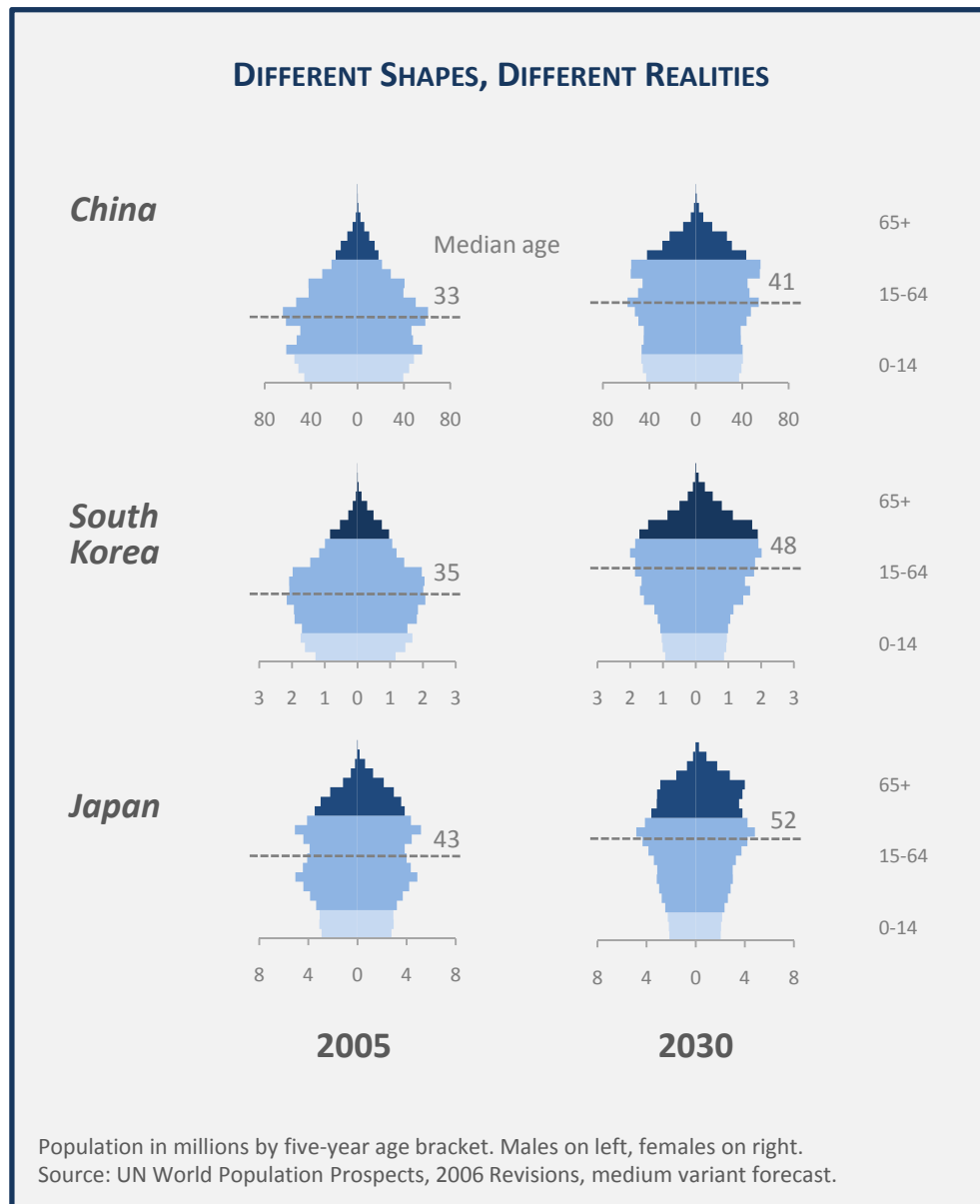




Critical Demographics: Rapid Aging and the Shape of the Future in China, South Korea, and Japan

Briefing for Fast Forward Scenario-Planning Workshop
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Adele Hayutin, Ph.D.
Director, Global Aging Program
Stanford Center on Longevity
ahayutin@stanford.edu

Critical Demographics:

Rapid Aging and the Shape of the Future in China, South Korea, and Japan

Dramatic and unprecedented demographic shifts are occurring in East Asia: China, South Korea and Japan face significant aging, shrinking workforces, and rapid changes in the proportions of young and old.

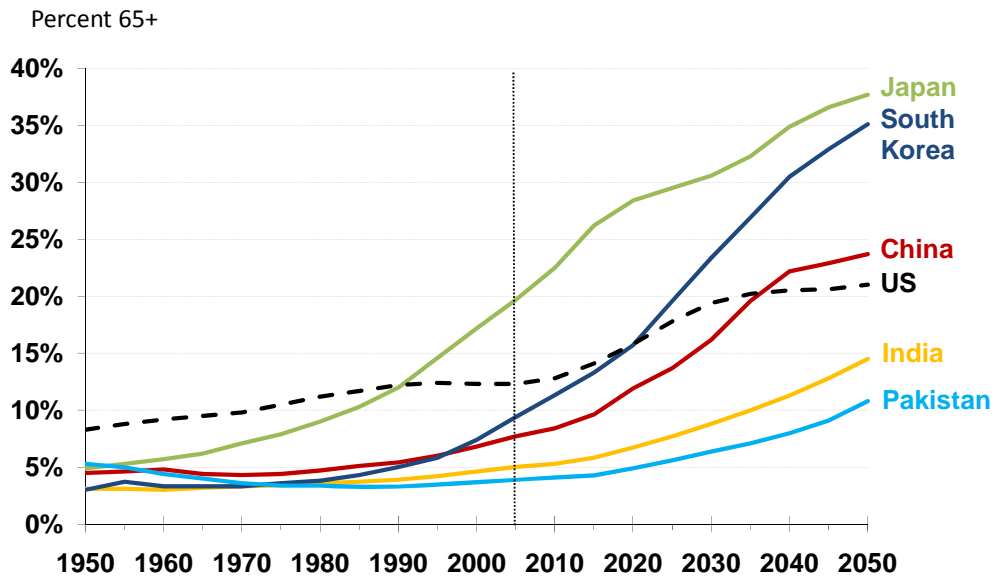
- Because of its early and steep fertility decline, China will age sooner and faster than most other developing countries. China's workforce is aging and will start to shrink in 2015. Total population is projected to begin shrinking by 2030.
- South Korea is already rapidly aging and beginning in 2020 the percent 65+ will increase even more sharply. By 2020 total population will have peaked, seniors will outnumber children, and the working-age population will be declining.
- Japan's shrinking population is quickly becoming top-heavy with old people. Seniors already outnumber children and the working-age population has been declining since the mid-1990s.

The attached charts, based on the UN 2006 medium variant, provide background on the critical demographics that will reshape the cultural, economic and security futures of Asia over the next ten to twenty years. The first set of charts provide cross-national comparison of the three countries, the US, and other Asian nations. Following that are a set of graphics focused on each of the three countries: China, South Korea, and Japan.

We know that huge demographic shifts are underway; what we don't know is whether countries will adapt their policies and cultures to the new realities in time to take advantage of opportunities presented by these population age shifts.

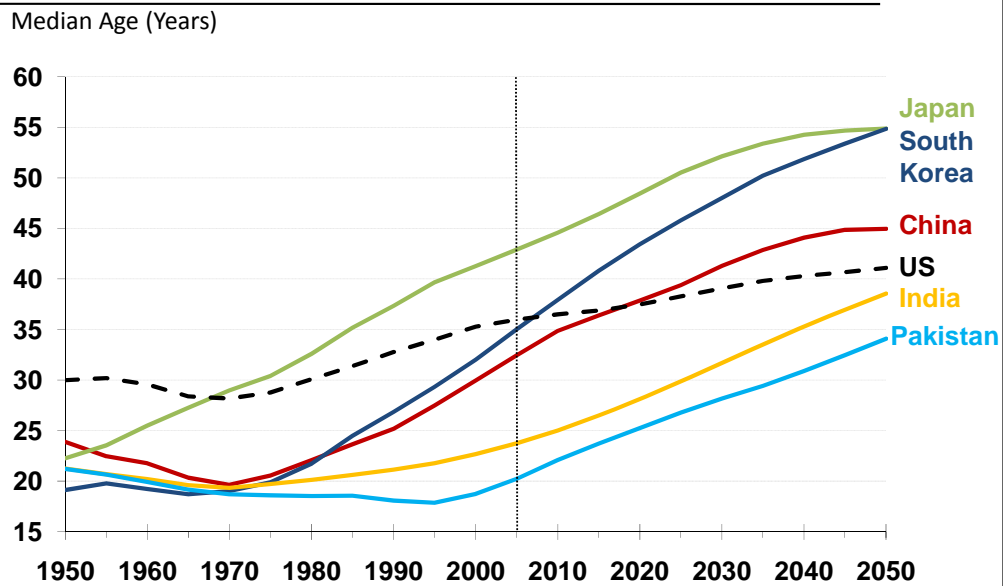
The Pace of Aging

Japan, South Korea, and China are already rapidly aging and the pace will sharply accelerate in less than ten years.



Source: United Nations 2006 World Population Prospects medium variant forecast

Sharply increasing median age reflects population age shifts toward older brackets.

