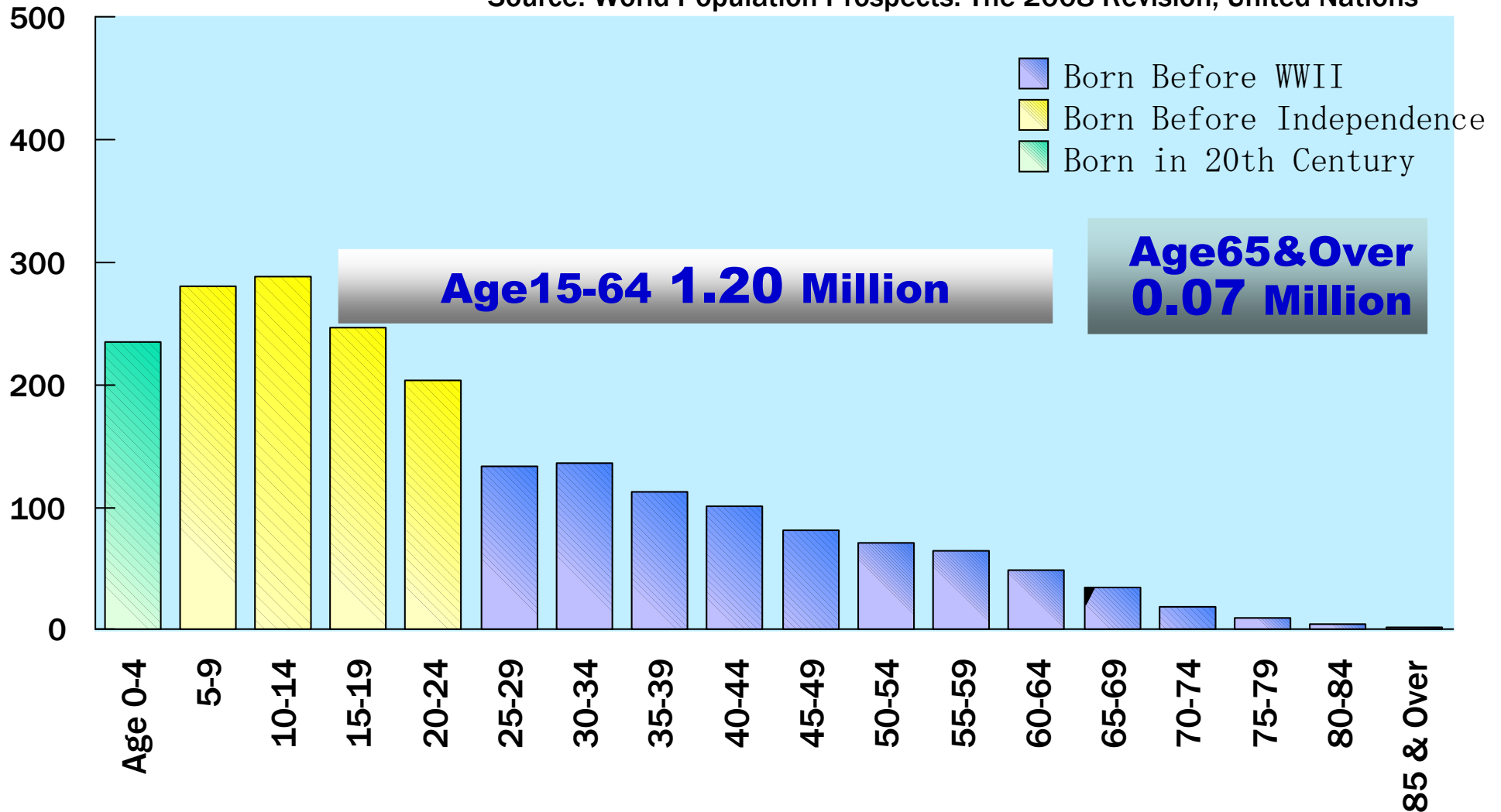


Silver Tsunami, or Aging Baby Boomers

Singapore Population Structure as of 1970

Population in Thousand, including Foreign Residents

Source: World Population Prospects: The 2008 Revision, United Nations

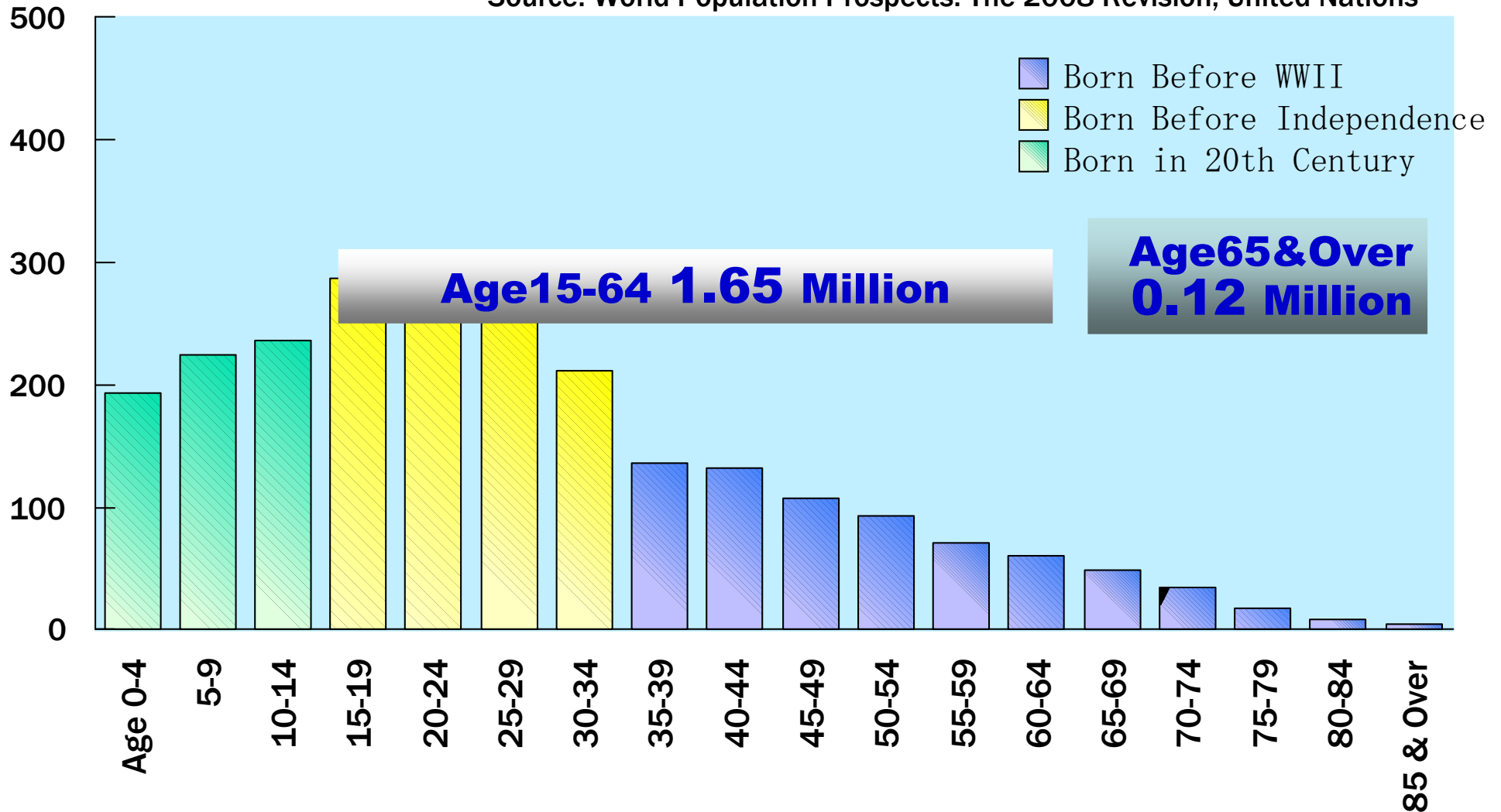


Silver Tsunami, or Aging Baby Boomers

Singapore Population Structure as of 1980

Population in Thousand, including Foreign Residents

Source: World Population Prospects: The 2008 Revision, United Nations

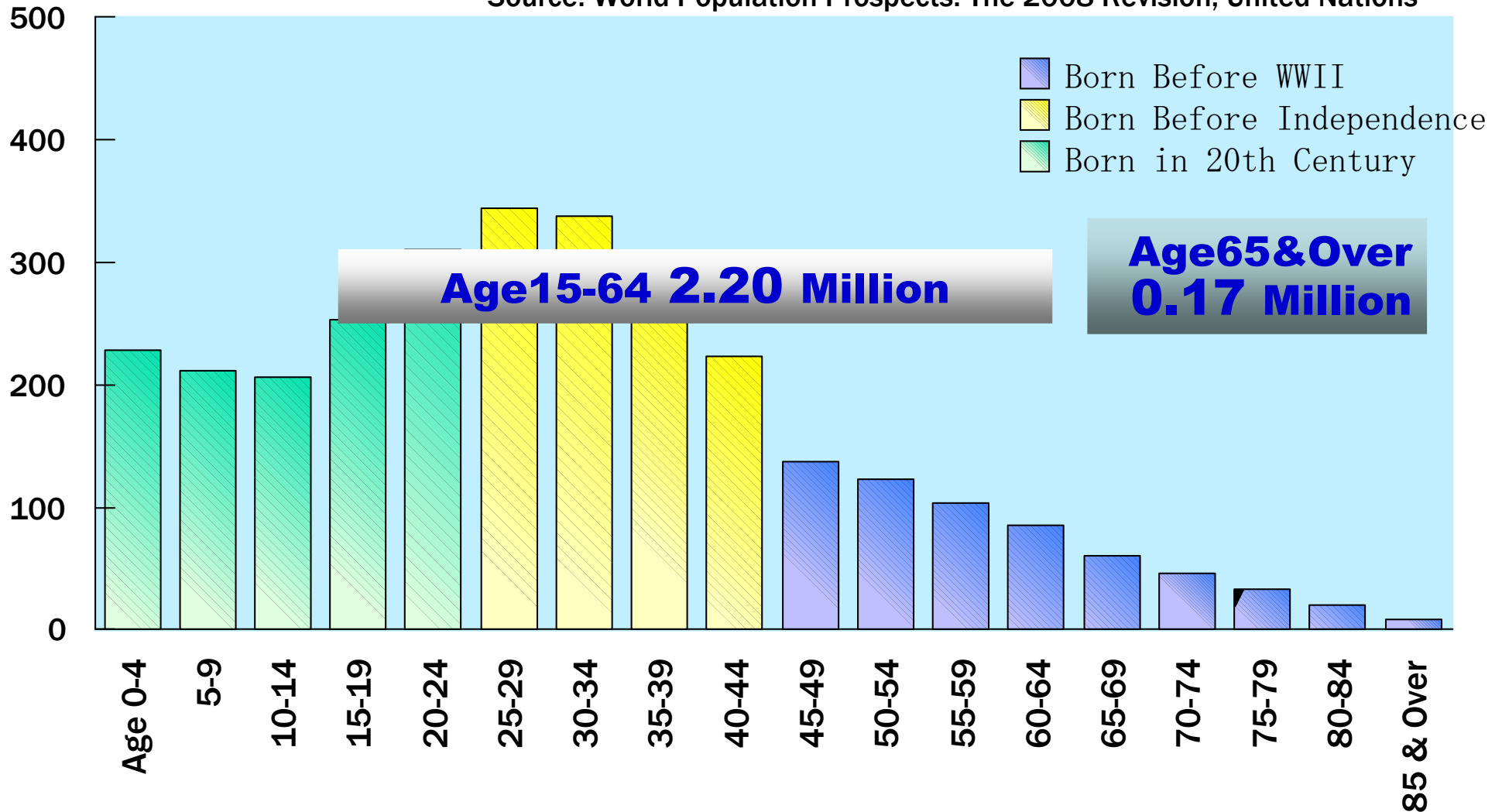


Silver Tsunami, or Aging Baby Boomers

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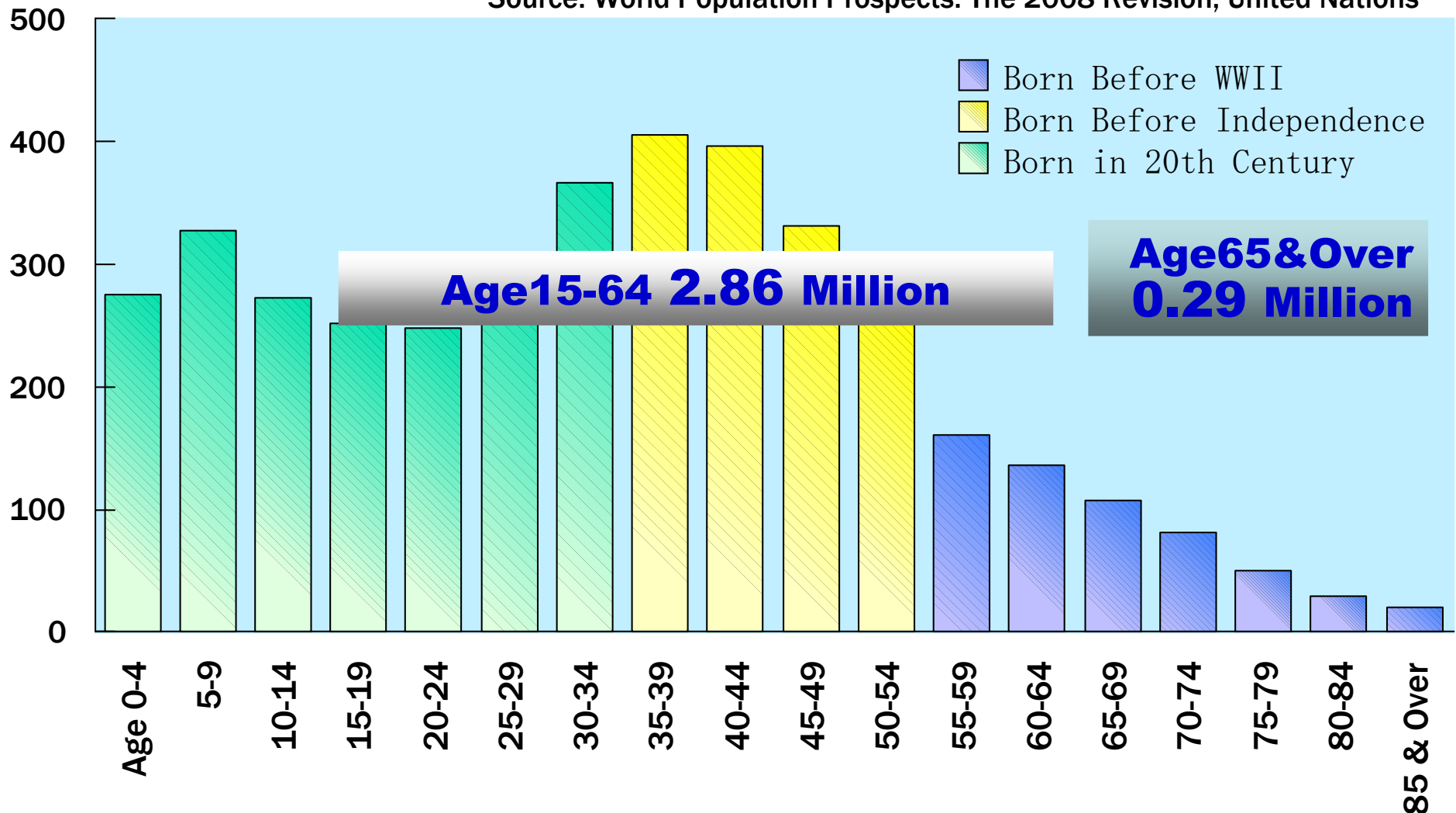


