POLICY BRIEF

Sustaining Economic Growth and Social Security in Aging Economies

A rapidly aging population could increase public spending, especially on healthcare and pension benefits. Photo credit: ADB.

Policy responses to population aging should promote economic growth, higher productivity, and higher income for workers.

Introduction

Decreasing fertility rates and increasing longevity are changing the age structure of the world. The number of older persons is growing faster than the number of people in younger age groups. Most of the Group of Twenty (G20) countries, where majority of the world's population live, are projected to experience a significant degree of population aging.

The impact of population aging is enormous and multifaceted—a deteriorating fiscal balance, changes in saving and investment patterns, shortage in labor supply, inadequate welfare system (particular in developing economies), possible decline in productivity and economic growth, and ineffectiveness of macroeconomic policy.

This policy brief proposes policy recommendations, covering comprehensive structural reforms, public finance reforms, and reforms of public and private pension schemes.

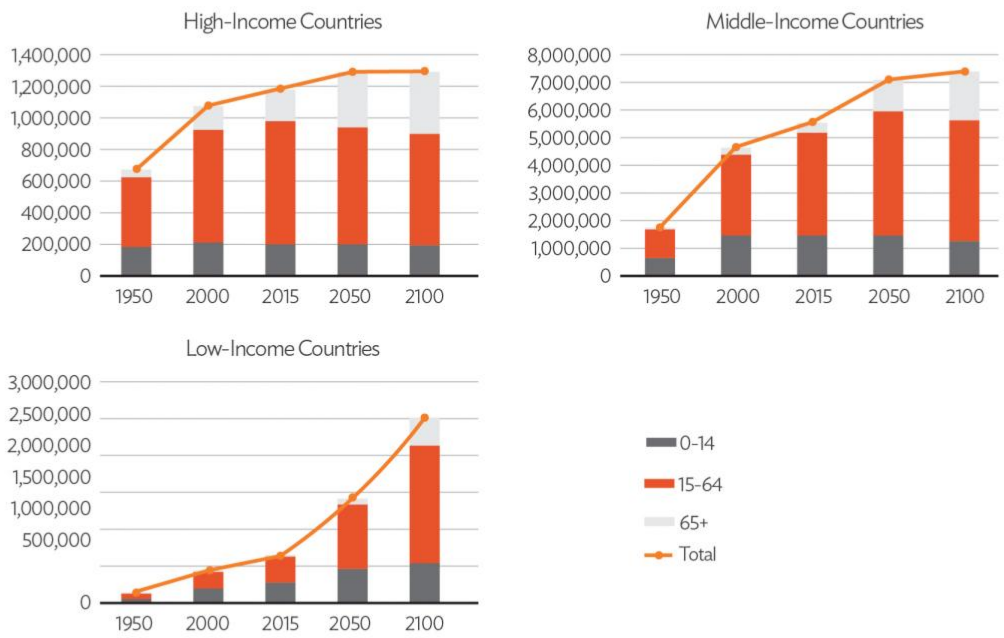
This is adapted from a policy brief developed under the T20 Japan Task Force 10: Aging Population and its Economic Impact + Immigrationfor the G20 Leaders' Summit in Osaka in 2019. THINK 20 (T20) is the research and policy advice network for the G20, an annual meeting of leaders from the world's major economies.

Challenges

The world is in the midst of demographic change toward population aging with countries experiencing it in varying degrees. According to the United Nations (2017), the number of people aged 60 and older is growing faster than younger age groups. An estimated 962 million people are aged 60 or over, accounting for 13% of the global population. Their number is projected to increase to 1.4 billion in 2030 and 2.1 billion in 2050, and could rise to 3.1 billion in 2100.

The world population projections by board age group and income group (Figure 1) indicate a decreasing growth rate in high-income and middle-income countries. The older population aged 65 and above is forecast to grow constantly in these economies. On the contrary, the population of low-income countries shows an increasing growth rate with a large working population aged 15 to 64.

