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INAUGURAL LECTURE

POPULATION AGEING: TRENDS AND CHALLENGES IN THE 21ST CENTURY

SPENCER EMPADING SANGGIN

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Spencer Empading Sanggin

Universiti Malaysia Sarawak
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PREFACE

The book basically discusses the trends in the world population growth, specifically focusing on population ageing. The global trend in the growth in the proportion of ageing population is a direct consequent of rapidly declining fertility and mortality rates. The shift from a young population to an old population goes through a transition that can be explained with two relevant theories: Demographic Transition Model and Modernization Theory. Relying specifically on the data provided by the United Nations Population Division, I tried to explore the phenomenon of population ageing in the world and use selected countries, representing the developed and developing countries as case studies.

The capacity and readiness to deal with the growing numbers of old-aged will differ between countries: Most developed countries have reached the ageing status in the past few decades, but for many less developed countries, this is totally a whole new experience. While it is argued that the growing ageing population is associated with development - economically and socially, which has enabled people in the developed world to live longer lives, at the same time it is a "cause" for concerns as old age comes with different sets of needs and challenges. Several key issues and challenges faced by

countries with population ageing are also discussed. Among the important challenges are increasing old-aged dependency burden, higher demands for old-age care services, and a strain on the economy. Last but not least, a case study of ageing in Sarawak is also presented towards the end, that provide empirical data highlighting similar trends as well as key issues faced by the old aged population in Sarawak, and such trends will certainly have serious implications and concern for the government and families as the old aged needs will increase both in numbers and intensity.

Spencer E. Sanggin
Department of Development Studies,
Faculty of Social Sciences, UNIMAS
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INTRODUCTION

The global population is fast changing in size as well as structures. Such demographic dynamic is a crucial factor and contextual backdrop in the development of any country. I would also argue that economic growth, development and population change are intertwined; changes in population size and structure will impact upon development, and economic development will influence growth in population. The reduction in the rate of population growth was a direct result of declining fertility and mortality. The drop in fertility and mortality, on the other hand, was influenced by the advances in science and technology through improvement in food production, better health and an overall higher quality of life. Increasing economic productivity will create more jobs, and enhances the economy's capacity to absorb increasing number of workers into productive employment.

The aim of this paper is to look at the world population with the intention of highlighting the characteristics of population growth including the historical trend and explanations for the patterns of population change. Efforts will be made to relate the impact and challenges faced by people of different parts of the world as a consequent of changes in population structure, particularly with regards to increasing older population.

TRENDS IN THE WORLD'S POPULATION GROWTH

The total population of the world has exceeded 7 billion mark since the year 2011. Currently, the world's population is estimated to be about 7.4 billion, an increase of 400 million in the last 5 years. Of this figure, more than 2 billion are found in Asia, the majority being in China and India.

Based on population data from the Population Division of the United Nations, the rapid growth in the world population only started in the 1950s. Prior to 1950, the growth in the population of the world was rather slow (Figure 1.1). It took all of human history up to 1804 for the world population to reach one billion (Population Division, United Nations1994). It took another 123 years before the next one billion came in 1927. Conversely, in 1960, only 33 years later, the population had achieved 3 billion; and 4 billion came along barely 14 years later, in 1974. The world then hit 5 billion 13 years later, in 1987; and 12 years later, in 1999, the population has reached six billion. In short, in just about 200 years, the number of people living on this earth had swelled to more than 7 billion.

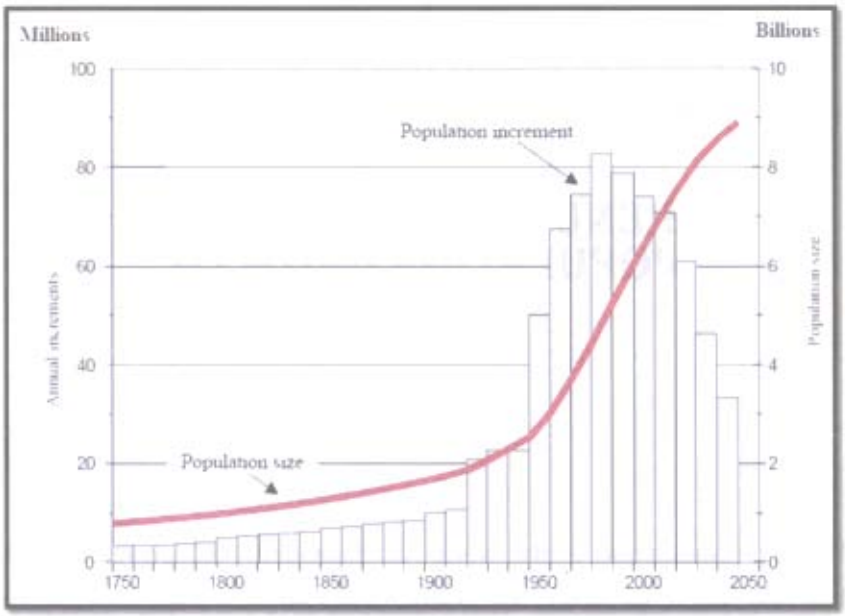

Figure 1.1: Long-term world population growth 1750 – 2050. Source: Population Division, United Nations.

