António Francisco (Ph.D), IESE. Session: “Social Research, Policy, and Practice”
‘Gerontogrowth’ vs. Population Ageing: Why does this differentiation matters?

António A da Silva Francisco

San Francisco, July 24, 2017
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INTRODUCTION (2/6)

• **IESE (Institute of Social and Economic Studies),** Maputo, Mozambique

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• This presentation is a more extensive development of the Academic Poster. Its content is a by-product of IESE's research focused on social protection issues, based on a structuring rather than merely charitable perspective, and in this specific case. It is oriented towards the investigation and debate on the pertinence, feasibility and sustainability of a universal old age pension for Mozambicans.
After attending this session participants should be able…:

Objective 1: ...To grasp the difference between ‘gerontogrowth’ vs. population ageing and its analytical relevance;

Objective 2: ...To understand the overrepresentation of the low income countries at the bottom of the HelpAge International’s *Global AgeWatch Index*;

Objective 3: ...To draw the appropriate and relevant implications for the policy framework of the aging population in relation to rejuvenation, particularly in low-income African countries.
Living to the age of 60 years or more is a notable achievement of the human population and one of the most remarkable privileges in the recent evolution of humanity. Longevity is a privilege because only a small portion of the people who are born and survive their first year of life manage to reach old age. Globally, 12.3% of the total population (901 million people) are elderly, ranging widely between 24% in the More Developed Regions and less than 5% in the Sub-Saharan Africa.
Is ‘Population Ageing’ happening in all countries?

Population ageing is happening in all regions and in countries at various levels of development. It is progressing fastest in developing countries, including in those that also have a large population of young people. Of the current 15 countries with more than 10 million older persons, seven of these are developing countries.

Ageing is a triumph of development. Increasing longevity is one of humanity’s greatest achievements. People live longer because of improved nutrition, sanitation, medical advances, health care, education and economic well-being.
KEY SOURCES

Reference:
António A. da Silva Francisco

Released by:
Elsevier

Full length article
‘Gerontogrowth’ and population ageing in Africa and the Global AgeWatch Index

Source:
The Journal of the Economics of Ageing

Visit:
https://authors.elsevier.com/a/1V4z3,oK5hcTA
The short and direct answer to the question in the title is: All countries are experiencing a progressive increase in the number of people aged 60 and over, but not all of them are experiencing an ageing population. These two distinct demographic dynamics can be accurately captured by distinguishing the widely used concept of ‘population ageing’ from the ‘gerontogrowth’ neologism.
What is ‘Gerontogrowth’?

As the word suggests - geronto + growth - means the increase in the number of elderly people (60+). The growth of the elderly population is a more certain phenomenon than the ageing population; It depends solely on the reduction of mortality in general, and among the elderly in particular, while population ageing depends mainly on reduced fertility.
What is ‘Population Ageing’?

Population ageing is the process that results in increasing proportions of the elderly in the total population. It can be measured by the ‘Ageing Index’ (AI), a demographic indicator that relates the proportion of the elderly to the proportion of the young. It is usually expressed as the number of people aged 60+ (or 65+) for 100 people under the age of 15; a number less than 100 means that there are fewer elderly than young people.
**Table 1: The Different Characteristics Between Gerontogrowth and Population Ageing**

<table>
<thead>
<tr>
<th>Gerontogrowth</th>
<th>Population Ageing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition</strong></td>
<td><strong>Definition</strong></td>
</tr>
<tr>
<td>Increase in the number of elderly people in a given population.</td>
<td>Increase in the proportion of older generations in a given population.</td>
</tr>
<tr>
<td><strong>Intensity factors</strong></td>
<td></td>
</tr>
<tr>
<td>1. Increase in the life expectancy of the elderly;</td>
<td>1. Fall of fertility at different speeds;</td>
</tr>
<tr>
<td>2. Effects of demographic inheritance;</td>
<td>2. Increase in the survival rates of the elderly;</td>
</tr>
<tr>
<td>3. Migratory contribution of elderly people (cases in public services in Maputo City).</td>
<td>3. Composition by age and fertility behavior due to migration;</td>
</tr>
<tr>
<td></td>
<td>4. Effects of demographic inheritance (factors to be analyzed in a specific way if it concerns the working population, the population of a company).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gerontogrowth</th>
<th>Population Ageing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Measuring Indicators</strong></td>
<td></td>
</tr>
<tr>
<td>1. Measures of variation of the number of elderly, in absolute (effective) and relative (growth rate of the elderly age groups) terms;</td>
<td>1. Ageing Index (AI);</td>
</tr>
<tr>
<td>2. Life expectancy in the elderly groups.</td>
<td>2. Median age and mean age of the population;</td>
</tr>
<tr>
<td></td>
<td>3. Total Fertility Rate and Life Expectancy at Birth.</td>
</tr>
</tbody>
</table>