Silver Tsunami, or Aging Baby Boomers

Singapore Population Structure as of 2000

Population in Thousand, including Foreign Residents

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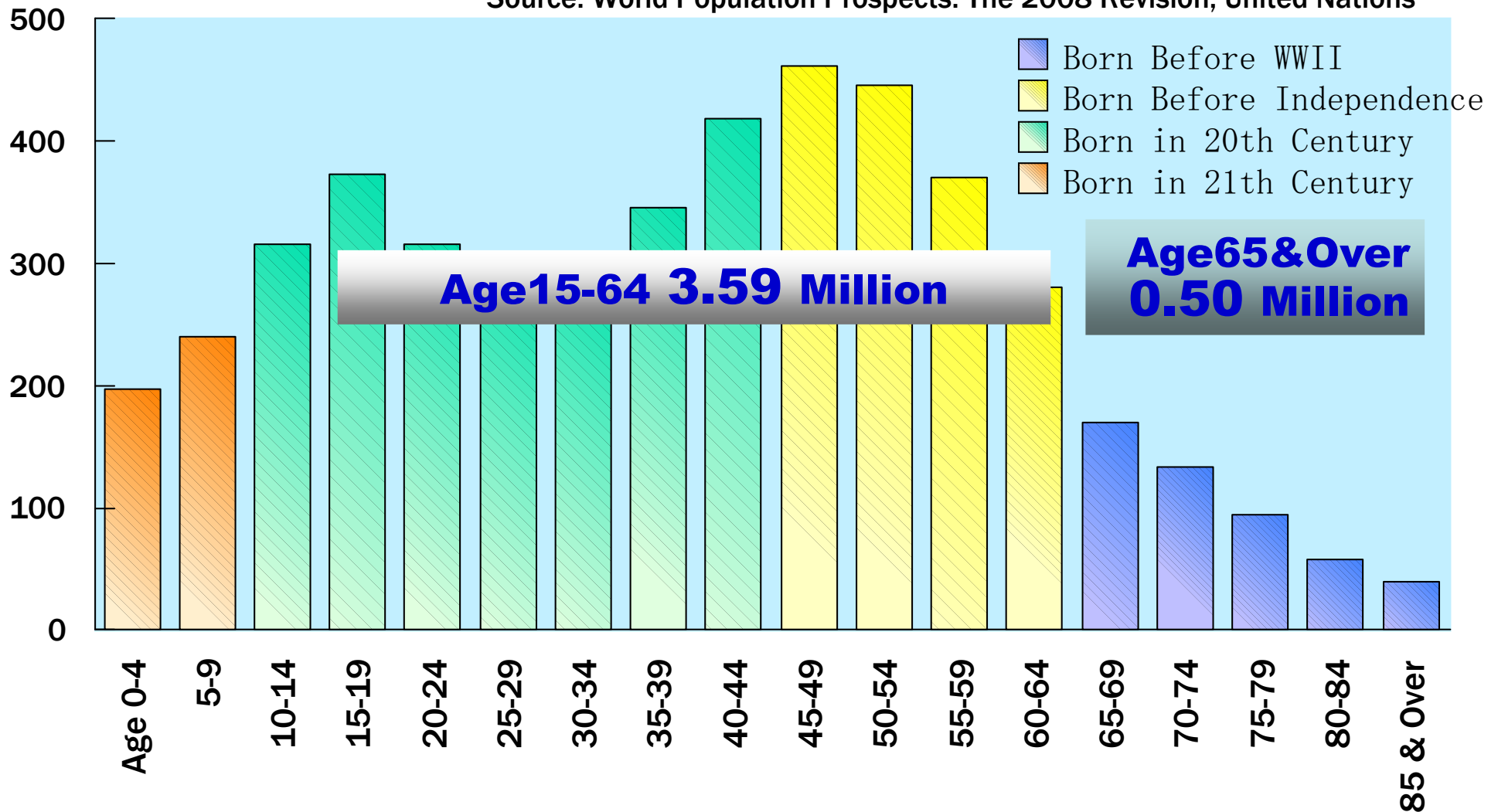