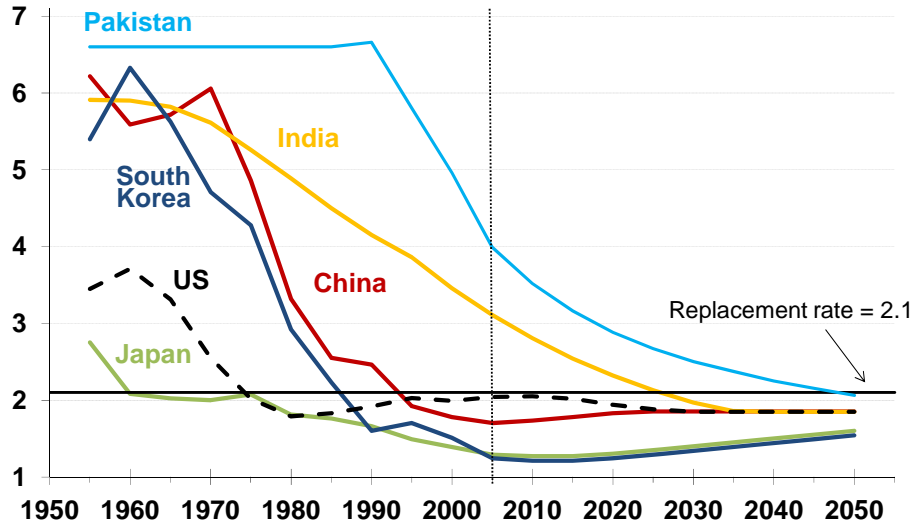


Source: United Nations 2006 World Population Prospects medium variant forecast

Demographic Drivers

Fertility rates have plummeted, with especially steep drops in China and South Korea.

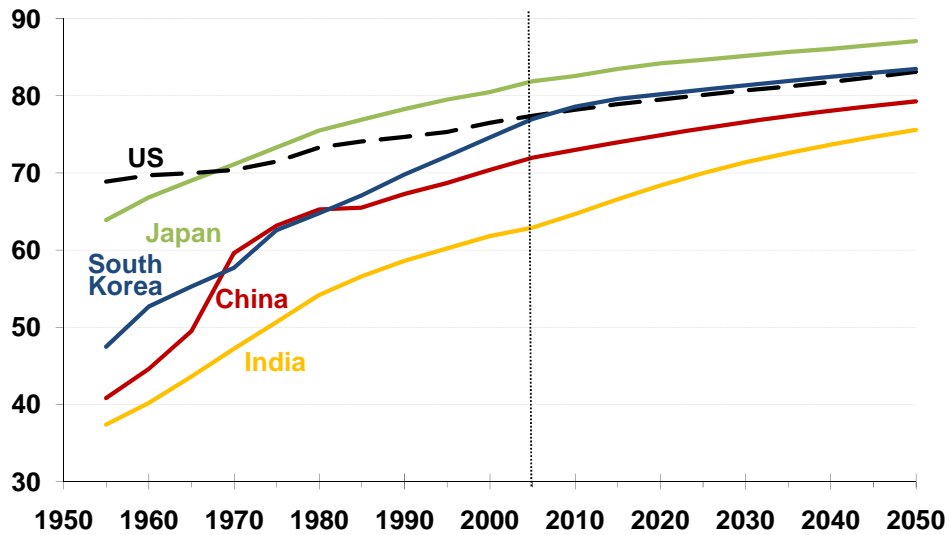
Fertility (Births per Woman)



Source: United Nations 2006 World Population Prospects medium variant forecast

Longevity gains have occurred everywhere.

Life Expectancy at Birth (Years)

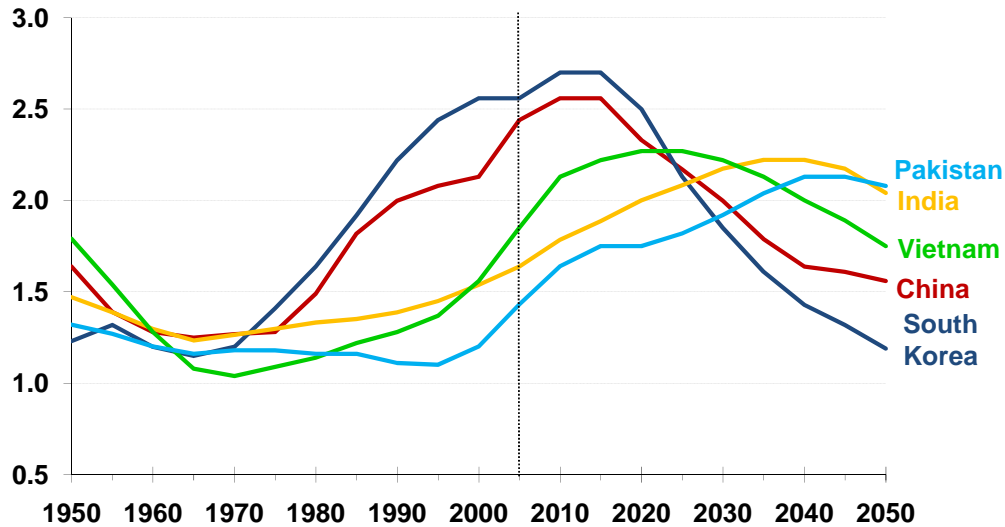


Source: United Nations 2006 World Population Prospects medium variant forecast

Support Ratios

The fast-growing Asian economies benefitted from a “demographic dividend” – a steep run-up in workers per dependent.

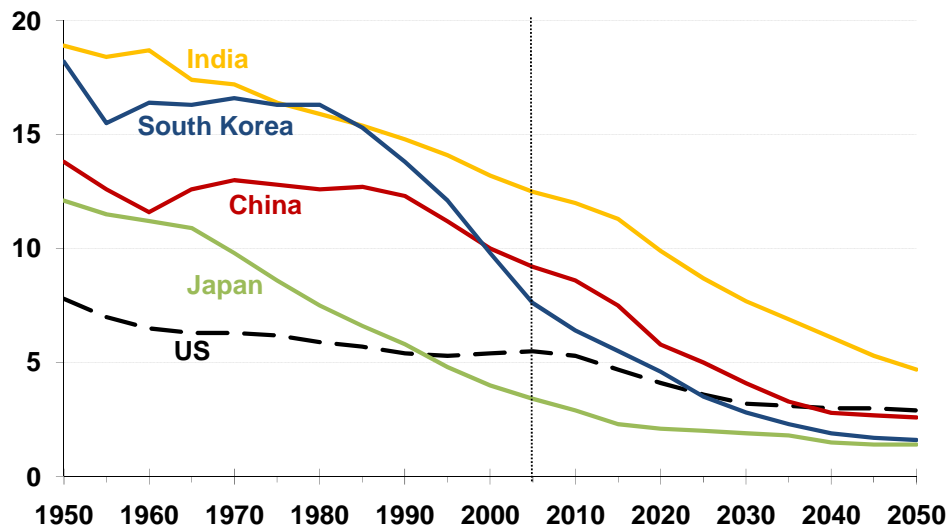
Ratio of Working-Age Population (15-64) to Dependent-Age Population (0-14, 65+)



Source: United Nations 2006 World Population Prospects medium variant forecast

The steep decline in potential workers per retiree will be especially burdensome for low-income countries such as China.

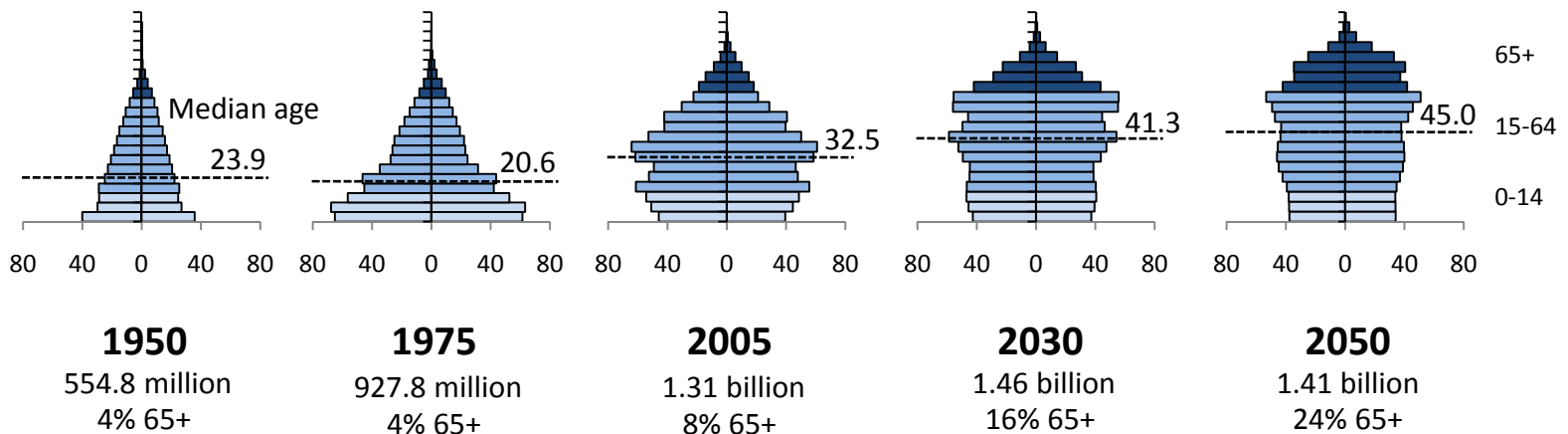
Ratio of Working-Age Population (15-64) to Retirement-Age Population (65+)