**Perspectives after 2015 in Mozambique**

<table>
<thead>
<tr>
<th>Gerontogrowth</th>
<th>Population Ageing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Slow structural changes, unless external factors arise;</td>
<td>1. Population ageing likely to be delayed, depending on the intensity of rejuvenation, the onset and speed of fertility transition.</td>
</tr>
<tr>
<td>2. Gerontogrowth should continue depending on the external influence (import of technological innovations and external savings).</td>
<td></td>
</tr>
</tbody>
</table>

Source: Adapted from Dumont (2003).
Table 2: Population Structure Indicators: Percentage of Elderly, Ageing Index (AI), Total Fertility Rate (TFR) and Median Age of the Population, 2015 and 2050

<table>
<thead>
<tr>
<th>Selected countries</th>
<th>ESTIMATES 2015</th>
<th>PROJECTIONS (MEDIUM VARIANT 2050)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>60+ (%)</td>
<td>AI (%)</td>
</tr>
<tr>
<td>WORLD</td>
<td>12.3</td>
<td>47.0</td>
</tr>
<tr>
<td>More developed regions</td>
<td>24.0</td>
<td>146.0</td>
</tr>
<tr>
<td>Less developed regions</td>
<td>10.0</td>
<td>35.2</td>
</tr>
<tr>
<td>Least developed countries</td>
<td>5.0</td>
<td>13.6</td>
</tr>
<tr>
<td>Least developed regions, excluding China</td>
<td>8.0</td>
<td>26.3</td>
</tr>
<tr>
<td>High-income countries</td>
<td>22.0</td>
<td>128.0</td>
</tr>
<tr>
<td>Middle-income countries</td>
<td>11.0</td>
<td>39.8</td>
</tr>
<tr>
<td>Low-income countries</td>
<td>5.2</td>
<td>12.2</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>4.8</td>
<td>11.2</td>
</tr>
<tr>
<td>AFRICA</td>
<td>5.4</td>
<td>13.3</td>
</tr>
<tr>
<td>ASIA</td>
<td>12.0</td>
<td>47.3</td>
</tr>
<tr>
<td>EUROPE</td>
<td>24.0</td>
<td>151.9</td>
</tr>
<tr>
<td>LATIN AMERICA AND THE CARIBBEAN</td>
<td>11.0</td>
<td>43.5</td>
</tr>
<tr>
<td>NORTHERN AMERICA</td>
<td>21.0</td>
<td>111.8</td>
</tr>
<tr>
<td>OCEANIA</td>
<td>16.0</td>
<td>70.2</td>
</tr>
<tr>
<td>Australia/New Zealand</td>
<td>20.0</td>
<td>107.6</td>
</tr>
</tbody>
</table>

Source: HelpAge International 2015; UN, 2015
Fig. 1. Median Age of the Population in Selected Countries and Regions, 1950-2050

- World, 29.6
- Mauritius, 35.2
- South Africa, 25.7
- Sub-Saharan Africa, 18
- Mozambique, 17
- Angola, 16

Source: UN, 2015
Having to many children continues to be the main form of social protection in many Sub-Saharan African countries, including Mozambique.
Gerontogrowth and population ageing in the WORLD and the MORE DEVELOPED REGIONS

WORLD: Gerontogrowth, Proportion of 60+ and Ageing Index, 1950-2015

MORE DEVELOPED REGIONS: Gerontogrowth, Proportion 60+ and Ageing Index, 1950-2015

