Demographic Challenges in China

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Demographic transition

• Demographic transition – from low through high to low population growth.

• Global demographic transition is bringing lower fertility and slower population growth even in developing countries, and especially in Asia.

• Migration increases, sufficient to maintain constant non-working aged dependency ratios in North America, Western Europe, Australia.
Demographic transition
Total fertility rate, 2003
(Source: World Health Organization)
China’s transformations

- Command to market economy
- Autarky to open regime
- Agricultural to manufacturing economy
- Rural-based to urban-based society
- Demographic transition – China has made the demographic transition under unusual circumstances and in less than 20 years.
China’s demographic characteristics

- Population increase during 1950s-70s has created a **population momentum**, that will drive population growth in coming decades despite low levels of fertility.

- High population **density** in relation to vital natural resources, such as land and water.

- Extreme spatial **distribution**, a consequence of uneven cropland distribution, climate, and physical environment.

- Sustained decline in **mortality** is impressive given such a large population at a relatively low level of income.

- The years from 1990-2025 represent a **window of opportunity** favorable for China’s economic growth.
Population momentum
(China’s population 1950-2050. Source: UN 2007)
High density & extreme distribution
(Based on 2000 Census, by county)
## Distribution of land and density

(Source: Heilig 1997)

<table>
<thead>
<tr>
<th>Cumulative land area</th>
<th>Cumulative population</th>
<th>Cumulative percent of land</th>
<th>Cumulative percent of population</th>
<th>Average population density</th>
</tr>
</thead>
<tbody>
<tr>
<td>47,297</td>
<td>114,837</td>
<td>0.5</td>
<td>10</td>
<td>2,428</td>
</tr>
<tr>
<td>170,445</td>
<td>230,247</td>
<td>1.8</td>
<td>20</td>
<td>1,351</td>
</tr>
<tr>
<td>336,812</td>
<td>348,163</td>
<td>3.5</td>
<td>30</td>
<td>1,028</td>
</tr>
<tr>
<td>534,411</td>
<td>460,545</td>
<td>5.6</td>
<td>40</td>
<td>882</td>
</tr>
<tr>
<td>778,021</td>
<td>576,063</td>
<td>8.2</td>
<td>50</td>
<td>740</td>
</tr>
<tr>
<td>1,078,453</td>
<td>691,192</td>
<td>11.3</td>
<td>60</td>
<td>641</td>
</tr>
<tr>
<td>1,488,455</td>
<td>806,126</td>
<td>15.8</td>
<td>70</td>
<td>542</td>
</tr>
<tr>
<td>2,070,090</td>
<td>921,771</td>
<td>21.7</td>
<td>80</td>
<td>445</td>
</tr>
<tr>
<td>2,927,574</td>
<td>1,036,728</td>
<td>30.7</td>
<td>90</td>
<td>354</td>
</tr>
<tr>
<td>9,543,280</td>
<td>1,152,355</td>
<td>100.0</td>
<td>100</td>
<td>121</td>
</tr>
</tbody>
</table>
Sustained decline in mortality
(Vital rates in China. Source: Naughton 2007)
Window of opportunity
(Dependency rates in China. Source: Naughton 2007)
China’s demographic challenges

• China will grow old before it has had the opportunity to grow rich.
• Growing gender ratio imbalance can take years to correct.
• Unprecedented migratory flows and increasing population mobility challenge the current population management structure.
• Rising nationalism among the younger generations presents a double-edged sword for the political regime.
Fertility decline

- Modernization leads families to prefer smaller families.
- Increasing levels of education for mothers and children.
- Uneven enforcement – limit most urban couples to one child, while rural residents may have two children. Policy not applied to minority groups, and birth rates for ethnic minorities about double the rate of Han Chinese.
- Total fertility rate lowest in Shanghai (1.28) and highest in Xinjiang (2.4).
Comparative fertility decline
(Source: Naughton 2007)
Changing age structure

• Advantage of a young population with low dependency rates (in 2000, over 70% was between 15 and 64).
• Growth of the working-age population will drop off quickly and reach zero growth after 2015.
• Rapidly aging – result of fertility decline and extended life expectancy (70.9 years in 2002, 73 for women and 69 for men), a level right in the middle of middle-income countries.