Source: United Nations 2006 World Population Prospects medium variant forecast

Critical Demographics

China



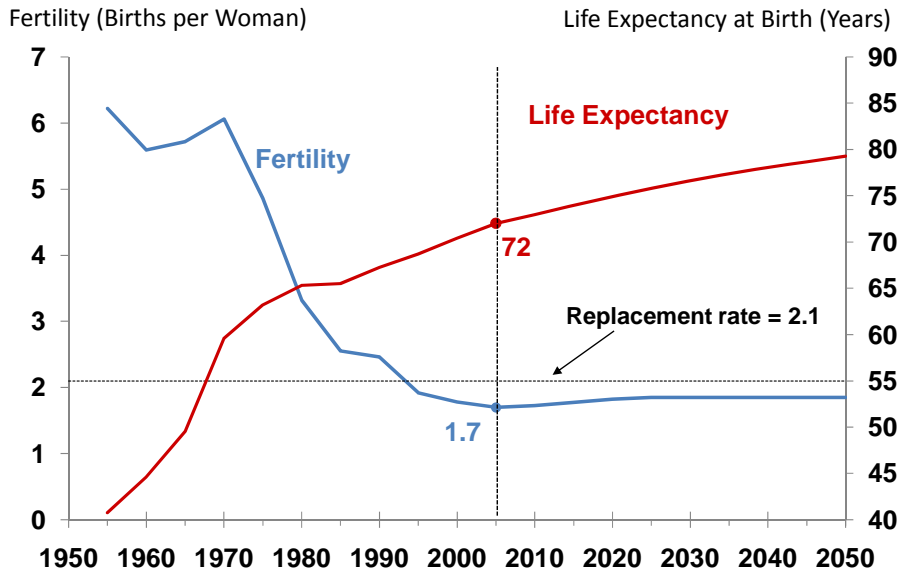
These histograms show population in millions by five-year age bracket. Males on left, females on right.
Source: UN World Population Prospects, 2006 Revisions, medium variant forecast

Because of its early and steep fertility decline, China will age sooner and faster than most other developing countries. China's workforce is aging and will start to shrink in 2015. Total population is projected to begin shrinking by 2030.

- China's steep drop in fertility from 6 births per woman in the 1950s to 1.7 in 2005, combined with a dramatic increase in life expectancy will lead to rapid aging of the population.
- The share of old people is rapidly increasing and is projected to increase from 8% in 2005 to 24% by 2050. Over the next 25 years, the number of old people (65+) will more than double, increasing from 100 million to 236 million by 2030. The number will triple to 334 million by 2050, when nearly 1 in 4 people will be 65+.
- China's working-age population will likely peak around 2015 at about 1 billion, with total population projected to peak around 2030.
- China's workforce will rapidly age; the number of young workers is already declining.
- Over the next 25 years, the population age 65+ will increase by 135% while the working-age population will increase by just 4.4%. Thus, the ratio of potential workers per retiree will fall from 9.2 to 4.1. By 2050 this support ratio is projected to be only 2.6.

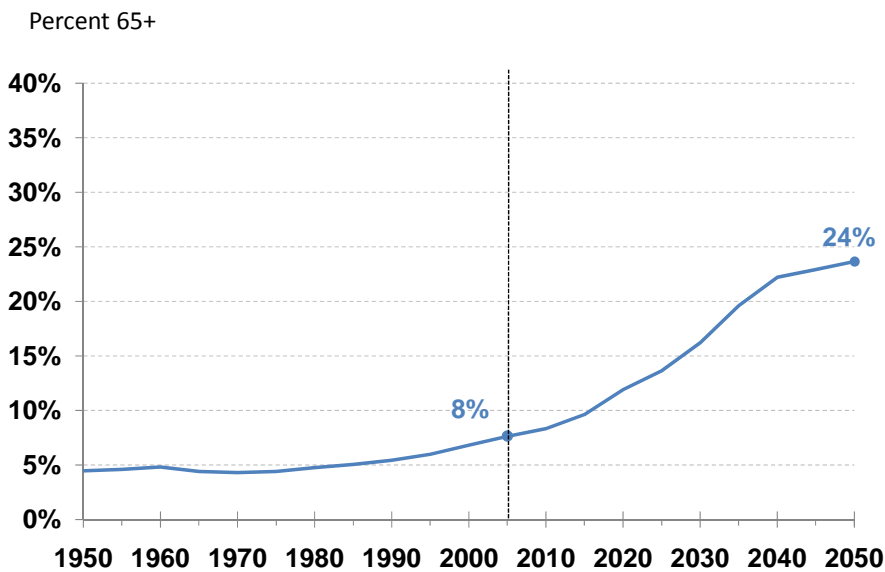
China: Aging Population

China's steep drop in fertility combined with a dramatic increase in life expectancy will produce rapid aging of the population.



Source: United Nations 2006 World Population Prospects medium variant forecast

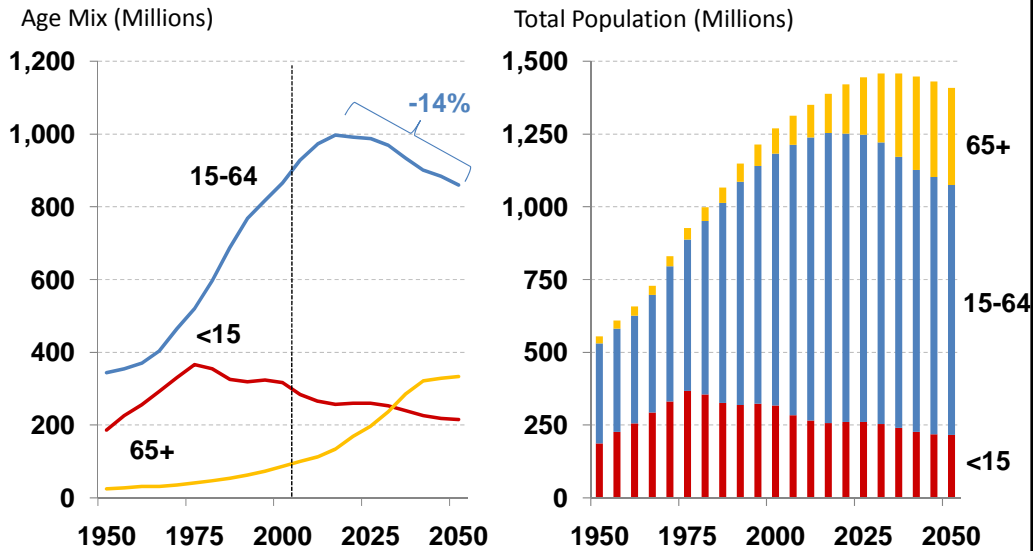
Aging will accelerate; by 2050, nearly 1 in 4 Chinese will be 65+.



Source: United Nations 2006 World Population Prospects medium variant forecast

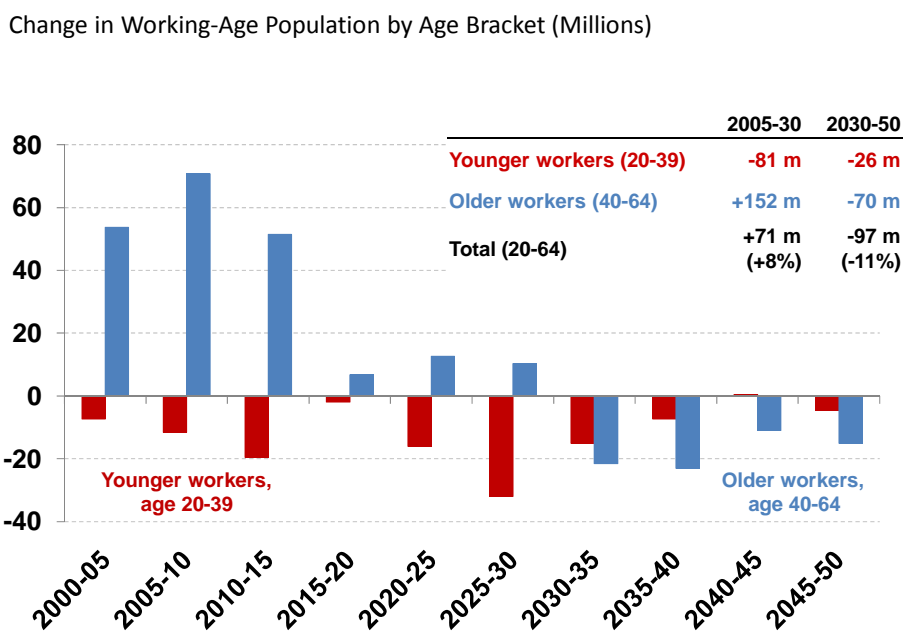
China: Changing Age Mix

China's workforce will likely peak around 2015, with total population projected to peak around 2030. The number of children continues to fall.



Note: Traditional UN definition of working age population is 15-64.
Source: United Nations 2006 World Population Prospects medium variant forecast

China's workforce will rapidly age; the number of young workers is already declining.