Source: UN, 2015
Gerontogrowth and population ageing in JAPAN and MAURITUS

JAPAN: Gerontogrowth, Portion 60+ and Ageing Index, 1950-2015

MAURITIUS: Population Gerontogrowth, Proportion 60+ and Ageing Index, 1950-2015
Gerontogrowth, REJUVENATION and ageing in SUB-SAHARAN AFRICA and MOZAMBIQUE

SUB-SAHARAN AFRICA: Gerontogrowth, Proportion of 60+ and Ageing Index, 1950-2015

MOZAMBIQUE: Gerontogrowth, Proportion of 60+ and Ageing Index, 1950-2015

Source: UN, 2015
Gerontogrowth, REJUVENATION and ageing in MALI and AFGHANISTAN

**Mali: Gerontogrowth, Proportion of 60+ and Ageing Index, 1950-2015**

- **Ageing Index**
- **60+/Pop**
- **Gerontogrowth**

**Source: UN, 2015**

**Afghanistan: Gerontogrowth, Proportion of 60+ and Ageing Index, 1950-2015**

- **Ageing Index**
- **Gerontogrowth**
- **60+/Pop**

**Source: UN, 2015**
According to the HelpAge International countries with the worst performance lack a comprehensive approach to policy framework to address the challenges posed by the aging of their populations. Although this conclusion is not entirely wrong, it needs careful attention and qualification:

- **What does it mean to have a comprehensive approach to population ageing in countries where increasing numbers of elderly is overshadowed by the rejuvenation of the younger population?**

- **Why people would worry in advance with a phenomenon that they still do not live or feel?**
No less important than the increase in the numbers is the remarkable global progress in quality of life and satisfaction of the elderly. At this level, most African low-income countries are overrepresented as the worst countries for the elderly to live in, as shown by the Global Gerontological Index (Global AgeWatch Index 2015).
Global Gerontological Index: World vs. 8 African low-income countries, 2015

Global AgeWatch Index: Performance Achieved and Not Achieved. World 2015
- GAI: 49.9% Not achieved
- Enabling environment: 66% Not achieved
- Capability: 36% Not achieved
- Income security: 59% Not achieved
- Health status: 53% Not achieved

Global AgeWatch Index: Performance Achieved and Not Achieved. Average of Eight African low-income Countries 2015
- GAI: 19% Not achieved
- Enabling environment: 58% Not achieved
- Capability: 24% Not achieved
- Income security: 15% Not achieved
- Health status: 27% Not achieved
Does living longer mean living better?

Average Per Capita Food Consumption Dynamics (kcal per capita per day) in African Low-Income Countries, 1961-2013
Without questioning the new Index’s potential of HelpAge International, our research and analysis show that its explanatory power and reach can and should be substantially improved with a really more comprehensive analytical and methodological framework. A framework that articulates the concept of capabilities with crucial structural concepts of population dynamics, in the context of the different stages of global demographic transition, where the world’s elderly population is integrated.
Gerontogrowth and the aging of the human population are two of the most significant achievements of the 20th century that are expected to be widespread and consolidated throughout the 21st century. Recognizing the difference between these two demographic processes is essential for three reasons:

1) To better understand the real and diversified nature of the demographic dynamics in progress;

2) To understand the differential impact dimension of the overall process of demographic transition resulting from the combined effect of changes in mortality and fertility;

3) Two different processes usually require distinct policies.
Today, the challenges faced by a significant number of countries in sub-Saharan Africa are still more due to rejuvenation than to the ageing of the population. Therefore, policy makers do not prioritize the issue of population ageing, as the greatest challenge they face in the short term stems primarily from population rejuvenation.
While it is unclear how long the process of rejuvenation in countries like Mozambique may last, international experience leaves no doubt that population aging only becomes relevant if and when the fertility transition becomes effective. Fortunately, sub-Saharan Africa already has some encouraging examples that this region does not remain an exception in the world (for example, Botswana, Lesotho, Mauritius, South Africa and a few others.)
**BOTSWANA**

**SOUTH AFRICA**

**Conclusions**

**BOTSWANA: Gerontogrowth, Proportion 60+ and Ageing Index, 1950-2015**

**SOUTH AFRICA: Gerontogrowth, Proportion 60+ and Ageing Index, 1950-2015**

Source: UN, 2015
Annex: Poster

‘Gerontogrowth’ vs. Population Ageing: Why the distinction matters?
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Introduction
The short and direct answer to the question in the title is: All countries are experiencing a progressive increase in the number of people aged 60 and over, but not all of them are experiencing an ageing population. These two distinct demographic dynamics can be accurately captured by distinguishing the widely used concept of ‘population ageing’ from the ‘gerontogrowth’ neologism.