Silver Tsunami, or Aging Baby Boomers

Singapore Population Structure as of 2010

Population in Thousand, including Foreign Residents

Source: World Population Prospects: The 2008 Revision, United Nations

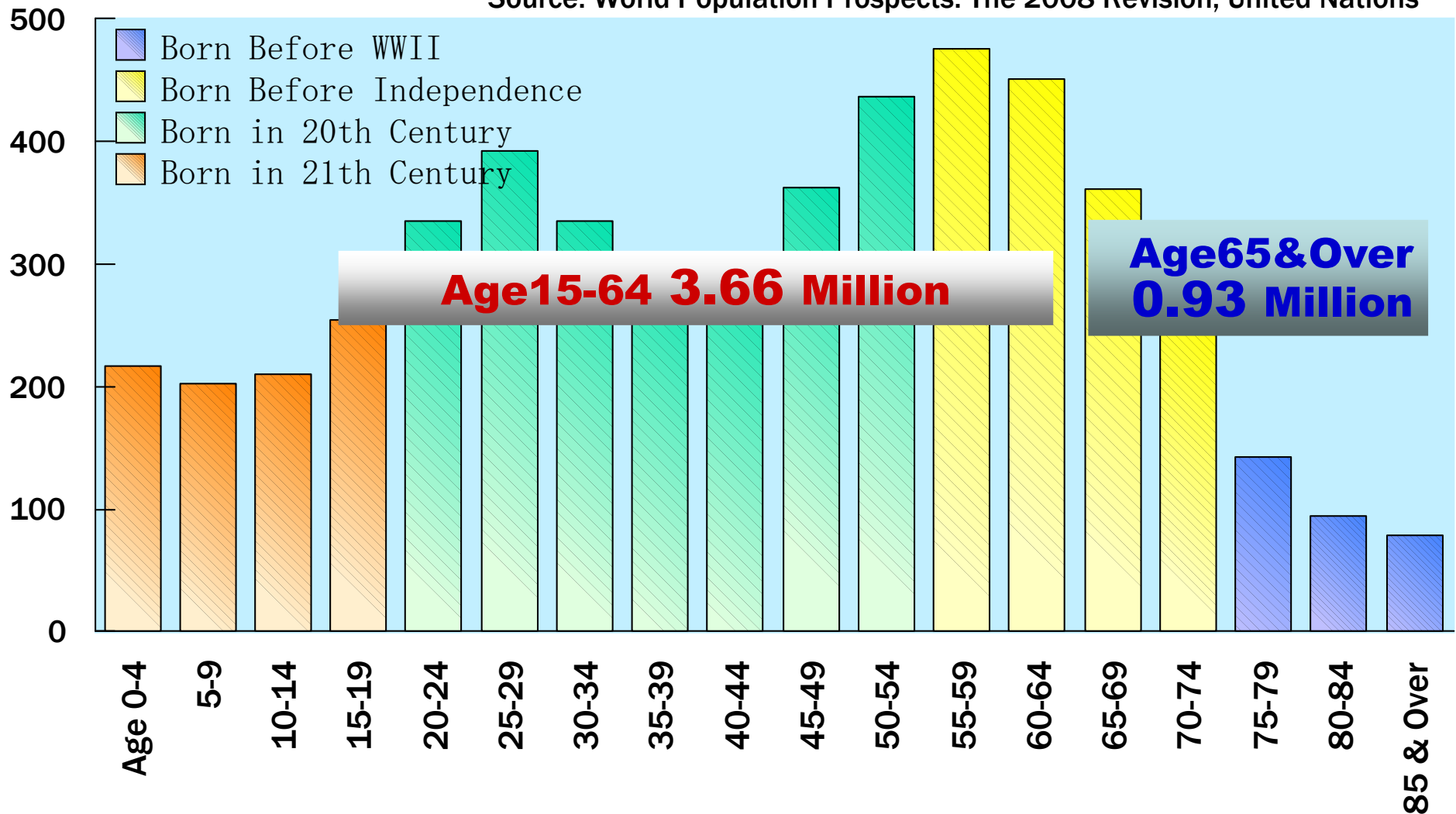


Silver Tsunami, or Aging Baby Boomers

Singapore Population Structure as of 2020

Population in Thousand, including Foreign Residents

Source: World Population Prospects: The 2008 Revision, United Nations

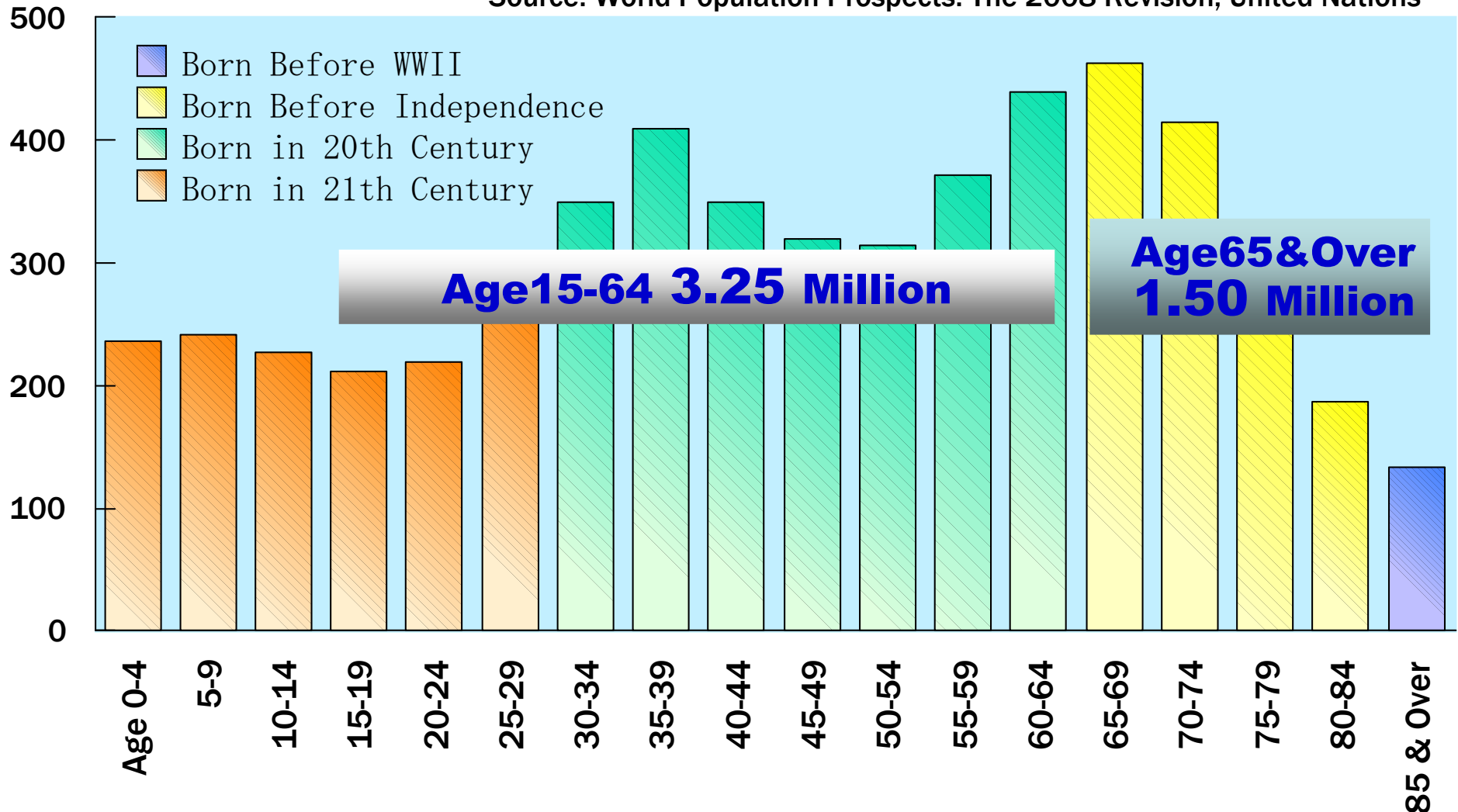


Silver Tsunami, or Aging Baby Boomers

Singapore Population Structure as of 2030

Population in Thousand, including Foreign Residents

Source: World Population Prospects: The 2008 Revision, United Nations

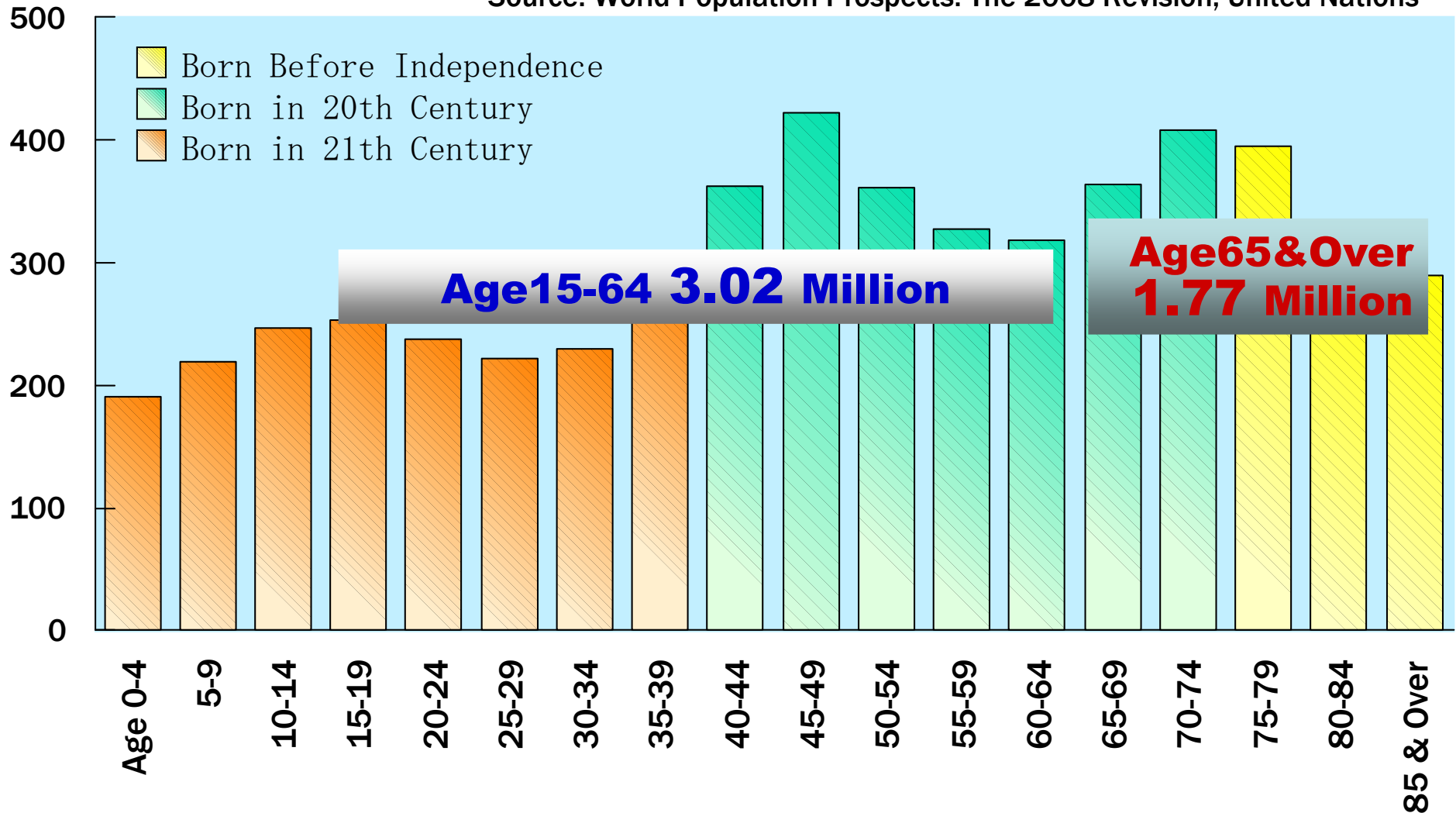


Silver Tsunami, or Aging Baby Boomers

Singapore Population Structure as of 2040

Population in Thousand, including Foreign Residents

Source: World Population Prospects: The 2008 Revision, United Nations

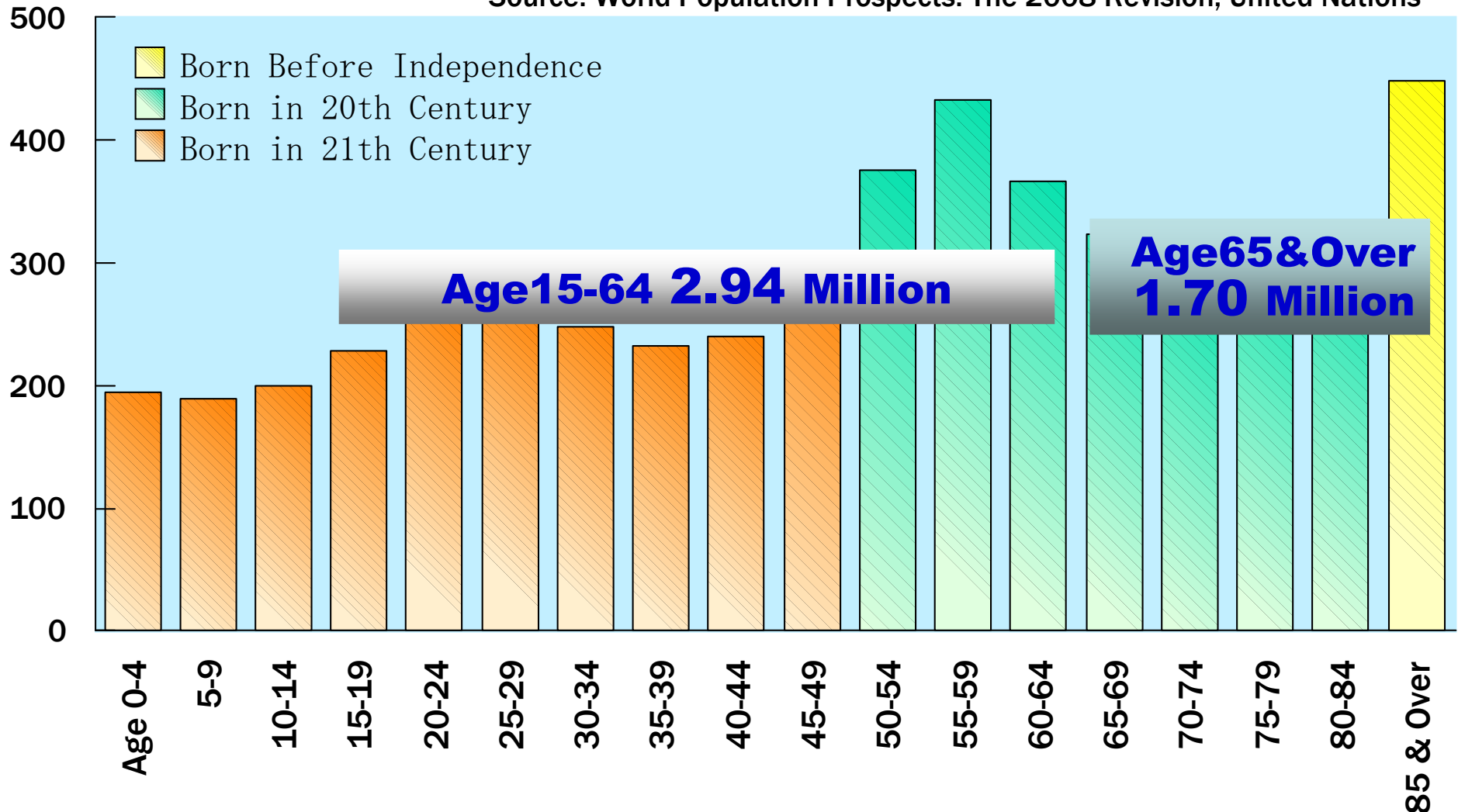


Silver Tsunami, or Aging Baby Boomers

Singapore Population Structure as of 2050

Population in Thousand, including Foreign Residents

Source: World Population Prospects: The 2008 Revision, United Nations



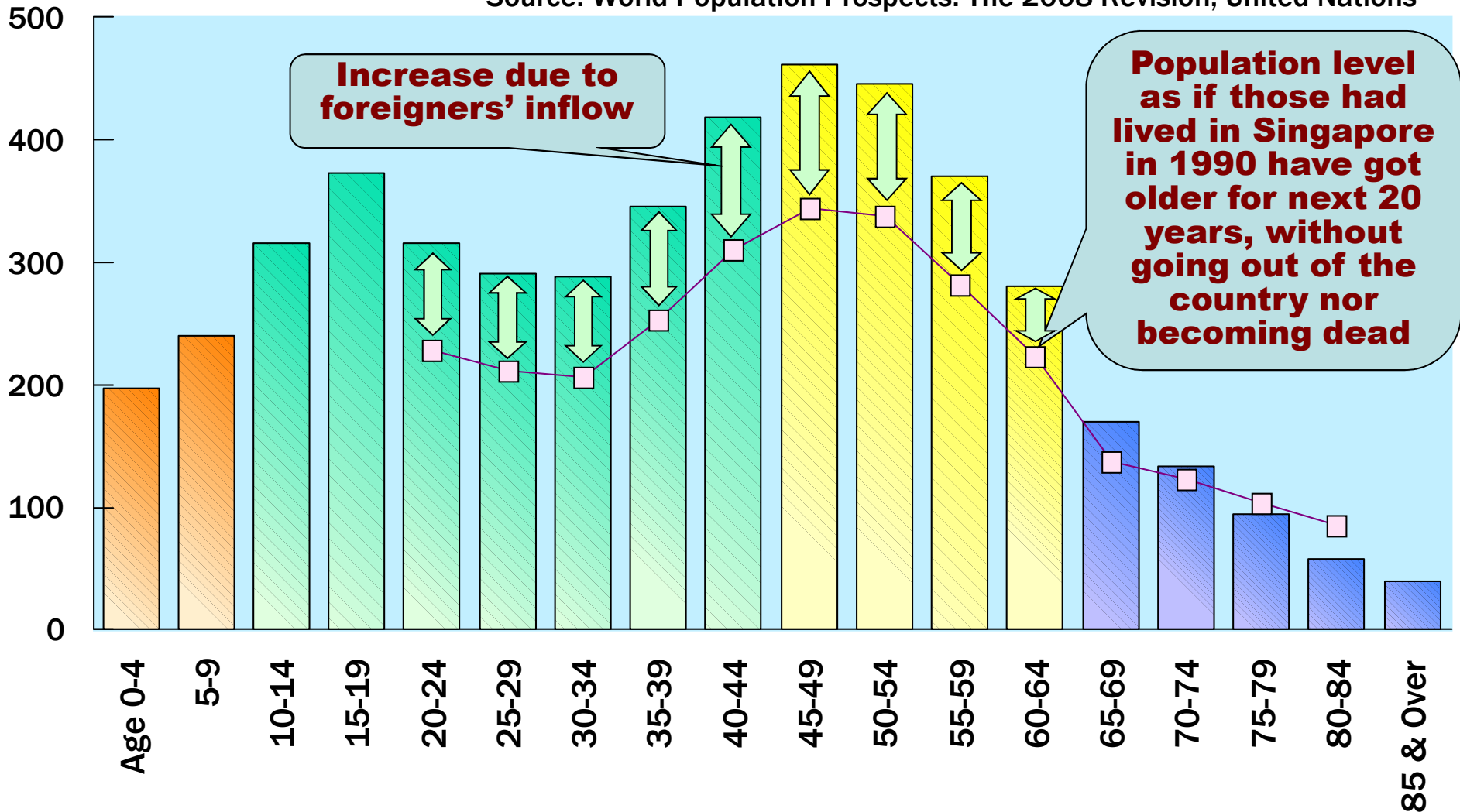
Foreign Immigrants Can be a Solution?

37

Singapore Population Structure as of 2010

Population in Thousand, including Foreign Residents

Source: World Population Prospects: The 2008 Revision, United Nations

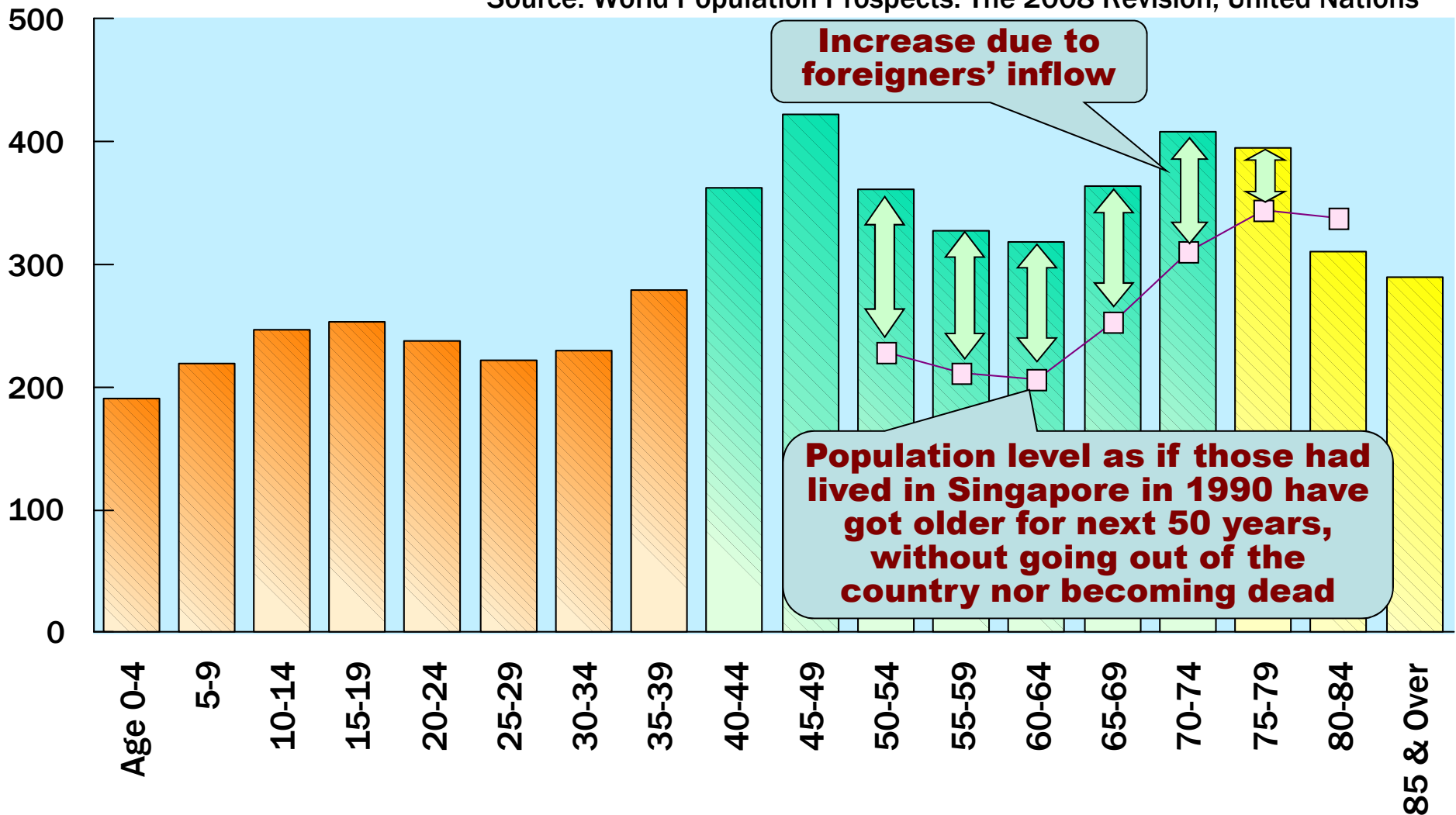


Foreign Immigrants Ends in more Seniors³⁸

Singapore Population Structure as of 2040

Population in Thousand, including Foreign Residents

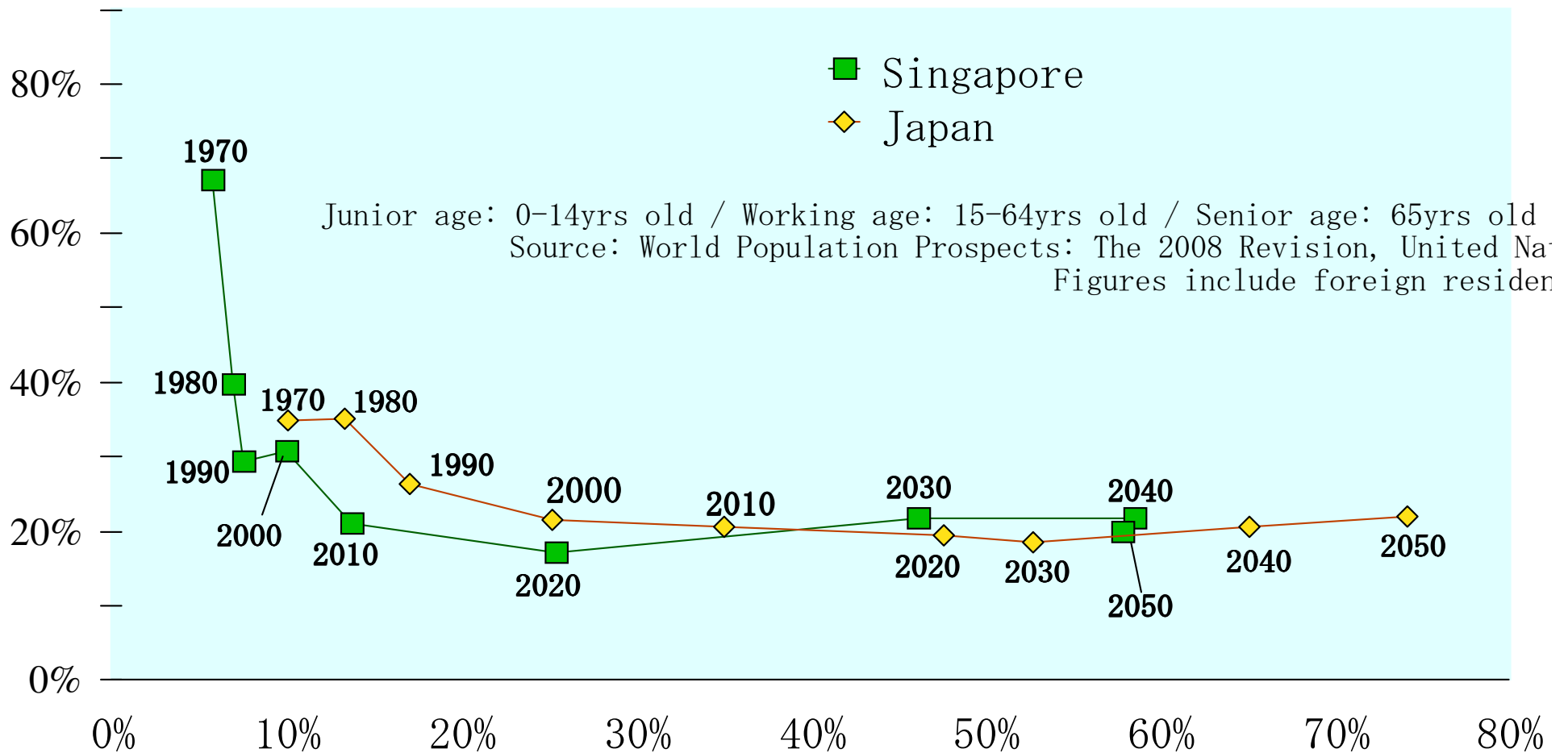
Source: World Population Prospects: The 2008 Revision, United Nations



Singapore and Japan: Only Time Difference

Decrease of Children and Increase of Senior Citi
1970-1980-1990-2000-2010-2020-2030-2040-2050

