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ASIA'S DEVELOPMENT CHALLENGES

The Asian Century : Plausible But Not Pre-ordained

…a five lecture series

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Distinguished Fellow, NCAER

April 28, 2015

LECTURE 2: DEMOGRAPHICS AND THE IMPERATIVES OF PRODUCTIVITY ENHANCING AND JOB CREATING GROWTH

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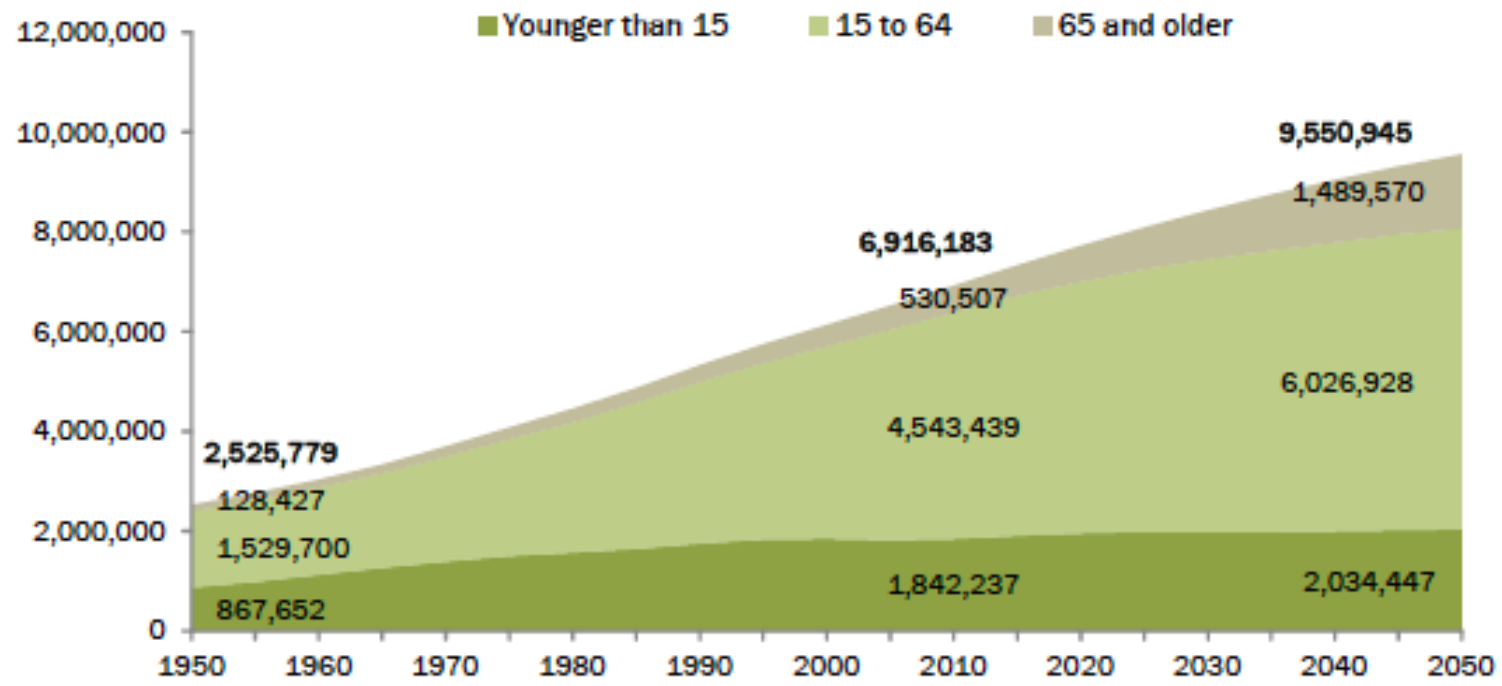
"Demographics is Destiny"

Auguste Comte

LECTURE 2: Demographics and the Imperatives of Productivity Enhancing and Job Creating Growth

Estimates of the Global Population, by Age, 1950 to 2050

Thousands



Source: United Nations, Department of Economic and Social Affairs, *World Population Prospects: 2012 Revision*, June 2013, http://esa.un.org/unpd/wpp/index.htm

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Distribution of the Global Population, by Age, 1950, 2010 and 2050

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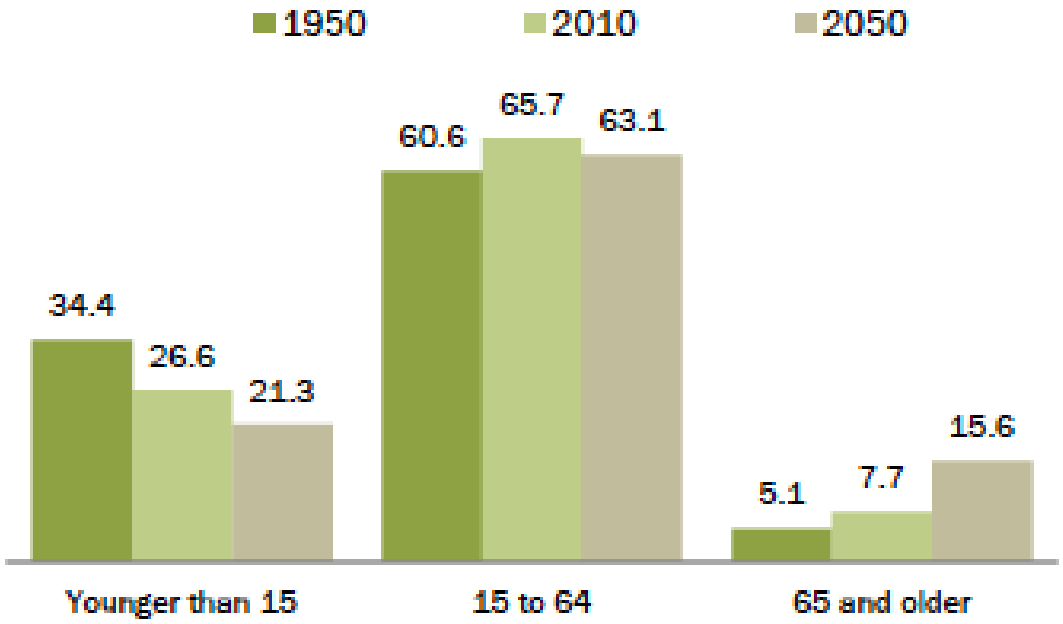

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Regional Distribution of the Global Population, 2010 and 2050

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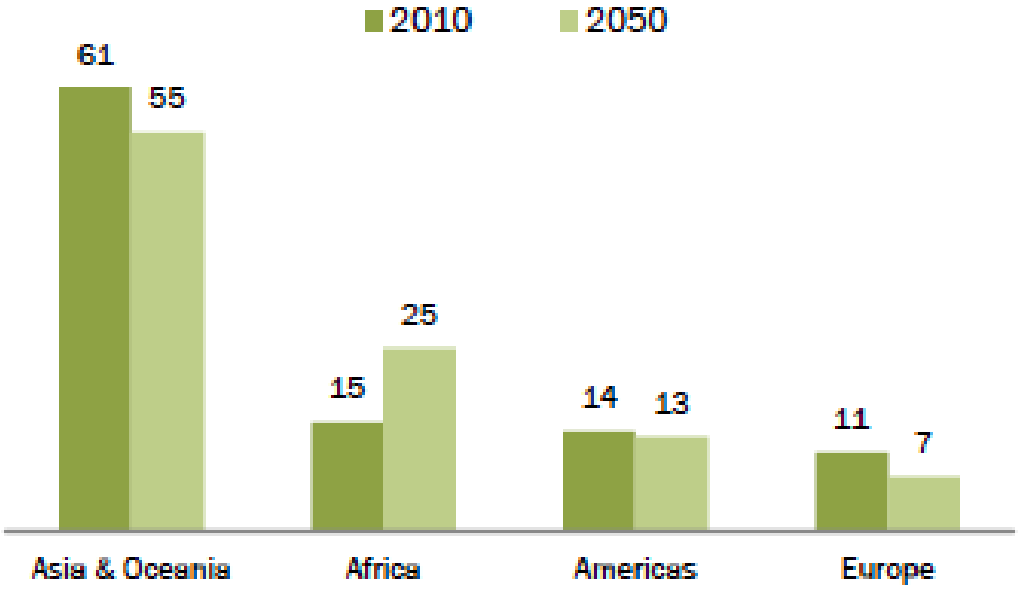

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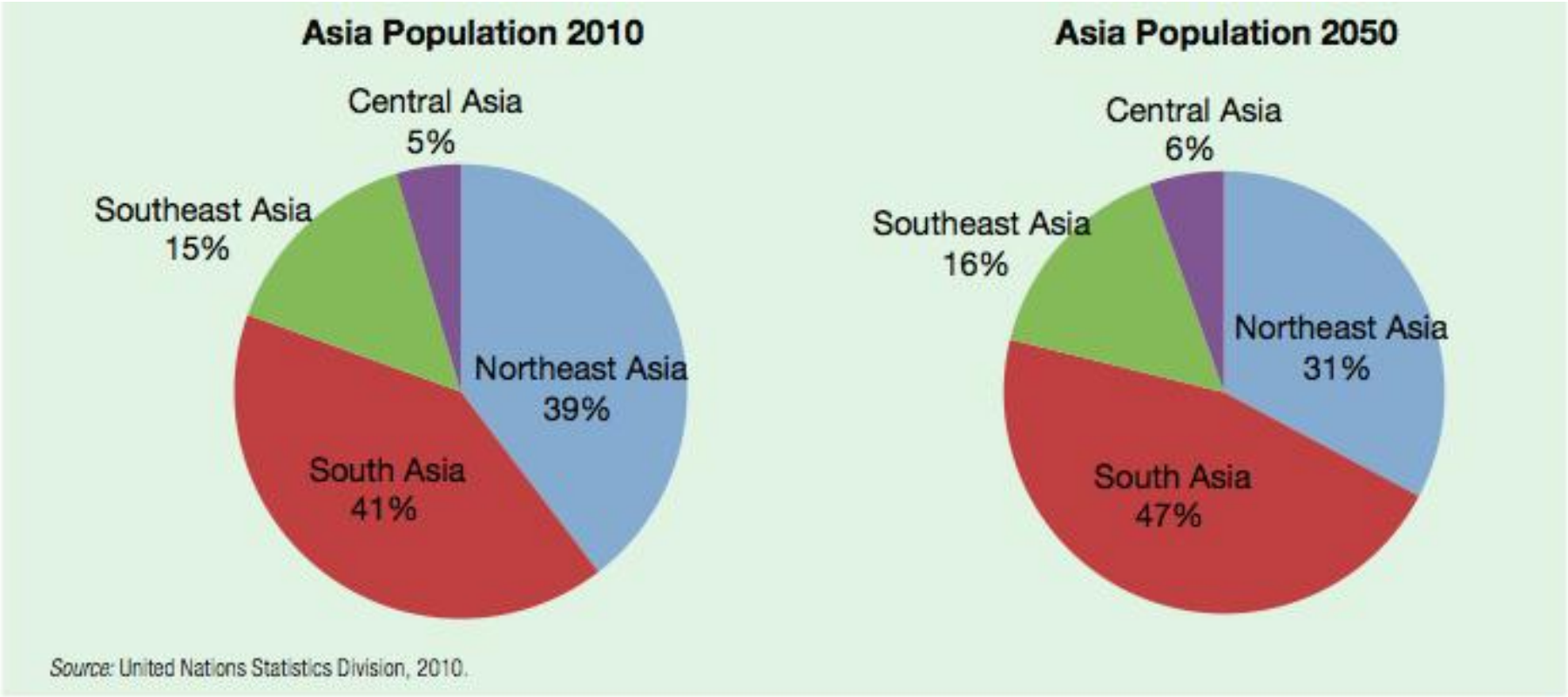
Population changes in Asia's subregions, 2010 vs. 2050



By 2050, Asia will constitute about 52 percent of the global population, down from its 57 percent share in 2010, but with slightly over 820 million more people than today.