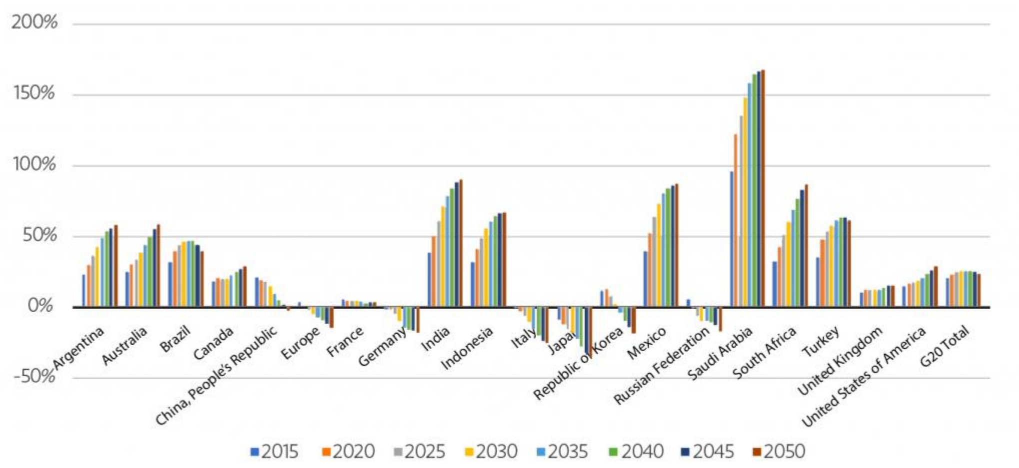
Figure 1: World Population by Board Age Group and Income Group (thousands)



Source: Population Division, United Nations (2018).

Diversity is shown among the G20 member countries. According to the United Nations (2018), the working population is projected to rise in some members, e.g., India, Indonesia, Mexico, Saudi Arabia, South Africa, and Turkey, while the People's Republic of China (PRC), European Union, Germany, Italy, Japan, Republic of Korea (ROK), and the Russian Federation are likely to experience a decline in working population (Figure 2). Overall, the G20's working population is forecast to be constant.

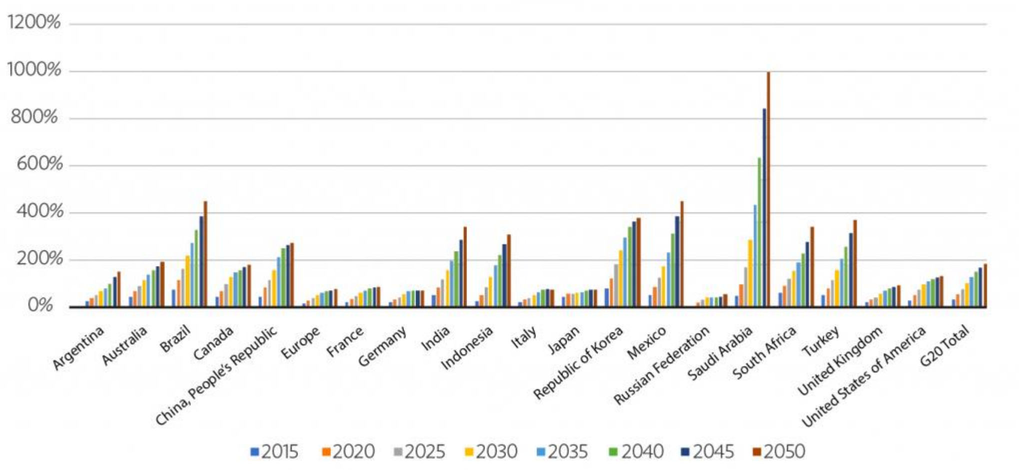
Figure 2: G20 Working Population, aged 20–64 (percentage of base year 2000)



Source: Population Division, United Nations (2018).

However, it is projected that most G20 economies would experience a significant degree of population aging (Figure 3). Different degrees of population aging are forecast among the economies.

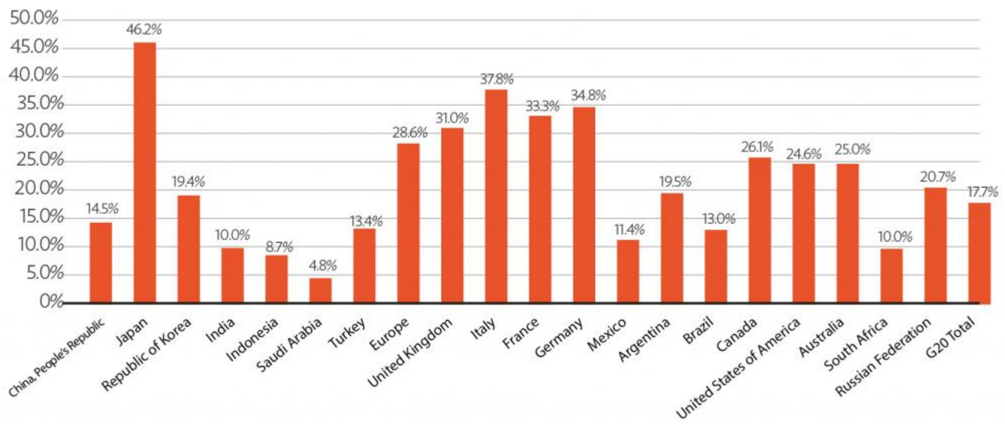
Figure 3: G20 Population, Aged 65 and over (percentage of base year 2000)