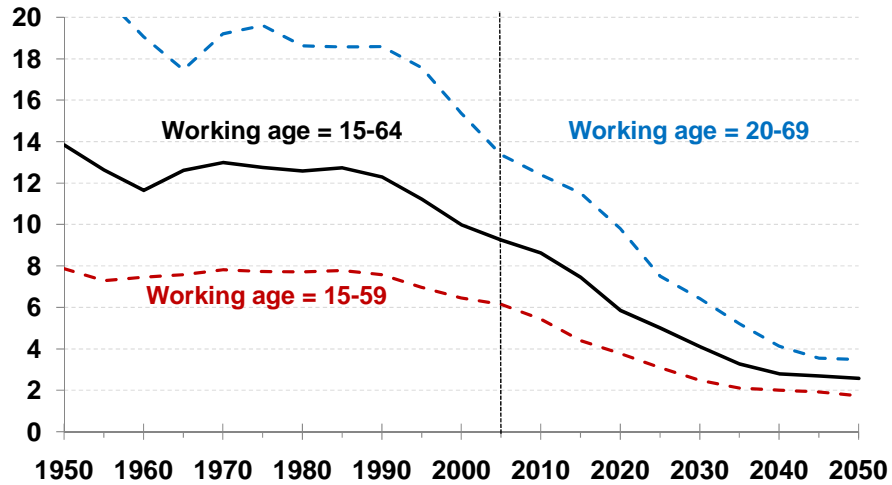


Source: United Nations 2006 World Population Prospects medium variant forecast

China: Workforce

Raising the working age in China would improve the potential support ratio and spread the growing retirement burden among more workers.

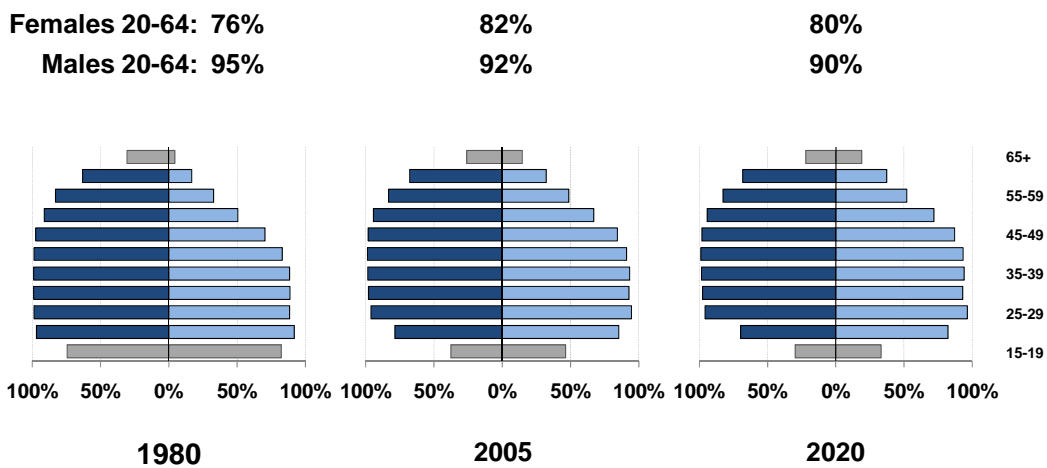
Ratio of Working-Age Population to Retirement-Age Population (alternative definitions)



Note: Traditional UN definition of working age population is 15-64
 Source: United Nations 2006 World Population Prospects medium variant forecast

Labor force participation rates are lowest among older Chinese women.

Economically Active Rate by Sex and Age (males on left, females on right)



Economically active rate = percent of total population engaged in production
 Source: ILO, Fifth Edition, revision 2008, 1980-2020

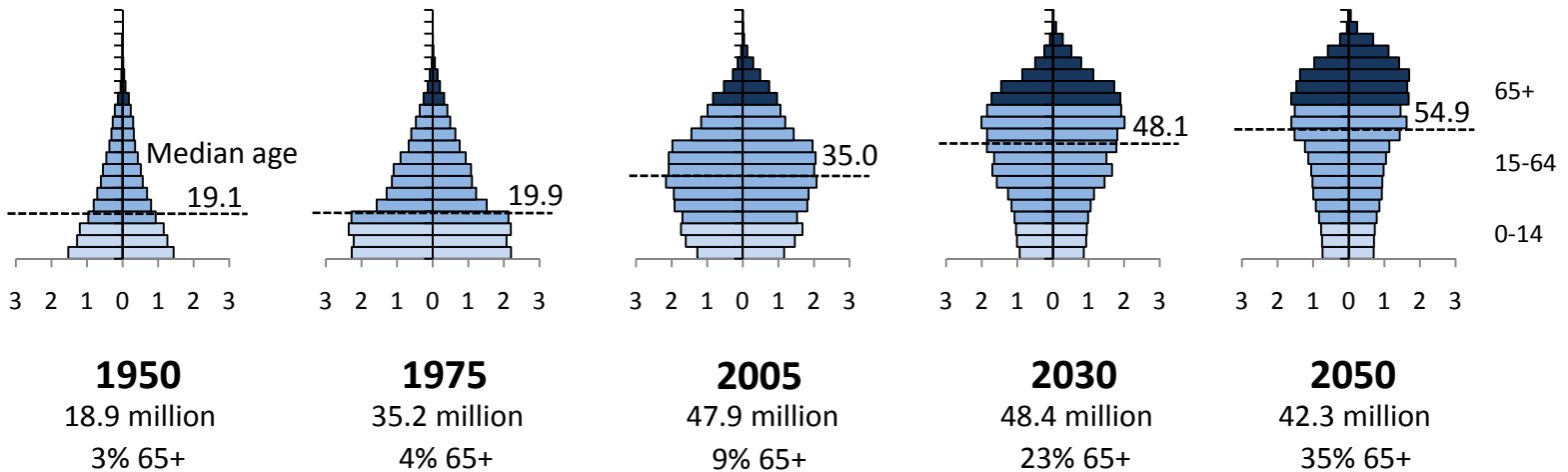
Demographic Reference

China	1950	1975	2005	2010	2020	2030	2050
Population (millions)							
Total	554.76	927.81	1312.98	1351.51	1421.26	1458.42	1408.85
<15	186.05	366.38	283.77	265.09	259.79	252.48	215.40
15-64	343.86	520.60	928.74	973.48	991.90	969.53	859.78
65+	24.85	40.83	100.46	112.94	169.57	236.41	333.67
65-79	23.29	35.73	85.06	93.46	141.02	194.81	230.65
80+	1.56	5.10	15.40	19.48	28.55	41.61	103.02
Share of Total Population (%)							
<15	33.5%	39.5%	21.6%	19.6%	18.3%	17.3%	15.3%
15-64	62.0%	56.1%	70.7%	72.0%	69.8%	66.5%	61.0%
65+	4.5%	4.4%	7.7%	8.4%	11.9%	16.2%	23.7%
65-79	4.2%	3.9%	6.5%	6.9%	9.9%	13.4%	16.4%
80+	0.3%	0.6%	1.2%	1.4%	2.0%	2.9%	7.3%
Support Ratios							
Working-Age to Retirement-Age	13.8	12.8	9.2	8.6	5.8	4.1	2.6
Working-Age to Dependent-Age	1.6	1.3	2.4	2.6	2.3	2.0	1.6
Median Age	23.9	20.6	32.5	34.9	37.9	41.3	45.0
Urbanization							
Percent Urban	13.0%	17.4%	40.4%	44.9%	53.2%	60.3%	72.9%
Urban Population (millions)	72.12	161.44	530.66	607.23	756.34	879.89	1027.29
Rural Population (millions)	482.64	766.37	782.32	744.28	664.92	578.53	381.55
5-Year Average (ending year)							
		1975	2005	2010	2020	2030	2050
Fertility Rate (births/woman)		4.86	1.70	1.73	1.83	1.85	1.85
Life Expectancy (years at birth)		63.2	72.0	73.0	74.9	76.6	79.3
Life Expectancy (males)		62.5	70.5	71.3	73.2	74.8	77.4
Life Expectancy (females)		63.9	73.7	74.8	76.9	78.6	81.3
Economically Active (percent)							
		1980	1990	2005	2010	2020	
Total Population (all ages)		63.2%	63.4%	75.6%	74.7%	71.8%	
Age:							
20-24		69.8%	70.6%	93.2%	92.8%	92.1%	
25-29		72.9%	73.8%	94.3%	94.3%	94.4%	
30-34		73.0%	73.7%	94.4%	94.5%	94.7%	
35-39		77.8%	78.9%	94.4%	94.6%	94.8%	
40-44		80.8%	83.6%	95.0%	95.4%	96.1%	
45-49		80.4%	81.4%	87.0%	87.6%	88.8%	
50-54		77.4%	80.7%	80.9%	81.8%	83.2%	
55-59		68.7%	69.2%	61.3%	62.1%	63.6%	
60-64		55.8%	55.5%	50.6%	51.3%	52.8%	
65+		26.3%	25.5%	17.1%	17.5%	18.4%	
Male		30.6%	32.7%	26.0%	24.2%	21.9%	
Female		4.5%	8.0%	14.5%	16.4%	19.0%	
20-64		85.8%	87.9%	87.4%	86.2%	85.2%	
Male		95.0%	94.0%	92.4%	91.2%	90.4%	
Female		75.8%	81.3%	82.0%	81.0%	79.7%	
Note: Economically active data from ILO, Fifth edition, revision 2008, 1980-2020							
Population Growth							
		1950-1975	1975-2005	2005-10	2010-30	2005-30	2030-50
Total:	Period Growth (%)	67.2%	41.5%	2.9%	7.9%	11.1%	-3.4%
	Avg annual growth (% per year)	2.1%	1.2%	0.6%	0.4%	0.4%	-0.2%
Working-Age:	Period Growth (%)	51.4%	78.4%	4.8%	-0.4%	4.4%	-11.3%
(15-64)	Avg annual growth (% per year)	1.7%	1.9%	0.9%	0.0%	0.2%	-0.6%
Retirement-Age:	Period Growth (%)	64.3%	146.1%	12.4%	109.3%	135.3%	41.1%
(65+)	Avg annual growth (% per year)	2.0%	3.0%	2.4%	3.8%	3.5%	1.7%

Source: United Nations, *World Population Prospects, The 2006 Revision*, medium variant forecast; except where noted.