According to the most recent United Nations estimates, based on the current trajectory, the world's population is expected to reach 8.1 billion in 2025 and 9.6 billion in 2050 (United Nations, 2015). As the rate of population growth is expected to slow down in the future, such a change in the patterns of growth could bring another new dimension to the structure and composition of the world's population. More than half of global population growth between now and 2050 is expected to occur in Africa. The African continent has the highest rate of population growth among major areas, growing at a pace of 2.55 per cent annually in 2010-2015 (Figure 1.2). It is the only region which will still experience the most "drastic" demographic growth in the future, albeit declining fertility rates, they remain far higher than anywhere else in the world (York, 2014). Past 2050, Africa will be the

only major area that has a persistently growing population, meaning that it housed 25% of the global population in 2010, but it will increase to 39% by the year 2100 (United Nations, 2015). Subsequently, of the additional 2.4 billion people projected to be added to the global population between 2015 and 2050, 1.3 billion will be added in Africa.

Conversely, the world's most populous region, Asia is projected to be the second largest contributor to future global population growth, adding 0.9 billion people between 2015 and 2050, followed by Northern America, Latin America and the Caribbean and Oceania, which are projected to have much smaller increments (United Nations, 2015). Even in Asia, the population growth remains moderately positive with much slower pace compare to the growth rate in the past 4 decades ago. After peaking in 2050, most countries in Asia are expected to experience a much reduced fertility rates resulting in much slower and eventually some negative growth comes year 2100. European region, on the other hand, will see a negative growth in the population as fertility rates continue to fall or maintain at lower rate.

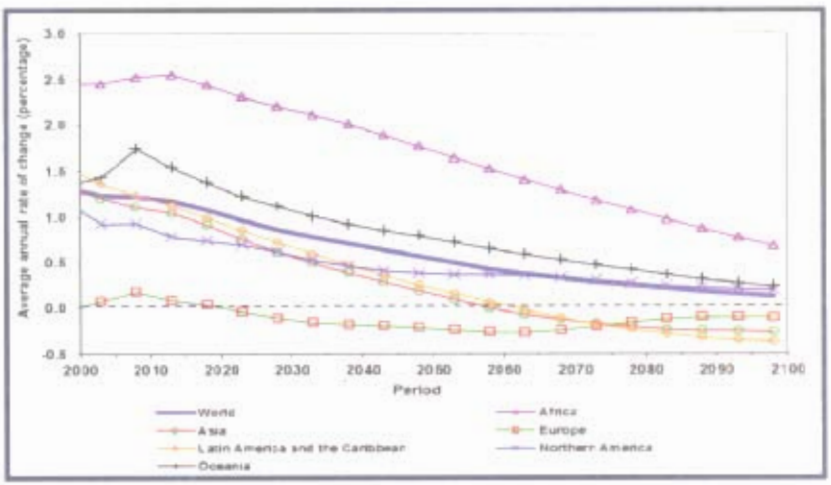

Figure 1.2: Average annual rate of population change by major area, estimates, 2000-2015, and medium-variant projection, 2015-2100. Source: DESA Population Division, United Nations 2015 Revision.

Thus, we could see that the rates of population growth vary across the world. Although the world's total population, in general, has been rising rapidly, not all countries are experiencing the same rate of growth. Furthermore, the Economically Developed Countries (MEDCs), such as UK and Germany, have generally low population growth rates and to some extent, causing a decline in the total population.

WORLD'S POPULATION AGEING

One stylised fact in the 21st century is that the world populations are growing older or ageing. Population ageing is a concept used to refer to the increasing number of older persons in relation to the rest of the population in a country or to the shifts in the age distribution (i.e., age structure) of a population toward older ages. More specifically, such phenomenon occurs and becomes visible when the median age of a country or region rises due to rising life expectancy in addition to declining fertility rates. This trend occurs as a direct consequence of the ongoing global fertility transition of decline birth rates and as well as declining mortality rates, particularly of the older ages. In countries where birth rates fall as their population numbers begin to stabilise, these countries will also experience a higher fraction of elderly people.

