THE POTENTIAL FOR INFLATION CAUSED BY LABOR SHORTAGES DUE TO A DECLINING BIRTHRATE AND AGING POPULATION

— THE IMPACT OF PERSISTENT HIGH PRICES ON CORPORATE MANAGEMENT —

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SUMMARY

- According to the 2019 UN population estimates, China's population was expected to begin declining in 2032. However, the most recent estimates have moved this date forward by a decade to 2022, indicating that a declining birthrate and aging population are already becoming apparent in China, as elsewhere.
- Some economists have drawn attention to the view that this demographic trend will exert upward pressure on prices through a scarcity of labor and the medical and other expenditures of the elderly who only consume but do not produce.
- In the US, prices have tended to rise faster than wages, and there has been an increase in the formation of labor unions, which is partly a consequence of labor shortages. In response to these trends that could affect corporate management, companies need to view human resources not merely as a cost, but as part of their capital, and incorporate that perspective into strategic and comprehensive capital policies.

Global monetary easing in the wake of the COVID-19 pandemic has led to unprecedented levels of excess liquidity, and has become a cause of large-scale inflation. The price rises spurred, among other things, by the Russia-Ukraine conflict, have yet to abate. However, central banks around the world have generally shifted the direction of monetary policy from easing to tightening. While the outcome of the war in Ukraine is unknown, given that it is a temporary situation, inflationary pressures are expected to ease in the not-too-distant future.

Although this trend is based solely on short-term factors, the view put forward by some economists, such as Charles Goodhart[1], that prices will remain under upward pressure over the long term is attracting attention. Behind this view lies a declining global birthrate combined with an aging population. This report examines why a declining birthrate and aging population, which is generally regarded as a factor restraining prices, is thought by some experts to exert upward pressure on prices, and considers the impact on companies should this become a reality.

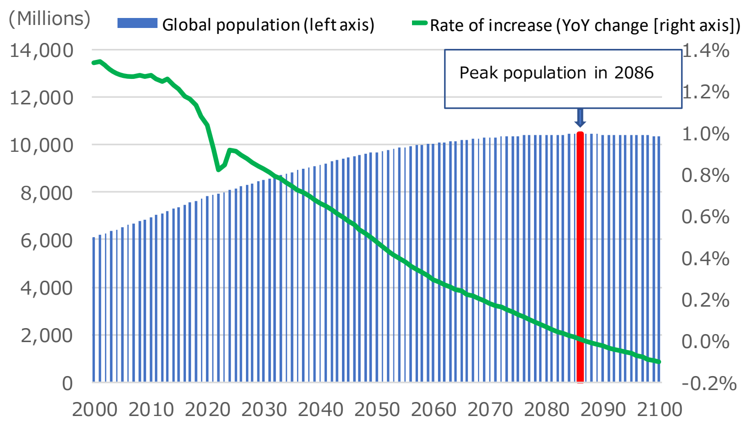
1. CHANGING DEMOGRAPHICS

According to UN population estimates released in July 2022, the pace of global population growth is declining. It fell below 1% for the first time in 2020, and is expected to drop to 0.82% by the end of 2022 (Figure 1). The world population is projected to peak in 2086 at 10.431 billion, a significant revision from the previous estimate (2019) that saw it peaking at 10.9 billion in 2100.

[1] The view is expressed in the following book and elsewhere: Charles Goodhart and Manoj Pradhan, *The Great Demographic Reversal: Ageing Societies, Waning Inequality, and an Inflation Revival*, Nihon Keizai Shimbun Publishing