Source: Population Division, United Nations (2018).

Taking a closer look at the ratio of older population to working population in 2015, Japan and Italy seem to experience the most significant impact as these countries possess the highest ratio at 46.2% and 37.8%, respectively (Figure 4). However, emerging economies in the G20 are aging at much faster rates. For example, projections show that the PRC, India, Indonesia, Turkey, and Brazil will continually experience a significant increase in their older population until 2050.

Figure 4: Ratio of Aged Population to Working Population in 2015 (%)



Source: Population Division, United Nations (2018).

The impact of population aging is enormous and multifaceted. For an economy like Japan, its advent has been long pronounced as reflected in a deteriorating fiscal balance, changes in patterns of savings and investment, and a shortage in labor supply, which led to a decline in productivity and economic growth.

Moreover, for developing economies, rapid population aging usually raises economic and social challenges particularly in terms of sluggish economic growth and fiscal sustainability, namely a decline in tax revenue, an increase in public expenditure, and lack of an adequate welfare system. An indirect impact also comes through productivity and economic-growth channel.

Taking into account the severity of possible impacts to the economy, international communities, including the G20, have given more attention to the aging phenomenon and started discussions on policy options and responses. It is imperative for both advanced and developing economies to identify and determine the impacts as well as to develop and design appropriate policy responses to ease the negative effects on the society and economy.

Impact Analysis

Macroeconomic variables

An aging population influences a pattern of economic behavior in the society. As people get older and reach their retirement age (approximately 60–65 years old), they spend less due to income constraints and only on necessary goods and services.[1] In parallel, a shrinking working population affects savings and investments. On one hand, a smaller base of spenders, i.e., working population, with the complement of a bigger base of elderly, i.e., retirees, brings about a decrease in aggregate consumption. On the other hand, less aggregate income results in lower domestic savings, which limits new investment.

At an early phase of the demographic transition, an increase in the proportion of workers in the total population enhances aggregate consumption, cumulative investment, total labor input, and thus output, creating a demographic dividend. As the transition progresses, a significant drop in labor supply because of lower fertility and mortality rates reduces aggregate output as well as domestic savings, and thus, decreases investment. This change in economic behavior can cause sluggish economic growth and potentially threaten national reserves as well as economic stability.

It is well documented that an aging population leads to capital deepening and hence higher output per worker (Lee et al., 2014; Andrew et al., 2106). However, there have been concerns that an aging population might lessen total productivity and economic growth. Generally, the elderly are comparatively slow to adopt new technologies or approaches, which can hamper overall productivity in a global economy undergoing rapid technological change.

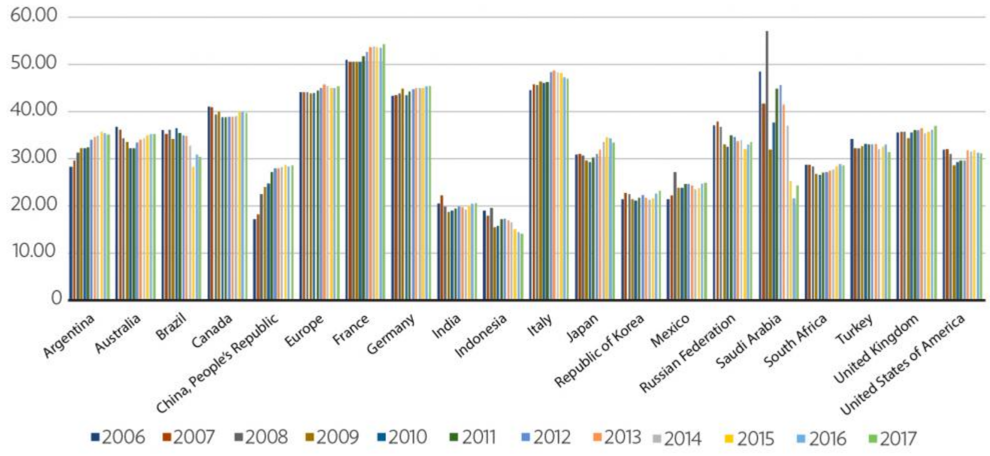
That said, aging does not necessarily have an adverse effect on economic growth. A longer life may require more savings and make investment in education more attractive. In such a scenario, a decline in labor force due to aging can be offset by higher productivity with increased physical and human capital accumulation and technological innovation. Indeed, some studies claim that there is no evidence of a negative relationship between aging and gross domestic product (GDP) per capita (e.g., Acemoglu and Restrepo 2017). As such, there is a clear need for further studies to more accurately identify the economic impacts that population aging could bring.

