# Mexico's Ageing Future

Turning Points and Policy Options: A Look towards 2040 and Beyond

Turning Points in Mexico's Ageing Future

2027: The end of the youth society

Young people have dominated Mexico's demographic scene during the last century. They reached their peak size in 2010, when people under age 20 accounted for 39% of the population. But this percentage has been declining, and the largest cohort of Mexicans has already been born, around 1991. It is projected that in 2027 young people will no longer be the dominant demographic group and this will mark the end of the youth society in Mexico[1]. A large wave is moving through Mexico's population age structure as the large cohorts born when high fertility was the norm advance through their life cycle and move from youth to adulthood to old age. The size of the working age groups will peak in 2031 for ages 20-39 and in 2051 for ages 40-59. The population of older persons will increase rapidly until the end of the century and will peak at 48.3 million in 2085.
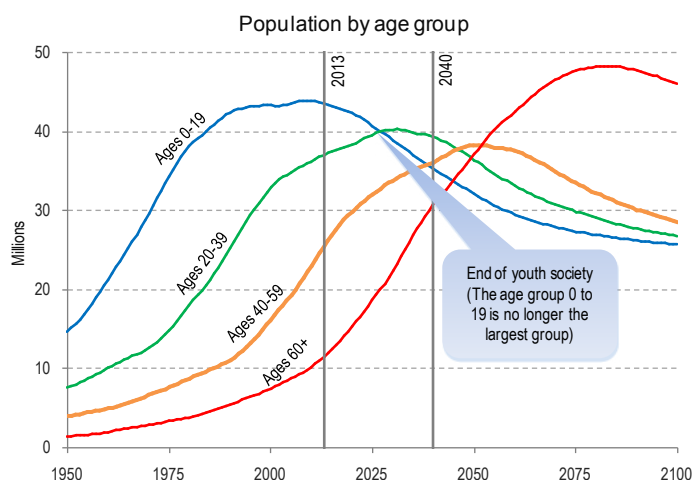
2035: Mexico becomes an aged economy

Mexico is expected to become an aged economy in 2035. In that year, for the first time in the history of the country, older persons will consume more (of all good and services, both public and private) than youth[2]. Japan became the world's first aged economy in 1996. Currently, there are 19 aged economies, all European economies with the exception of Japan. According to the latest projections based on NTA, in 2040 there will be 73 aged economies, among them Brazil, Costa Rica, Chile, Cuba, and Uruguay. By the end of this century, most of the world's economies will be aged economies, leading to an increased demand for health care and other programs and services for older persons. This will put pressure on governments as many of these programs are provided by the public sector and on families caring for older family members.
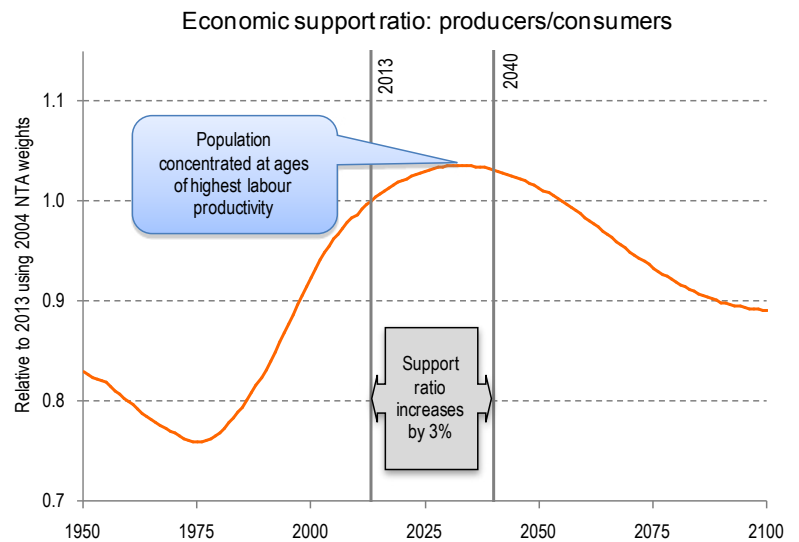

