

Statistical Evaluation of the Demographic Aging Problem and its Impact on the World Economy

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Annotation: The article presents the student's conclusions and suggestions on the impact of demographic aging on the economic situation in the world as a result of the study of statistics, scientific books and various district views.

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What are the implications of an ageing population? An older population presents many challenges to labor markets, government tax, government spending and the wider economy.

One of the great achievements of the Twentieth Century is a dramatic rise in life expectancy. For example, life expectancy in the world has increased from 52 in 1960 to 67 in 2000 and currently the world average life expectancy is 72 years. Even in the past 50 years, life expectancy has risen in most western economies.

However, increased life expectancy combined with declining birth rates have caused many to worry about the impact of an ageing population. Frequently, we hear about "a demographic time bomb", and the fear future generations will struggle to meet an ever increasing number of retired workers and pension commitments.

First, at the end of 2020 in Uzbekistan, the ratio of people of working age and people over 65 is about 15 to one. However, recently in Uzbekistan there has been a decrease in the total fertility rate: 5.6 in 1980, 3.9 in 1993, 2.2 in 2008, 1.78 in 2016, which is below the level of reproduction of generations – 2.15. In turn, this can have a negative impact on the demography of the state. This implies a very large increase in the dependency ratio and therefore cause for concern, because with the current liabilities for pension spending, this will place a heavier burden on the shrinking working population.

However, others argue it is a mistake to base calculations solely on a fixed retirement age of 65. If life expectancy increases dramatically, you would expect a sensible policy is to allow some increase in the retirement age, e.g. keeping the same % of your working life for retirement.

Main impact of an ageing population:

- increase in the dependency ratio. If the retirement age remains fixed, and the life expectancy increases, there will be relatively more people claiming pension benefits and fewer people working and paying income taxes. The fear is that it will require high tax rates on the current, shrinking workforce;
- increased government spending on health care and pensions. Also, those in retirement tend to pay lower income taxes because they are not working. This combination of higher spending commitments and lower tax revenue is a source of concern for Western governments – especially those with existing debt issues and unfunded pension schemes;

- Those in work may have to pay higher taxes. This could create disincentives to work and disincentives for firms to invest. Therefore there could be a fall in productivity and growth;
- Shortage of workers. An ageing population could lead to a shortage of workers and hence push up wages causing wage inflation. Alternatively, firms may have to respond by encouraging more people to enter the workforce, through offering flexible working practices;
- Changing sectors within the economy. An increase in the numbers of retired people will create a bigger market for goods and services linked to older people (e.g. retirement homes);
- Higher savings for pensions may reduce capital investment. If society is putting a higher % of income into pension funds, it could reduce the amount of savings available for more productive investment, leading to lower rates of economic growth.

Evaluation of an ageing population:

- a declining birth rate also means a smaller number of young people. This will save the government money because young people require education and pay little, if any, taxes. Though the net cost of retired people is greater than the net cost of young people under 18;
- it depends on the health and mobility of an ageing population. If medical science helps people live longer, but with poor mobility, there will be less chance to work. If people live longer and can remain physically active for longer, the adverse impact will be less;
- immigration could be a potential way to defuse the impact of an ageing population because immigration is primarily from people of working age. However, immigration brings its own political challenges and has become increasingly unpopular, despite net migration creating a positive net fiscal effect;
- increasing the retirement age is one solution to an ageing population. But, the effect of a higher retirement age will not be felt equally. Those with private savings may be able to still retire early, those with low income paid jobs are more likely to have to keep working. Also, the impact of longer working life will be felt more by manual workers who will find it harder to keep working;
- population demographics have been shifting for the past few centuries. This is not the first time we have had shifts in the age profile of the population;
- how will it be funded? A big issue is whether spending commitments are funded or unfunded. Many western governments fund their pension plans through pay as you go, rather than saving national insurance contributions. This could lead to gaps in spending commitments;
- incentives to keep working? Part of the problem is that there is currently a strong incentive for people to retire early. The effective marginal tax rate imposed on earnings resulting from delayed retirement has in many systems been in excess of 60 percent. These incentives have encouraged many to take early retirement. Also, there is often a rule prohibiting people working longer – even if they wanted to. If these incentives can be changed, we could increase the number of people working for longer and reduce the dependency burden;
- a big factor in determining the impact of an ageing population is future rates of economic growth. There is a concern, western economies have entered a period of secular stagnation – falling growth rates. This decline in economic growth will increase the pressure on public finances from an ageing population. Strong economic growth, increases tax revenues and makes it easier to fund pension commitments. But, in recent years we have seen stagnant wages and a

decline in real incomes of young people. This places stress on redistribution of income from the young to retired. The problem is that an ageing population is one reason put forward for secular stagnation in a country like Japan;

- another problem with an ageing population is that it could exacerbate inequality. With increased reliance on private sector savings, there could be a division between those with a good private sector pension, and those who rely on a diminishing state pension. Also, inequality could be exacerbated by the state of the housing market, with homeowners in a much better position than those who have to continue to rent into their retirement.

As I said earlier, demographic aging is no longer new. In each case, this indicator affects the economy in one way or another. But at the moment there are such states in which this problem has attracted the present crisis. This issue is affecting the Japanese economy in the most critical way.