Fiscal sustainability

Rapid population aging can pose a serious structural challenge to fiscal sustainability. Two main channels are referred to: (1) a shrinking working population who are taxpayers, and (2) increasing government expenditures for aged-related programs, particularly healthcare expenditure. In many high-income countries, the pension also plays a crucial role, as important as healthcare spending. The complementary nature of these two factors will create a serious burden on public finance. In other words, the tax revenue decreases due to a smaller base of taxpayers, while the government expenditure, particular on healthcare, continuously increases.

The side effect also comes from a reduction in economic growth corresponding to diminishing productivity. This jeopardizes tax collection. Low economic growth will lead to a reduction in national revenue and savings, which in turn generates negative impacts on economic sustainability.

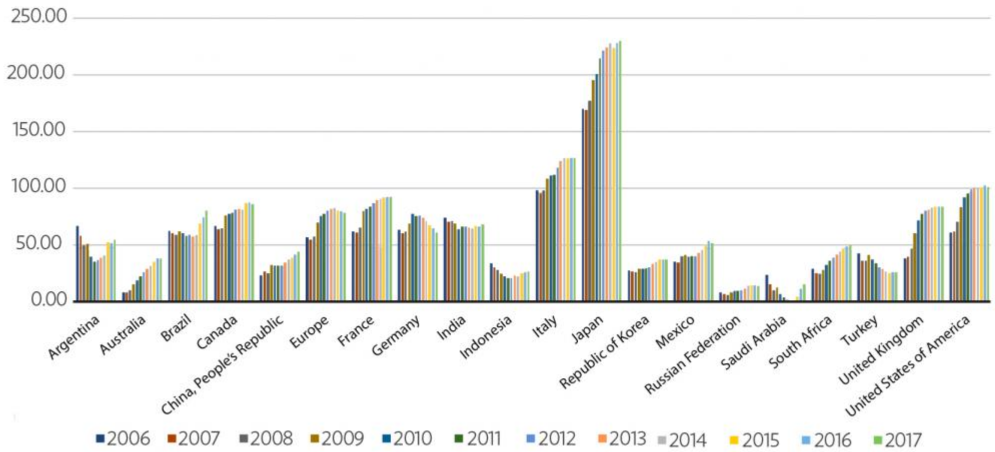
Figure 5: Government Revenue
(% of GDP)



Source: IMF (2018) and EUROStat (2018).

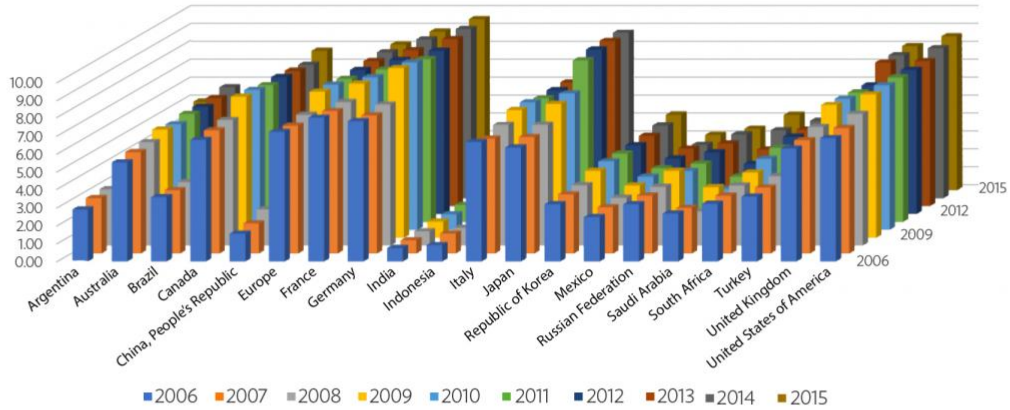
In the G20 community, government revenues in Italy and Japan show a declining trend in these past years (Figure 5). Many G20 countries, such as the PRC, Italy, Japan, Republic of Korea, and United States, have experienced an increasing rate of gross national debt as a percentage of GDP (Figure 6). In addition to the consequences from the recent financial flux and global economic turbulence, a substantial increase in government spending can pose a further challenge to fiscal balance. Most of these countries have increasingly spent a large part of their budget on public health (Figure 7). As fiscal revenue gets smaller and government expenditure continues to increase, the massive burden on public finance will be further reflected.

