Turning Demographic Challenge into Economic Opportunity

By Yumiko Murakami

Author
Yumiko Murakami

There is no country in the world aging as rapidly as Japan. Today, approximately 27% of the Japanese population is over 65 years old, the highest level in the world. This ratio is expected to reach almost 40% by 2060 and Japan's total population will decline to below 100 million by 2050 from the current population of 127 million. The demographic challenges associated with an aging and shrinking population are daunting and the Japanese economy has already started to feel the pain of a shrinking workforce. The unemployment rate is dangerously low at 3.0% and a number of companies are being forced to cut back their operations due to their inability to secure workers. The impact is being felt in a wide range of industries, especially in the food service, retail, trucking, and construction sectors.

While most of the discussions around Japan's evolving demography have been focused on the negative implications of a declining population, I would argue the very same demographic characteristics present unique opportunities for the Japanese economy.

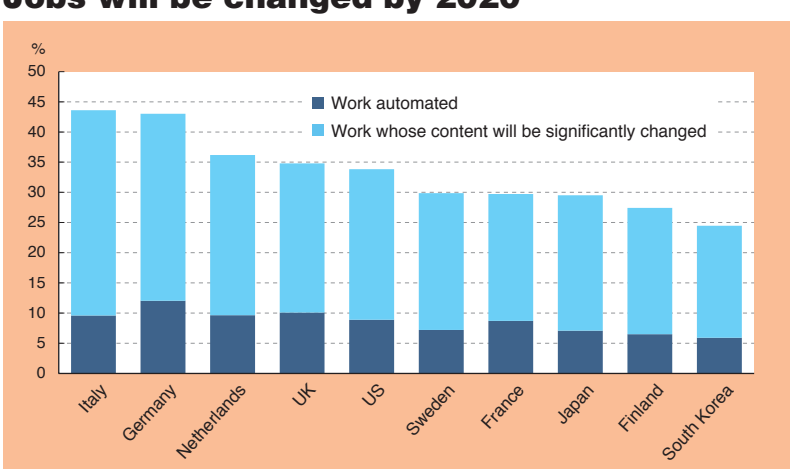
Driving the Technology Revolution

First, because of our severe shortage of labor, Japan is better positioned than most countries when we consider embracing drastic industrial changes driven by technology. These changes are far reaching, including robotic automation, new business models based on the Internet of Things (IoT), applications of AI, and Big Data, just to name a few. According to the OECD's analysis, approximately 9% of all jobs in the Japanese economy are likely to be eliminated by technological advances and the nature of tasks demanded in an additional 22% of jobs will change drastically by 2020 *(Chart 1)*. Basically, one out of three jobs will be replaced by machines and automation. Thus, workers will have to partner with technological change urgently and learn new skills to stay relevant in the new environment. This so-called technology revolution is changing the way we live and work in a fundamental way. The same trend is becoming a global phenomenon, which is expected to bring higher efficiency and productivity to economies. Unfortunately, however, the truth is this technology revolution has also brought about undesirable side-effects, namely lost jobs for humans. Countries with particularly high unemployment find themselves challenged with even more unemployment created by automation and stagnating wages for workers who have not been able to upgrade their skills. Governments are also conflicted with policies to promote technological advancement in industries since these policies often require provision for vast safety net and training services for unemployed workers. However, with Japan's extreme labor shortage, the Japanese government and businesses can promote technology-driven automation without an immediate concern for lost jobs.

This difference can become an important competitive advantage for Japan. One of the root causes of rising protectionism in Europe and the United States can be attributed to unsatisfied blue-collar workers who have felt marginalized due to a lack of "good jobs". Globalization and technology-driven structure changes occur together while global value chains are developed across borders. While the US and some European countries may shift their efforts to protect workers from external competition, Japan can focus on improving labor productivity by promoting technology across all aspects of the economy. Again, this is achievable in a country where lost jobs are unlikely to cause immediate social concern.