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Population changes in Asia's subregions, 2010 vs. 2050

Population (in millions)	2010	Projected 2050	Change in population (millions)	change (%)
Asia	3,933	4,755	822	20.9
Japan	127	109	-18	-14.2
Republic of Korea	48	47	-1	-2.4
PRC	1,341	1,296	-45	-3.4
Viet Nam	88	104	16	18.3
Indonesia	240	293	54	22.3
India	1225	1692	467	38.2
Pakistan	174	275	101	58.3
Afghanistan	31	76	45	142.7

Source: UN Statistics Division, 2011.

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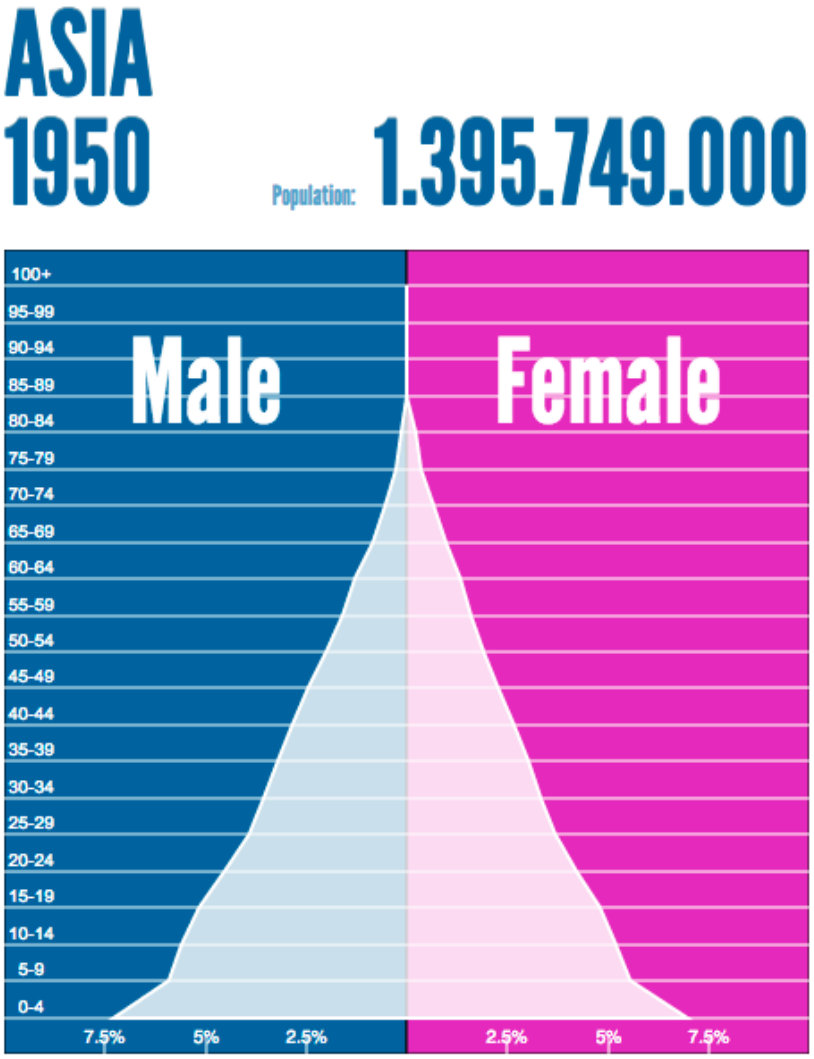

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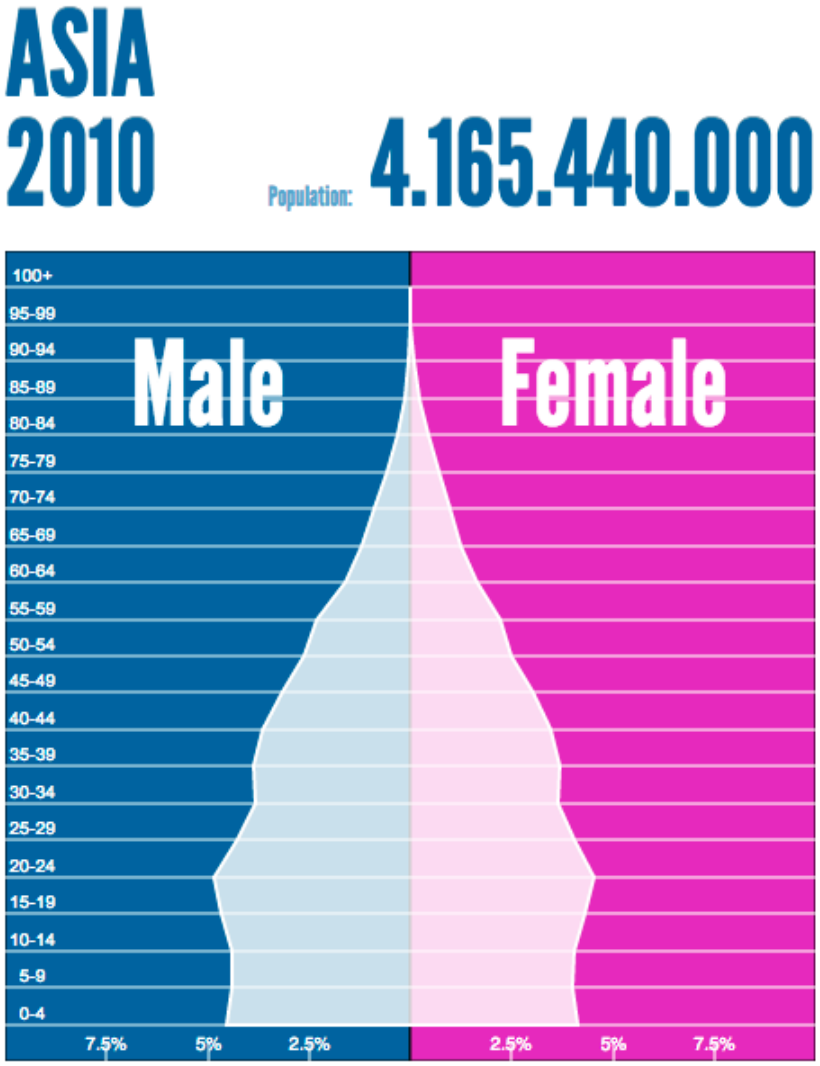

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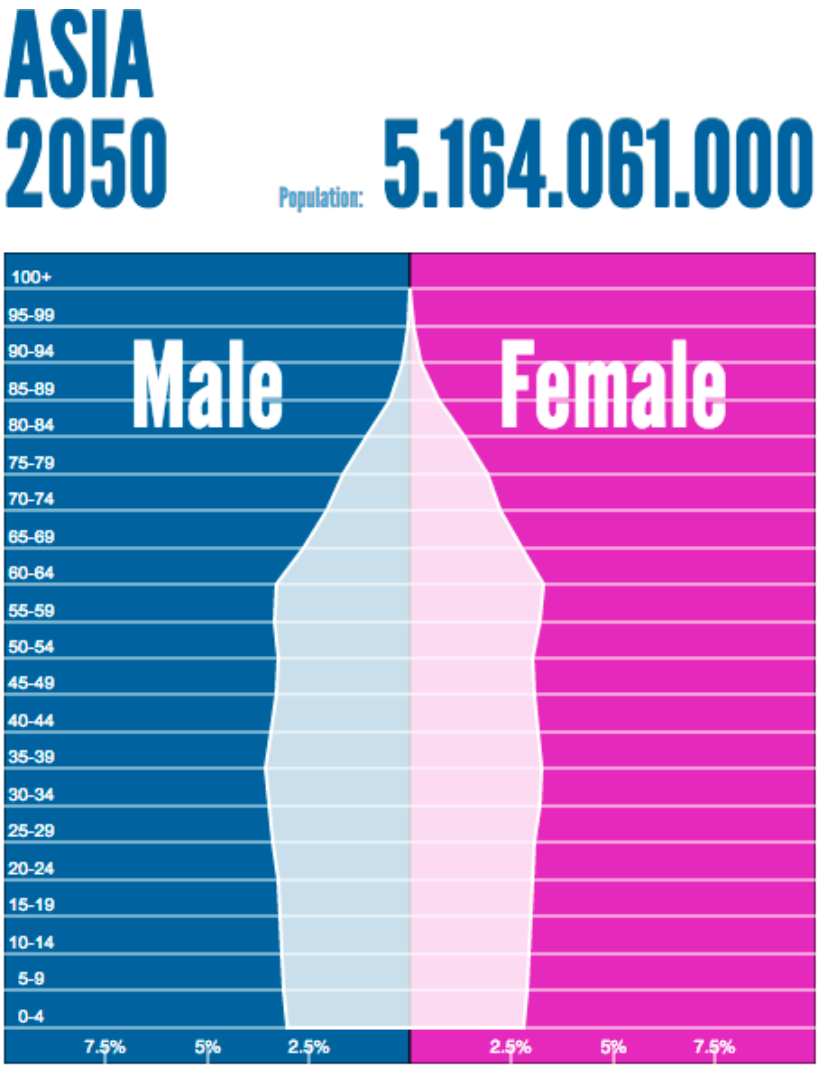

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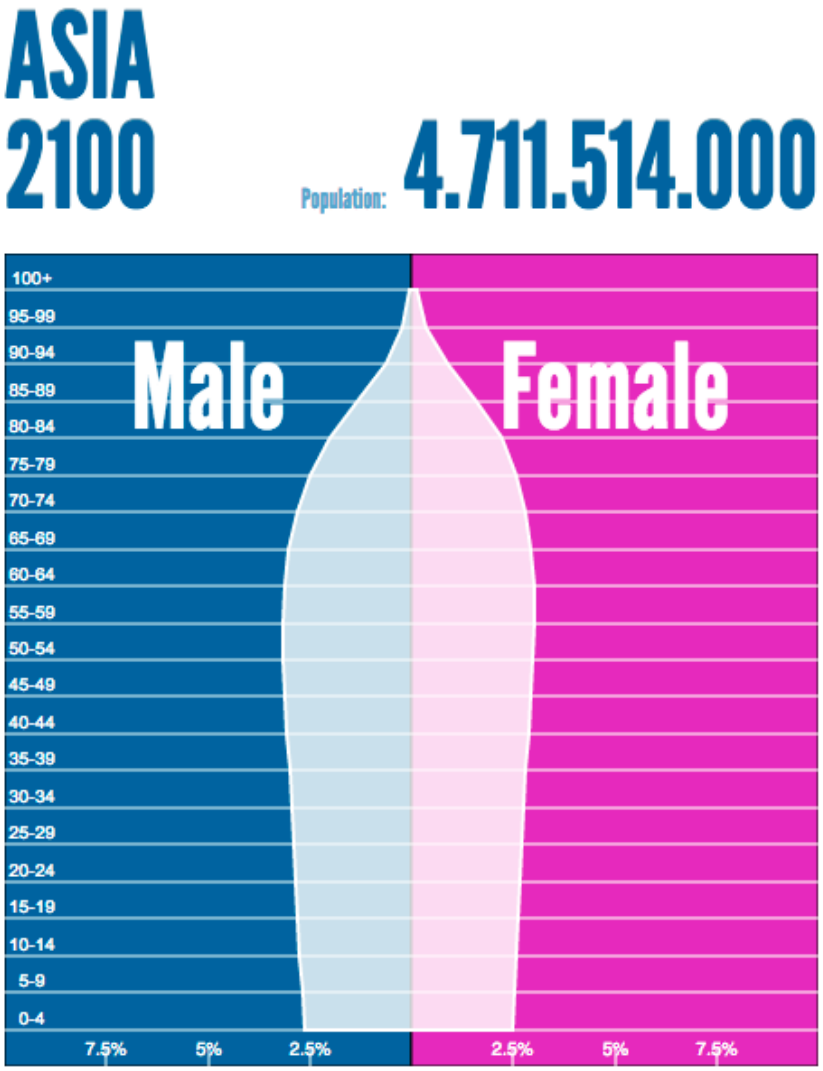