What is ‘Gerontogrowth’?
As the word suggests - geront + growth - referring to the increase in the number of elderly people (60 and over). The growth of the elderly population is a more certain phenomenon than the ageing population; it depends solely on the reduction of mortality in general, and among the elderly in particular, while population ageing depends mainly on reduced fertility.

What is ‘Population Ageing’?
Population ageing is the process that results in increasing proportions of the elderly in the total population. It can be measured by the ‘Ageing Index’ (AI), a demographic indicator that relates the proportion of the elderly to the proportion of the young. It is usually expressed as the number of people aged 60 and over (or 65+) for 100 people under the age of 15; a number less than 100 means that there are fewer elderly than young people.

Analysis
Table 1: The Different Characteristics Between Gerontogrowth and Population Ageing

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<tr>
<td>Intensity Factors</td>
<td></td>
</tr>
<tr>
<td>1. Increase in the life expectancy at birth</td>
<td></td>
</tr>
<tr>
<td>2. Effects of demographic shocks</td>
<td></td>
</tr>
<tr>
<td>3. Measured in terms of actual age dependency ratio</td>
<td></td>
</tr>
<tr>
<td>4. Life expectancy in the elderly population</td>
<td></td>
</tr>
</tbody>
</table>

Perspectives after 2015 in Mozambique
- Population ageing likely to be observed, depending on the intensity of the different processes acting on the population of younger age groups.

Results
Table 2: Population Structure in Selected Percentage of Elderly (Ageing Index (AI), Total Fertility Rate (TFR) and Median Age of the Population, 2015 and 2050)

<table>
<thead>
<tr>
<th>Country</th>
<th>AI 2015</th>
<th>AI 2050</th>
<th>TFR 2015</th>
<th>TFR 2050</th>
<th>Median Age 2015</th>
<th>Median Age 2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>26.6</td>
<td>36.2</td>
<td>1.34</td>
<td>1.31</td>
<td>73.8</td>
<td>81.7</td>
</tr>
<tr>
<td>China</td>
<td>10.0</td>
<td>20.2</td>
<td>1.6</td>
<td>1.5</td>
<td>68.0</td>
<td>72.0</td>
</tr>
<tr>
<td>India</td>
<td>8.7</td>
<td>14.8</td>
<td>2.5</td>
<td>2.3</td>
<td>27.0</td>
<td>35.0</td>
</tr>
</tbody>
</table>

Gerontogrowth and ageing in the World and in More Developed Regions

Gerontogrowth and rejuvenation (ageing?) in Sub-Saharan Africa and Mozambique

Conclusions
Gerontogrowth and the ageing of the human population are two of the most significant achievements of the 21st century that are expected to be widespread and consolidated throughout the 21st century. Recognizing the difference between these two demographic processes is essential for three reasons: 1) to better understand the real and diversely nature of the demographic dynamics in progress; 2) to understand the differential impact dimension of the overall process of demographic transition resulting from the combined effect of changes in mortality and fertility; 3) different processes usually require distinct policies.

Today’s challenges faced by a significant number of countries in sub-Saharan Africa are still more due to rejuvenation than to the ageing of the population. Therefore, policy makers do not prioritize the issue of population ageing as the greatest challenge they face in the short term stems primarily from population rejuvenation.

While it is unclear how long the process of rejuvenation in countries like Mozambique may last, international experience leaves no doubt that population rejuvenation becomes relevant if and when the fertility transition becomes effective. Fortunately, sub-Saharan Africa already has some encouraging examples this that the region does not remain an exception in the world (for example, Botswana, Lesotho, Mauritius, South Africa and a few others).

References

July 23-27, 2017 • Moscone West • San Francisco, CA
THANK YOU!