Critical Demographics

South Korea



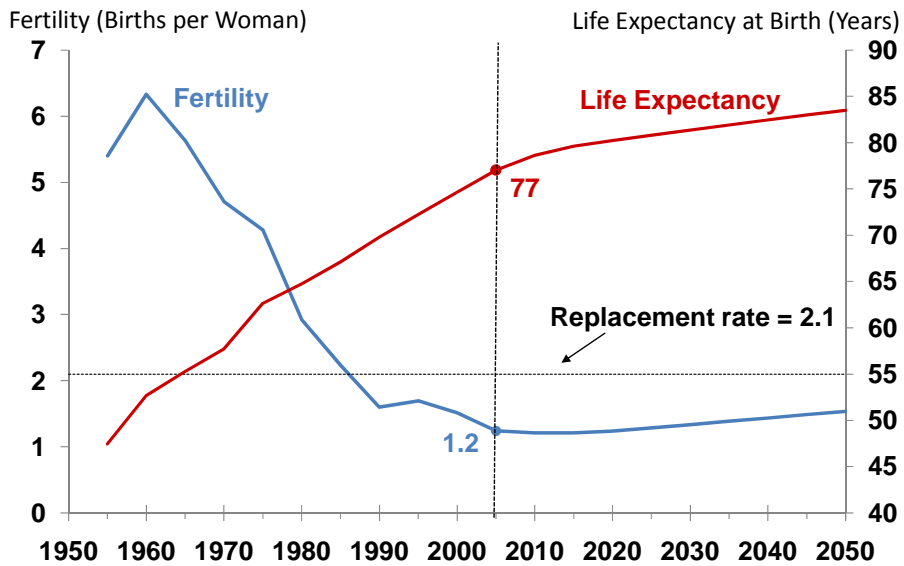
These histograms show population in millions by five-year age bracket. Males on left, females on right.
Source: UN World Population Prospects, 2006 Revisions, medium variant forecast

South Korea is already rapidly aging, and beginning in 2020 the percent 65+ will increase even more sharply. By 2020 total population will peak, seniors will outnumber children, and the working-age population will be declining.

- South Korea's dramatic population aging is driven by an increase in life expectancy and the swift decline in fertility, which fell from 6 children per woman in the 1960s to 1.2 in 2005, one of the world's lowest rates.
- By 2050 South Korea will be the world's second oldest population with 35% of its population 65+.
- The South Korean working-age population 15-64 is growing but aging and will start to shrink rapidly in 2015. From 2005 to 2030 the working-age population is projected to decline by 9%; this will accelerate from 2030 to 2050 when the projected decline is 26%.
- There are currently 7.6 potential workers per retiree; this ratio is projected to fall to 2.8 by 2030 and 1.6 by 2050.
- South Korean female workforce participation rates have risen significantly in recent decades, though they still remain low by developed world standards. In 2005, only 59 percent of the female population ages 20-64 were economically active, compared with 64 percent in Japan and 72 percent in the US.

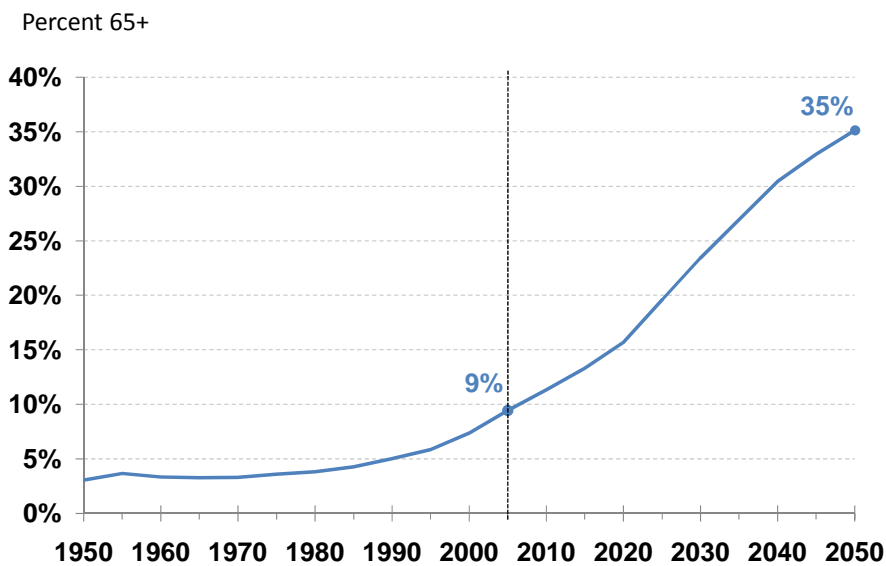
South Korea: Aging Population

Rapid changes in South Korea's fertility and life expectancy over the last 50 years combine to drive dramatic population aging.



Source: United Nations 2006 World Population Prospects medium variant forecast

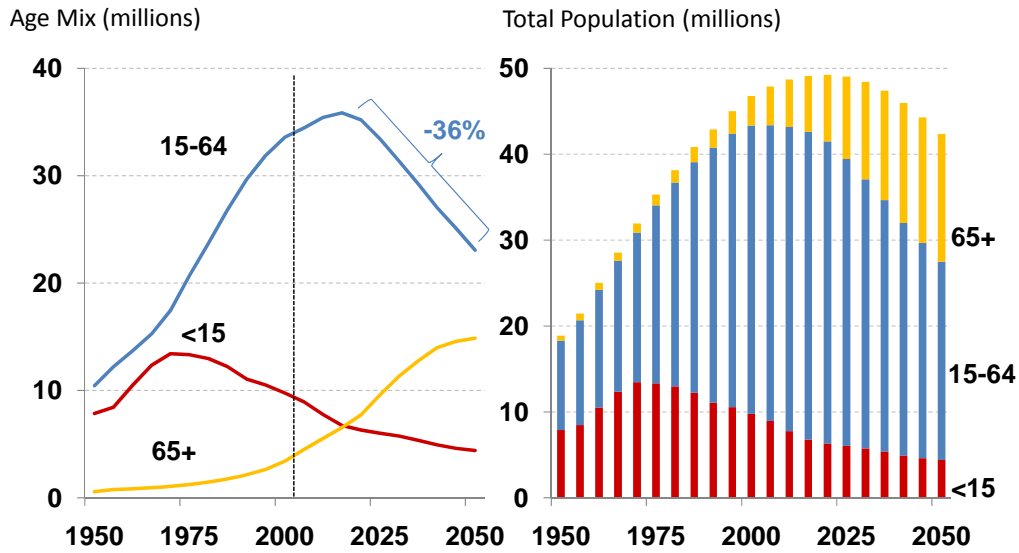
South Korea is already aging rapidly; beginning in 2020, the percent 65+ will increase even more sharply.



Source: United Nations 2006 World Population Prospects medium variant forecast

South Korea: Changing Age Mix

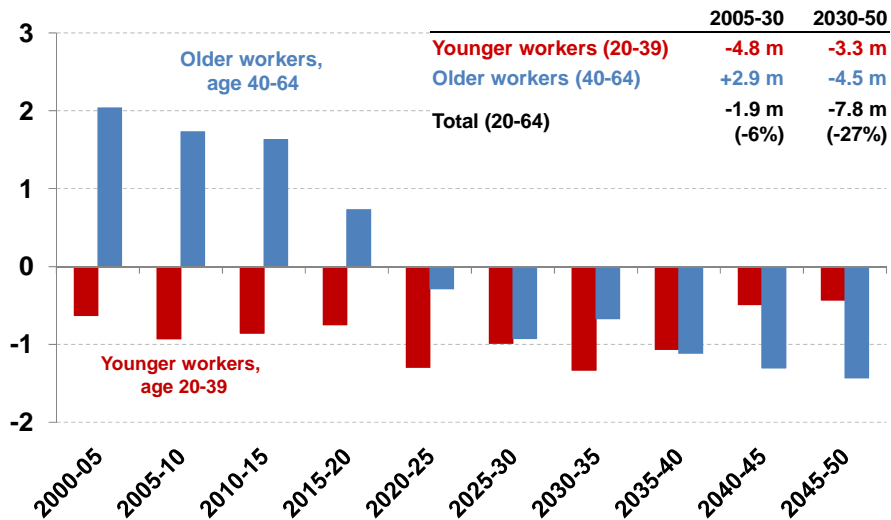
By 2020 South Korean population will peak, seniors will outnumber children, and working-age population will be declining.



Note: Traditional UN definition of working age population is 15-64
 Source: United Nations 2006 World Population Prospects medium variant forecast

South Korea's workforce will rapidly age as the number of potential young workers declines.