Population by age group

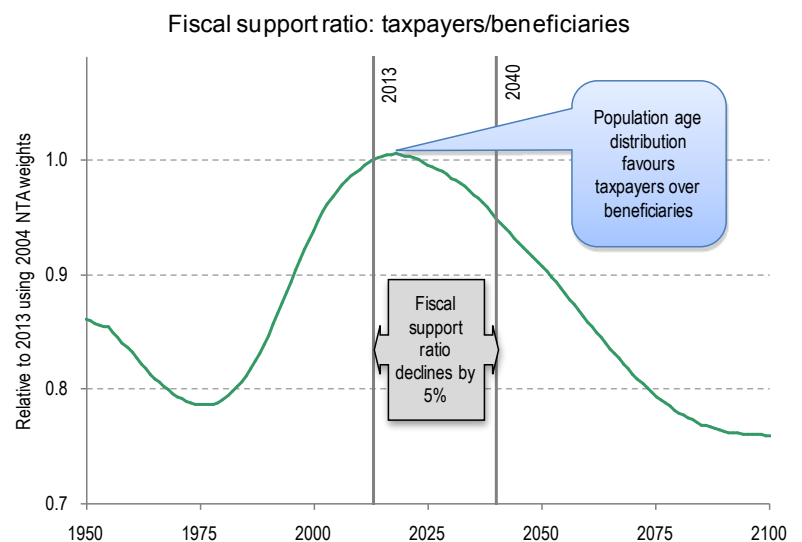Consumption by Youth and older persons
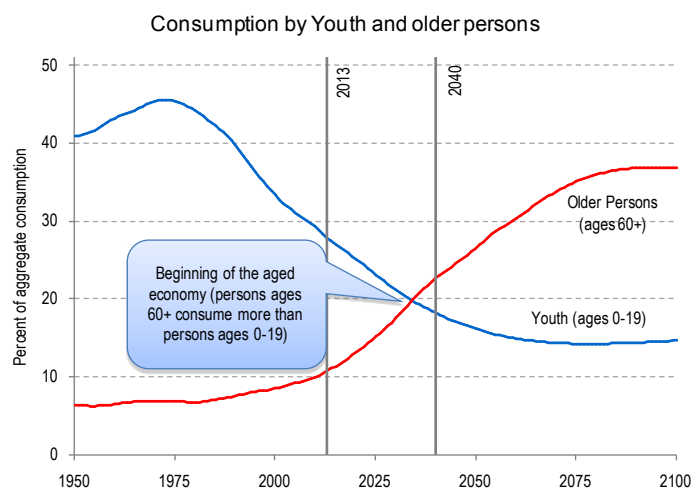
2033: Most productive population

The age structure of a population affects the economy by changing the distribution of people in ages of high labour productivity relative to their consumption. If the current age patterns of production and consumption persist, the age distribution will continue to favour producers in relation to consumers during the next two decades reflected in the increase of the economic support ratio[3] until 2033. This situation represents a potential "demographic dividend" – a surplus generated by the economy that, if invested in health, education, and infrastructure, can move the economy permanently to a path of higher production, consumption and living standards. However, beginning in 2033, it is projected that the economic support ratio will decline steadily as the percentage of older persons in the population increases. This new situation will pose increasing economic challenges for Mexico.

Economic support ratio: producers/consumers

Population concentrated at ages of highest labour productivity

Support ratio increases by 3%

2018: Fiscally-strongest population

During the last decades, changes in the age structure of the population have contributed positively to improve the fiscal situation of Mexico. However, this favourable outlook will soon end. The ageing population will mean growing fiscal pressures as the number of beneficiaries of public programmes increases relative to the number of taxpayers. The fiscal support ratio, the ratio of taxpayers to beneficiaries, summarizes this trend[4]. This ratio is expected to reach its peak in 2018 and then decline sharply. In the short term, it is expected that the fiscal support ratio will fall by 5% by 2040. In 2100, the ratio is projected to be approximately 0.76 taxpayers per beneficiary, relative to a value of 1 in 2013. Demographic trends after 2018 will increasingly contribute to the fiscal challenges Mexico will face.

Fiscal support ratio: taxpayers/beneficiaries

Population age distribution favours taxpayers over beneficiaries

Fiscal support ratio declines by 5%

About the National Transfer Account (NTA) Network

The NTA Network brings together researchers from different regions of the world using a new methodology: National Transfer Accounts. NTAs provide a new vision of economic relationships between groups in a national economy: between young and old, between men and women, between rich and poor. For the first time, we can measure the complete set of economic flows between these population groups and determine the roles played by the market (via labour and financial markets), the state (via taxes and benefits), and the family (via transfers within and between households) in defining these economic relationships. The NTAs represent a disaggregation of National Accounts by age, gender, and socioeconomic status. Applying the same NTA framework in all the countries in the NTA network allows for international comparisons of consumption, labour earnings, taxation, savings and other economic flows by age, gender and socioeconomic status. CELADE – the Population Division of ECLAC is responsible for the regional coordination of the NTA Network in Latin America and the Caribbean.
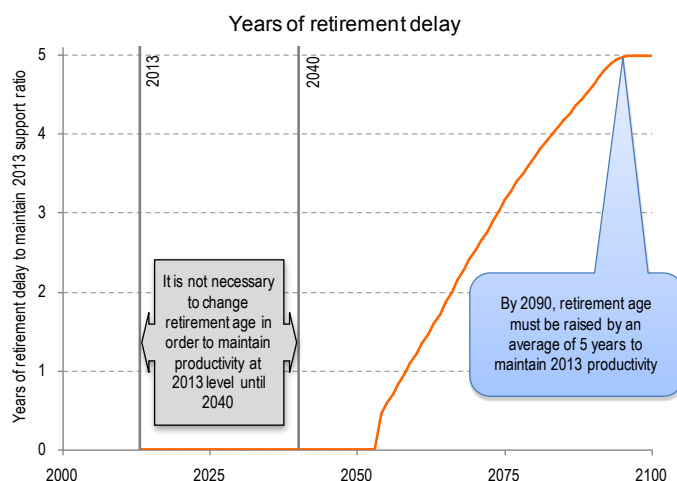
Policy options for the ageing future