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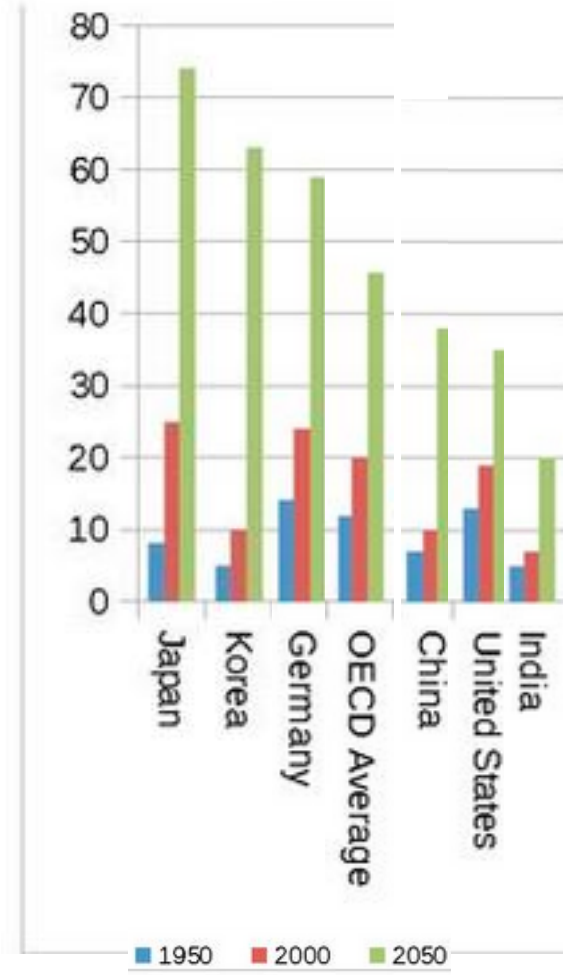
The "old-age dependency ratio" set to double by 2050

Population aged 65 years and over per 100 persons aged 15-64 years, 1950, 2000 and 2050



Greying of Asia

Projected growth of Asia's elderly population (number of people, age 65 and above, in millions)

	2010	2020	2030	2040	2050	% increase 2010–2050
Northeast Asia	147	215	286	380	395	168
South Asia	78	110	160	221	298	284
Southeast Asia	33	48	76	107	137	312
Central Asia	9	12	19	26	38	312

Source: UN Statistics Division, 2011.

Asia is greying at different speeds

- Aging East Asia; young South and Central Asia.
- Need for Productivity Enhancements in aging, declining populations
- Job creating growth in younger, increasing populations

Asia's 3-speed aging

Asia's differential-speed demographic inflection years

	Total population	Working age population
Speed 1: Old Asia		
Japan	2009	1997
Republic of Korea	2026	2018
PRC	2029	2018
Speed 2: Young Asia		
Thailand	2033	2022
Viet Nam	2045	2035
Indonesia	Post 2050	2038
Bangladesh	Post 2050	2044
India	Post 2050	Post 2050
Speed 3: Very Young Asia		
Pakistan	Post 2050	Post 2050
Afghanistan	Post 2050	Post 2050

Source: Centennial Group International calculations based on data from United Nations Statistics Division, 2011.

- Japan : labor force peaked around 1997; declining in since then at about 800,000 workers a year.
- By 2050, Japan's labor force could be almost 25 million workers smaller than today's, a drop of one-third.
- Korea and Taipei,China: under going demographic transitions similar to Japan's, but with a lag of 15–20 years.
- For both, peaking of labour force expected in the next 5–10 years and then decline at a pace similar to Japan's—1.3 to 1.5 percent a year.

- China: labor force will probably peak soon, around 2018.

- India: labor force will continue to grow and reach nearly 1 billion by 2050, when the country will have 41 percent more workers than China (versus 23 percent fewer workers today).

- Different population dynamics in Asia will require different policy responses

- Take Japan, China and India as illustrative case studies.

Demographic Challenge for each of these countries:

India: Demographic Dividend or Curse?

Japan: Seriously diminishing population and worsening age dependency ratio

China: in between

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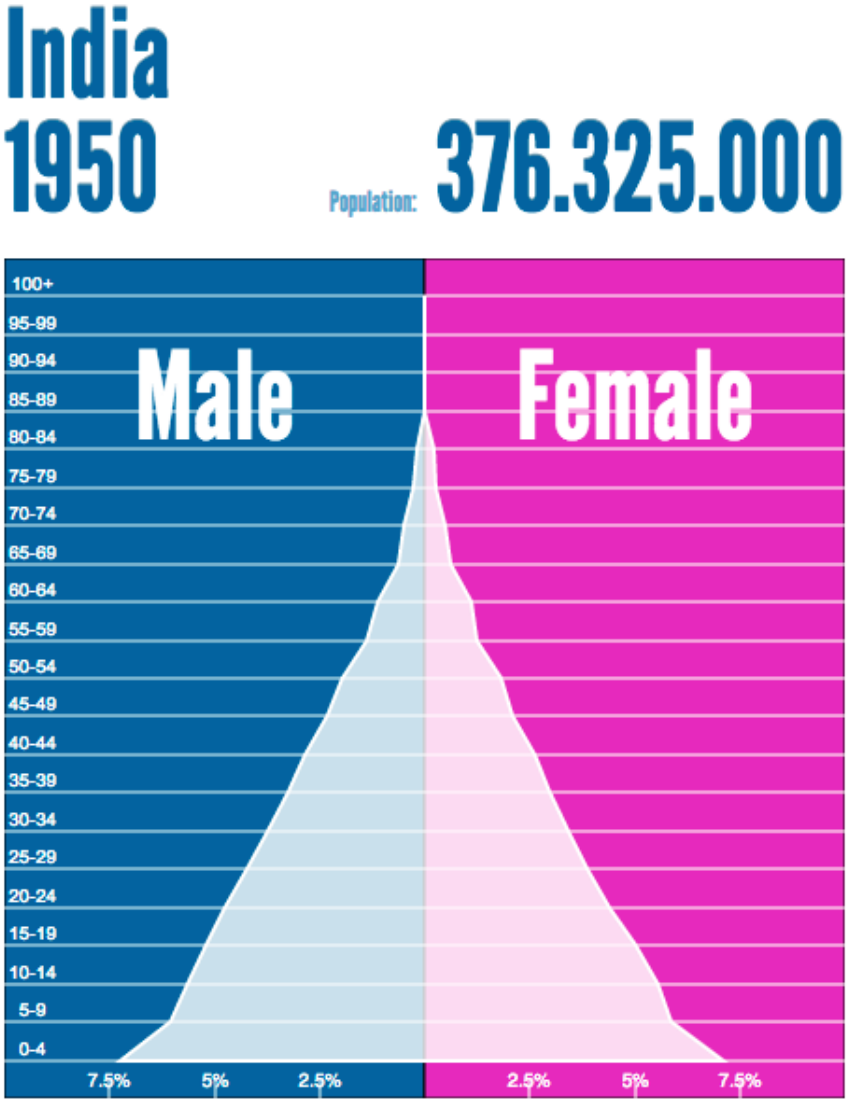

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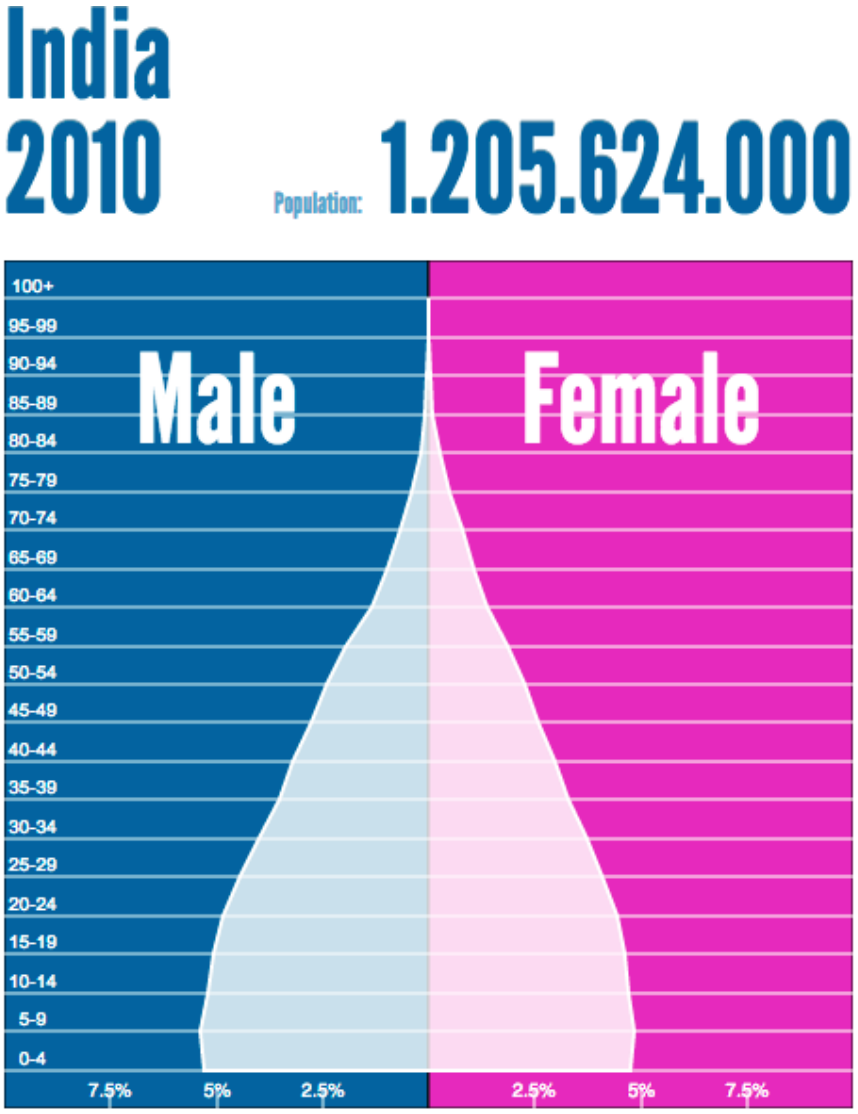