Change in Working-Age Population by Age Bracket, in millions

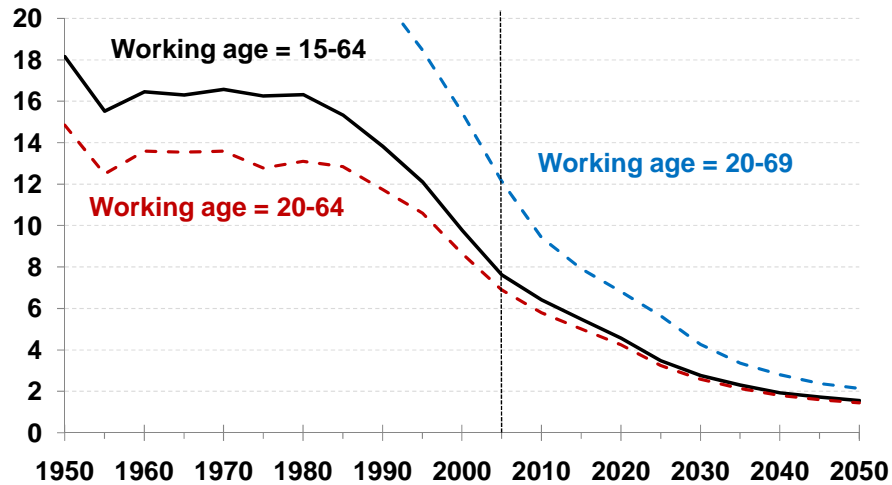


Source: United Nations 2006 World Population Prospects medium variant forecast

South Korea: Workforce

Expanding the working age in South Korea would increase the potential support ratio, spreading the retiree burden among more workers.

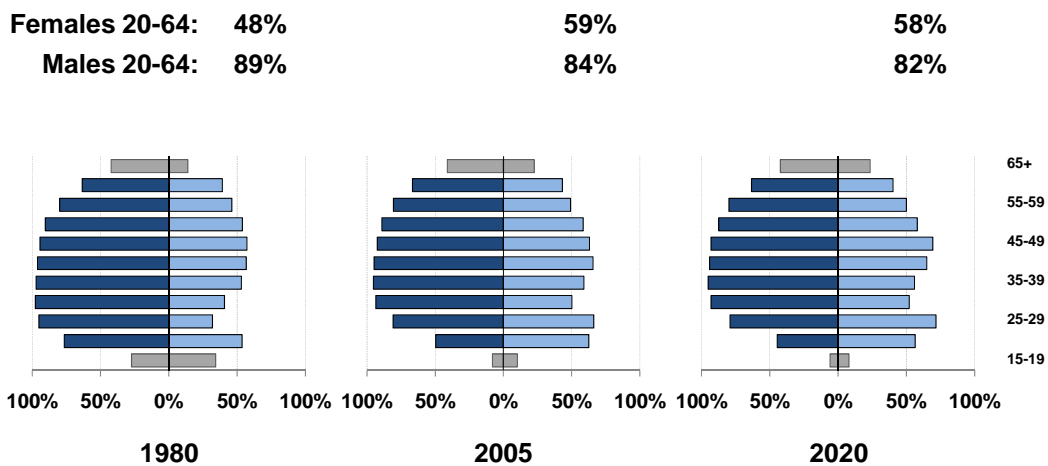
Ratio of Working-Age Population to Retirement-Age Population
(alternative definitions)



Note: Traditional UN definition of working age population is 15-64
Source: United Nations 2006 medium variant forecast

Labor force participation rates among South Korean women are still significantly lower than men's.

Economically Active Rate by Sex and Age (males on left, females on right)



Economically active rate = percent of total population engaged in production.
Source: ILO, Fifth Edition, revision 2008, 1980-2020

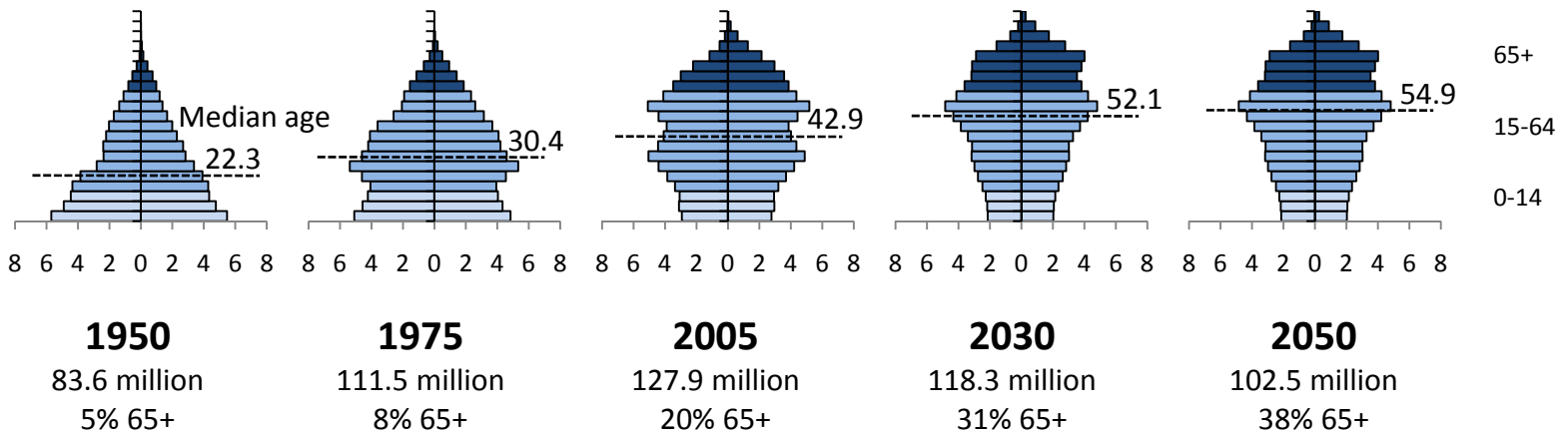
Demographic Reference

South Korea	1950	1975	2005	2010	2020	2030	2050
Population (millions)							
Total	18.86	35.28	47.87	48.67	49.22	48.41	42.33
<15	7.86	13.32	8.92	7.74	6.29	5.73	4.40
15-64	10.43	20.69	34.43	35.42	35.20	31.33	23.05
65+	0.57	1.27	4.52	5.52	7.73	11.34	14.87
65-79	0.53	1.14	3.85	4.60	5.95	8.80	9.48
80+	0.04	0.13	0.67	0.92	1.78	2.54	5.39
Share of Total Population (%)							
<15	41.7%	37.7%	18.6%	15.9%	12.8%	11.8%	10.4%
15-64	55.3%	58.6%	71.9%	72.8%	71.5%	64.7%	54.5%
65+	3.0%	3.6%	9.4%	11.3%	15.7%	23.4%	35.1%
65-79	2.8%	3.2%	8.0%	9.4%	12.1%	18.2%	22.4%
80+	0.2%	0.4%	1.4%	1.9%	3.6%	5.3%	12.7%
Support Ratios							
Working-Age to Retirement-Age	18.2	16.2	7.6	6.4	4.6	2.8	1.6
Working-Age to Dependent-Age	1.2	1.4	2.6	2.7	2.5	1.8	1.2
Median Age	19.2	19.9	35.0	38.0	43.4	48.1	54.9
Urbanization							
Percent Urban	21.4%	48.0%	80.8%	81.9%	84.2%	86.3%	89.8%
Urban Population (millions)	4.03	16.95	38.67	39.88	41.43	41.76	38.00
Rural Population (millions)	14.83	18.33	9.20	8.79	7.79	6.65	4.33
5-Year Average (ending year)							
		1975	2005	2010	2020	2030	2050
Fertility Rate (births/woman)		4.28	1.24	1.21	1.24	1.34	1.54
Life Expectancy (years at birth)		62.6	77.0	78.6	80.2	81.4	83.5
Life Expectancy (males)		59.3	73.5	75.0	76.6	77.8	79.9
Life Expectancy (females)		66.1	80.6	82.2	83.8	85.0	87.1
Economically Active (percent)							
	1980	1990	2005	2010	2020		
Total Population (all ages)	63.2%	63.4%	61.4%	60.3%	59.4%		
Age:							
20-24	69.8%	70.6%	59.3%	60.2%	60.5%		
25-29	72.9%	73.8%	63.3%	63.6%	65.4%		
30-34	73.0%	73.7%	70.8%	72.0%	72.8%		
35-39	77.8%	78.9%	75.4%	76.0%	77.4%		
40-44	80.8%	83.6%	80.3%	79.7%	79.8%		
45-49	80.4%	81.4%	76.5%	76.7%	78.3%		
50-54	77.4%	80.7%	73.9%	73.2%	72.8%		
55-59	68.7%	69.2%	60.8%	60.0%	63.3%		
60-64	55.8%	55.5%	54.6%	52.4%	51.5%		
65+	26.3%	25.5%	25.2%	25.4%	25.8%		
Male	42.2%	39.3%	41.2%	41.8%	56.4%		
Female	13.9%	18.4%	22.5%	23.0%	23.3%		
20-64	68.7%	71.1%	71.4%	71.0%	69.9%		
Male	89.2%	86.9%	83.9%	83.4%	81.9%		
Female	48.0%	55.1%	58.6%	58.2%	57.6%		
Note: Economically active data from ILO, Fifth edition, revision 2008, 1980-2020							
Population Growth							
	1950-1975	1975-2005	2005-10	2010-30	2005-30	2030-50	
Total:							
Period Growth (%)	87.1%	35.7%	1.7%	-0.5%	1.1%	-12.6%	
Avg annual growth (% per year)	2.5%	1.0%	0.3%	0.0%	0.0%	-0.7%	
Working-Age:							
(15-64) Period Growth (%)	98.4%	66.4%	2.9%	-11.5%	-9.0%	-26.4%	
Avg annual growth (% per year)	2.8%	1.7%	0.6%	-0.6%	-0.4%	-1.5%	
Retirement-Age:							
(65+) Period Growth (%)	121.7%	254.9%	22.1%	105.6%	151.0%	31.1%	
Avg annual growth (% per year)	3.2%	4.3%	4.1%	3.7%	3.7%	1.4%	

Source: United Nations, *World Population Prospects, The 2006 Revision*, medium variant forecast; except where noted.

