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Policy Brief
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Population ageing in Algeria: Why should we start caring about?

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Key Messages

- Additionally to its continual growth, the Algerian population undergoes a rapid transformation in terms of age structure.
- The ratio of the population at working age to that at retirement age was at 6.7 in 1966. It stood stable at around 8.75 from 1987 to 2008.
- In 2021, this ratio has fallen below 6 for the first time in the history of independent Algeria and it will continue its substantial decrease in the future and reach a value of 2.7 in 2051.
- Policymakers need to foresee these upcoming changes and design some reforms of social and economic policies to cope with these population changes.

Introduction

Context

One of the fundamental parameters to take into consideration when designing economic and social policies is population numbers and age structure as well as their expected future evolution. From one side, the population at working age is the source of the labour force required to turn on the production process. Also, the resident population is the first costumer of the goods and services produced. Furthermore, the needs of a population depend strongly on its age structure; young and adult people may have different needs compared to children and elderly. Efficient economic development plans should take into account the population growth and expected changes of its structure. On the other side, social policies need to be designed in function of the list of the basic social services taken in charges by the state (health, education, old age benefits) and the evolution of the population groups concerned by these social services. Therefore, the evolution of the population at childhood, the population at school age, and the old age population need to be numbered and their future evolution to be expected.

In addition to its evolution in terms of number in the recent decade, the Algerian population undergoes deep transformations in terms of structure after having been relatively stable from the independence of Algeria in 1962 to late 2010s. Policymakers need to expect the changes that population is undergoing and to design some adaptations and reforms in social and economic policies to cope with these population changes.

Our objective

In this policy brief, we show why the current stage of the demographic transition should be considered with a particular degree of importance compared to the changes occurred in the previous stages. Based on the historical population data issued from the five population censuses combined with the population projections of Flici (2020)[1], we illustrate the importance of the change that the age structure of the Algerian population started just to undergo. We will focus on social policies dedicated to elderly such as old age benefits and old age cares. Flici and Planchet (2020) showed the effect of population ageing on the sustainability of the Algerian retirement system in the coming decades.

Our objective is to draw the attention of policymakers and public policies designers to get ready for making the necessary adaptations, especially that, currently, the long-term public planning is somehow neglected by policy makers especially regarding population changes. Furthermore, official population projections made by the Office of National Statistics (ONS) run only up to 2040. Efficient public planning requires projections to be extended for longer horizon.

In demography, two indicators are usually used to measure the change of population age structure: the economic dependency ratio and the old age dependency ratio. The first indicator is represented by the ratio of the population at inactivity ages (below age 15 and beyond age 60 or 65) to the population at working age (i.e., from 15 to 59 or 64 years respectively). In other words, it measures the

[1] *A population projection simulator was developed by Farid Flici allowing to display the changes of the population pyramid of Algeria from 2020 to 2070 in regards to the selected future scenarios of life expectancy and fertility. Link: https://farid-flici.github.io/pps.html*

number of inactive people living at the expenses of one people at working age. The second indicator measures the number of people at retirement age (e.g. 60 years and older, 65 years and older) living at the expenses of one individual at working age. In this policy brief, we use a simpler and easily readable indicator which is the ratio of the population at working age to the population at retirement age (the reverse of the old age dependency ratio). This ratio can be simply read as the number of people at working age corresponding to 1 people at retirement age.