Although policy interventions aimed at delaying population ageing by promoting immigration or increasing fertility can have some effect, their impact tends to be very limited. In order to effectively confront the economic challenges of population ageing, policies should focus mainly on economic and social factors. Three illustrative scenarios that examine policy options for Mexico's ageing future are presented in this section. The first reviews the impact of extending working lives, the second explores closing the gender gap in labour earnings, and the third examines raising taxes. The scenarios are all population-driven in that they reflect policies adopted to respond to changes in population age structure. Once the age structure of the population completes its transformation from a child-dominated population to a senior-dominated population (towards the end of the this century), the economic impacts of these policy options also end.

The scenarios are based on several simplifying assumptions in order to assess the sustainability of current policies and practices as measured by the economic support ratio and the fiscal support ratio. They assume no changes in the levels of coverage and benefits of public services. Each scenario evaluates one policy option. Logically, countries have an array of different policy options available to them. These options are not mutually exclusive and usually a mix of options form the basis of national policy. The estimates generated in the context of the NTA project which examine economic activity by age, gender, and socioeconomic status provide a rich source of information for further analysis of these and other national policy options.
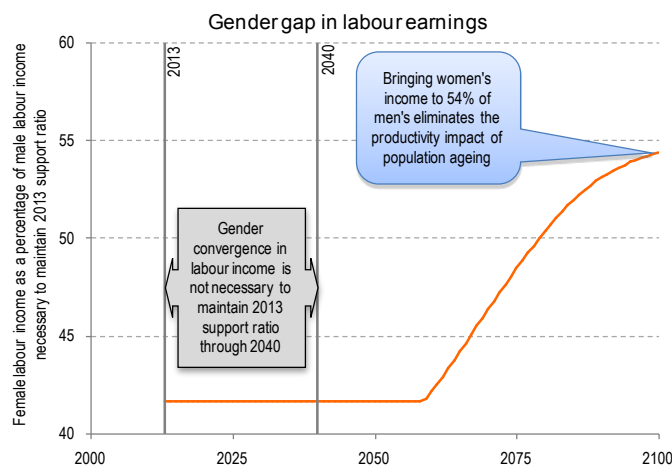
Delay retirement to maintain productivity

One way to counteract the effects of population ageing on productivity is to induce people to extend their working lives and delay retirement. We saw that in the case of Mexico, the short and medium run outlook for productivity is favourable. In fact, under the assumption considered in this exercise, the economic support ratio will be 3% larger in 2040 compared to 2013. However, in a long run perspective, delaying retirement would mitigate the effects of ageing on productivity[5] while additionally generating increased tax revenue. The option to extend working lives may be reasonable in a context of increasing healthy life expectancy and social protection policies aimed at supporting those for whom the delay in retirement would be an undue hardship. If this were the only policy option used, an additional 5 years of working life would be required to maintain productivity at its current level until the end of the century. Over this same period, life expectancy at birth is expected to increase by about 9 years.

Years of retirement delay

It is not necessary to change retirement age in order to maintain productivity at 2013 level until 2040

By 2090, retirement age must be raised by an average of 5 years to maintain 2013 productivity

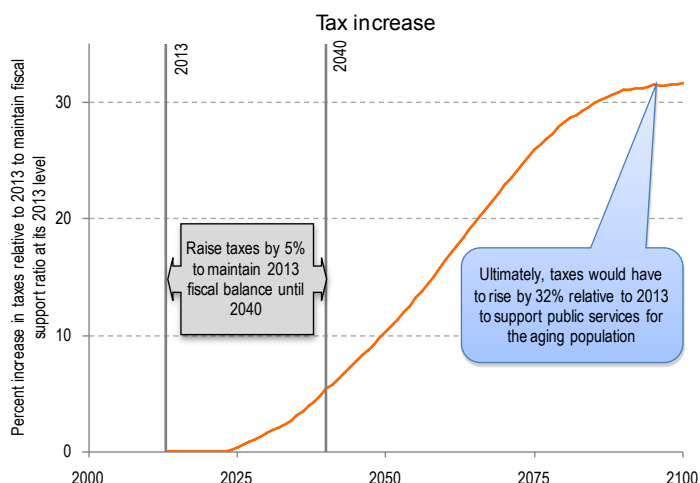## Close the gender gap to maintain productivity