Junior Age Population ÷ Working Age Population



Senior Age Population ÷ Working Age Population

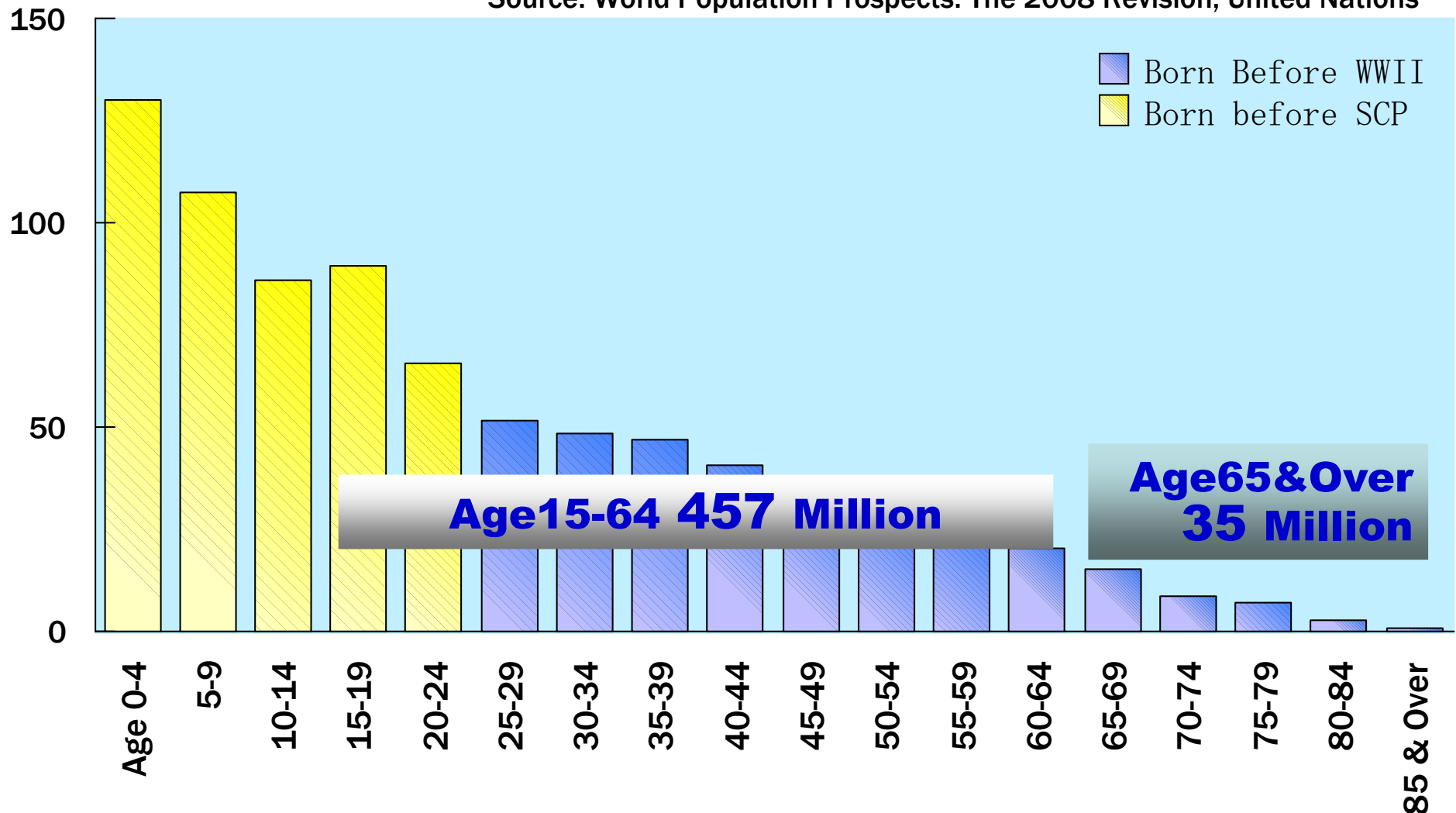
China: Dynamic Emerging and Maturing

40

China Population Structure as of 1970

Population in Million, including Foreign Residents

Source: World Population Prospects: The 2008 Revision, United Nations



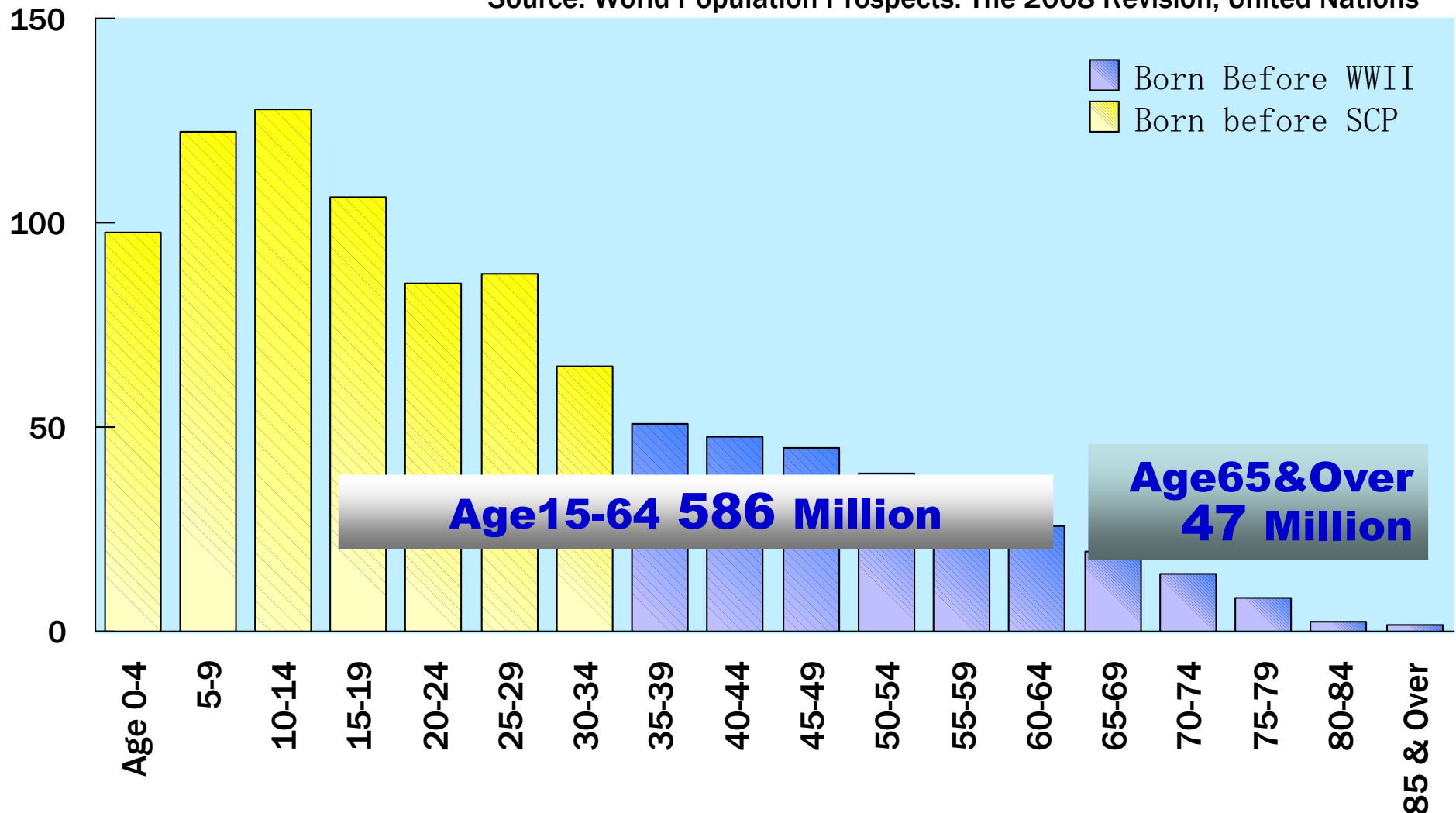
China: Dynamic Emerging and Maturing

41

China Population Structure as of 1980

Population in Thousand, including Foreign Residents

Source: World Population Prospects: The 2008 Revision, United Nations

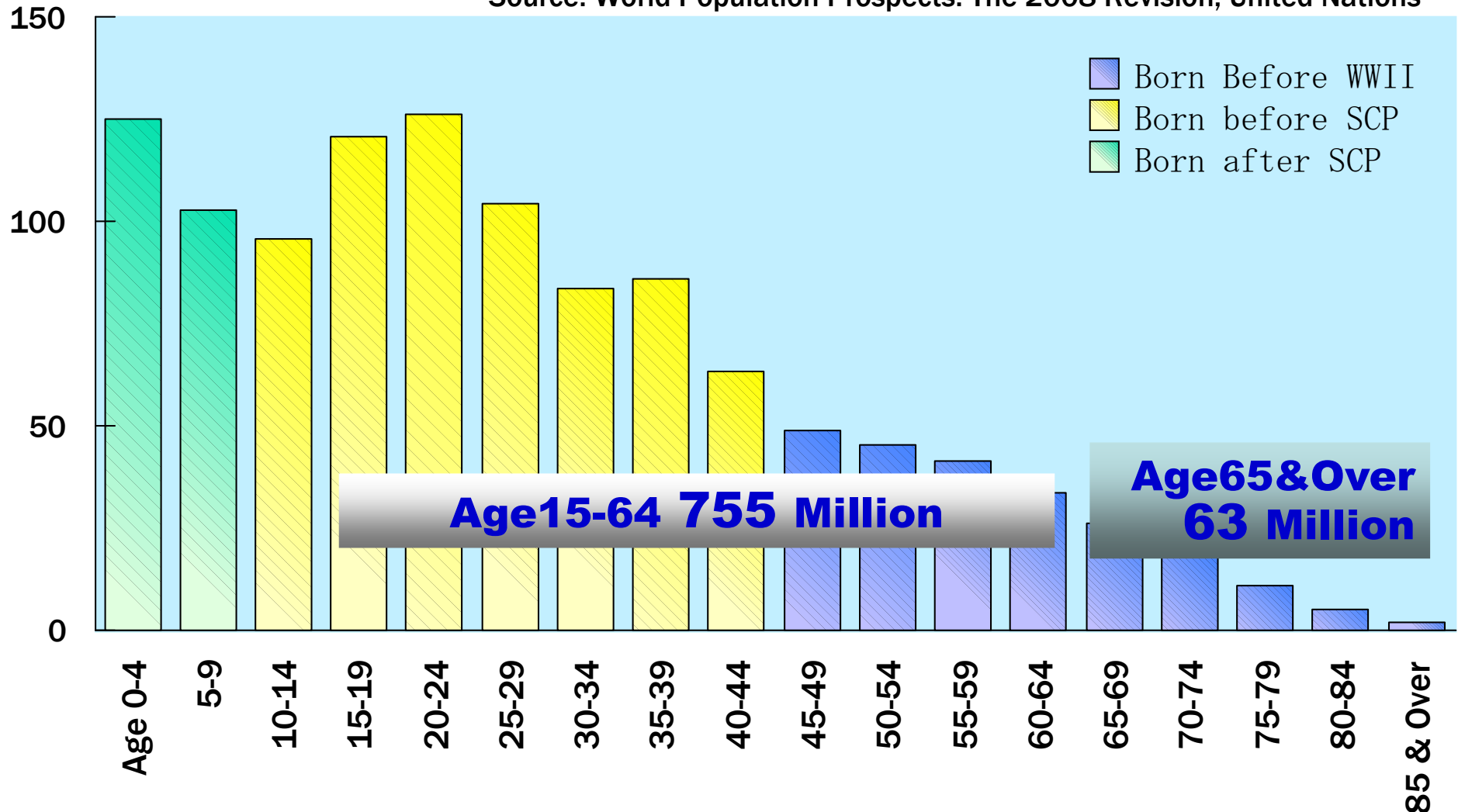


China: Dynamic Emerging and Maturing

China Population Structure as of 1990

Population in Thousand, including Foreign Residents

Source: World Population Prospects: The 2008 Revision, United Nations



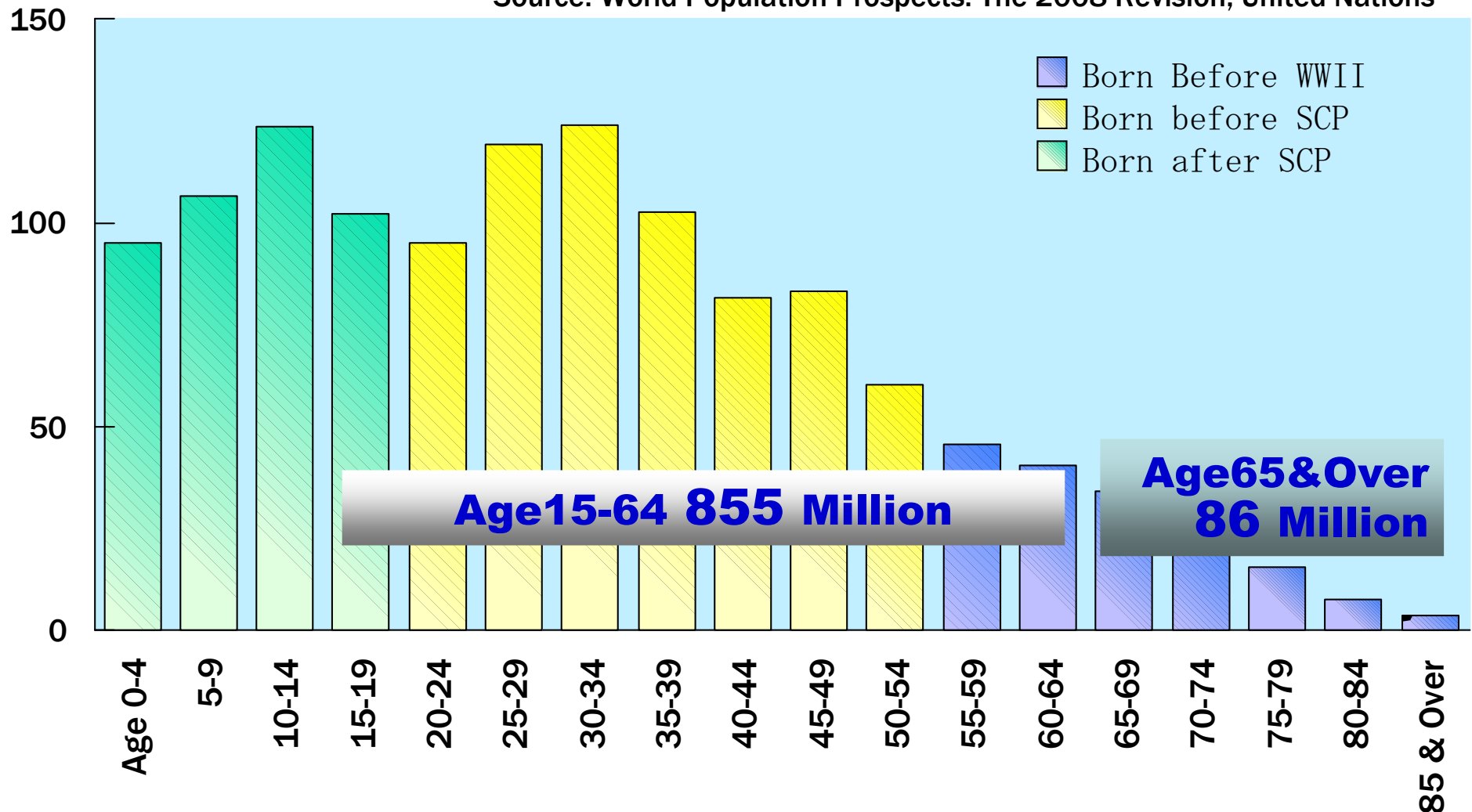
China: Dynamic Emerging and Maturing

43

China Population Structure as of 2000

