Population Age Structure Changes and Demographic Dividend in Viet Nam: Findings from NTA Approach

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Contents of Presentation

1. Demographic changes in Vietnam
2. Data and estimation
3. Estimates and policy implications
4. Concluding remarks
5. On-going work and next steps
1. DEMOGRAPHIC CHANGES IN VIET NAM

### Table 1. Age structure of the Vietnamese population, 1979-2009

<table>
<thead>
<tr>
<th>Year</th>
<th>Total (millions)</th>
<th>0-14</th>
<th>15-59</th>
<th>60+</th>
<th>Percentage of the total population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>0-14</td>
<td>15-59</td>
<td>60+</td>
<td>0-14</td>
</tr>
<tr>
<td>1979</td>
<td>53.74</td>
<td>23.40</td>
<td>26.63</td>
<td>3.71</td>
<td>41.8</td>
</tr>
<tr>
<td>1989</td>
<td>64.38</td>
<td>24.98</td>
<td>34.76</td>
<td>4.64</td>
<td>39.2</td>
</tr>
<tr>
<td>1999</td>
<td>76.33</td>
<td>25.56</td>
<td>44.58</td>
<td>6.19</td>
<td>33.0</td>
</tr>
<tr>
<td>2009</td>
<td>85.79</td>
<td>21.45</td>
<td>56.62</td>
<td>7.72</td>
<td>25.0</td>
</tr>
</tbody>
</table>


### Table 2. Ageing index and potential support ratio in Viet Nam, 1979-2049

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Aging index</td>
<td>16</td>
<td>17</td>
<td>24</td>
<td>36</td>
<td>50</td>
<td>65</td>
<td>85</td>
<td>107</td>
<td>124</td>
<td>141</td>
<td>158</td>
</tr>
<tr>
<td>Potential support ratio</td>
<td>7.44</td>
<td>7.43</td>
<td>7.33</td>
<td>7.27</td>
<td>5.29</td>
<td>4.60</td>
<td>3.83</td>
<td>3.27</td>
<td>2.88</td>
<td>2.51</td>
<td>2.20</td>
</tr>
</tbody>
</table>


### Table 3. ‘Feminization’ of aging, 2009-2049

<table>
<thead>
<tr>
<th>Age group</th>
<th>2009</th>
<th>2019</th>
<th>2029</th>
<th>2039</th>
<th>2049</th>
</tr>
</thead>
<tbody>
<tr>
<td>60-69</td>
<td>131</td>
<td>119</td>
<td>109</td>
<td>104</td>
<td>105</td>
</tr>
<tr>
<td>70-79</td>
<td>149</td>
<td>140</td>
<td>127</td>
<td>116</td>
<td>111</td>
</tr>
<tr>
<td>80+</td>
<td>200</td>
<td>179</td>
<td>164</td>
<td>143</td>
<td>130</td>
</tr>
</tbody>
</table>

Source: GSO (2011)
The time needed for transforming from an ‘aging’ to an ‘aged’ population is much shorter than other countries with higher income levels.

*Time needed to move from ‘aging’ to ‘aged’ in some countries*

Source: Kinsella and Gist (1995); U.S. Census Bureau (2005); Viet Nam: GSO (2010)
1. DEMOGRAPHIC CHANGES IN VIET NAM

- **Children under 15**
  - 2009: 44.7
  - 2049: 55.3

- **Working population 15-64**
  - 2009: 42.2
  - 2049: 44.0

- **Aged 65 & above**
  - 2009: 42.6
  - 2049: 48.7

**DDR**
- 2009: 44.7
- 2049: 55.3
1. DEMOGRAPHIC CHANGES IN VIET NAM

Viet Nam’s Population Pyramid

2005

2050
2. DATA & ESTIMATION

• We use the data from the Vietnam Household Living Standards Survey (VHLSS) in 2008.
• The survey includes 38,523 persons living in 9,189 households. They are representative for all regions, urban and rural areas.
• The survey is conducted at household level, but provides a lot of individual information, such as age, gender, education, working status, and relation to household head.
• Labor income and consumption are at household level.
2. DATA & ESTIMATION

• We also use the Input-Output Table (National Accounts System) 2007 for calculating public consumption (on education, health, and others) and controlling macro balance.