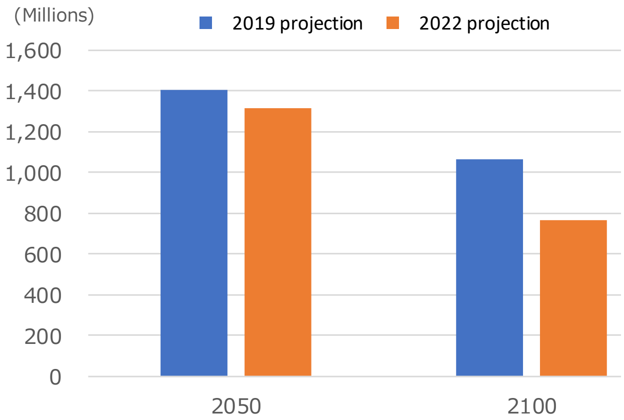
In China, in particular, the decline in population that was projected to begin in 2032 under the previous estimate has been brought forward by a decade in the current estimate, and is now expected to begin in 2022 with a year-on-year decline of 6,000 people. China's population is expected to fall to 1.312 billion in 2050, and to 766 million in 2100, down 90 million and 300 million, respectively, from the previous estimates (Figure 2).

Figure 1 Global population projection



Source: Created by MGSSI based on the UN's "World Population Prospectus" (2022)

Figure 2 Change in China's population projection



Source: Created by MGSSI based on the UN's "World Population Prospectus" (2019, 2022)

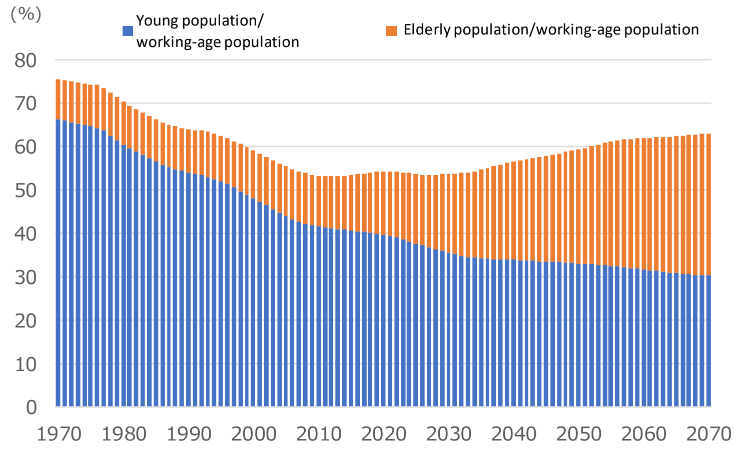
2. PERSISTENT INFLATIONARY PRESSURE FROM THE DECLINING BIRTHRATE AND AGING POPULATION

It has been pointed out that this trend could lead to global inflationary pressures. A declining birthrate and an aging population mean that the number of non-productive dependents (the dependent population), who are net consumers of goods and services engaging only in consumption activities but not production activities, will increase relative to the number of workers (the working-age population[2]) who have a disinflationary effect on the economy. While the elderly in particular are limited consumers of goods, they spend substantial amounts on medical and nursing care. Although much of this will be borne directly by the public sector, Goodhart and like-minded economists believe that since it is, in effect, consumption by the elderly, the increase in the proportion of elderly in society (Figure 3) will exert inflationary pressure.

Until now, such pressure has been offset by the price restraint accompanying productive activity by the working population. In particular, the large supply of labor in China decreased upward pressure on prices globally, even during boom times. However, Goodhart and others point out that the global trend in prices will shift from deflation to inflation as China's declining birthrate and aging population lead to a scarcity of labor (Figure 4), which will begin to put upward pressure on prices.

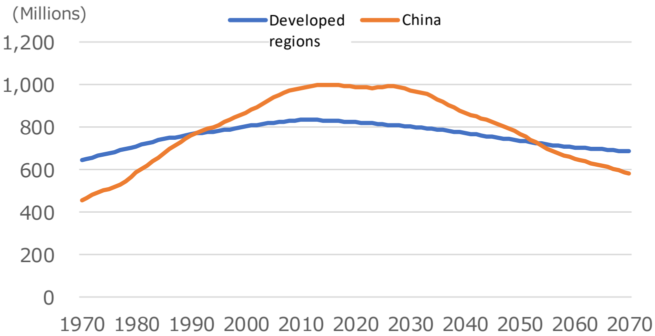
[2] The age group that is able to engage in productive activities.