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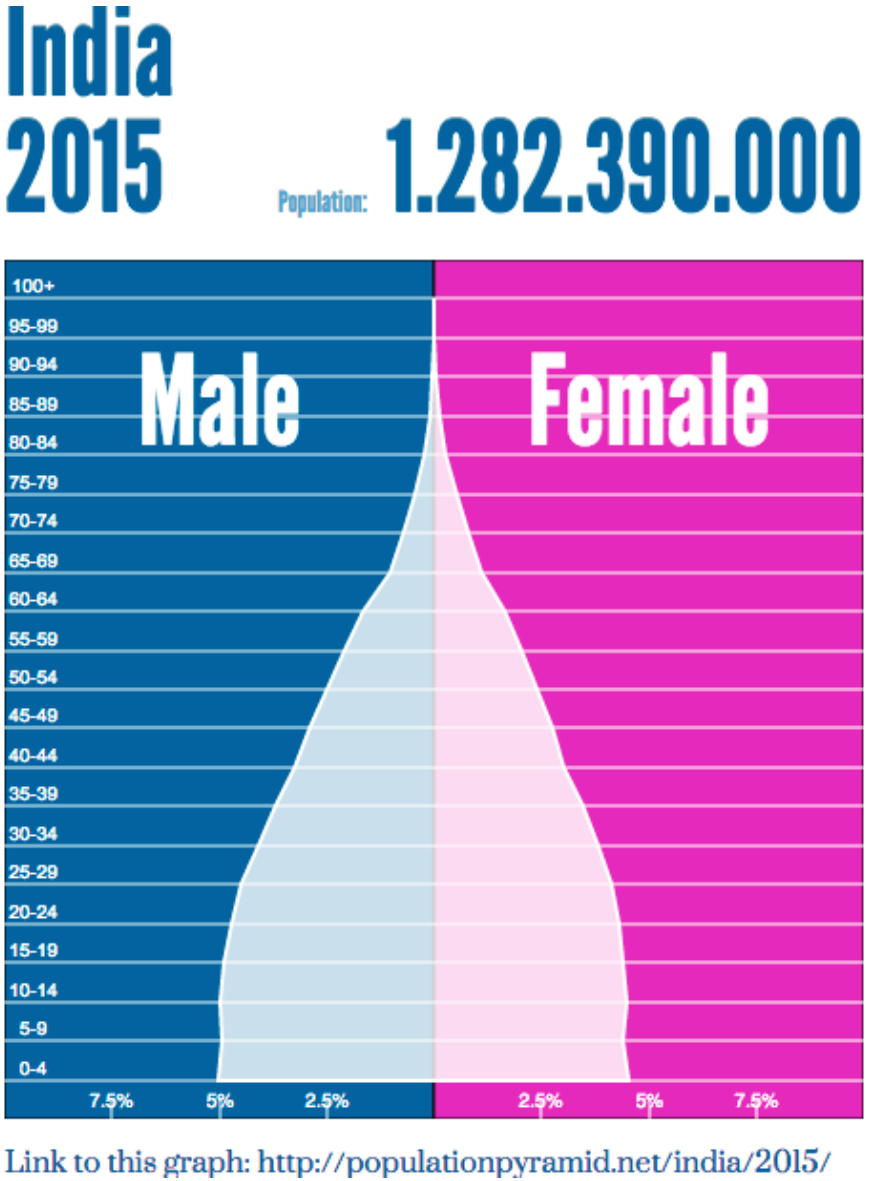

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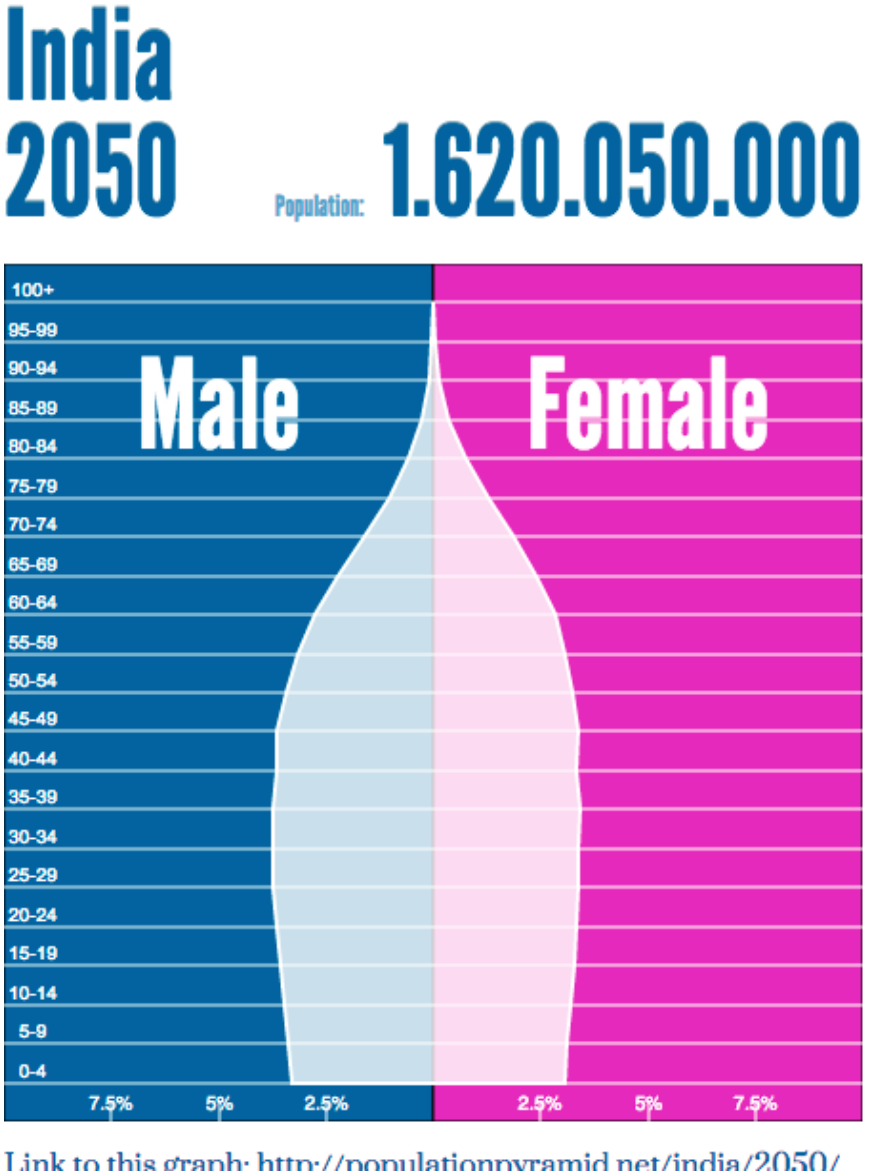

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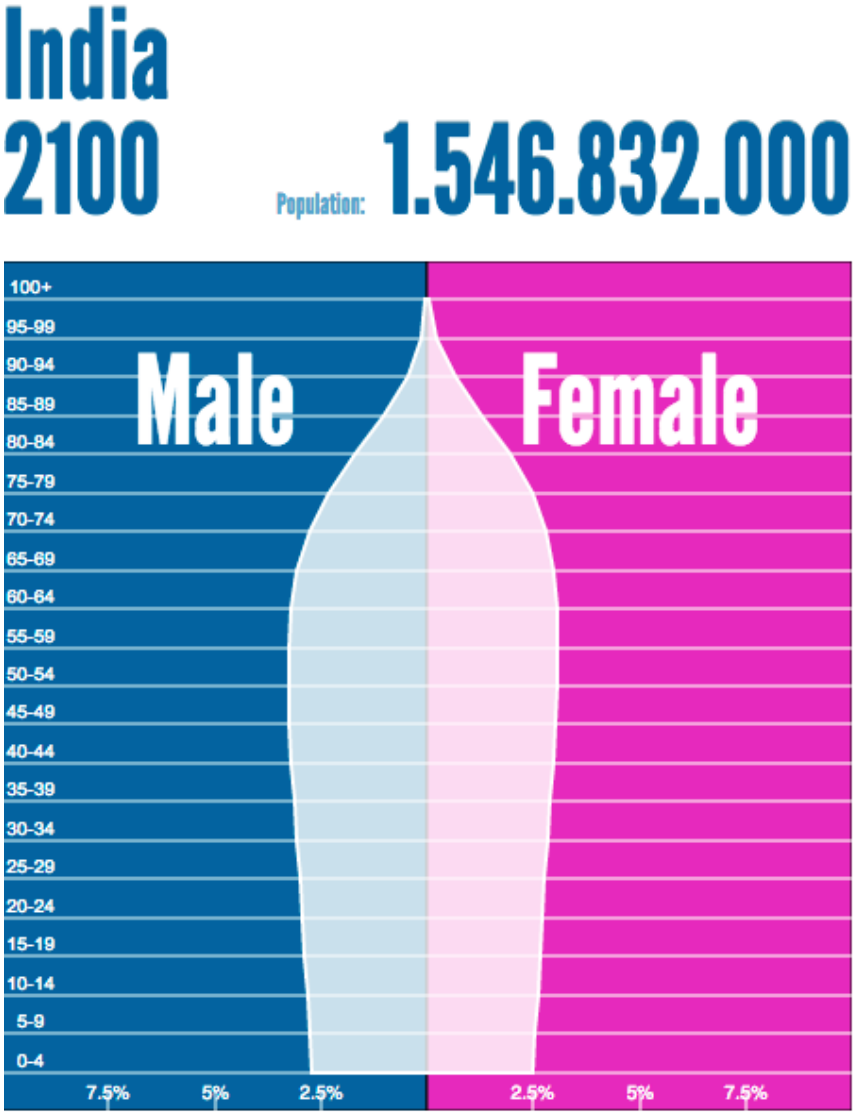

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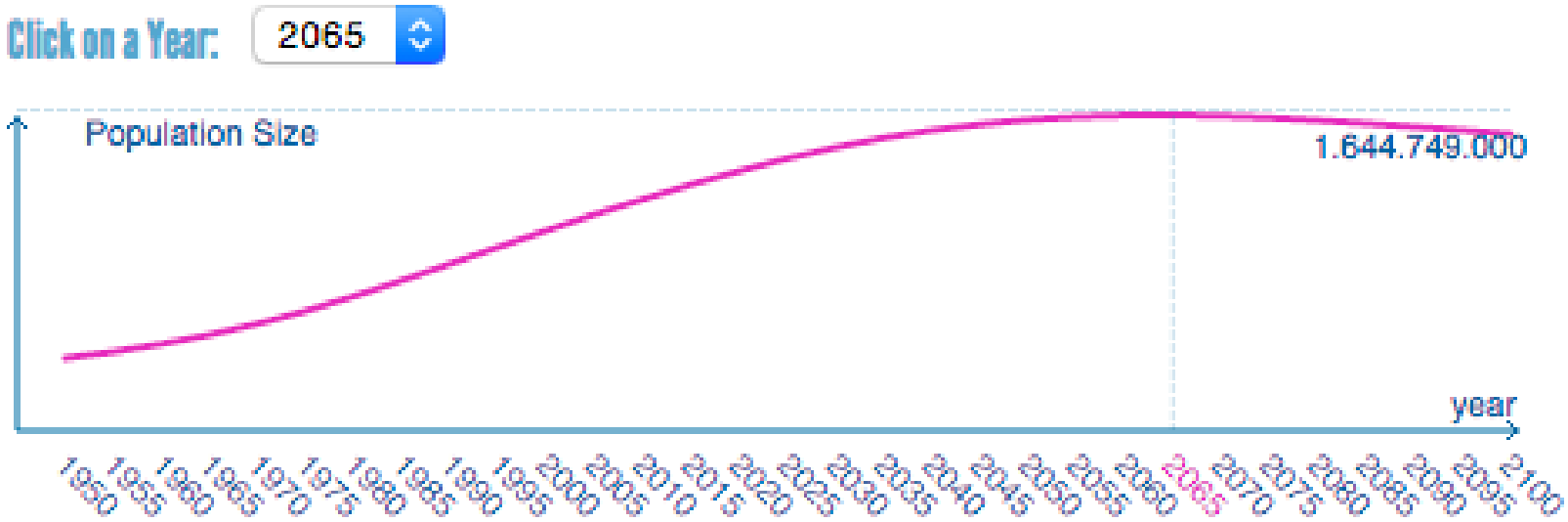
INDIA



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Age Structure - India

	2015	2030	2050
0-14	28.4%	23.8%	19.5%
15-64	66.1%	68.0%	67.8%
65+	5.5%	8.2%	12.7%
DR	51	47	48
DR Old-age	8	12	19

Working Age Profile

- An increase of 193 million over the next 20 years
- The challenge of employing this cohort to reap the demographic dividend
- And even within this age range (15-64), the vast majority are in the younger group

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Age Group	1999-2000	2004-05	2009-10	2011-12
Rural Male				
15-19	6.5	7.9	10.0	11.4
20-24	6.2	6.2	6.4	6.9
25-29	3.2	2.3	2.2	2.8
15-29	5.1	5.2	5.5	6.1
Rural Female				
15-19	3.1	6.7	7.4	8.0
20-24	4.9	9.3	8.6	9.9
25-29	2.4	5.2	4.5	5.8
15-29	3.7	7.0	6.5	7.8
Urban Male				
15-19	15.4	14.0	13.2	14.4
20-24	13.9	12.5	10.1	11.6
25-29	7.5	5.8	4.4	5.3
15-29	11.5	10.0	7.9	8.9
Urban Female				
15-19	15.5	15.6	14.3	15.3
20-24	22.6	25.8	21.7	21.9
25-29	11.5	15.8	14.6	10.8
15-29	16.6	19.9	17.2	15.6

Source: NSS Report No.554: Employment and Unemployment Situation in India, 2011-12

As per NSSO 2011-12, unemployment rate was 2.4 percent for males and 3.7 percent for females among all age groups, while the unemployment rate among the youth (15-29 years) varied between 6.1 percent to 15.6 percent across the different categories.