Population in Thousand, including Foreign Residents

Source: World Population Prospects: The 2008 Revision, United Nations



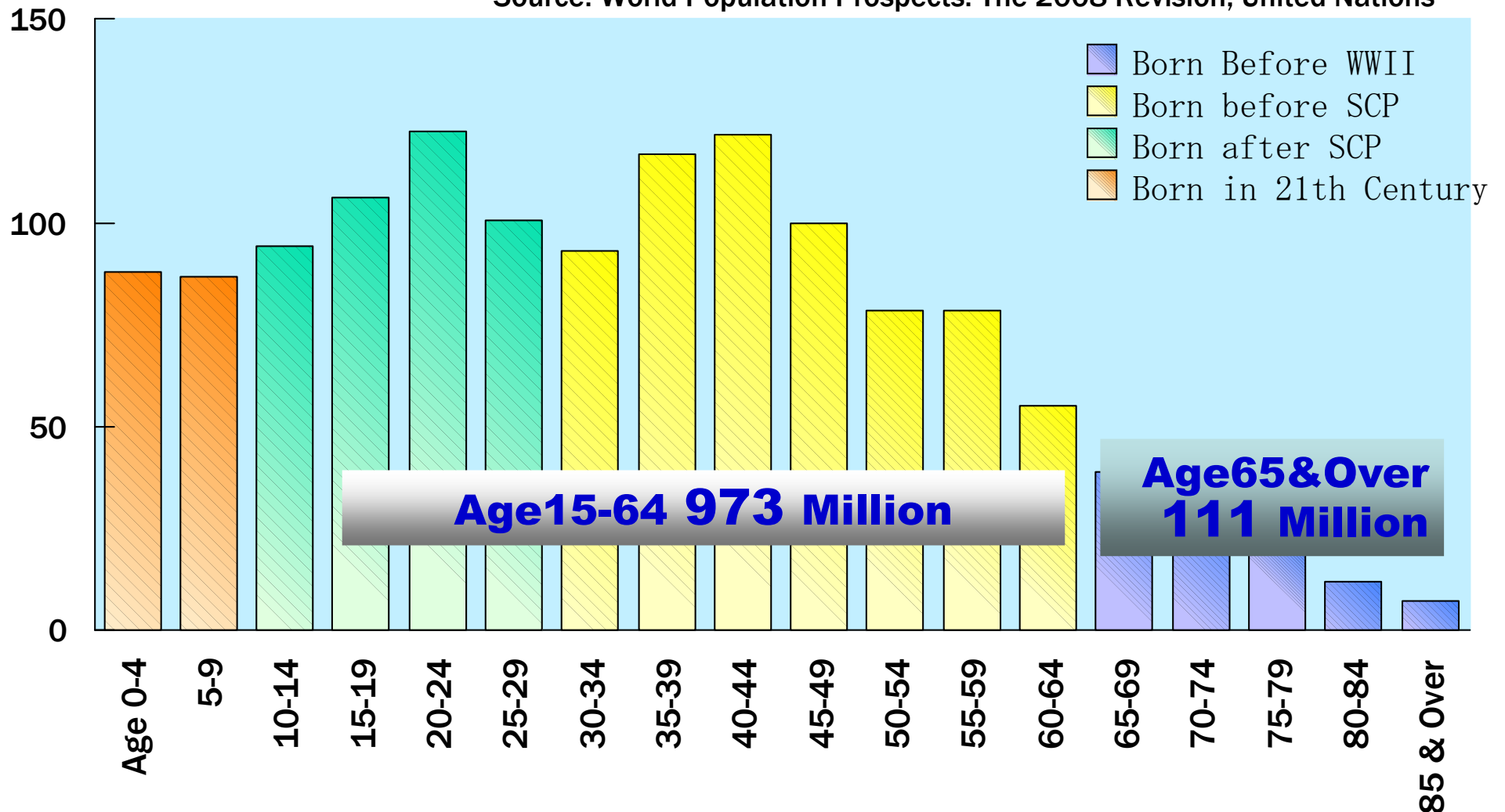
China: Dynamic Emerging and Maturing

44

China Population Structure as of 2010

Population in Million, including Foreign Residents

Source: World Population Prospects: The 2008 Revision, United Nations



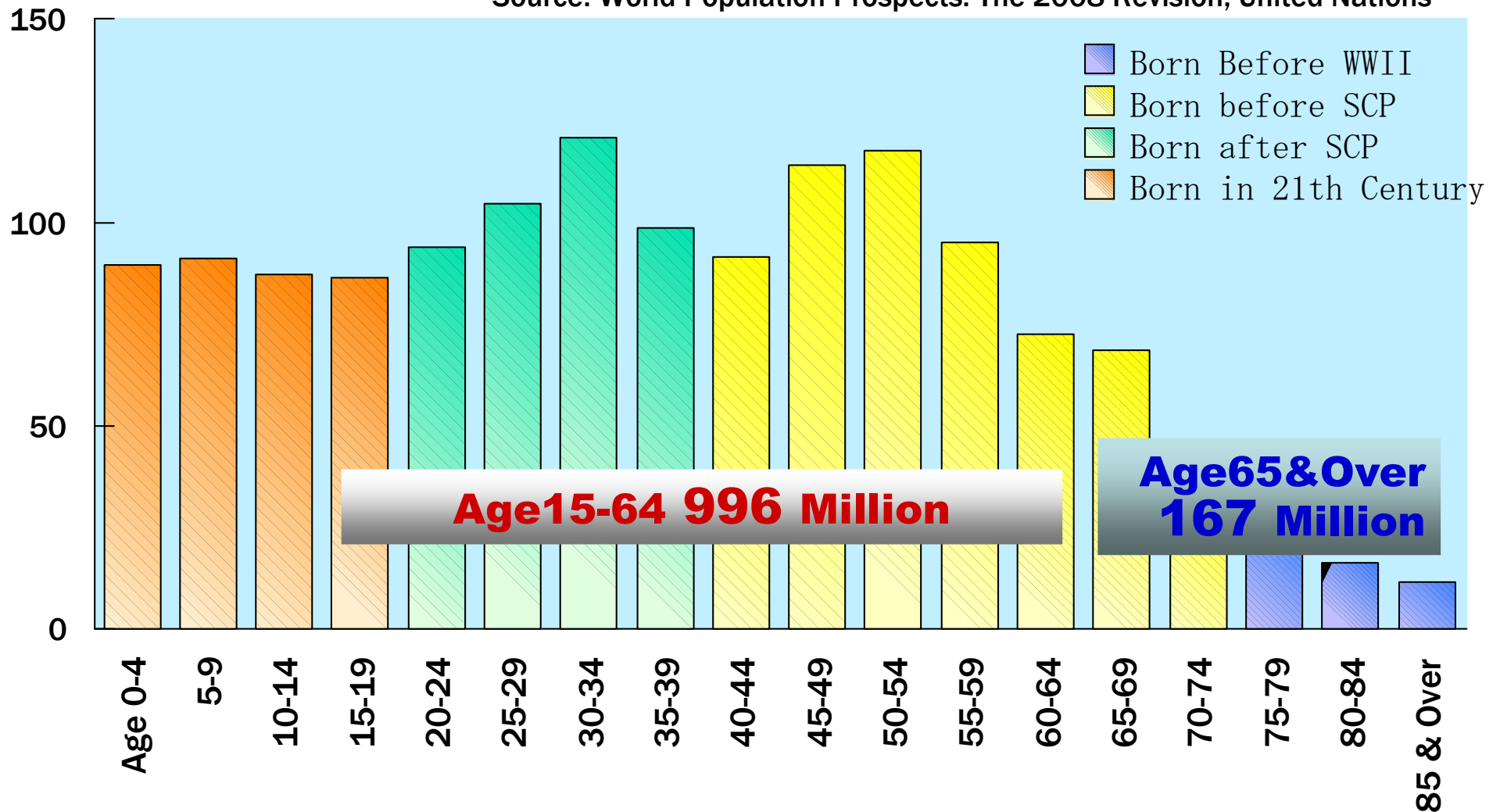
China: Dynamic Emerging and Maturing

45

China Population Structure as of 2020

Population in Million, including Foreign Residents

Source: World Population Prospects: The 2008 Revision, United Nations



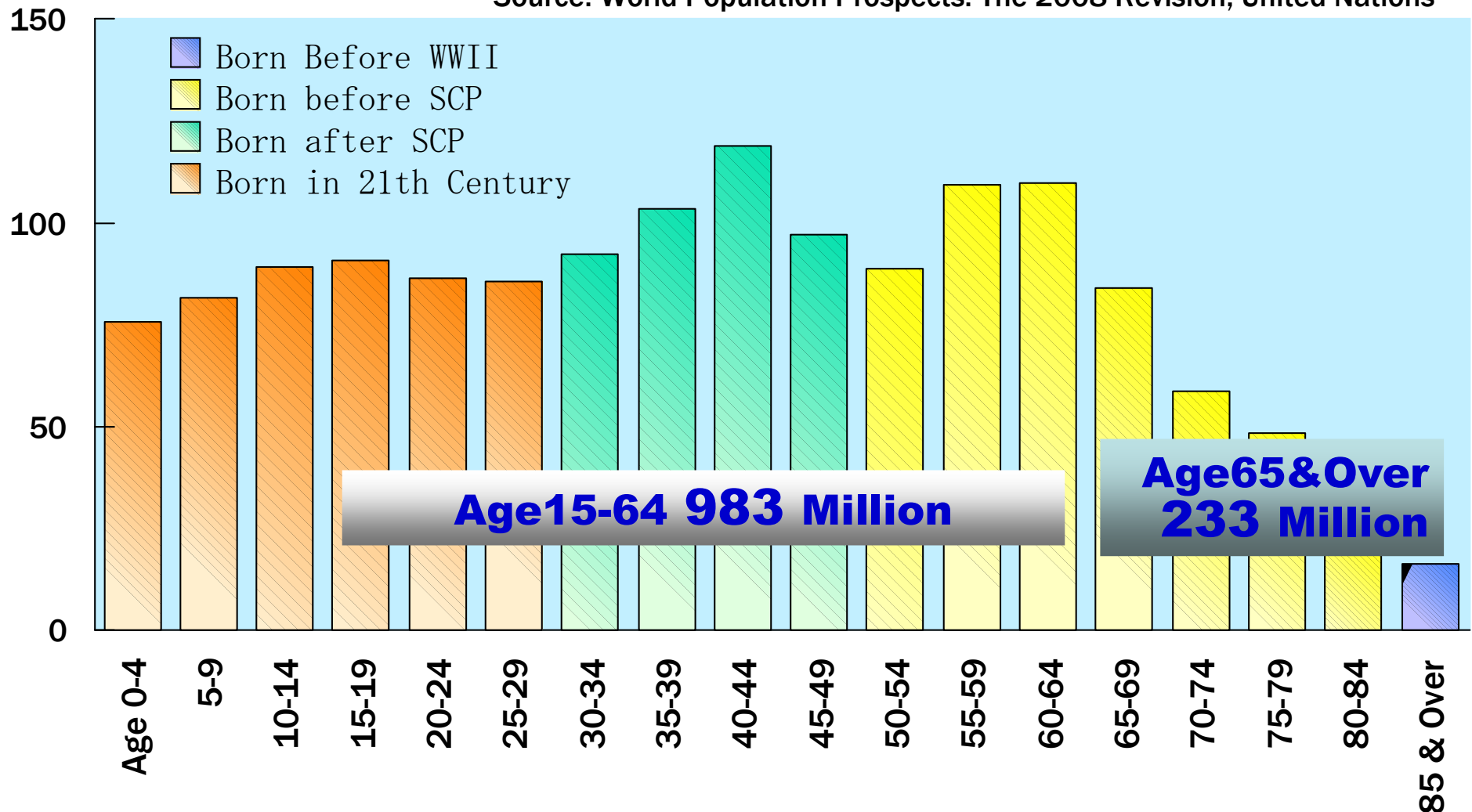
China: Dynamic Emerging and Maturing

46

China Population Structure as of 2030

Population in Million, including Foreign Residents

Source: World Population Prospects: The 2008 Revision, United Nations



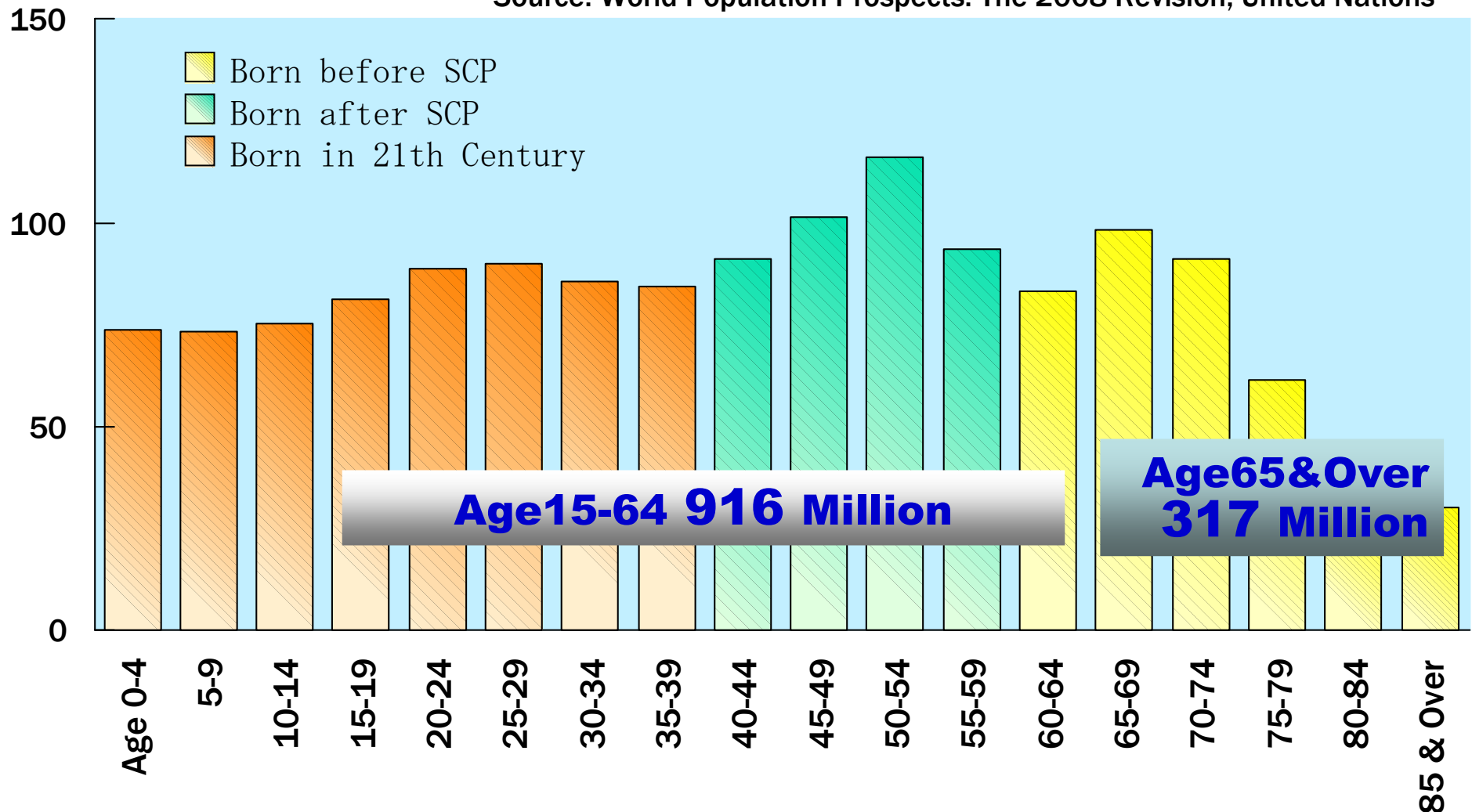
China: Dynamic Emerging and Maturing

47

China Population Structure as of 2040