Figure 3 Percentage of dependent population by age distribution



Note: Young population= 0-14, Working-age population = 15-64,
Elderly population = 65 and over
Source: Created by MGSSI based on the UN's "World Population Prospectus" (2022)

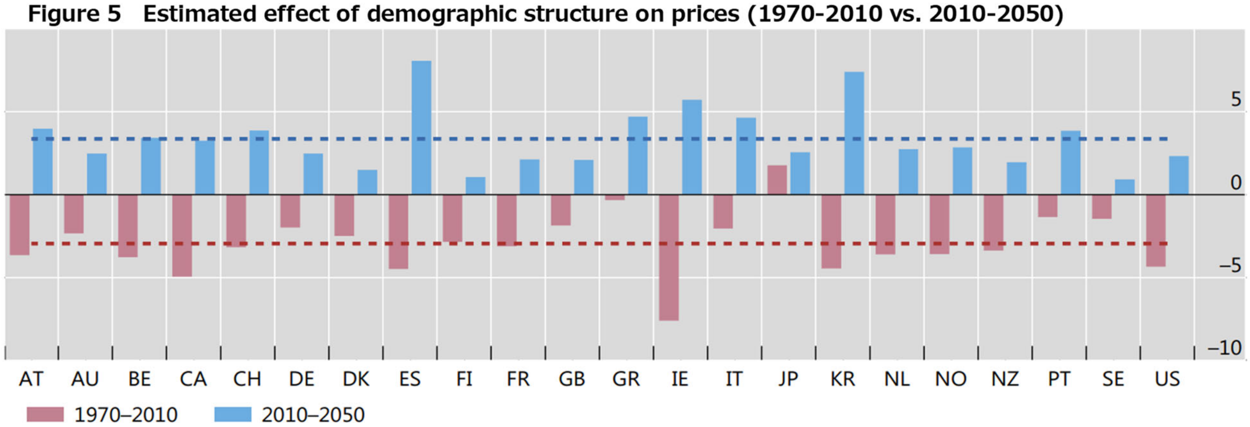
Figure 4 Working-age populations in developed regions and China



Note: Working-age population = 15-64, "developed regions" = More Developed Regions as defined by the UN. Source: Created by MGSSI based on the UN's "World Population Prospectus" (2022)

A similar view is also expressed in a report by the Bank for International Settlements. Based on a comprehensive analysis of the relationship between inflation rates and population age structure in major developed countries, the report calculated that demographic structure exerted downward pressure on prices by about 3% during the 40-year period from 1970 to 2010, but that this will shift to upward pressure by approximately 3% during the 40-year period from 2010 to 2050 when declining birthrates and aging populations become apparent (Figure 5).

Figure 5 Estimated effect of demographic structure on prices (1970-2010 vs. 2010-2050)



Source: Bank for International Settlements https://www.bancaditalia.it/pubblicazioni/altri-atti-seminari/2018/20180910_paper_Takats.pdf (accessed November 1, 2022)

AT: Austria, AU: Australia, BE: Belgium, CA: Canada, CH: Switzerland DE: Germany, DK: Denmark, ES: Spain, FI: Finland, FR: France, GB: UK, GR: Greece, IE: Ireland, IT: Italy, JP: Japan, KR: South Korea, NL: Netherlands, NO: Norway, NZ: New Zealand, PT: Portugal, SE: Sweden, US: USA

3. SKEPTICISM ON THE THEORY OF A DECLINING BIRTHRATE AND AGING POPULATION CREATING INFLATIONARY PRESSURE, AND GOODHART'S VIEW

3-1. Why has deflation persisted in Japan, an advanced country with a declining birthrate and aging population?

If a declining birthrate and aging population create inflationary pressure, then Japan would have been experiencing inflation for some time, whereas, in fact, it has suffered from a prolonged period of persistent deflation. In this regard, Goodhart and others point out that the global labor supply provided by China has also had an impact on Japan, particularly in the manufacturing sector, and has exerted downward pressure on prices. He also notes that because the rigid lifetime employment system and the corporate balance sheet adjustments undertaken since 1990[3] are unique to Japan, the price trends experienced in Japan are not indicative of what would happen in other countries that are expected to experience similar demographic developments in the future.

3-2. Can AI and automation be expected to help resolve the labor shortage?