Critical Demographics

Japan



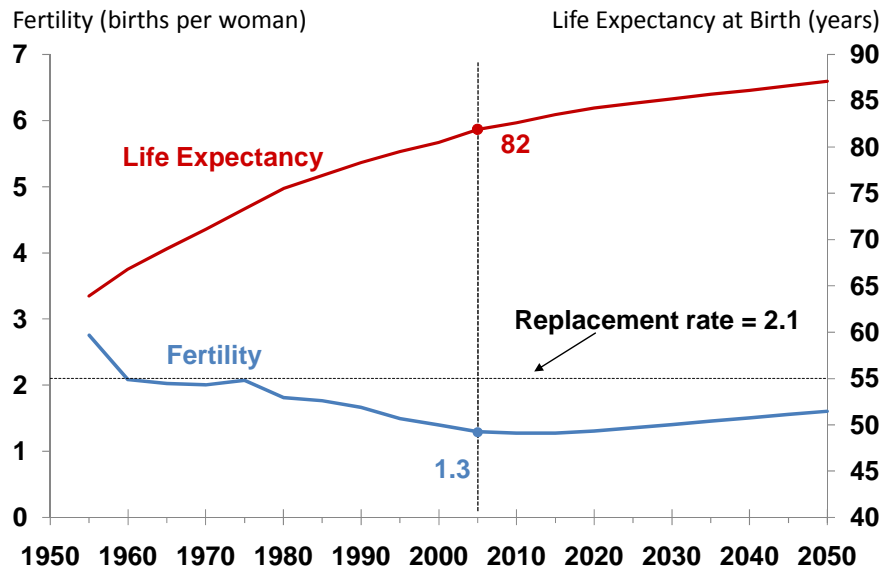
These histograms show population in millions by five-year age bracket. Males on left, females on right.
Source: UN World Population Prospects, 2006 Revisions, medium variant forecasts

Japan's shrinking population is quickly becoming top-heavy with older people. Seniors already outnumber children and the working-age population has been declining since the mid-1990s.

- Japan's below-replacement rate fertility has continued to fall since the 1970s, while life expectancy has steadily increased. The result is a rapid increase in the share of people 65 and older, from 5% in 1950 to 20% in 2005. By 2050 nearly 38% of the population will be 65+ and half the population will be age 55 or over.
- Japan's total population began to shrink in 2005 and is projected to decline by 7.5%, or 10 million, by 2030.
- The working-age population has been declining since the mid-nineties and is expected to decline 18.5%, or 16 million, between 2005 and 2030.
- There are currently 3.4 potential workers per retiree; this ratio will fall to 1.9 by 2030.
- Japanese female workforce participation rates have risen significantly in recent decades, though they remain low compared to men. In 2005, 64 percent of the female population ages 20-64 were economically active, compared with 90 percent of the male population in the same age bracket.

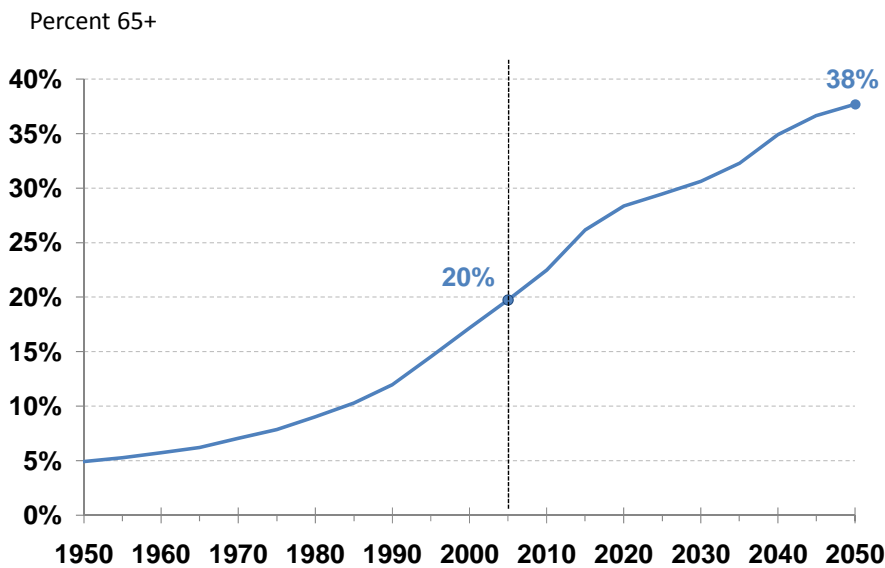
Japan: Aging Population

Japan's below-replacement rate fertility has continued to fall, while life expectancy has steadily increased. The result is rapid aging.



Source: United Nations 2006 World Population Prospects medium variant forecast

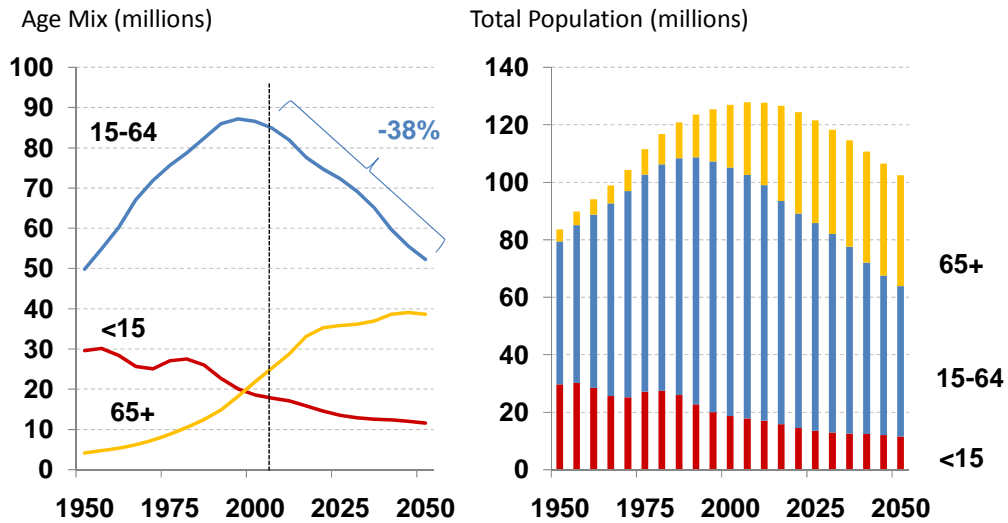
The share of old people has been rapidly increasing, keeping Japan the world's oldest country. By 2035 more than 1 in 3 people will be 65+.



Source: United Nations 2006 World Population Prospects medium variant forecast

Japan: Changing Age Mix

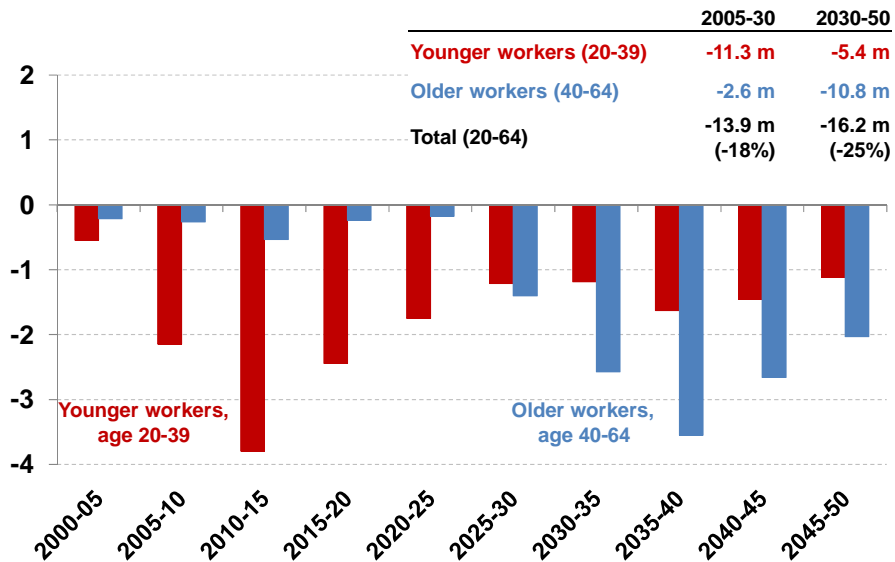
Japan's working-age population has been declining since 1995. There are already more seniors than children.



Note: Traditional UN definition of working age population is 15-64
Source: United Nations 2006 World Population Prospects medium variant forecast

Japan's working-age population (20-64) will shrink by 38%, or 30 million, over the next 40 years.