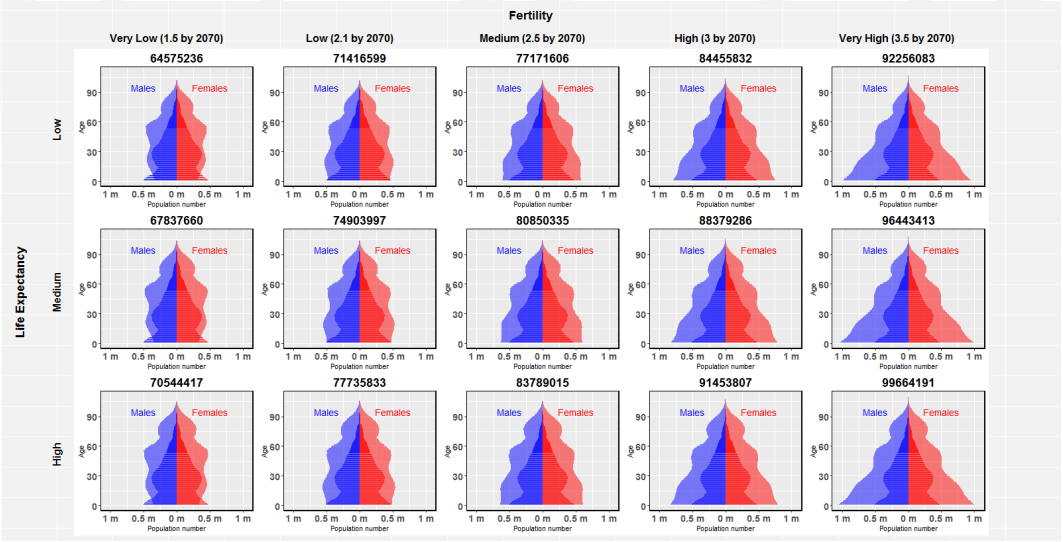
Analysis

Past evolution and future perspective

According to the population census of 1966, the number of people at working age corresponding to one people at retirement age was at 6.7. This ratio has increased to nearly 8 in 1977 and then stood in between 8.7 and 8.8 through the three next censuses of 1987, 1998 and 2008. This ratio has fallen to 6 in 2021 for the first time in the history of independent Algeria and is supposed to fall down to 2.7 starting from 2051 and stay at that level onwards.

Based on the multi scenarios population projections of Flici (2020), the Algerian population is expected to reach nearly 67 million inhabitants in 2050 and nearly 81 million in 2070 following the central scenario. Flici (2020) combined three scenarios of life expectancy evolution (Low, Medium, and High) and five scenarios of fertility evolution. The total fertility rate (TFR), which stands at around 3.1 children per women in 2019 according to the ONS was supposed to decrease slightly to 2.5 in 2070 following the medium scenario. According to the four other scenarios, i.e. "Very Low", "Low", "High" and "Very High", the TFR is assumed to evolve to 1.5, 2.1, 3, and 3.5 children per women respectively by 2070. The combination of life expectancy and fertility scenarios leads to 15 scenarios for population growth. Results are shown in Figure 1.

Figure 1: Multi-scenarios population projections for Algeria, 2070 Vs. 2015



Source: Flici (2020). Note: Each subplot corresponds to a scenario crossing one of the three scenarios of life expectancy in rows and one of the five scenarios of fertility in columns. The subplots compare the population pyramids of Algeria in 2070 (transparent) to that of 2015.

From Figure 1, we observe that the structure of the population pyramid in 2070 changes mainly according to the future level of fertility; the higher fertility rates are, the wider the base of the pyramid is. The effect of life expectancy on the population age structure is slighter since reduction in mortality, in the current stage of epidemiological transitions, benefits a little more for the old age population. Thus, improvement in life expectancy results in enlarging the population pyramid at all ages.

When comparing different subplots within the same column in Figure 1, one can observe the differences in terms of population numbers but no apparent changes in terms of structure despite the fact of a slight enlargement of the top of the pyramid; since the reduction of mortality will allow more and more people to survive to higher ages.

According to Figure 2, the number of people at working age corresponding to one people at retirement age; with this later set at 60 years, is supposed to fall in the most favourable situations to 2.9 in 2051 before to return slightly to 3.4 in 2070. Here, the most favourable scenario corresponds to a "Low" life expectancy" combined with "Very High" fertility. For a retirement age of 65 years, the expected value of the ratio of people at working age on people at retirement is 4.2 in 2051 and 4.3 in 2070.

Figure 2: Ratio of the population at working age to the population at retirement age, Algeria, 2015-2070

Source: Flici (2020). Note: The subplots represent the expected evolution of the number of people at working age corresponding to one people at retirement. The red lines correspond to a retirement age of 60 years while the green lines correspond to a retirement age of 65 years.

The worst scenario corresponds to a "High" life expectancy combined with "Very Low" fertility. According to such a scenario, even when setting the age of retirement at 65 years, the ratio of the population at working age on the population at retirement will fall below 3 starting in 2060.

Why should we care about this?

Poverty alleviation is one of the ultimate objectives of social protection policies. Such a task gets complicated when it concerns elderly who have usually no work ability and no earning power. Thus, different mechanisms can be deployed to ensure elderly accessing to financial and non-financial services needed in their daily life such as healthcare, housing, assistance, and psychological support. These mechanisms may include contributory social security systems, non-contributory social protection systems and even informal familial solidarity systems. Social security allows workers to access to a retirement benefit once at retirement by paying contributions during the working age. When the collected contributions fall to cover the retirement expenses, the state can intervene to cover temporary financial imbalances. Social protection programs cover all the services freely accessible by the whole population, including the elderly, without paying contributions. This includes access to health infrastructures, medications expenses for the persons having a chronic disease, small pensions for disabled people and many other programs. Such programs are financed through taxation. The informal familial solidarity system was defined by the World Bank (Holzmann et al., 2008) as the non-financial pillar of pensions systems which makes use even of the informal financial resources of the family members to support the elderly in accessing financial and non-financial services such as healthcare, housing, and family support.