AI and automation, which can be considered as ways of addressing a decline in the labor force, are a means of complementing labor, not an alternative to it. Goodhart argues that while they can offer a certain benefit to manufacturing, there are limits to the role they can play in a service economy. The effects of AI and automation will be more pronounced in emerging countries where economies are still developing and manufacturing is the backbone of the economy. However, because many emerging countries are not faced with the problem of a declining birthrate and aging population, and have no great demand for AI and automation, they will have limited effect in compensating for the global labor shortage as a whole.

3-3. Could India and Africa become alternative sources of labor to China

India's population is expected to surpass China's in 2023 and replace China as the source of a global labor supply. However, Goodhart notes that the country's weak administrative capital and the difficulty of coordinating political management among political parties and between the state and federal governments create significant hurdles to achieving Chinese-style economic development that strives towards a single goal.

While Africa's population is expected to continue growing even after India's population peaks at just under 1.7 billion in 2063, because each African country has small economy, and therefore having lower investment efficiency, it may prove difficult for these nations to accumulate capital and make progress with industrial development and employment growth. Accordingly, Goodhart believes that population growth in African countries will have a limited effect in restraining labor costs.

4. THE IMPLICATIONS FOR COMPANIES OF THE INFLATIONARY PRESSURES OF A DECLINING BIRTHRATE AND AGING POPULATION

What does the fact that a declining birthrate and aging population lead to persistent inflationary pressure mean for businesses, and what needs to be done? Consideration is given below to the impact of and response to this situation broadly from the perspectives of workers and management.

4-1. The workers' perspective: Formation of labor unions

Generally speaking, a shortage of labor leads to higher wages, but at present wages are restrained relative to price increases. For example, in the US, real wage growth has remained negative for more than a year (Figure 6). While the rapid rise in prices has been a major factor behind this state of affairs, it may also be related to the decline in the bargaining power of workers when negotiating with the owners of capital due to the abundant supply of labor available worldwide. This is also evident in the gradual decline in trade union density[4] that has taken place in many countries (Figure 7). Especially in the service sector, however, as labor shortages become apparent, workers' bargaining power is growing, and in some cases, new trade unions are being formed. Amazon and Starbucks are prime examples of this trend. While such cases are as yet seen mainly in the service sector, where there are constraints on the mobility of labor, the formation of labor unions in many sectors in the future as labor becomes scarcer is likely to place further upward pressure on prices. This appears to be a critically important trend from the perspective of a shift in the power between capital and labor.

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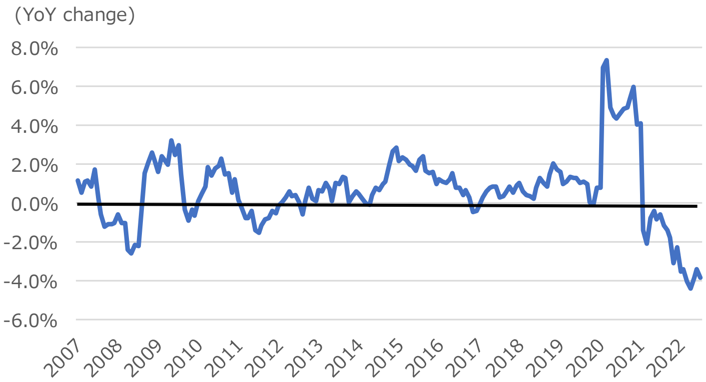
[3] The process by which companies that increased both their assets and liabilities during the bubble economy of the 1980s adjust their excessive liabilities relative to assets, which fell in price when the bubble burst, is referred to as "balance sheet adjustment". Until this adjustment process is completed, it has a negative effect on the economy as a whole as companies curtail investment.

[4] The percentage of unionized workers.