Population in Million, including Foreign Residents

Source: World Population Prospects: The 2008 Revision, United Nations



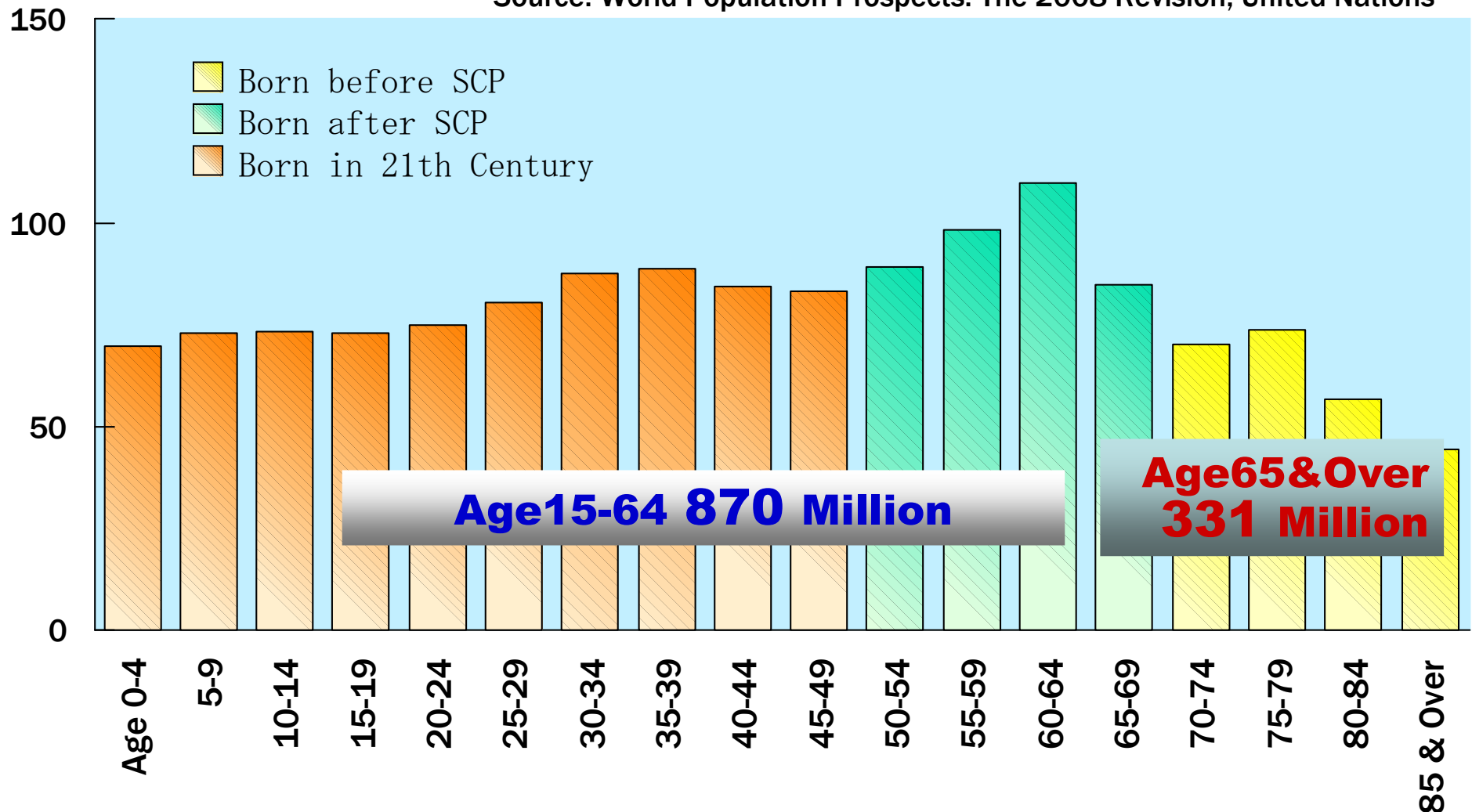
China: Dynamic Emerging and Maturing

48

China Population Structure as of 2050

Population in Million, including Foreign Residents

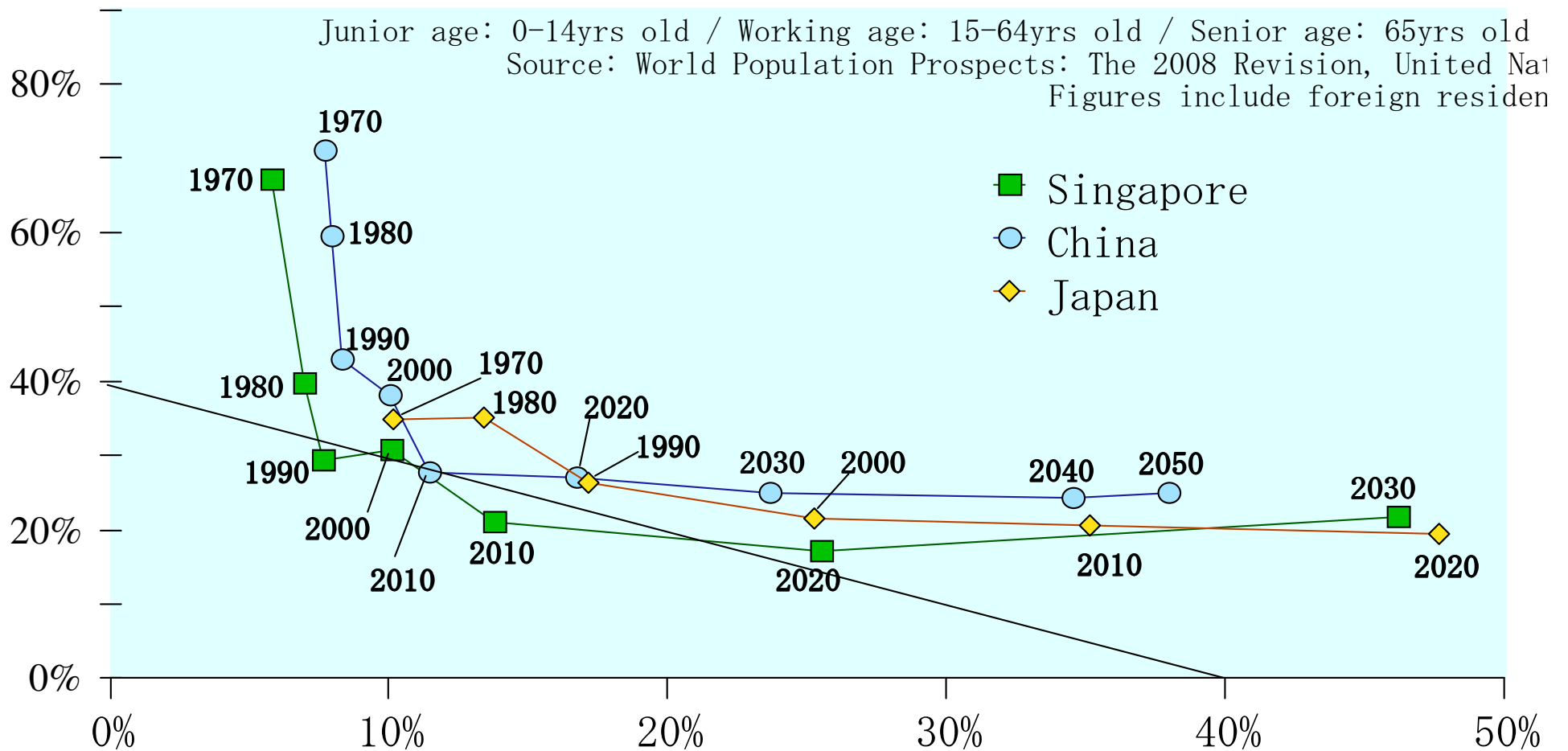
Source: World Population Prospects: The 2008 Revision, United Nations



China Follows the Same Track

Decrease of Children and Increase of Senior Citi
1970-1980-1990-2000-2010-2020-2030-2040-2050

Junior Age Population ÷ Working Age Population

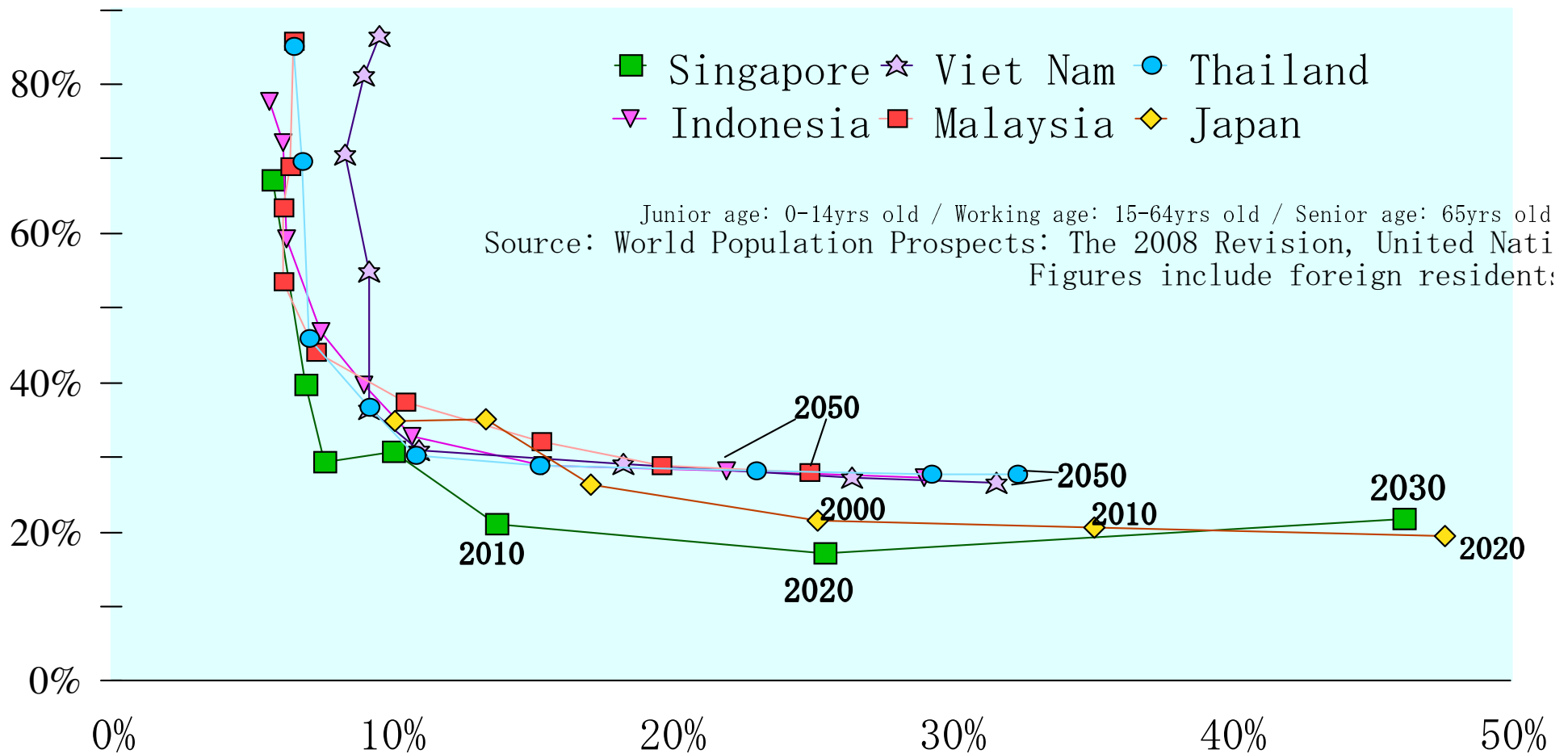


Senior Age Population ÷ Working Age Population

Aging Prevails All Over South East Asia

Decrease of Children and Increase of Senior Citi
1970-1980-1990-2000-2010-2020-2030-2040-2050

Junior Age Population ÷ Working Age Population



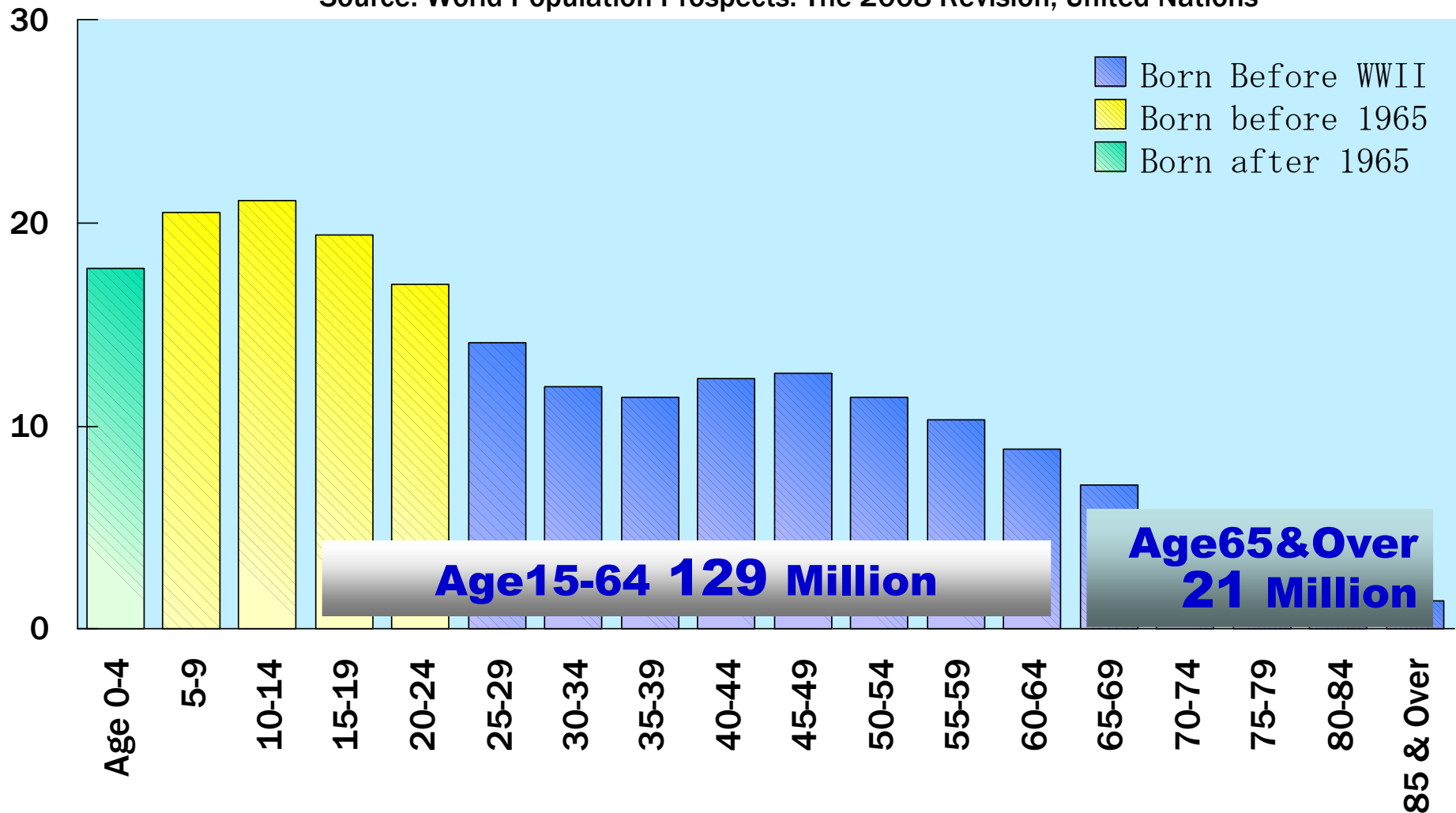
Senior Age Population ÷ Working Age Population