[China's population pyramid, 1950-2050]
Population pyramids

Source: U.S. Census Bureau, International Data Base.
Old-age support (> 60 in 2004)
(Source: Naughton 2007)

<table>
<thead>
<tr>
<th></th>
<th>Working</th>
<th>Pension or insurance</th>
<th>Children</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Urban men</strong></td>
<td>8%</td>
<td>80%</td>
<td>12%</td>
</tr>
<tr>
<td><strong>Urban women</strong></td>
<td>4%</td>
<td>59%</td>
<td>38%</td>
</tr>
<tr>
<td><strong>Rural men</strong></td>
<td>43%</td>
<td>12%</td>
<td>46%</td>
</tr>
<tr>
<td><strong>Rural women</strong></td>
<td>23%</td>
<td>4%</td>
<td>73%</td>
</tr>
</tbody>
</table>
Gender ratio imbalance

- Female infanticide – under-five girl mortality rates much higher than those of boys.
- Underreporting – more than 12 million “missing girls” in 2000 census.
- Availability of sex-selective abortion.
- Gender inequality – Many women and girls still suffer disproportionately from low levels of health and malnutrition. The maternal mortality ratio in rural areas could be 2 to 3 times higher than that of urban areas.
# Sex ratio (males per 100 females)

(Source: Naughton 2007)

<table>
<thead>
<tr>
<th>Year</th>
<th>At birth</th>
<th>Population aged 0-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1953</td>
<td>104.9</td>
<td>107.3</td>
</tr>
<tr>
<td>1964</td>
<td>103.8</td>
<td>106.5</td>
</tr>
<tr>
<td>1982</td>
<td>111.8</td>
<td>107.0</td>
</tr>
<tr>
<td>1990</td>
<td>116.6</td>
<td>109.8</td>
</tr>
<tr>
<td>1995</td>
<td>117.8</td>
<td>118.8</td>
</tr>
<tr>
<td>2000</td>
<td></td>
<td>120.8</td>
</tr>
<tr>
<td>2003</td>
<td></td>
<td>121.2</td>
</tr>
</tbody>
</table>
Spatial pattern of gender ratio

- Gender ratio imbalance is not equally distributed. Many regions almost unaffected by the national rise.
- There is a distinct clustering of regions – areas with higher values tend to be close to each other.
- There seem to be similar patterns across time.
- In most regions where minorities prevail, gender ratio is close to normal value.
- Large cities are less affected than rural areas.
Preponderance of eastern China in gender ratio (aged 0-4) imbalance
Internal migration

• Driven by industrialization, surplus rural labor, and persistent income disparity.
• Urbanization level increased from 19.4 to 36.1 percent between 1980 and 2000.
• Income disparities between urban and rural areas remain large (ratio of urban-to-rural household income above 3.0).
• Magnitude of 150-200 million migrants. Primarily from rural to urban areas, and involves circular movements.
• Concentrated among the most economically active (age of 15-34). Males outnumber females (about 2 to 1).
Net migration flows, 1995-2000
(Source: Fan 2005)
Double divides

- Rural-urban divide
- Two kinds of citizenship, urban and rural, that were created during the era of state socialism now form the basis of the broadest kind of social inequality in China.
- Local-nonlocal divide
- A number of factors make China’s rural-urban migrants more like immigrants from developing to developed counties than internal migrants within developing countries.
Rising nationalism

- Historical opening to outside world coincided with prolonged period of national humiliation – victim narratives.

- Pragmatic nationalism as an instrument CCP uses to bolster faith in the political system.

- “Dream of strong Chinese” as an effective unifying theme in the face of hostility and challenge from abroad.

- Double-edged sword – potential not just for conferring legitimacy on the government but also for taking it away.