In general, there is no inherent chronological threshold to old age. However, in the United States (US) and much of the developed world, old age has come to be defined as beginning at 65. For the US, 65 is also the age at which important government-funded benefits such as Social Security and Medicare become fully available (Weeks, 2008). In some developing or less developed countries, on the other hand, the retirement age is lower (e.g. 60 years in Malaysia since 2012). About

20 years ago, the retirement age for Malaysia was 55 years old and during that time anybody ages 55 and above were considered old. Globally, nowadays a society is considered relatively old when the fraction of the population aged 65 and over exceeds 10% of the total population.

Presently, the proportion of elderly people in a population is generally higher in the MEDCs than in others, but ageing is increasingly becoming a global phenomenon. Developed countries are noted to have been ageing for well over half a century, but this process only began in recent times in most of the Less Economically Developed Countries (LEDCs), and it is being condensed into a few decades. By 2050 it is estimated that there will be about 1.5 billion ageing population, representing 16 percent of the world's population (U.S. Dept of Health and Human Services, 2015). Nearly 1.2 billion of the expected 1.5 billion people aged 65 or older will reside in today's Less Developed Countries and less than a quarter of the world's older people will live in what we today call the more developed countries. This demographic transformation will profoundly affect the health and socioeconomic development of all nations (Kinsella & Phillips, 2005).

Table 2.1: World Population Ageing by Region

Region	Population aged 60 years or over (thousands)		Percentage of Total population	
	2015	2030	2015	2030
More developed region	298 783	375 219	23.3	29.2
Less developed region	602 123	1 027 187	9.9	14.2
Least developed region	52 066	88 531	5.5	6.7

Source: United Nations, Department of Economics and Social Affairs, Population Division, *The 2015 Revision*.

In terms of the world's regional distribution, *Table 2.1* shows that the highest number of ageing population (60 years and above) are found in the less developed regions and the least numbers are located in the least developed regions. However, in terms of percentage, the more developed regions have a greater proportion of older population (23.3%), followed by the Less Developed Countries (9.9%) and a smaller percentage are located in the Least Developed Countries. Nonetheless, the overall percentage of elderly population is projected to increase in all regions, with the developed region expected to experience a far greater significant change compare to the other regions.

Table 2.2 shows the relative status of ageing population in some selected developed and less developed countries. We could see that the proportion of ageing as expressed by percentage of the population aged 60 years and over of the total population is higher in the developed nations such as Japan, UK and Australia compared to the developing nations. In every country, except for Mali, the rate of ageing is expected to increase in the year 2030, with Singapore projected to have the highest from 17.9 to 30.7 percent increase in the incidence of population ageing.

Table 2.2: Ageing populations in selected countries

Country	Population aged 60 years or over (thousands)		Percentage of Total population	
	2015	2030	2015	2030
Japan	41 873	44 808	33.1	37.3
United Kingdom	14 889	19 521	23.0	27.8
Australia	4 887	7 014	20.4	24.6
Singapore	1 001	1 969	17.9	30.7
Mali	706	1 100	4.0	4.0
Malaysia	**2 785**	**5 196**	**9.2**	**14.4**
China	**209 240**	**358 146**	**15.2**	**25.3**

Source: United Nations, DESA, Population Division, *The 2015 Revision*

Also, amongst the developing nations, China and Singapore are currently experiencing a very rapid rate of ageing and are projected to have one of the most significant shifts towards old aged population by the year 2030. Some of the factors or events contributing to the demographic changes in these two countries will be highlighted in the later part of this paper.

As noted earlier, the rate of ageing varies between regions and countries. Generally, the Less Developed Countries populations are still young compared to those in the Developed nations. For example, The United Nation's report on population prospect 2015 indicated that the populations in Africa, children under age 15 account for 41 per cent of the population in 2015 and young persons aged 15 to 24 account for a further 19 per cent. In Latin America and the Caribbean and Asia, which have seen greater declines in fertility, have smaller percentages of children of 26 and 24 year old, respectively and similar percentages of youth of 17 and 16 year old, respectively. In total, these three regions are home to 1.7 billion children and 1.1 billion young persons in 2015. Providing these generations with health care, education, and employment opportunities, including in the poorest countries and groups, is a pivotal focus of the post-2015 agenda (United Nations, 2015). While the proportions of children in the populations of many countries of these regions are projected to decline further in the near-term future, the size and the proportion of populations in the prime working ages can be expected to grow.

Globally, population aged 60 or over is the fastest growing compare to the younger age group. In 2015, for example, there are 901 million people aged 60 or over, comprising 12 per cent of the global population, growing at a rate of 3.26 per cent per year. The number of older persons in the world is projected to be 1.4 billion by 2030 and 2.1 billion by 2050, and could rise to 3.2 billion in 2100 (United Nations, 2015). In terms of distribution, currently, Europe has the highest percentage at

24 per cent, of population aged 60 or over but rapid ageing will occur in other parts of the world as well, so that, by 2050, all major areas of the world, except Africa, will have nearly a quarter or more of their populations aged 60 and over.