Americans, Uniquely Prolific but Also Aging⁵¹

U.S. Population Structure as of 1970

Population in Million, including Foreign Residents

Source: World Population Prospects: The 2008 Revision, United Nations

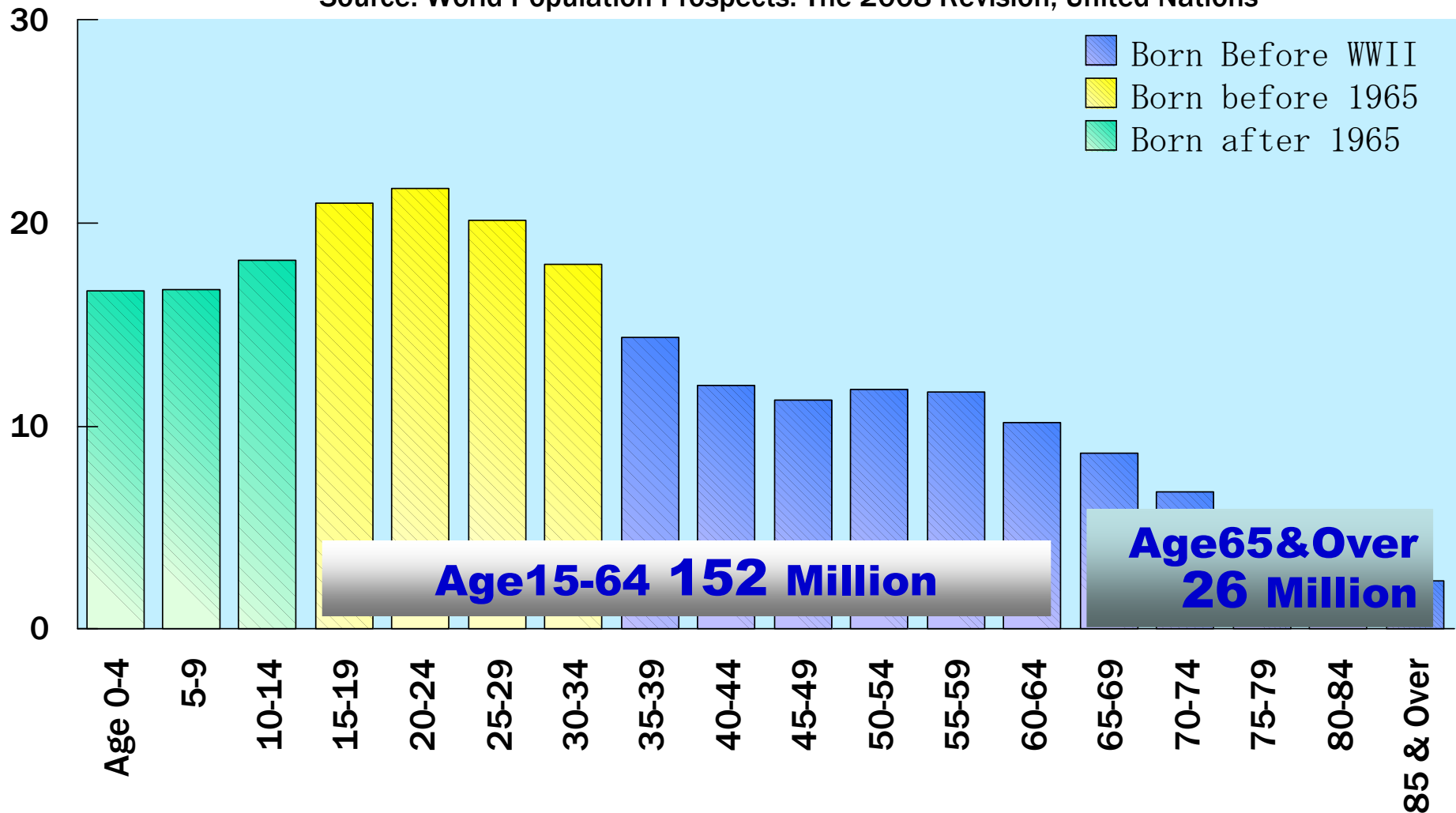


Americans, Uniquely Prolific but Also Aging⁵²

U.S. Population Structure as of 1980

Population in Thousand, including Foreign Residents

Source: World Population Prospects: The 2008 Revision, United Nations

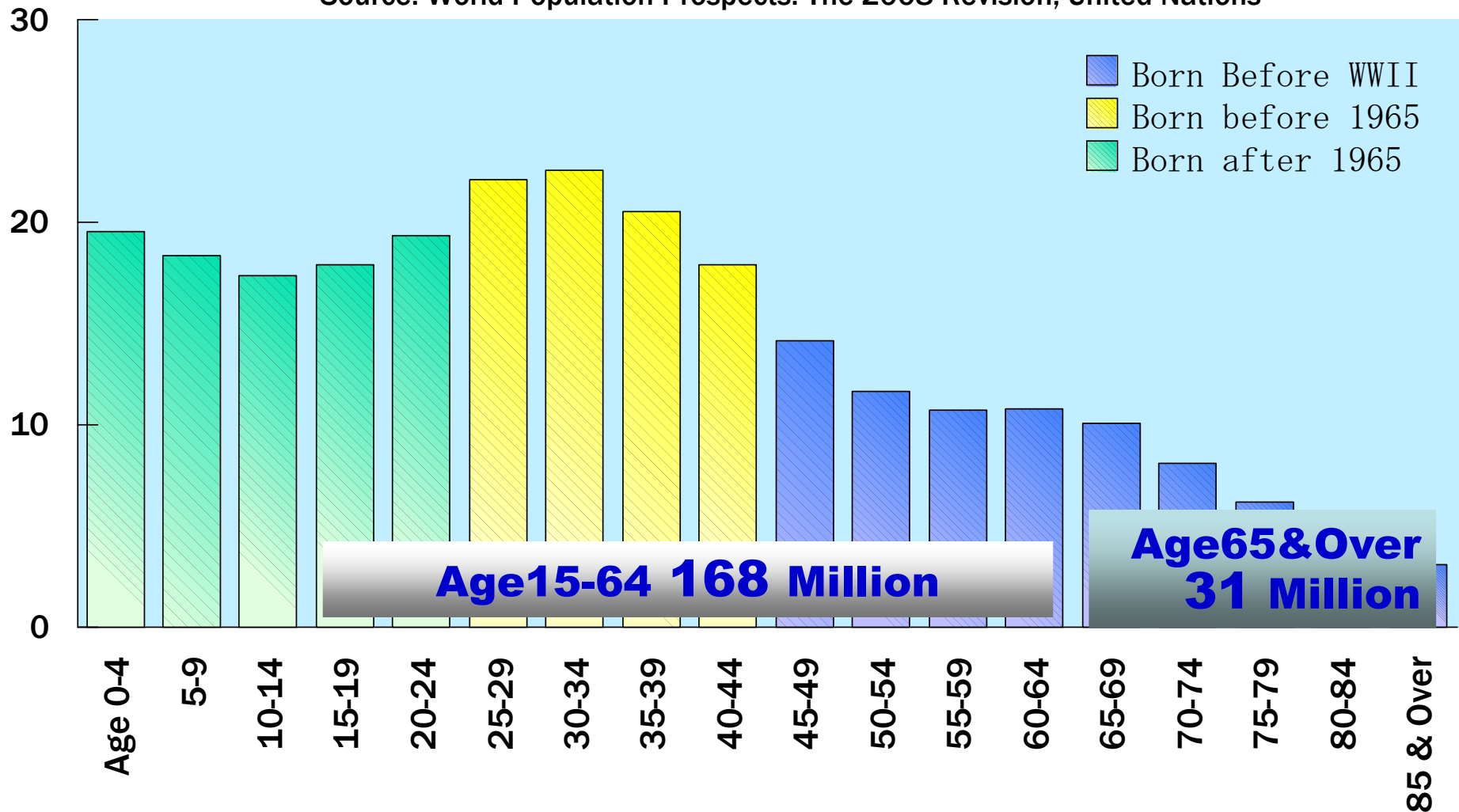


Americans, Uniquely Prolific but Also Aging⁵³

U.S. Population Structure as of 1990

Population in Thousand, including Foreign Residents

Source: World Population Prospects: The 2008 Revision, United Nations

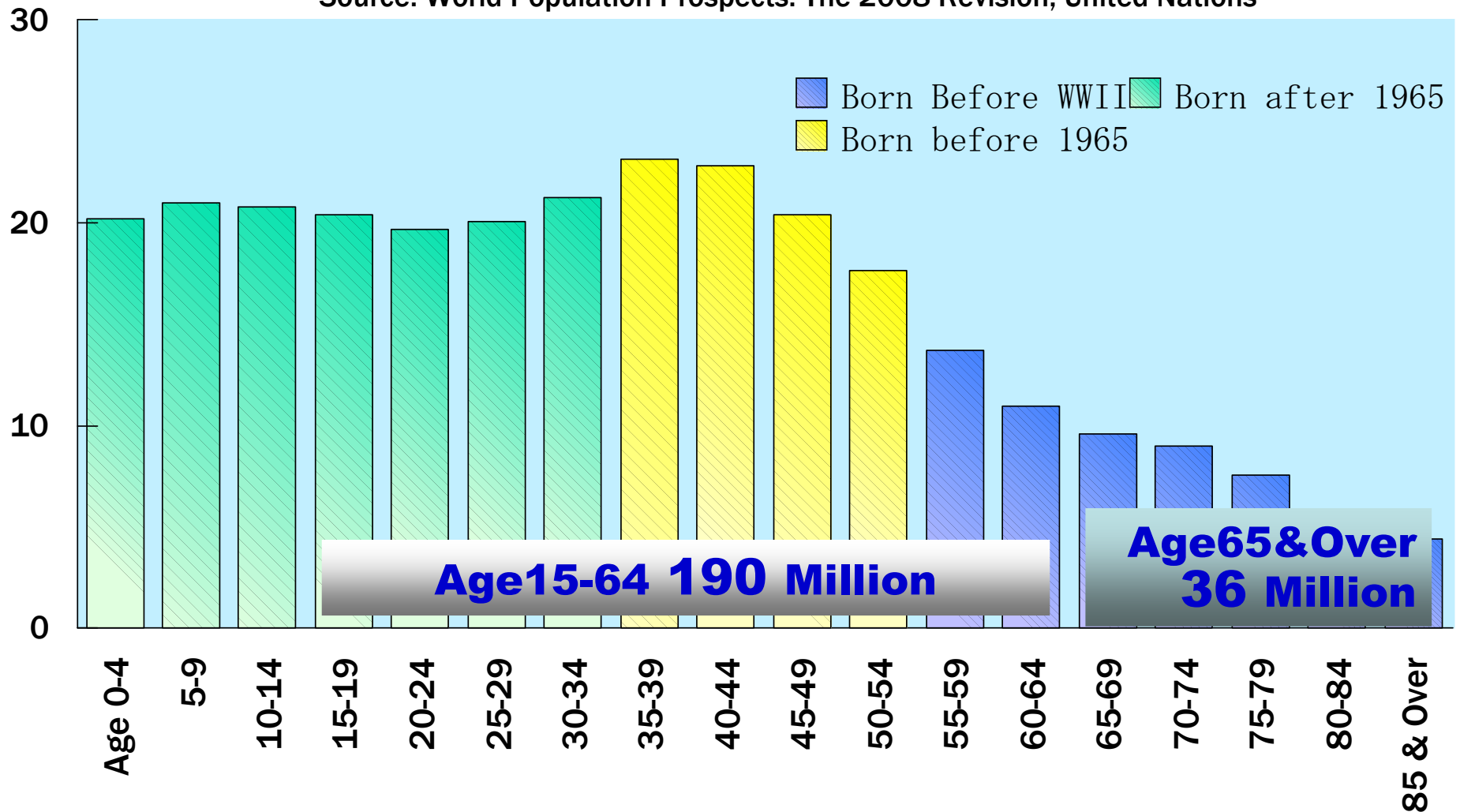


Americans, Uniquely Prolific but Also Aging⁵⁴

U.S. Population Structure as of 2000

Population in Thousand, including Foreign Residents

Source: World Population Prospects: The 2008 Revision, United Nations

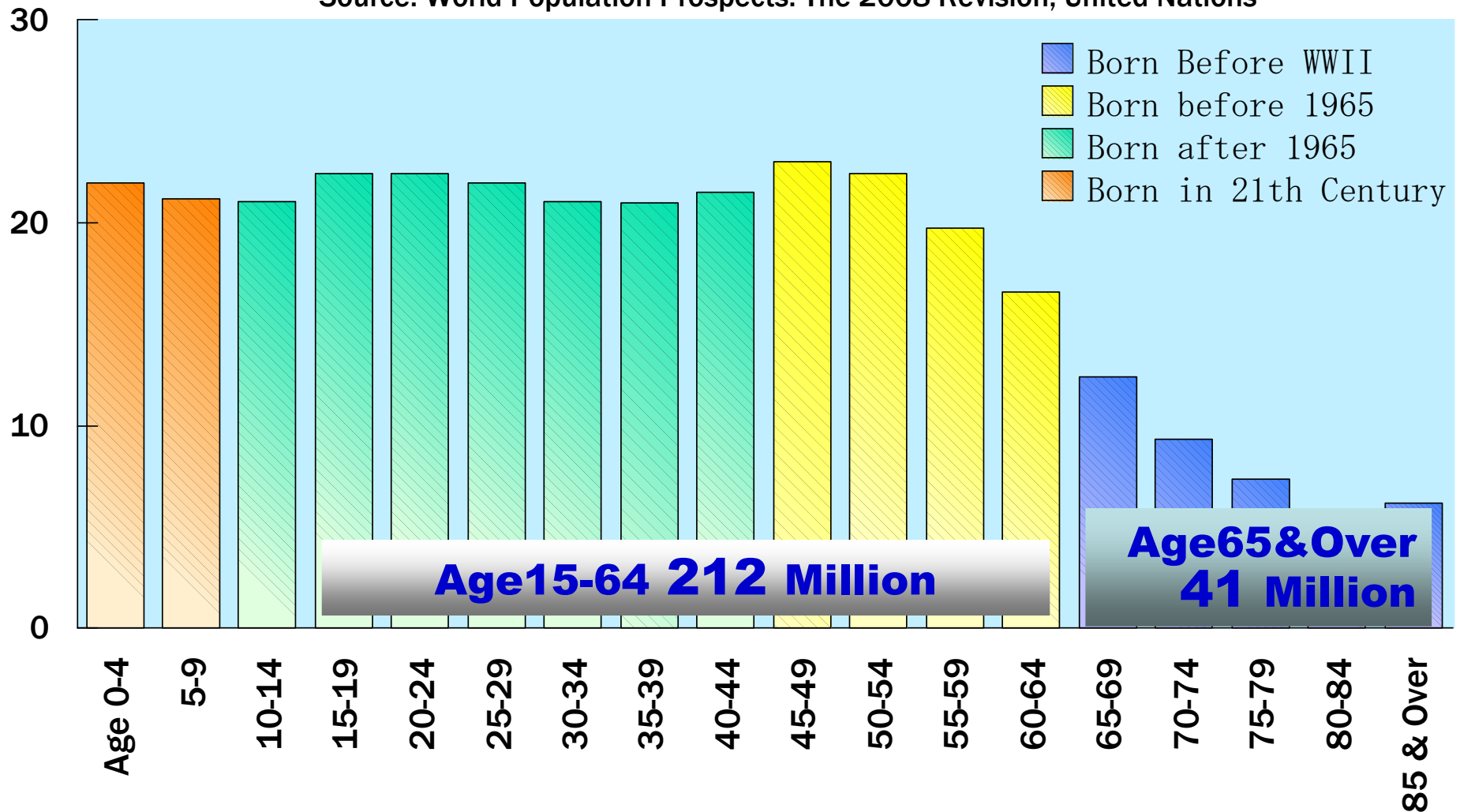


Americans, Uniquely Prolific but Also Aging⁵⁵

U.S. Population Structure as of 2010

Population in Million, including Foreign Residents

Source: World Population Prospects: The 2008 Revision, United Nations