Keeping poverty alleviation on target involves maintaining the financial sustainability of all the systems already presented. The balance between resources and expenses is, unfortunately, threatened by population ageing. The Algerian retirement system works following the Pay-As-You-Go principle, which means that the contributions paid by the current workers are used to pay the pensions of current retirees. Thus, the population at working age constitute potential contributors to the system while the population at retirement age are potential beneficiaries. The long run sustainability of the system is tied to the expected changes of the ratio of these two populations. The Algerian retirement system faces financial imbalances with a current ratio of 6 people at working age. The situation is expected to worsen with a ratio of 3. Obviously, this ratio doesn't represent the ratio of contributors to retirees, but when the first is falling to a half, it will be tough, if not imaginable, to keep the later at its current level.

Besides contributing to retirement, affiliated workers pay other contributions for social security covering health, disability, jobless and death insurance. Because health care expenses at old ages are usually much higher than those at younger ages, total healthcare expenses supported by social security depend widely on the share of elderly in the insured population.

Indeed, old age pensions and health care expenses of the elderly are among the heaviest burdens for public authorities in an ageing population. In addition to the old people who have right to a retirement pension, a considerable share of the elderly has never contributed to social security or even worked at all and are very likely to find themselves without any financial resources at retirement age and will therefore fall into vulnerability.

According to the statistics of the National Retirement Fund (CNR), there are 2.23 million people aged 60 years and older who receive retirement benefits by the end of 2020, among 3.3 million of beneficiaries all ages included. Women represent 13% only of the direct pensions and allowances beneficiaries from a total of 1.64 million while they represent 97.5% of the 591,100 beneficiaries of survivors' pensions. If we add to them the 300,000 retirees covered by the CASNOS (Retirement Fund for Non-Salaried Workers), it means that around 1.77 million people among the 4.3 million people aged 60 years and older live without a retirement income and without social security coverage. A proportion of them may continue working beyond the retirement age while some others may live at the expenses of their relatives.

Kouaouci and Sahraoui (2011) investigated the means of living and living conditions of the elderly in Algeria based on the Algerian family health survey (Papfam-2002). Among other variables, the authors were interested in studying where the financial resources of the elderly come from. Even if the survey dataset dates back to 2002, the findings may be partially applicable for nowadays context. According to their findings, the main source of incomes for the elderly is the retirement benefits with a share of 60% for the elderly aged 75-79 years and of 50% for those aged 80 years and older. Social insurance contributes with around 10% of the elderly incomes. Thus, about 70% of the elderly incomes come from social security. The second source of incomes for the elderly consists of the support of their children, which increases with the age of parents from 25% at 60-64 years to 32% at 80 years and older. Women receive more support from their children than men do (34% against 21%). Public subsidies, although more modest, also increase with age from 8% to 16% between 60-64 years and 80 years and older.

A rapid growth of the population of elderly compared to the population at working age will increase the burden on the public budget and, in parallel, will weaken the familial solidarity since we are expected to have more and more elderly in the family for less and less people at working age.

Recommendations

Depending on the long run plans of the government, a population policy needs to be setup based on the economic policy. If we expect our economy to remain depending on the redistribution of gas and oil incomes, the best strategy to adopt will be to slow down population growth but to support elderly expenses including healthcare and old age pensions among other services. However, if we expect to pass into a competitive economy, we will need to make sure of the availability of the required labor force in the future decades. A decision needs to be taken; with two main options resulting in completely different implications.

Slowing down population growth can be achieved through maintaining total fertility rates slightly higher than 2.1 children per woman. Lower fertility rates will results in a decreasing population accompanied with an accelerated population ageing process. In most of cases, such actions are irreversible; experience suggests that once a society switch to a low fertility based life style, it will not be possible to return back and raise fertility again; the cases of Germany, Spain and Italy among many other countries are well known. If we decide to adopt this first option, we will need to expect to increase public budget allocated for old age pensions and for old age health care expenditures. In other words, social protection programs for the elderly will need to be substantially extended. In addition, the fact that the implications of such a policy are irreversible, adopting it will make it harder in the future to go for an effective economic recovery plan, except if we expect to count on the immigrant work force.

The second option is to encourage fertility rates to rise at least to 3.5 children per woman in the near future. This can be achieved through sensitization campaigns, encouragement or by acting on the factors affecting fertility rise. Such a policy will require to improve and to extend the reproductive healthcare services and social protection programs dedicated for children. This comprises access to healthcare and to education among other services. Additionally, such a policy will result in the growth of the population which requires public investment in social infrastructures that the public budget will fall to cover if this population growth is not exploited for economic recovery.

Between these two main possible plans, many combined ones can be designed. The most important thing is to ensure the long term adequacy between economic plans and population policies. Given the current stage of population changes, the need for long term planning is requisite more than in any time before.

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