Japan, the world's third largest economy, has been experiencing the issue of population aging to an unprecedented degree. More than 20 percent of Japan's population is over 65 years old, the highest proportion in the world. By 2030, one in every three people will be 65 or older, and one in five people 75-plus years old. The rapid aging process in Japan is striking because of the high rate of economic growth and changes in family and social structures in the postwar period.

The decline in Japan's fertility rate has been attributed to several factors such as changing lifestyles, people marrying later in life or not marrying at all and the economic insecurity of younger generation. Increasing life expectancy is another driving force behind the aging trend. Fifty years ago, life expectancy at birth was about 72 years; it has since climbed to 84 years.

There are two fundamental aspects behind Japan's aging population. One aspect is the increase in the proportion of the elderly in the total population. The other is the slower growth of the population, arising directly from the declining fertility rate. The former affects Japan's economic performance by increasing the social security burden and benefits. The latter has a direct impact on economic growth by reducing the labor force, which is a major factor in production.

"A rapidly aging population and shrinking labor force are hampering growth," warned the International Monetary Foundation in its latest country report on Japan. The IMF also calculated that the impact of aging could drag down Japan's average annual GDP growth by 1 percentage point over the next three decades.

The causal effect of aging is leaving its mark on the macroeconomy of Japan, especially the labor force and capital accumulation. Due to the nation's aging and shrinking population, there is an increased need to address the labor shortage. People eventually retire and leave the workforce as they start aging, and at present, there are not enough young people in Japan to fill this vacuum owing to the decline in the fertility rate as well.

This further implies that some of Japan's big industries — like motor vehicles and electronics - do not possess the manpower to continue at the current level of production. If Japan cannot maintain its levels of production, it may subsequently lose its spot as the third largest economy in the world.

The issue of aging is also likely to make untenable the seniority system among the labor force, in which wages increase in proportion to length of service with a company. This leads to fewer promotion opportunities and also damages workers' morale.

Due to a decrease in the working age population, Japan also hopes to see higher female labor force participation under tightening labor market conditions. Ex-Prime Minister Shinzo Abe had been

going such a path, called "Womenomics", where companies are pressured and given incentives to hire more women and give more leadership positions to female employees.

As Japan's population ages, the prime minister's administration finds it difficult to balance its conservative views on immigration with the need for younger and skilled workers to boost the Japanese economy. Therefore, the nation came up with the idea of allowing more foreign workers in a controlled manner.

An amendment to the immigration control law that came into effect in April created new visa categories for foreign workers in sectors that are suffering from labor shortages. However, its impact cannot be assessed easily. It is important to keep in mind that the countries targeted as possible sources of labor for Japan will also face their own labor shortages, especially in the care-giving sector, in the near future.

A study by the U.N. Population Division released in 2000 found that Japan would need to raise its retirement age to 77 to maintain its worker-to-retiree ratio. Currently, retirees are largely well off and are reaping the fruits of a long and laborious life. However, it is unlikely that the benefits they enjoy now can be sustained for future generations. Aggravating the growing labor force shortage are the rising expenses associated with aging, like caregiving needs for the ill and the fact that older people will require extra medication and hospitalization.

Prime minister's administration has also vowed to tackle this crisis by taking steps to support young couples in raising children, for instance, making preschool education free. His government has set a target of increasing the fertility rate back to 1.8 by 2025 - a goal unlikely to be achieved so soon, given that the rate was just 1.43 in 2017.

The government should pursue structural and labor reforms, which will aim at increasing the nation's productivity despite the declining labor force supply. More elderly people and women should be encouraged to play active roles in the labor force.

Healthier individuals are better able to work longer and with more energy, which suggests that protecting older individuals' health will intensify their productivity and labor force participation. In addition to savings in health care costs, effective health promotion programs will therefore lead to gains in productive labor hours and output.

A healthy population will also lead to higher savings rates, lower medical expenses, and increased foreign direct investment. The government has also come up with an idea of making Japan an "age-free society" in which people 65 and older will not be considered senior citizens and will rather be encouraged to stay healthy and keep working.

The 2019 Revision of World Population Prospects, released in June 2019, predicts the proportion of people aged 65 years and older in Japan will increase from the current level of 28 percent to 38 percent by 2050. Although the rapid aging of the population is a major challenge to the Japanese economy, its negative impacts on savings and investment can be largely reduced by stimulating labor-augmenting technological change and extending the working life of the elderly.

As a result of this situation, which is observed in all governments around the world, government officials may be able to control the demographic aging of the population if they act as follows:

- increase the labor market participation rate. Make it easier for people past 65 to keep working;
- raise the retirement age. The government have already proposed an increase to 67. The retirement age could automatically be linked to life expectancy;

- increase the importance of the private sector in providing pensions and health care. However, this may cause increased inequality if people can't afford private pensions;
- increase tax to pay for pension costs. But, many governments already have limited budgets;
- immigration. The easiest solution to an ageing population is to encourage young migrants of working age. For example, the UK has attracted many young workers from Eastern Europe. But, net migration and free movement of labor is unpopular for fears it drives down wages and places stress on infrastructure and housing demand.

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