• Estimate the per capita age-profile for the variable using household survey data or administrative records.

• Per capita age profiles are estimates of per capita values by single year of age (0-90+).

• All consumption and labor production can be assigned to individuals (public consumption follows private consumption structure by age).
Modeling the First Dividend

- Given constant productivity, changes in population age structure affect the economic support ratio:

\[ N(t) = \sum_a \alpha(a)P(a,t) \]
\[ L(t) = \sum_a \gamma(a)P(a,t) \]

where \(\alpha(a)\) and \(\gamma(a)\) are the age profiles of per capita consumption and labor income, and \(P(a,t)\) is the population

- Economic Support Ratio : \(L(t)/N(t)\)
3. ESTIMATES AND POLICY IMPLICATIONS

Per capita consumption (1,000VND/year)
3. ESTIMATES AND POLICY IMPLICATIONS

Per capita labor income (1,000 VND/year)

- Compensation of employees per capita
- Self-employed income per capita
- Labor income per capita
Per capita consumption and labor income, 2007

3. ESTIMATES AND POLICY IMPLICATIONS
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Lifecycle deficit $\text{(1,000VND/person/year)}$
Summary of the Lifecycle Deficit

• Age of lifecycle surplus: 23 - 53
• Total consumption: 827,189 billion VND
• Total labor income: 611,659 billion VND
• Total deficit: 215,620 billion VND
3. ESTIMATES AND POLICY IMPLICATIONS

<table>
<thead>
<tr>
<th>Age</th>
<th>0-19 (Child)</th>
<th>20-39 (Young)</th>
<th>40-59 (Middle-age)</th>
<th>60+ (Elderly)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>YL</td>
<td>14,557</td>
<td>313,595</td>
<td>256,232</td>
<td>27,184</td>
<td>611,569</td>
</tr>
<tr>
<td>C</td>
<td>145,831</td>
<td>207,765</td>
<td>208,101</td>
<td>265,493</td>
<td>827,189</td>
</tr>
<tr>
<td>C-edu</td>
<td>24,937</td>
<td>10,578</td>
<td>356</td>
<td>6</td>
<td>35,877</td>
</tr>
<tr>
<td>C-health</td>
<td>6,408</td>
<td>7,473</td>
<td>8,488</td>
<td>16,807</td>
<td>39,176</td>
</tr>
<tr>
<td>C-other</td>
<td>114,486</td>
<td>189,713</td>
<td>199,257</td>
<td>248,680</td>
<td>752,136</td>
</tr>
<tr>
<td>Deficit</td>
<td><strong>-131,273</strong></td>
<td><strong>105,830</strong></td>
<td><strong>48,132</strong></td>
<td><strong>-238,309</strong></td>
<td><strong>-215,620</strong></td>
</tr>
</tbody>
</table>

Note: Age categorization is based on Malmberg’s four stages of demographic transition.
3. ESTIMATES AND POLICY IMPLICATIONS

Economic Support Ratio, 1950-2050
Given 2008 labor income and consumption patterns, the first demographic dividend in Vietnam will last for about 44 years, from 1976 to 2020. It means, for now, Viet Nam will have only 10 years to grasp it.
3. ESTIMATES AND POLICY IMPLICATIONS

4. CONCLUDING REMARKS

• Viet Nam has been going through the first demographic dividend, which happens during 1976-2020. Such dividend should be well realized and positioned in any socio-economic strategy.

• Demographic opportunity is only necessary condition, while domestic policy environment is sufficient condition for taking advantages of population in economic growth and development.
... depends on how individuals, policy makers, and the whole society comprehend the nuances of demographic changes, so as to take advantages of positive impacts from such changes on economic growth and development.
5. ON-GOING WORK AND NEXT STEPS

- Plan:
  - Disaggregation by gender
  - Disaggregation by area (urban vs. rural).
- Possible topics applying NTA:
  - Population aging and generational welfare: What can Vietnam learn from other countries’ NTA?
  - Toward an aging population: Reshaping social protection in Vietnam.
THANK YOU FOR YOUR ATTENTION!

COMMENTS ARE WELCOME!