In Mexico, women in the most productive working ages (between 30 and 49) only bring home 42% of what men earn. This gap reflects lower labour force participation of women, fewer hours of work per week, and lower wages per hour worked. Many women specialize in home production, performing unpaid work that benefits the family and the productivity of other workers in the family. From the perspective of the national economy, however, overall productivity would increase if women's participation in the formal labour market were closer to that of men. Reducing the 2013 gender gap in labour earnings by increasing labour earnings of women from 42% to 54% of what men earn would completely counteract the negative impact of population ageing on economic productivity during this century[6]. Measures to close the gender gap, such as (1) investing in women and girls' education, (2) instituting family leave policies that support working mothers, and (3) fighting gender discrimination in the workplace are a key set of policy options to maintain the support ratio in the face of population ageing.

Gender gap in labour earnings

Bringing women's income to 54% of men's eliminates the productivity impact of population ageing

Gender convergence in labour income is not necessary to maintain 2013 support ratio through 2040

Increase taxes to maintain fiscal balance

The fiscal support ratio forecast showed that, based on current tax and benefit programs, population ageing will quickly strain Mexico's public finances. One way to solve this problem is to raise taxes to meet the growing demand for public programs, such as pensions and health care programs for older persons. If the tax increase were the only policy change implemented, taxes would need to rise by only 5% to maintain the current fiscal balance through 2040[7]. In the longer term, however, the tax increase necessary to offset the full impact of populating ageing on government budgets rises to 32%.

Tax increase

Percent increase in taxes relative to 2013 to maintain fiscal support ratio at its 2013 level

Raise taxes by 5% to maintain 2013 fiscal balance until 2040

Ultimately, taxes would have to rise by 32% relative to 2013 to support public services for the aging population

Notes on Data and Methods:

Data for the analysis were taken from Iván Mejía-Guevara, "NTA Data for Mexico, 2004", National Transfer Accounts Project, 2012.

For detailed methodological information, see Gretchen Donehower (2013), "Methods used for estimations for Ageing Futures Series", NTA Project, [online] <www.cepal.org/celade/NTA>.

[1] Population estimates and projections were obtained from United Nations, World Population Prospects: The 2010 Revision, [online] <http://esa.un.org/unpd/wpp/Excel-Data/ population.htm>.

[2] We estimate and project aggregate consumption (public and private goods and services) by multiplying the NTA estimate of average consumption by age for 2004 by the population age structure in each year over the period 1950-2100. Details on the NTA estimates for Mexico in 2004 are available in Iván Mejía-Guevara (2011), "The economic lifecycle and intergenerational redistribution in Mexico", Population Aging and the Generational Economy: A Global Perspective, R. Lee and A. Mason, Cheltenham, Edward Elgar, p. 283-496.

[3] The economic support ratio is the ratio of the sum of the population by age, weighting each age by average labour earnings estimated from the NTA, and the sum of the population by age, weighting each age by average consumption estimated from the NTA. The calculation assumes that the patterns of labour income and consumption by age remain fixed at their 2004 levels, and that only the size and age distribution of the population changes.

[4] The fiscal support ratio is calculated in the same way as the economic support ratio (see note 3), but the numerator is weighted by average taxes paid by age and the denominator is weighted by average benefits received by age. This is a useful and easy to calculate indicator. Using data derived from the NTA, it is possible to obtain more realistic long-term budget forecasts.

[5] The analysis is based on calculating the economic support ratio. If the support ratio falls below the 2013 level, the labour income schedule by age is shifted to the right, from the point of peak labour income, representing a delay in average retirement by one year, until the support ratio is at or above the 2013 level.

[6] The gender gap is measured using data on labour force participation, hours worked and average wage by gender from Socio-Economic Database for Latin America and the Caribbean (CEDLAS and The World Bank), (see [online] <http://sedlac.econo.unlp.edu.ar/eng/statistics-by-gender.php> access in December 2012). The analysis involves calculating the reduction in the gender gap necessary to maintain the economic support ratio at its 2013 level.

[7] The tax rate increase necessary to maintain the fiscal support ratio at 2013 levels is the inverse of the fiscal support ratio.