Change in Working-Age Population by Age Bracket, in millions

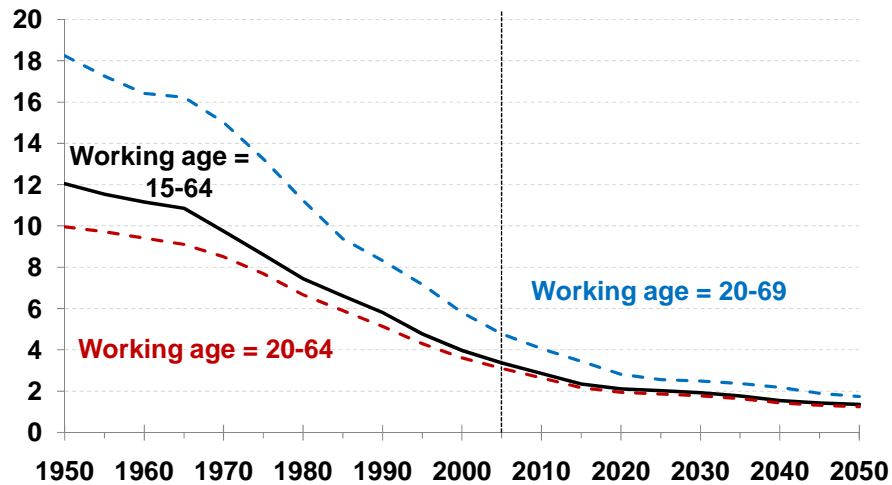


Source: United Nations 2006 World Population Prospects medium variant forecast

Japan: Workforce

Expanding the working age in Japan would only slightly improve the potential support ratio, spreading the retirement burden among more workers.

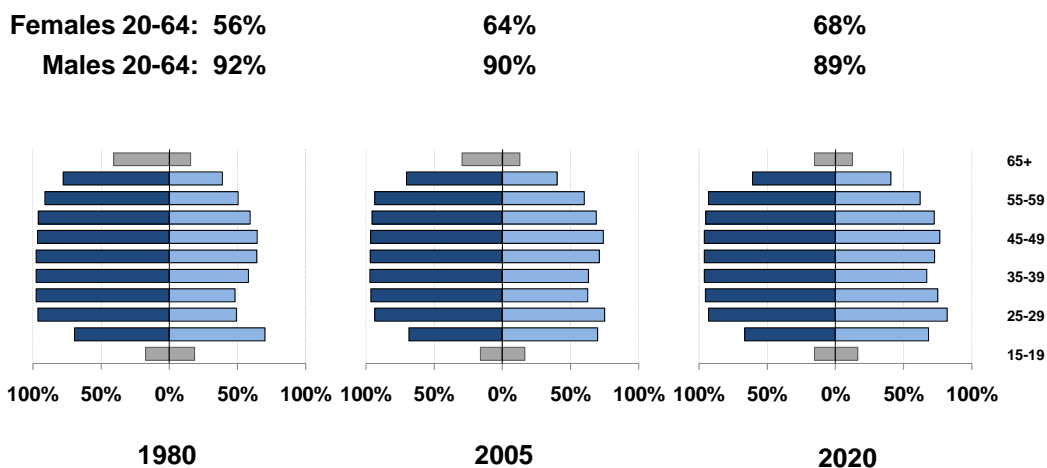
Ratio of Working-Age Population to Retirement-Age Population (alternative definitions)



Note: Traditional UN definition of working age population is 15-64
Source: United Nations 2006 World Population Prospects medium variant forecast

Labor force participation rates among Japanese women are still significantly lower than men's.

Economically Active Rate by Sex and Age (males on left, females on right)



Economically active rate = percent of total population engaged in production.
Source: ILO, Fifth Edition, revision 2008, 1980-2020

Demographic Reference

Japan	1950	1975	2005	2010	2020	2030	2050
Population (millions)							
Total	83.63	111.52	127.90	127.76	124.49	118.25	102.51
<15	29.64	27.11	17.76	17.07	14.53	12.83	11.55
15-64	49.85	75.63	84.88	81.94	74.64	69.21	52.33
65+	4.14	8.79	25.26	28.75	35.32	36.21	38.63
65-79	3.76	7.60	19.08	20.75	23.96	21.09	22.79
80+	0.38	1.19	6.18	7.99	11.36	15.12	15.84
Share of Total Population (%)							
<15	35.4%	24.3%	13.9%	13.4%	11.7%	10.8%	11.3%
15-64	59.6%	67.8%	66.4%	64.1%	60.0%	58.5%	51.1%
65+	4.9%	7.9%	19.7%	22.5%	28.4%	30.6%	37.7%
65-79	4.5%	6.8%	14.9%	16.2%	19.3%	17.8%	22.2%
80+	0.5%	1.1%	4.8%	6.3%	9.1%	12.8%	15.5%
Support Ratios							
Working-Age to Retirement-Age	12.1	8.6	3.4	2.9	2.1	1.9	1.4
Working-Age to Dependent-Age	1.5	2.1	2.0	1.8	1.5	1.4	1.0
Median Age	22.3	30.4	42.9	44.6	48.5	52.1	54.9
Urbanization							
Percent Urban	34.9%	56.8%	65.8%	66.8%	69.8%	73.7%	80.7%
Urban Population (thousands)	29.15	63.37	84.36	85.39	86.42	86.30	82.09
Rural Population (thousands)	54.48	48.15	43.53	42.37	38.07	31.95	20.43
5-Year Average (ending year)							
		1975	2005	2010	2020	2030	2050
Fertility Rate (births/woman)		2.07	1.29	1.27	1.30	1.40	1.60
Life Expectancy (years at birth)		73.3	81.9	82.6	84.2	85.2	87.1
Life Expectancy (males)		70.6	78.3	79.0	80.5	81.5	83.3
Life Expectancy (females)		75.9	85.2	86.1	87.9	88.9	90.9
Economically Active (percent)							
		1980	1990	2005	2010	2020	
Total Population (all ages)		63.2%	63.4%	60.6%	58.2%	54.6%	
Age:	20-24	69.8%	70.6%	71.0%	72.3%	72.3%	
	25-29	72.9%	73.8%	75.1%	75.4%	77.4%	
	30-34	73.0%	73.7%	74.0%	73.6%	74.1%	
	35-39	77.8%	78.9%	78.9%	79.3%	79.5%	
	40-44	80.8%	83.6%	84.1%	84.0%	84.6%	
	45-49	80.4%	81.4%	82.4%	82.3%	83.2%	
	50-54	77.4%	80.7%	82.2%	82.6%	83.7%	
	55-59	68.7%	69.2%	70.1%	69.8%	70.7%	
	60-64	55.8%	55.5%	54.8%	53.3%	50.6%	
	65+	26.3%	25.5%	24.3%	23.8%	23.8%	
	Male	41.0%	36.5%	29.4%	23.1%	15.5%	
	Female	15.6%	16.2%	12.7%	12.6%	12.6%	
	20-64	74.1%	77.0%	77.5%	77.2%	78.8%	
	Male	92.3%	91.8%	90.4%	89.1%	88.9%	
	Female	56.3%	62.1%	64.5%	65.1%	68.5%	
Note: Economically active data from ILO, Fifth edition, revision 2008, 1980-2020							
Population Growth							
		1950-1975	1975-2005	2005-10	2010-30	2005-30	2030-50
Total:	Period Growth (%)	33.4%	14.7%	-0.1%	-7.4%	-7.5%	-13.3%
	Avg annual growth (% per year)	1.2%	0.5%	0.0%	-0.4%	-0.3%	-0.7%
Working-Age:	Period Growth (%)	51.7%	12.2%	-3.5%	-15.5%	-18.5%	-24.4%
(15-64)	Avg annual growth (% per year)	1.7%	0.4%	-0.7%	-0.8%	-0.8%	-1.4%
Retirement-Age:	Period Growth (%)	112.6%	187.3%	13.8%	26.0%	43.4%	6.7%
(65+)	Avg annual growth (% per year)	3.1%	3.6%	2.6%	1.2%	1.5%	0.3%

Source: United Nations, *World Population Prospects, The 2006 Revision*, medium variant forecast; except where noted.



Global Population Age Shifts directly affect the major global and national issues of today: economic prosperity, social well-being, and national security. We know the world is getting older. What's important is that different countries are aging at different speeds and in different ways. The "developed" world is steadily graying, and in some cases, workforces and even total populations are actually shrinking. In the "developing" world there are some startling changes in store over the next 20 to 40 years. Some countries will age with unprecedented speed, while others will increase their proportion of young adults dangerously quickly. These often surprising developments present both major challenges and real opportunities.

The Global Aging Program at the Stanford Center on Longevity focuses on the economic and political implications of longevity. The program specifically addresses the risks and opportunities of Population Age Shifts around the world. Understanding the implications of these Population Age Shifts will be critical for effective policy making. For Congress and the Obama administration, failing to look at policy decisions through this "lens" of Population Age Shifts would result in choices made with incomplete information.

The Stanford Center on Longevity (SCL) seeks to transform the culture of human aging using science and technology. Working as a catalyst for change, the Center identifies challenges associated with increased life expectancy, supports scientific and technological research concerning those challenges, and coordinates efforts among researchers, policymakers, entrepreneurs, and the media to find effective solutions. SCL was founded in 2006 by **Professor Laura Carstensen** and received its initial funding from Richard Rainwater. The SCL Advisory Council includes George Shultz, former U.S. Secretary of State, and Jack Rowe, former Chairman and CEO of Aetna.

Adele Hayutin, Ph.D., Senior Research Scholar and Director of SCL's Global Aging Program, is a leader in the field of comparative international demographics and population aging. Dr. Hayutin combines broad knowledge of the underlying data with the ability to translate that data into practical, easy to understand language and implications. She has developed a comparative international perspective that highlights surprising demographic differences across countries and illustrates the unexpected speed of critical demographic changes. Previously she was director of research and chief economist of the Fremont Group (formerly Bechtel Investments) where she focused on issues and trends affecting business investment strategy. Dr. Hayutin received a BA from Wellesley College and a Master's in Public Policy and a Ph.D. from the University of California at Berkeley.