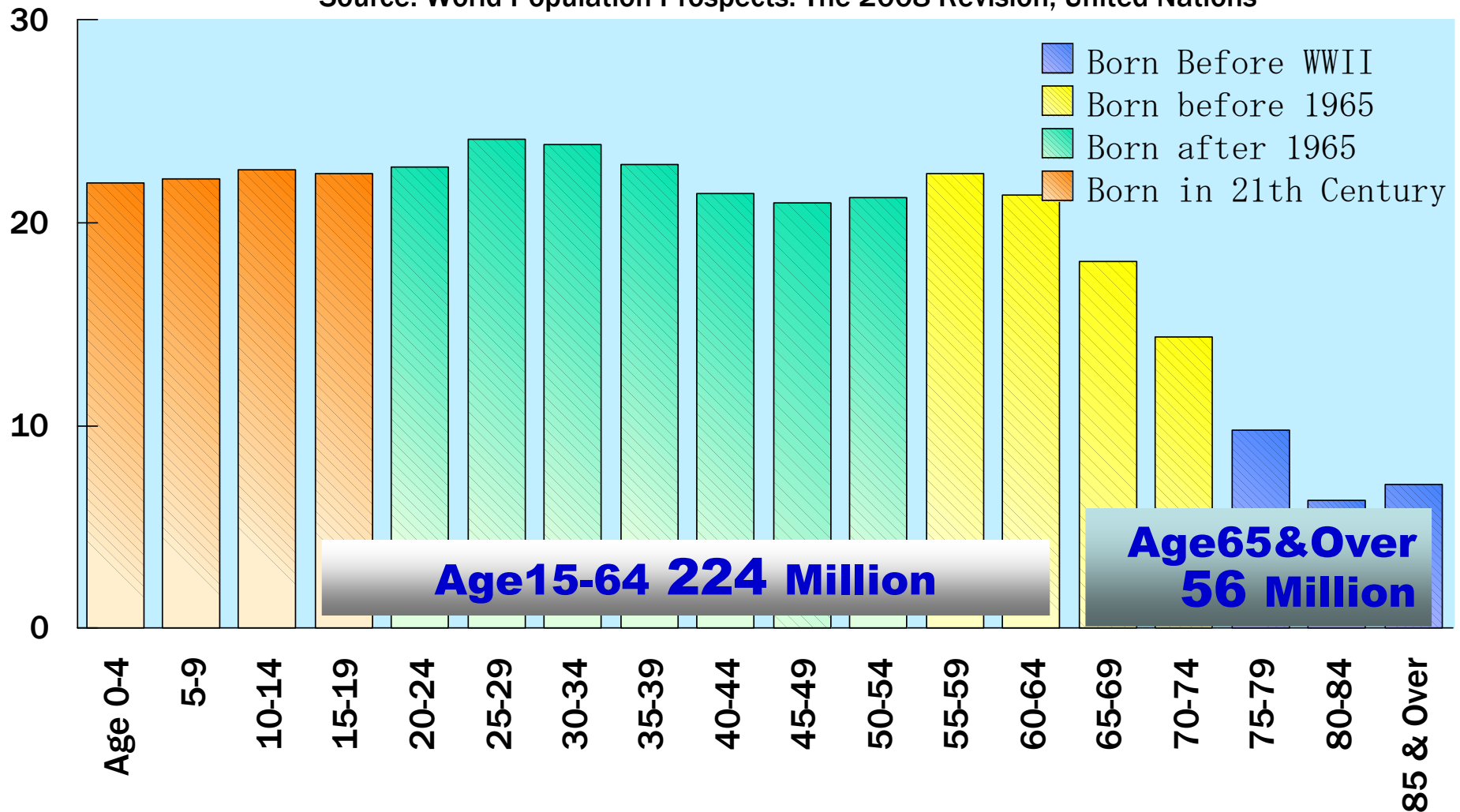


Americans, Uniquely Prolific but Also Aging⁵⁶

U.S. Population Structure as of 2020

Population in Million, including Foreign Residents

Source: World Population Prospects: The 2008 Revision, United Nations

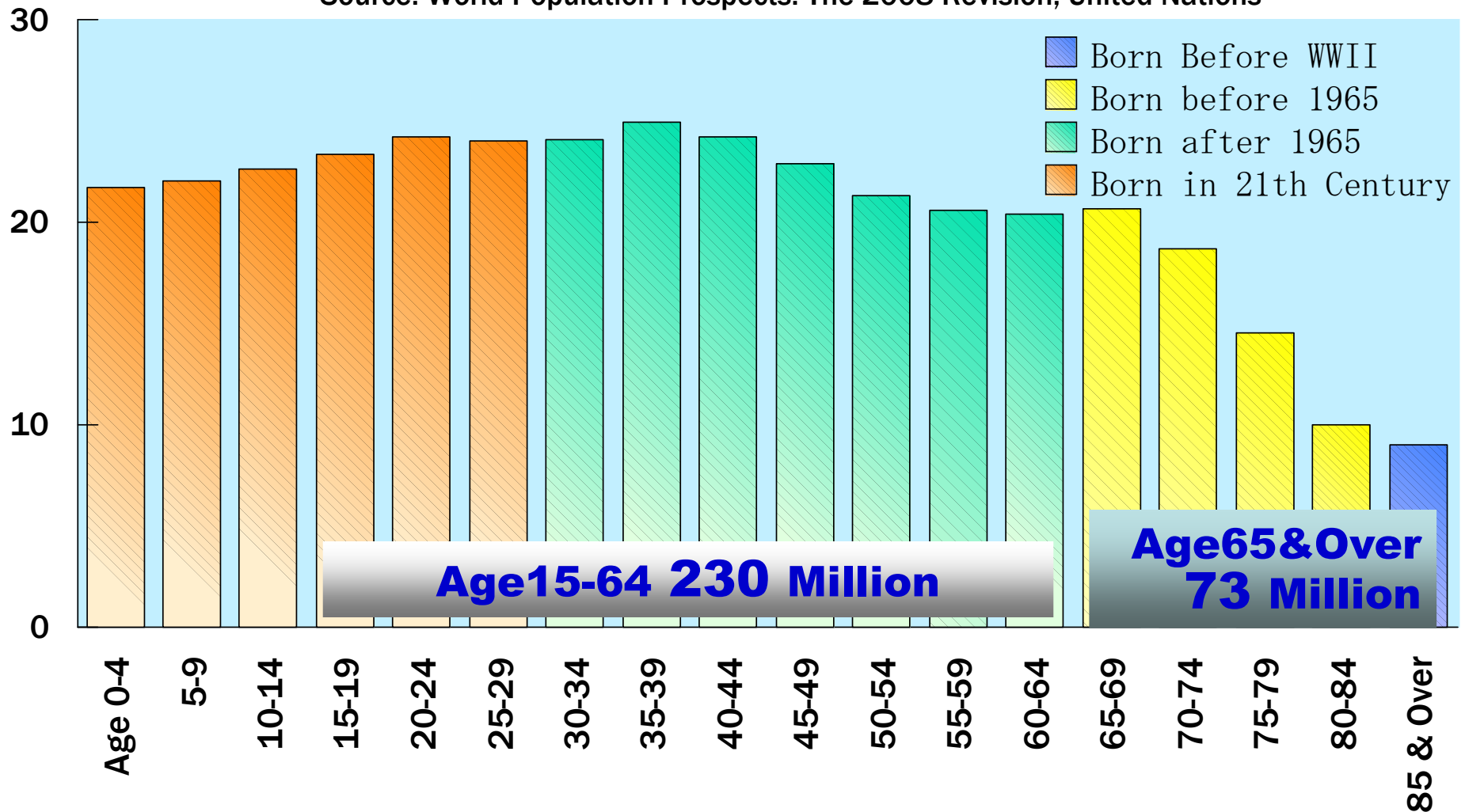


Americans, Uniquely Prolific but Also Aging⁵⁷

U.S. Population Structure as of 2030

Population in Million, including Foreign Residents

Source: World Population Prospects: The 2008 Revision, United Nations

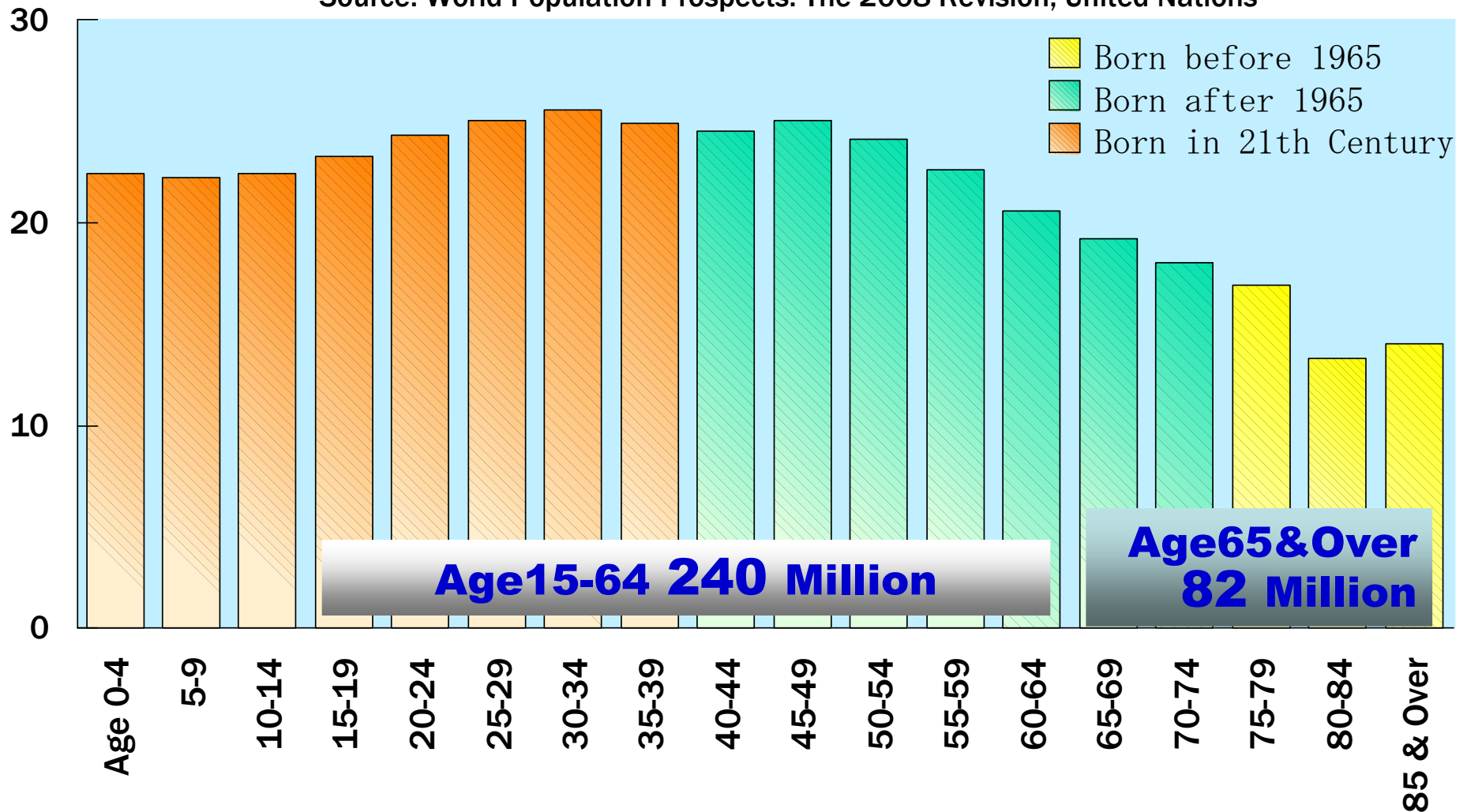


Americans, Uniquely Prolific but Also Aging⁵⁸

U.S. Population Structure as of 2040

Population in Million, including Foreign Residents

Source: World Population Prospects: The 2008 Revision, United Nations

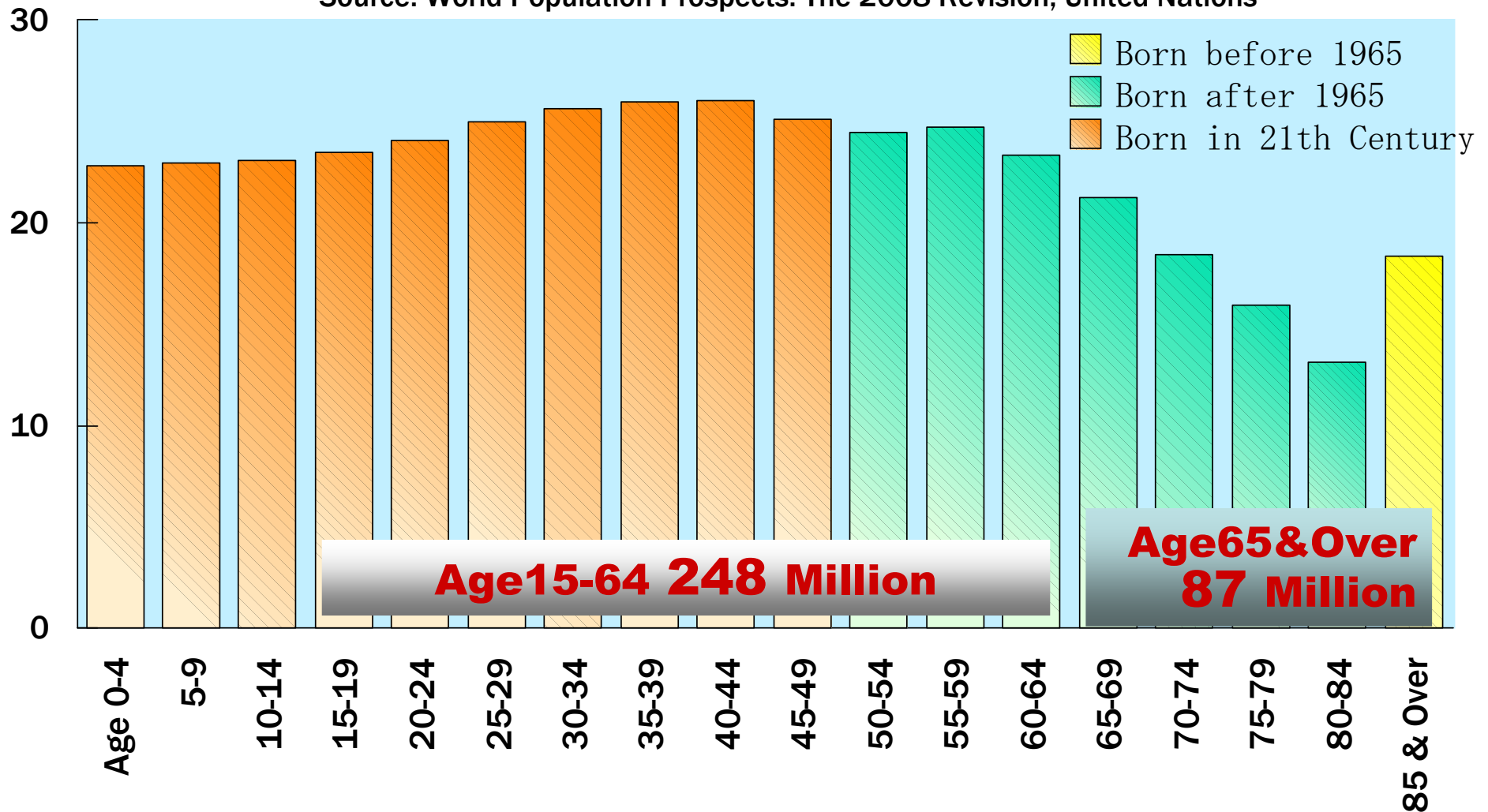


Americans, Uniquely Prolific but Also Aging⁵⁹

'U.S. Population Structure as of 2050

Population in Million, including Foreign Residents

Source: World Population Prospects: The 2008 Revision, United Nations



Americans Also Aging But Dying Earlier

Decrease of Children and Increase of Senior Cit
1970-1980-1990-2000-2010-2020-2030-2040-2050

Junior Age Population ÷ Working Age Population