- Consequences of youth unemployment go well beyond economic losses and wasted opportunities

- Serious social consequences (Youth violence, frustration, social pathologies, violence against women etc.)

- Prof. Craig Jeffrey, Stanford University, "Time pass: Youth, Class and the politics of waiting in India, 2010"
  - Male youth in a limbo state of "waiting - of making time pass"

- Prof. Ravinder Kaur, IIT Delhi
  - Study in Haryana of Large number of village youth who travel to nearby towns to "time pass"

- High economic growth is a necessary condition to absorb this growing workforce but growth has to be employment generating

- Employment intensive growth is crucial for India to meet the Demographic Dividend Challenge

Estimates of employment elasticity (RBI Study)

- The aggregate employment elasticity for India is estimated to be around 0.2 during the post reform period (1993-94 to 2011-12),
- And declining since 1970s and 1980s

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Sectoral Employment Elasticity – CAGR Approach					
Sector	1999-2000 to 2004-05	2004-05 to 2009-10	2009-10 to 2011-12	2004-05 to 2011-12	1999-00 to 2011-12
Agriculture	1.09	-0.39	-0.44	-0.41	-0.08
Manufacturing	0.80	-0.27	1.74	0.10	0.33
Mining & quarrying	0.87	0.20	-1.76	-0.14	0.34
Utilities	0.67	-0.27	7.60	1.42	1.17
Construction	0.88	1.63	-0.25	1.12	1.01
Trade, Transport, hotels	0.45	-0.02	0.54	0.13	0.25
Finance, real estate	1.40	0.34	-2.32	-0.45	0.06
Other services	0.46	-0.11	2.96	0.48	0.47
All sectors	0.50	0.01	0.17	0.06	0.20

Note: 1. Sector-wise classification has been kept the same as used by Planning commission for comparability.
2. Utilities include electricity, gas, water supply, sewerage and waste management.
3. 2009-10 being a "non-normal year" because of a bad agricultural year, NSSO survey was conducted just after two years in 2011-12. Hence, sectoral elasticities have been reported for the 7-year period 2004-05 to 2011-12.

Source: RBI report (Sangita Misra and Anoop K Suresh)

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- Given the huge productivity and wage differentials between organized and informal sector, greater employment generation in organized manufacturing sector is crucial as it has large multiplier effects.

- Hence the critical importance of manufacturing and to some extent, services

- Need for suitable ecosystem to support manufacturing and services
  - Appropriate macro policy environment to encourage inclusive and job enhancing growth
  - Conducive business and investment climate
  - Infrastructure
  - Good governance
  - Skilled and educated labor force

- Need for a skilled and educated labor force is a pivotal issue

- Of the 600,000 engineers who graduate annually
  - Less than 20% are employable for the software engineering, IT services
  - Less than 5% are appropriately trained to be directly deployed on projects
  - Less than 10% are employable in core jobs like mechanical, electrical or civil engineering related areas

Despite the stellar reputation and contributions of IIT and IIM graduates the world over, none of the Indian Universities (including the IITs and IIMs) are in the top 100 of the World's Best Universities

Quantity vs Quality of India's Educational System

India: Demographic Curse or demographic dividend??
An existential challenge

- A sharper focus on education and development of human capital, with a particular focus on women, will be essential to fully realize the demographic dividend.
- Create employment opportunities
- Pressure on better governance from younger people

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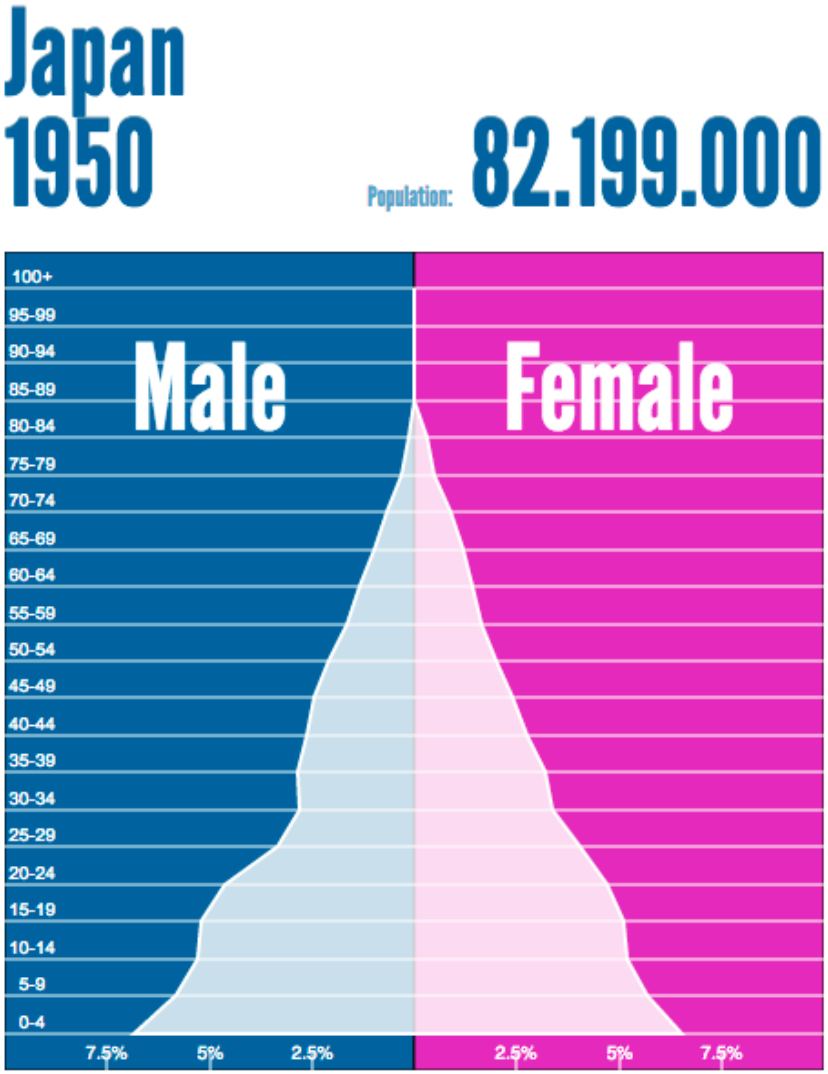

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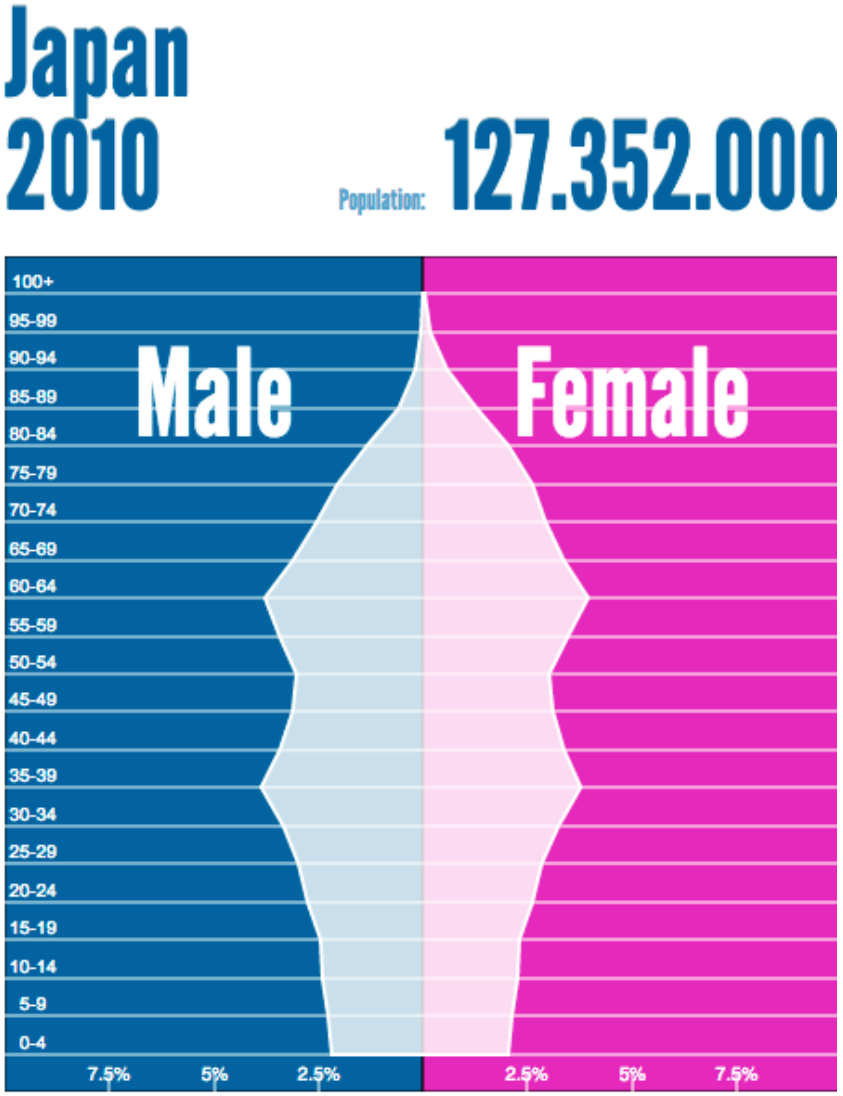