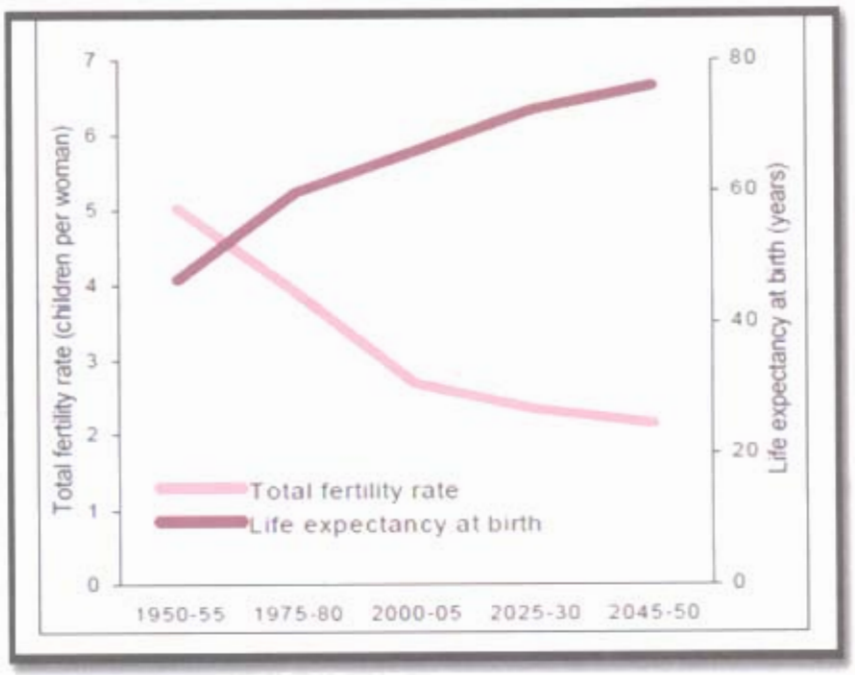

Figure 2.1: Total fertility rate and life expectancy in the world, 1950 – 2050. Source: United Nations, Population Division (2013).

The world's population trend shows that, as the world's overall fertility declines and life expectancy rises (Figure 2.1) the proportion of the population above retirement age rises. From just 11 % in 2012, the total population worldwide, the percentage of the population aged 60 years and older, is projected to rise to 16 % by 2030 and further increase to 22 % come the year 2050 (Figure 2.2).

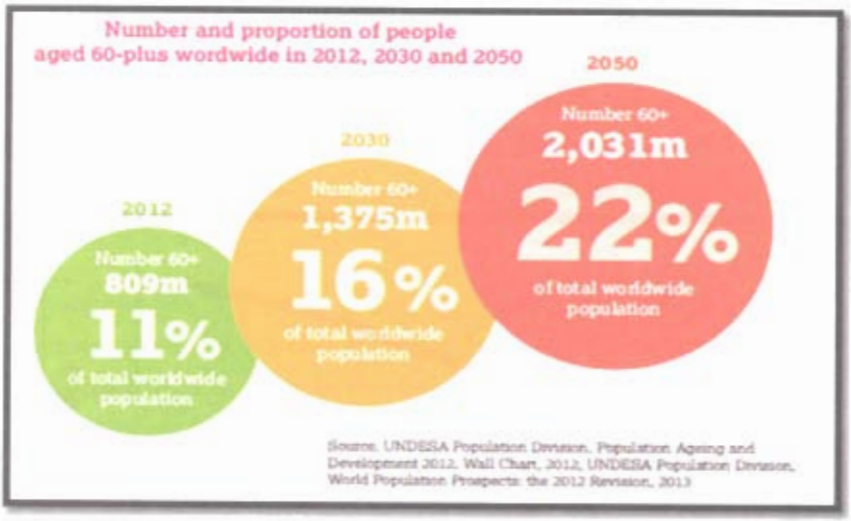

Figure 2.2: Number and proportion (actual and projected) of people aged 60 years and above worldwide in year 2012, 2030 and 2050.

Increasing Median Age

Another way to know whether a country is ageing is by looking at the median age, the age at which exactly half the population is older and another half is younger, is another widely used indicator of ageing. Thus, a country having a higher median age is more likely to have population ageing than those with lower median age. Increase in the median age is influenced by the reduction in fertility and mortality rates. As a general rule, a median age of 30 years and above would indicate that the population is old. Globally, the median age is projected to increase from 30 to 36 years between 2015 and 2050 and to 42 years in 2100 (United Nations, 2015). In most MEDCs, where fertility rates had been low for a long time, the median age is higher. A few more advanced developing countries also fall into this category. On the other hand, LEDCs are likely to have a much lower median age and, therefore, labeled as having young population.