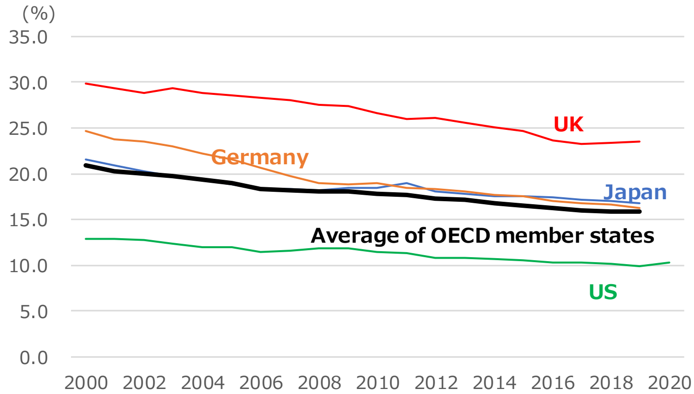
Figure 6 Real wages in the US



Note: Based on weekly wage in non-agricultural sectors

Source: Created by MGSSI based on data from the U.S. Bureau of Labor Statistics

Figure 7 Trade union density in major countries



Source: Created by MGSSI based on OECD data

4-2. Management's perspective

1) Focus on human capital management

Under these circumstances, companies will be required to view human resources not merely as a cost, but as part of their capital, and will need to hire and deploy personnel more strategically than ever before. Moreover, since it is expected to become more difficult to meet all human resource requirements in-house, which will increase the need to rely on outside sources, a comprehensive capital policy will be essential. In Japan, the Report of the Study Group on Achieving Human Capital Management[5] was released in May 2022 as a follow-up to the Report of the Study Group on Sustainable Corporate Value and Human Capital[6] produced by the Ministry of Economy Trade and Industry in September 2020. The report cites Asahi Kasei, a chemical manufacturer, as a practical case example of a company that has adopted this approach, noting that "every year the company identifies the quantity and quality of human resources to be hired from both the business and the functional aspects on a company-wide basis to build a human resources portfolio required to realize its management strategy", and "where human resources cannot be secured through recruitment and training, they are acquired through M&A, and by strengthening connections with companies through corporate venture capital and small-scale investment."

2) Seeking a deeper understanding with investors regarding the optimal capital structure

Even with greater emphasis placed on human capital management, ownership of a corporation remains in the hands of the shareholders. Even if there may be a decline in the relative importance of ROE and other indicators, under the current capitalist system, they would continue to be important as management indicators. Under these circumstances, the dynamics between capital and labor will change, and the shift in the weighting of the return of corporate earnings from investors to workers will cause ROE to decline due to the fall in profit margins. Also, if interest rates rise along with inflation, the interest burden on indebted companies will also increase. While companies will be required to make efforts to increase sales to outpace these increased costs, if future demographic developments are accompanied by a slowdown in economic growth, it will be a difficult ask for society as a whole. For this reason, it will be more important than ever to carefully consider the asset turnover rate and capital structure, which are components of ROE, other than the profit margin. In particular, significant changes may be required with respect to the optimal capital structure, and a series of conversations with investors will be required to deepen mutual understanding. Since it will be difficult for those changes to immediately give rise to the same level of return enjoyed by investors in the past, there will need to be a more persuasive dialogue than ever before.

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[5] Commonly known as the *Ito Report for Human Capital Management 2.0.*

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5. CONCLUSION

The reason that demographic projections are said to be relatively accurate is likely because demographic changes do not occur suddenly, and a major shift in trend from an increase to a decrease is not easily reversed once it has happened. Accordingly, should there be an increase in inflationary pressure caused by an aging population, it would likely be a gradual phenomenon occurring over a prolonged period of time, and would have a different effect on corporate management than that occurring during the current period of rapid inflation.

The French economist Thomas Piketty, author of *Capital in the Twenty-First Century*, has pointed out that, based on data dating back to the 18th century, the annual rate of return on capital has been about 5%, while economic growth has only been 1-2% per annum. This means that the wealth gained through investment has been greater than that gained through labor, which is a clear illustration of the traditional relationship between capitalists and laborers. The view put forward by Goodhart and others that a declining birthrate and aging population will lead to inflationary pressure is not yet the mainstream perspective among economists. However, now that we have witnessed how easily large-scale inflation can occur, it is increasingly important for companies to prepare for the impact of demographics on prices, and the major changes in the relationship between capital and labor that could ensue.