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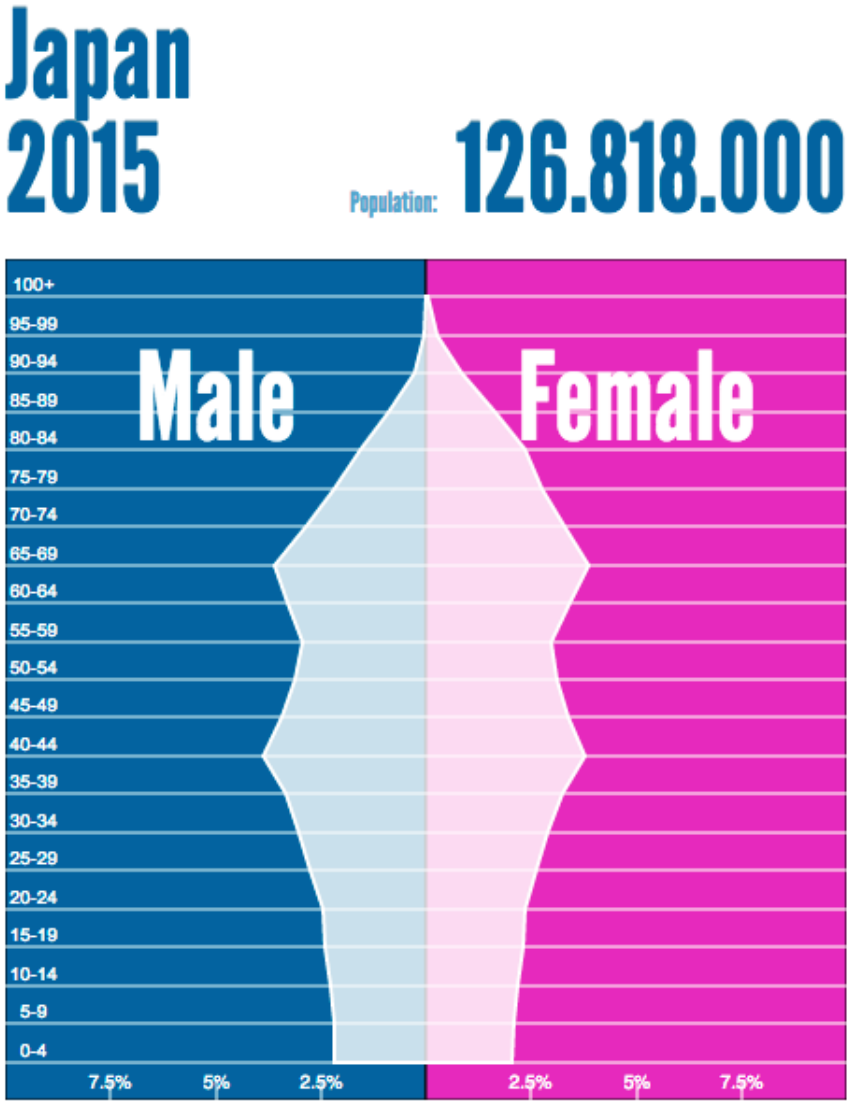

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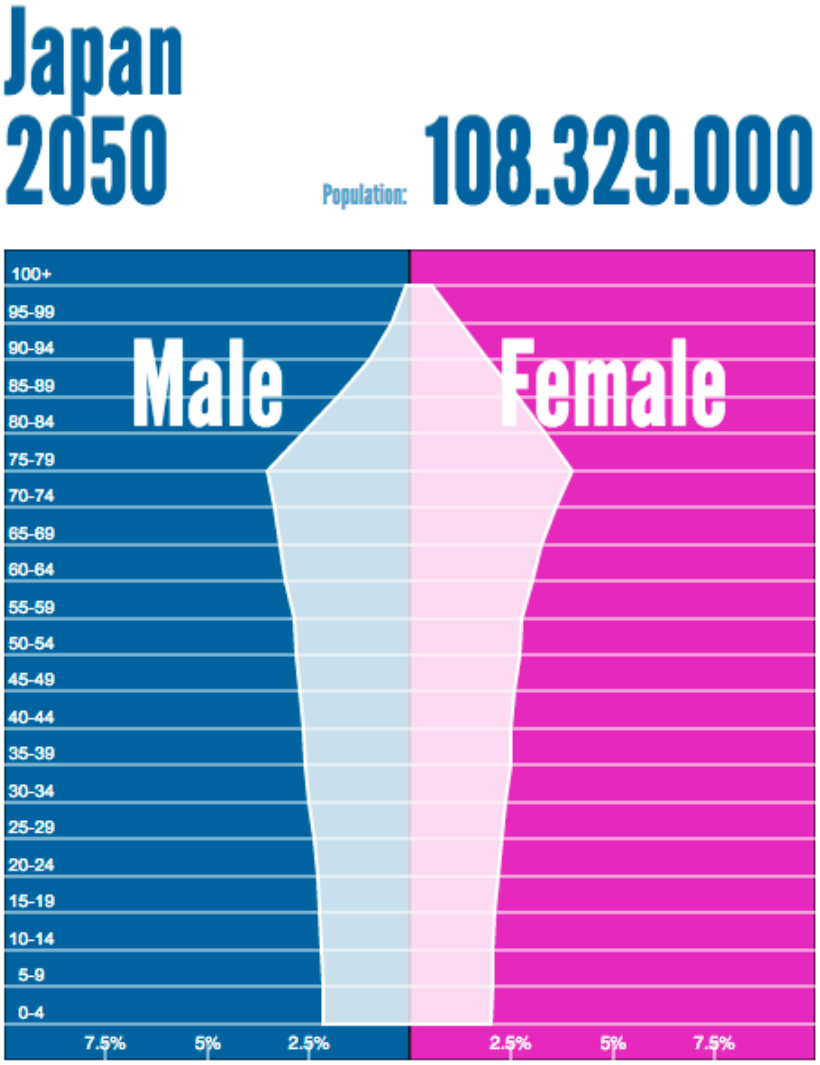

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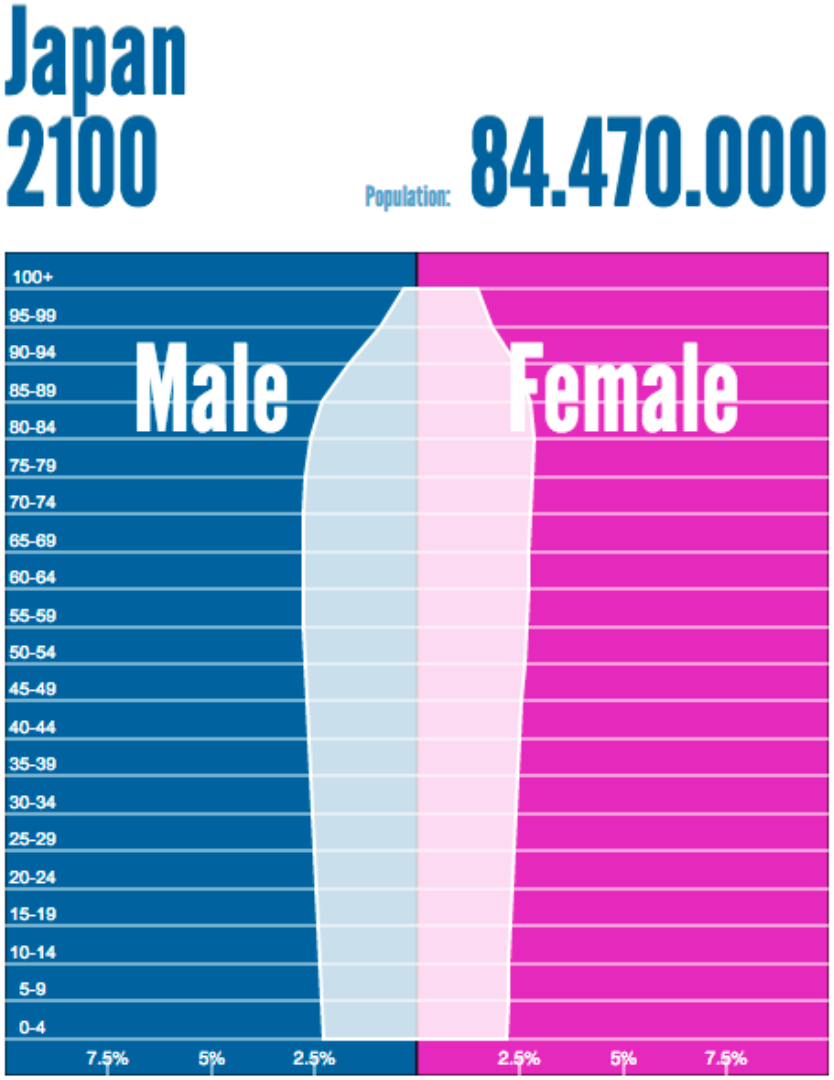

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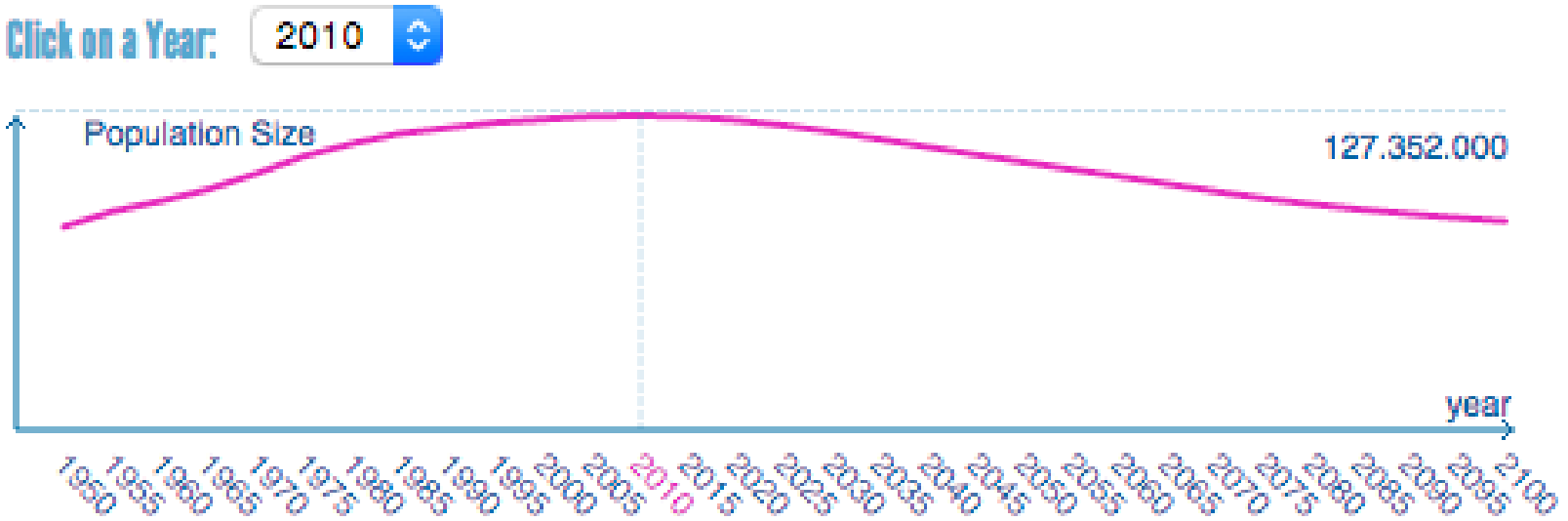
Japan



- **Japan's** population in 2050 (108.3 million) projected to be what it last was in 1975

- The challenge is not only a diminished population but an aging population

Age Structure - Japan

	2015	2030	2050
0-14	12.9%	12.2%	12.5%
15-64	60.7%	57.1%	51.0%
65+	26.4%	30.7%	36.5%
DR	65	75	96
DR Old age	44	54	72

- As the working age population shrinks and the 65+ cohort increases, the dependency ratio rises

- By 2050, each working age person will have to support about 1 person (young and old)

- As the population shrinks, consumption, savings and investment shrink, and so does economic growth

- In the immediate term, implications of this for Prime Minister Abe's "third arrow" of structural changes in Japan

- With shrinking work force, issue of raising productivity

- Advanced economies generally display productivity growth rates of between 1.0% -1.5 %; Japan has also generally been in this range (2000-08)

- Can it be higher? Greater use of robotics?