Figure 6: Gross National Debt
(% of GDP)



Source: IMF (2018) and EUROStat (2018).

Figure 7: Government Health Expenditure
(% of GDP)



Source: World Bank (2018).

Consequently, sluggish economic growth can threaten economic and financial stability. Lower economic growth implies a reduction of national revenue and savings. With low national income and reserves, a country can put itself at risk of insufficient social development and economic unsustainability. The current high level of both public and private debts in many economies would leave them poorly positioned to handle the coming effects of population aging.

Effectiveness of macroeconomic policies

Besides its impact on economic performance, population aging weakens the effectiveness of traditional macroeconomic—fiscal and monetary—policies as evidenced by Yoshino and Miyamoto (2017).

On the fiscal policy side, the effectiveness is lessened through lower labor supply in the economy. The fiscal balance relies heavily on the ability of government to collect taxes. Generally, income tax is the biggest portion of total government revenue. In principle, an aging population pushes down the number of workers, who are taxpayers, in the economy, which diminishes tax revenue. Additionally, under a pension scheme, retirees receive pension benefits that are financed by taxes and contributions imposed on active workers and by the issuance of government bonds. Given a fixed amount of pension benefits per retiree, the overall burden per worker is substantially raised with a decreasing working population.

In terms of monetary policy, the study shows that the positive impact of an expansionary policy on consumption is reduced in an aging economy. This is because consumption decisions of the aged are not affected by a change in interest or inflation rates. Unlike the working population, the elderly's consumption behavior is inelastic to price changes due to their limited income and their fixed spending behavior. Although the central bank decides to decrease the interest rate to boost domestic consumption, the elderly will spend only on their necessary and/or regular purchases. As a result, a ratio of the population directly affected by the monetary policy shock decreases. It also implies the declining effect of monetary policy due to diminished marginal productivity of capital faced with an aging population. Taking into account such lowering of policy effectiveness, more structured responses and reforms should be in place to address challenges posed by population aging.

[1] While private consumption tend to decline with aging, combined public and private consumption expenditures rise very sharply with age in many high and middle-income countries. Total consumption with aging heavily depends, among others, on old-age

support systems.

Policy Proposals

Policy responses to population aging should be geared toward encouraging economic growth, higher productivity, and higher income for workers. Policy proposals to address macroeconomic and fiscal sustainability challenges arising from population aging are presented in three areas: quantity and quality of labor supply, public finance, and pension.

Recommendation 1: Comprehensive Structural Reforms for Improving the Quantity and Quality of the Labor Force

To cope with a diminishing working population, encourage the participation of more senior and female workers in order to maintain the size of the labor force. A higher proportion of workers in the total population will maintain or enhance the taxpayer base as well as help reduce the amount of tax paid by worker transferred pension benefits. With these two factors combined, the results can lead to (i) an increase in government's ability to collect more taxes, and (ii) a potential increase in productivity, which will be followed by rising consumption, savings, investment, and hence, economic growth.

There are several ways to facilitate the elderly to work longer, including postponement of retirement by removing mandatory retirement laws, prohibiting discrimination against the elderly, and encouraging the creation of government jobs for the elderly. Measures for removing discriminatory practices toward women and keeping the balance between work and life are important as well to bring in female workers into labor markets. Additionally, promoting the greater role of women's productivity and use of female workers in the healthcare and long-term care systems will improve market efficiency as well as the quality of the labor force while dealing with the aging phenomenon.