- Implications for Japan's economic power, and consequently political power
- Fiscal implications
- Funding of public and private pension plans
- Old age care expenditures and their financing

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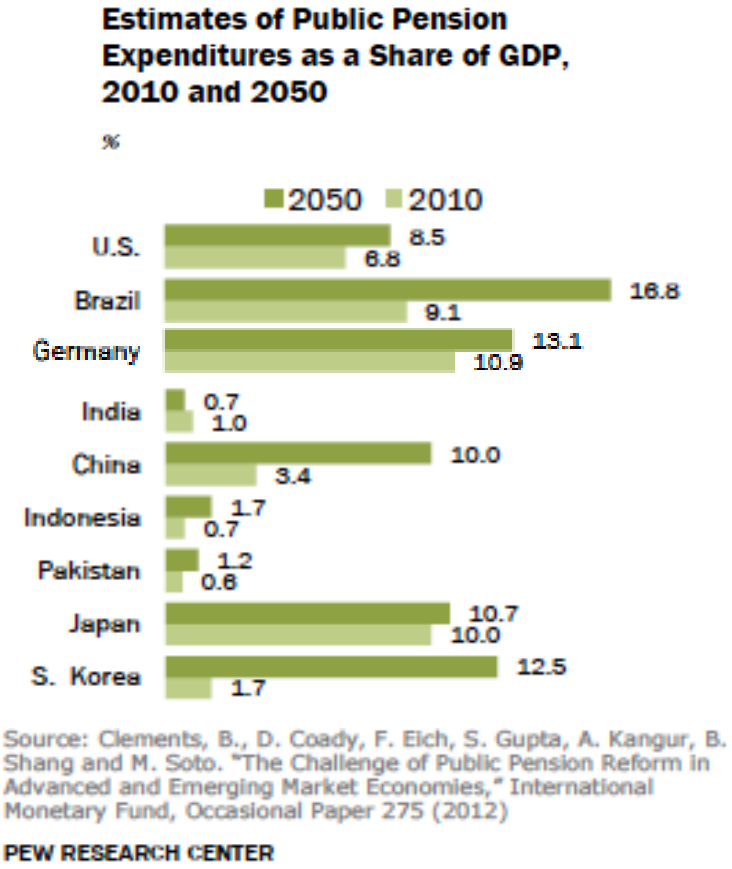

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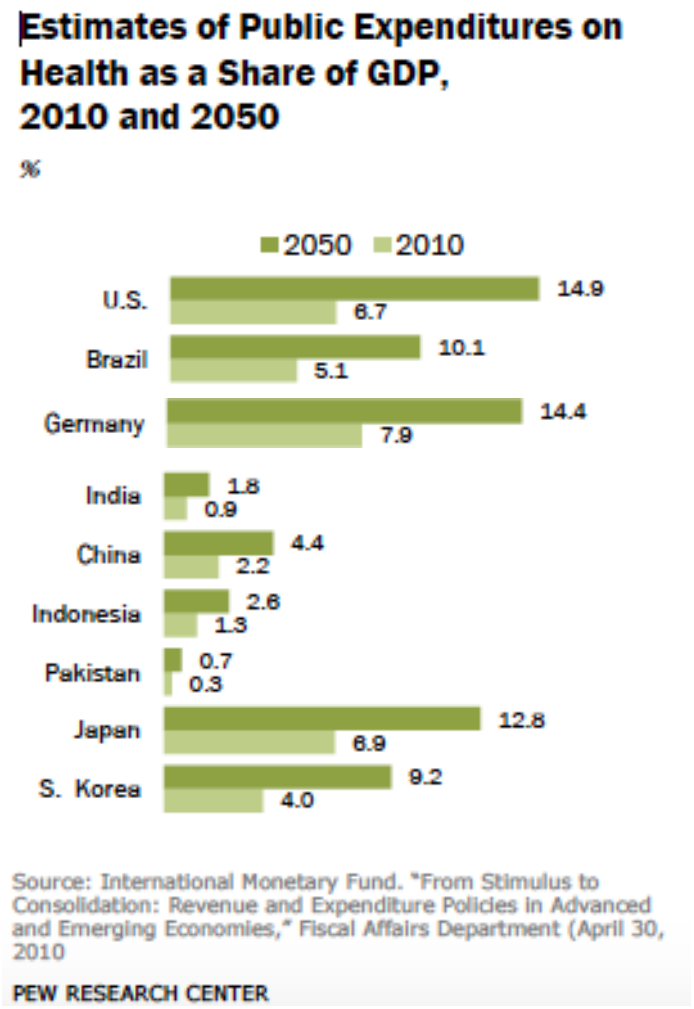

Some demographic simulations suggest that if Japan starts to accept 200,000 more immigrants AND raise the fertility rate to 2.07, the country's population could reach slightly over 100 million by 2060

- Structural changes to FR is a long term process
- FR: 1982: 1.8; 1990:1.5; 2000: 1.3; 2010: 1.4
- Raising it to 2.07 will be very difficult and only in the long term, if at all

- Visa deregulation to attract more foreign professionals, domestic helpers and health care workers being considered

- Longer term stay visas

- These would help, but only marginally

Surprisingly, net migration has actually decreased over time

- 1992: 451,000
- 2002: 622,000
- 2012: 350,000

- Long term immigration policies would have to be considered

- In addition, means to increase the pool of workers : encourage more women and the elderly to join or return to the work force

- Limited potential of significant increase in labor productivity?

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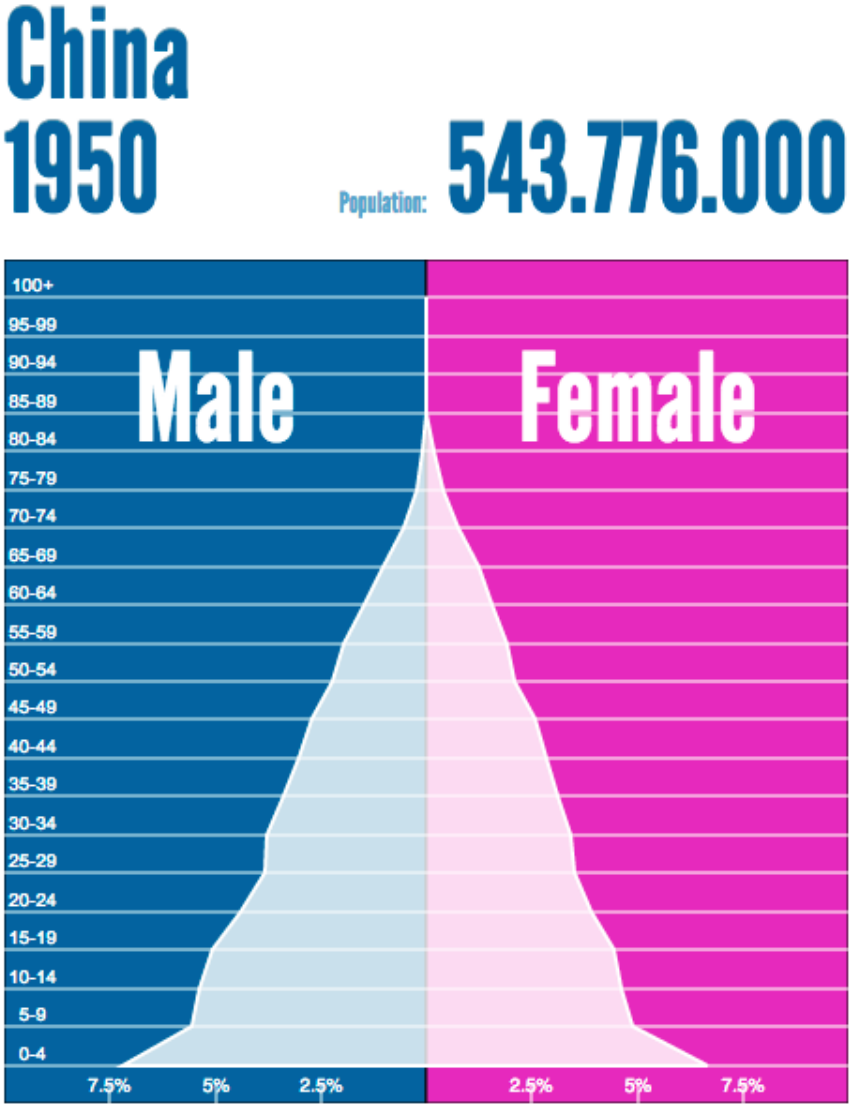

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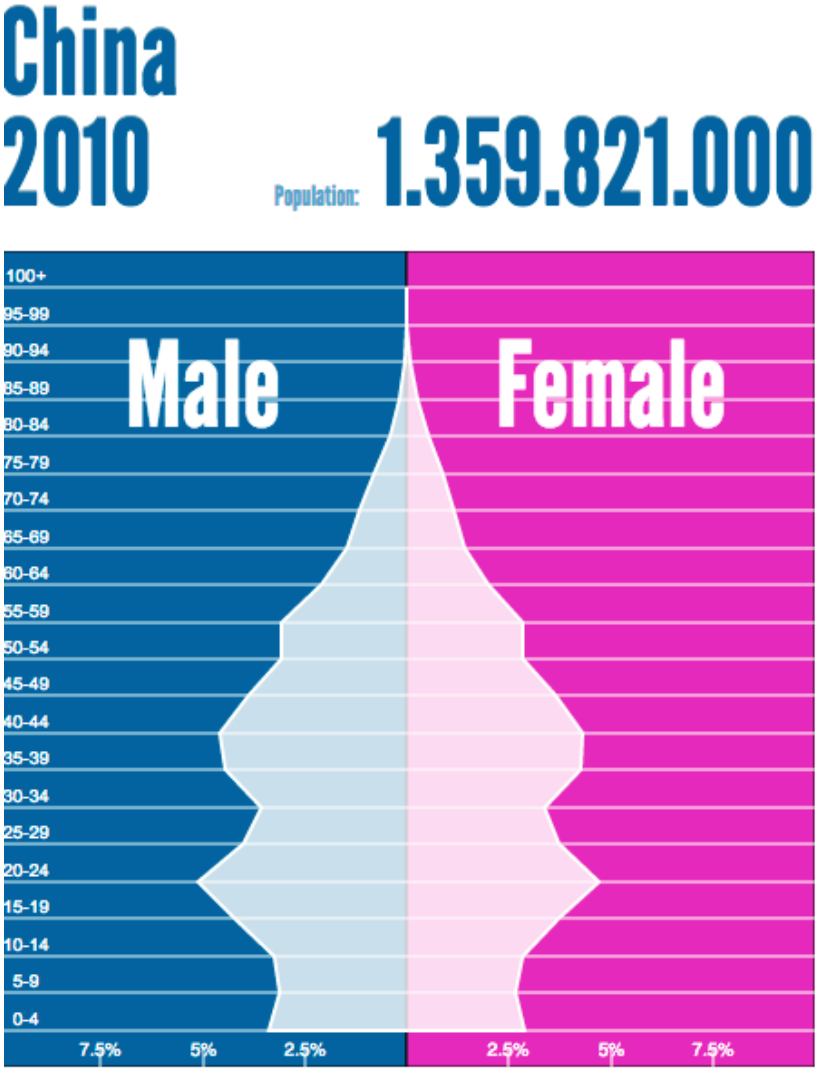

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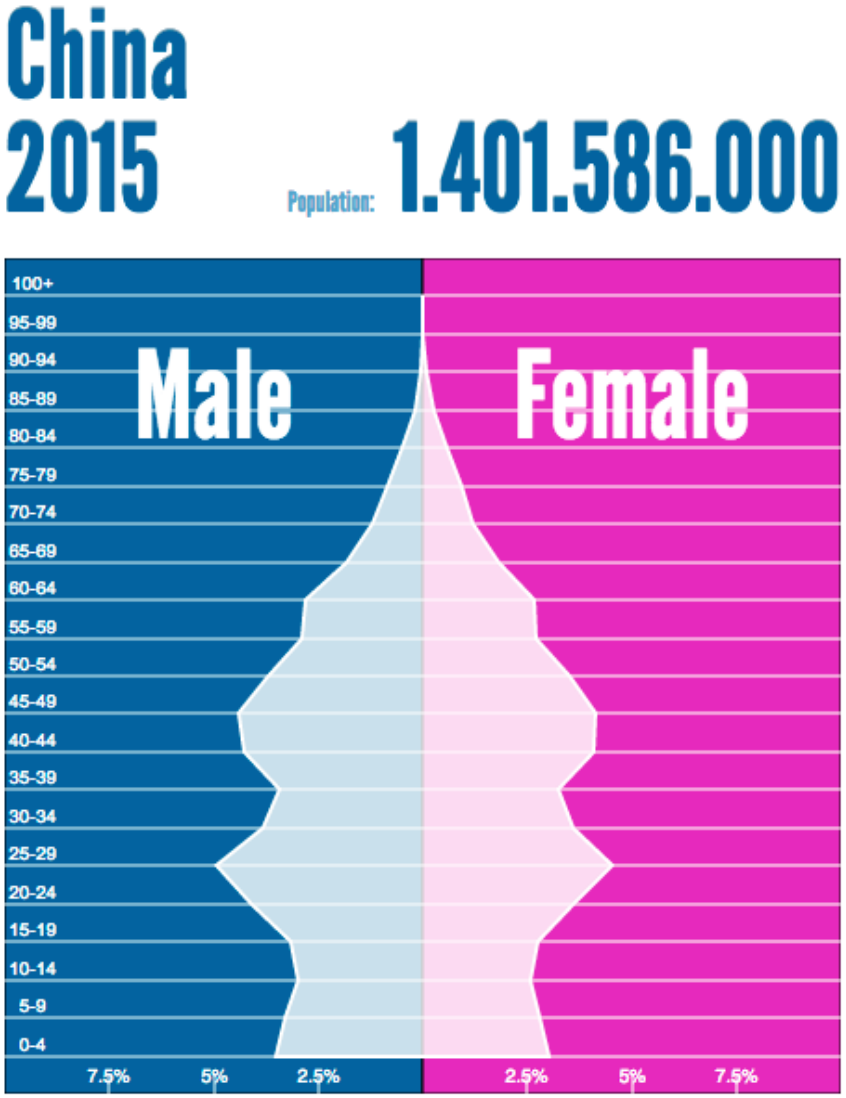

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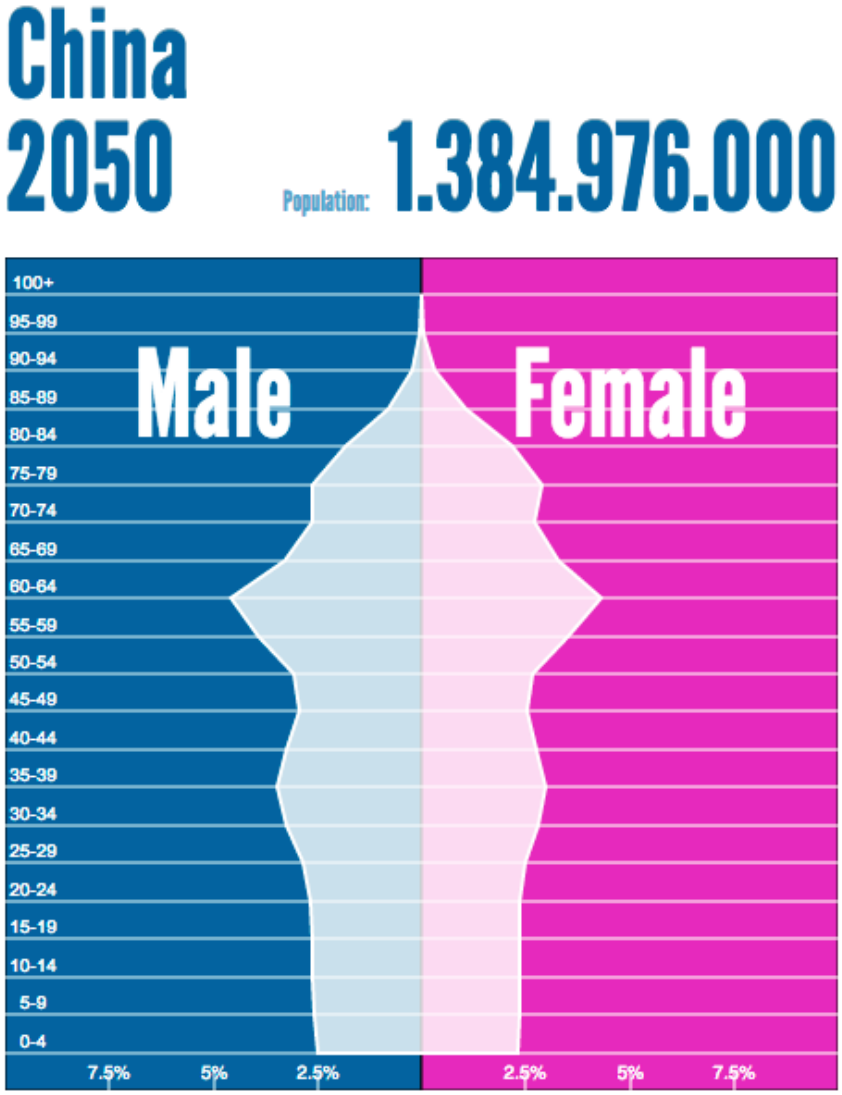

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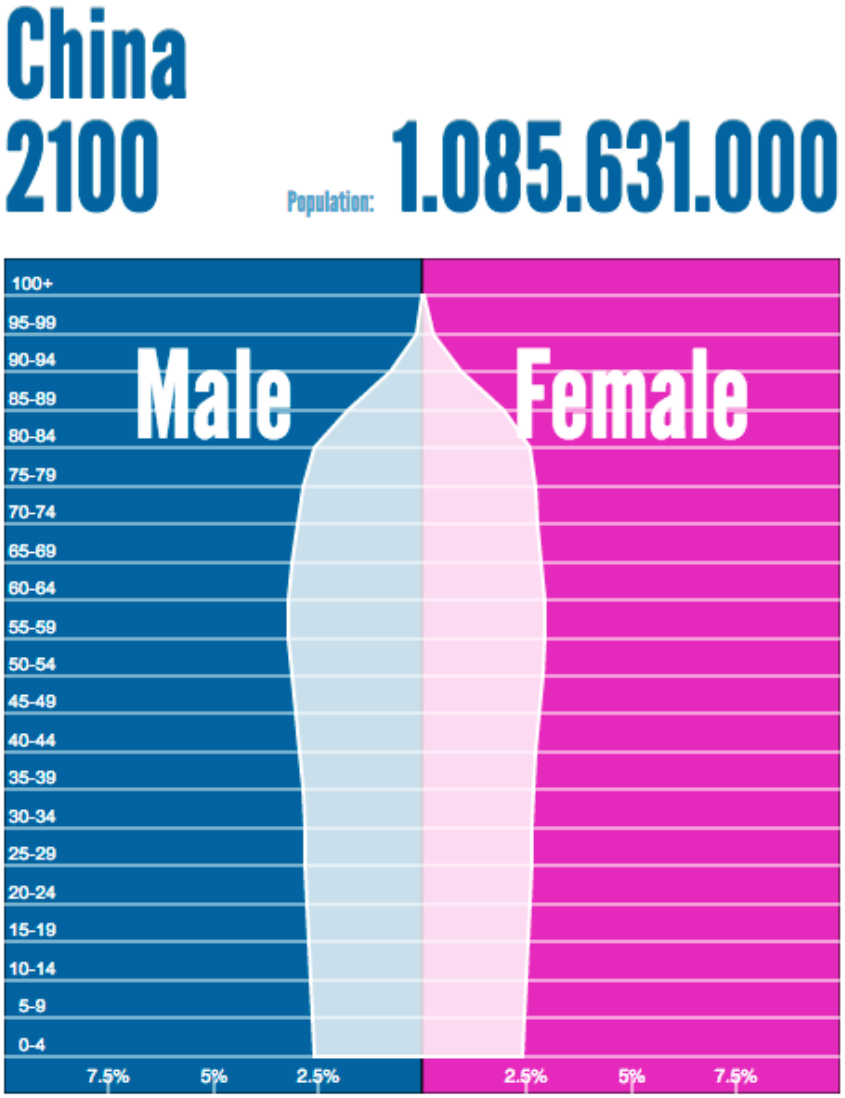

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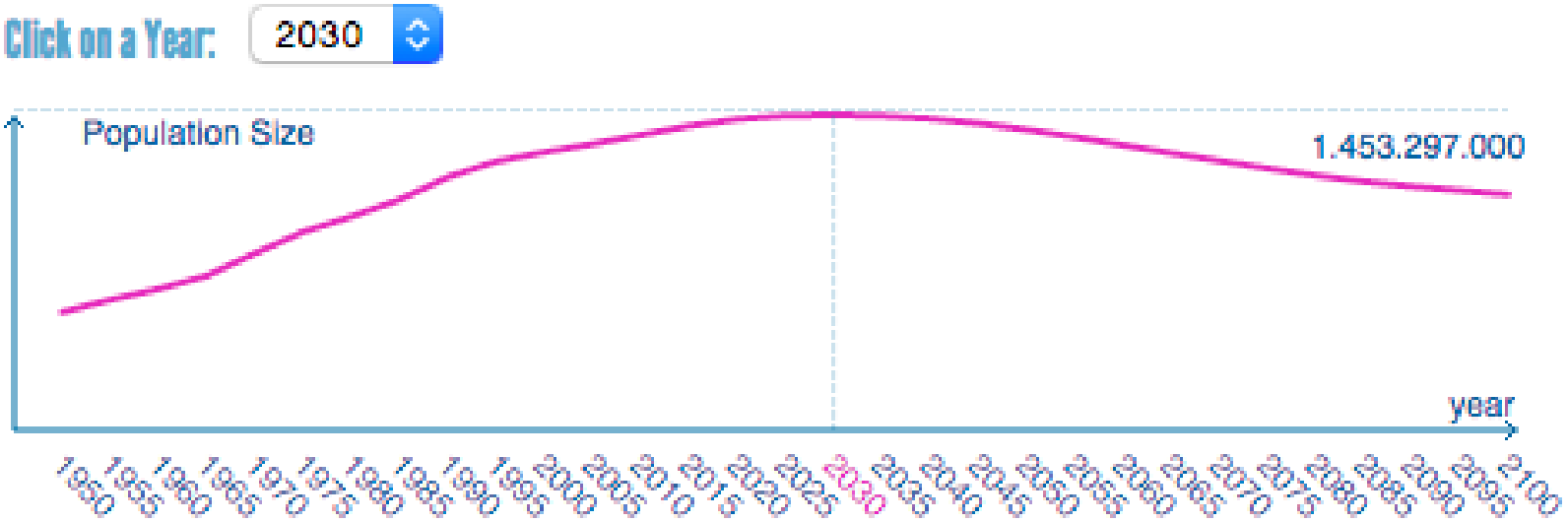
China



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- China's 'demographic dividend': Almost one quarter of the growth in the last 30 years attributable to it.
- Under China's 'one-child' policy, TFR has dropped to 1.4, well below the replacement rate.
- But society has now started to age. Population will peak by 2030
- In terms of demographic transition, China is where Japan was in the early 1990s

Two possible reform measures:

1. Prolong the demographic dividend

- Raise TFR. China getting close to the "low fertility trap". Abandon the 'one child policy".
- Raise retirement age
- Increase years of schooling
- Enhance quality of education

2. Enhance productivity

Regulatory reform to make it easier for workers and capital to shift from low-productivity firms to high-productivity firms.

Strengthening market mechanisms in China is essential to boosting productivity and hence growth

- Financial system reform: interest rate liberalization important to efficiently allocate resources

- Reform China's household registration system to make it easier for workers to move to jobs in which they will be most productive

Inexorable momentum of demographics

An existential challenge for all the countries: how they deal with it will broadly determine their future for the next several decades

Demographics is Destiny

Thank you