In particular, keeping elderly people in the labor force for a longer period would be a very effective tool as a policy response to the decreasing effectiveness of macro policies (Yoshino and Miyamoto, 2017). The logic is quite simple. In the long run, encouraging elderly people to continue working will bring higher output and consequently, a higher level of consumption. With the elderly able to carry on their employment, they would not rely heavily on social welfare, which could lower tax levels. Thus, the tax burden on the younger generation would decline as their disposable income and consumption rise. Facilitating this process would require reforming the wage system and heavy investment in human capital.

The first measure is to redesign the wage system from a seniority-based system to a performance-based one under which wages are paid at the level of marginal productivity of labor. In a country like Japan, this reform is critical, not only to encourage greater labor force participation among the elderly but also to create more labor movement toward high-productive segments of the economy.

The second is to invest more in human capital and education. The standard of living is determined by productivity in the long run. Productivity-enhancing, life-long education and/or training programs must be offered to both working and aging populations to overcome their technical limitation and ensure their capability to adopt and adapt to technological advancements.

Recommendation 2: Public Finance Reforms

As population aging rapidly progresses, its fiscal consequences would be enormous. Accordingly, it is imperative for governments to take decisive action to minimize fiscal imbalances. As stated, fiscal sustainability hinges on two channels, tax revenue and fiscal spending, each requiring robust and credible reform measures.

As the national debt position deteriorates with population aging, fiscal balance heavily relies on the ability of government to correct tax levels. It seems the easiest way is to raise taxes—payroll, consumption, and other taxes. However, a large increase in taxes inevitably leads not only to a growing burden that will result in the reduction of consumption and investment but also to distortions to economic behaviors.

The reform should be more on the expansion of the tax base by restructuring the tax framework to rely more on other tax types beyond individual income, namely corporate, excise, and luxury tax. The other option is to carefully review the individual income tax structure in relation to progressive rates to increase the tax base for the high-income group and adjust the tax base for the middle-income group. A third possible approach is to reform tax reduction and incentives as well as the tax exemption. These measures would equally allow extra fiscal space to balance government finances.

As for the reform of government spending, a careful review of expenditure, especially for healthcare and age-related programs, is required to lessen the tax burden and fiscal deficit. The most important thing is to keep costs under control by removing unnecessary and unjustified expenditures that are not linked to improvements in health and other welfare services. There is a need for vigorous reform measures in the health sector, including more use of market mechanisms, demand controls, and supply-side controls, that are tailored to each country’s situation to stabilize spending and thus attain fiscal sustainability.

Recommendation 3: Reform of Public and Private Pension Schemes

Along with the healthcare system, public pension is a major segment where urgent reform should be considered for fiscal sustainability. Firstly, to clearly figure out the status of the pension scheme, a long-term actuarial balance management framework should be implemented, duly taking into account social, economic, and demographical impacts. An appropriate pension level should be determined based on its impacts on the living standard of the elderly, government fiscal and social burdens, and economic growth. The designed framework should be verified regularly on an annual basis to ensure the responsiveness of the pension scheme to changes and circumstances. It is also recommended to equip the framework with socioeconomic parameters to capture the effectiveness of the pension scheme.

Based on this regular review, it is recommended to take relevant measures to improve the financial status of the public pension scheme. Measures include (i) raising the retirement age, (ii) increasing contribution rates, (iii) compulsory government subsidy, and (iv) abolishing unjustified benefits. The other option would be to switch from a pay-as-you-go system to a fully or partially funded system. The pension fund, if well managed, could contribute to national savings, investment, and growth while reducing fiscal burdens.

A modification of private pension schemes is also recommended to strengthen income security for aged workers. Reforms include the progressive expansion of employer's obligation in the retirement pension program. To encourage progressive employers' contribution, a tax incentive or other types of government subsidies may need to be offered. However, it is also essential to evaluate an optimal return for fiscal sustainability, improve asset diversification to enhance the financial status, and upgrade information sharing by building a pension database.

Consequently, a number of initiatives have been introduced and recommended to ensure fiscal sustainability in the face of population aging. Given the serious impact of this phenomenon to the economy, the G20 community should seriously consider adopting appropriate measures in preparation to coping with the medium- and long-term consequences. Statistics continue to show an increasing trend of population aging and its negative impacts to the economy, which affects the community's wealth and economic stability.

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