CHART 1

Jobs will be changed by 2020



Source: OECD Survey of Adult Skills (PIAAC)

TABLE 1

Adult skills — average literacy & numeracy proficiency among adults

Literacy		Numeracy	
Score	**Country**	**Score**	**Country**
296	**Japan**	**288**	**Japan**
288	Finland	282	Finland
284	Netherlands	280	Belgium
280	Australia	280	Netherlands
279	Sweden	279	Sweden
278	Norway	278	Norway
276	Estonia	278	Denmark
275	Belgium	276	Slovak Rep
274	Czech Rep	276	Czech Rep
274	Slovak Rep	275	Austria
273	Canada	273	Estonia
273	Average	272	Germany
273	South Korea	269	Average
272	UK	268	Australia
271	Denmark	265	Canada
270	Germany	265	Cyprus
270	US	263	South Korea
269	Austria	262	UK
269	Cyprus	260	Poland
267	Poland	256	Ireland
267	Ireland	254	France
262	France	253	US
252	Spain	247	Italy
250	Italy	246	Spain

Source: OECD Survey of Adult Skills (PIAAC)

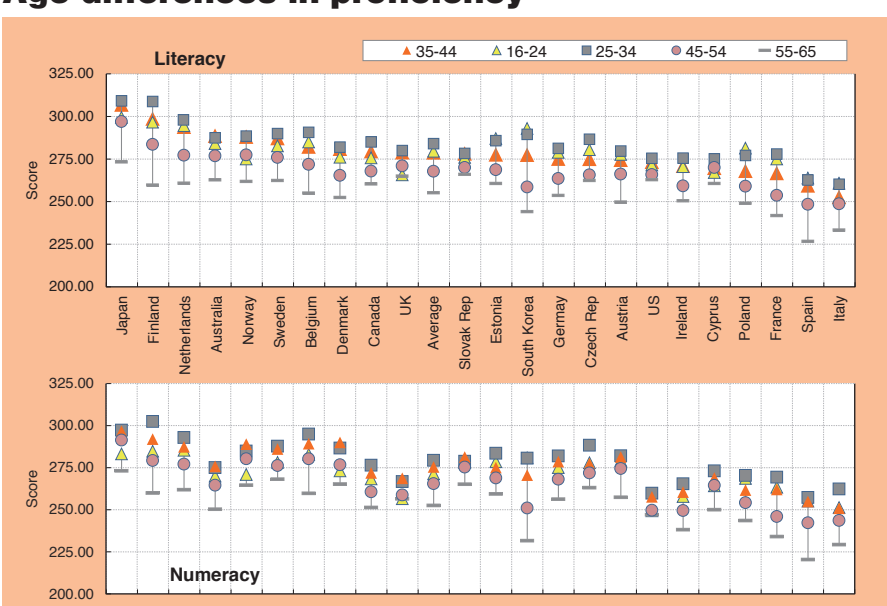
Upgrading the Workforce

Job obsolescence as a result of technological advancement is a desirable outcome in Japan as it alleviates short-term labor shortages. However, mid-to-long-term workers need to be retrained in new skills so they can add value in technology-rich work environments. The "re-skilling" and "up-lifting" of workers to match the needs of a technology-dominated economy are critically important for labor productivity improvement.

The second advantage Japan enjoys lies in its highly educated population. According to the OECD's PIAAC, which is often called the Adult Survey, the Japanese adult population between 16 and 65 years old demonstrates the highest levels of literacy and numeric ability in the world *(Table 1)*. I would argue the solid academic foundation of Japanese people provides a strong backdrop for an economy which can transform its workforce efficiently and effectively to add value in the digital era. Moreover, Japan's older population has sustained relatively high skill levels both in literacy and numeric ability. Of all the age groups surveyed by PIAAC, Japanese workers between 55 and 65 years old remain at the top level with the largest gap against the 2nd-highest ranked country, Finland *(Chart 2)*. The retraining of older workers is believed to be more challenging than retraining younger workers, but in the case of

CHART 2

Age differences in proficiency



Source: OECD Survey of Adult Skills (PIAAC)

Japan this generalization may not apply. Given the rigid employment environment in Japan where a lifetime employment system is still the norm, workers are not incentivized to seek employment opportunities outside their current jobs. It does not mean, however, they don't have the ability to acquire new skills. On the contrary, older Japanese workers have the highest literacy and numeric abilities in the world and therefore by changing incentive systems and increasing labor market mobility, they are more likely to up-skill themselves than their European and US counterparts. We will discuss needed changes in labor market incentives later in this paper.

Silver Economy

A third advantage for Japan is the sheer fact that it is the first major country in the world to experience a disproportionately aging society. Innovations born out of necessity in combating an aging society in Japan will become a template for other countries to emulate.

In fact, Japan's neighboring countries are already showing signs of a proportionally large aging population. South Korea and China, in particular, are expected to experience rapid population aging over the next 5-10 years. In the case of South Korea, 14% of the total population is over 65 years old today and the ratio will likely to catch up with that of Japan's elderly at 40% by 2060. Although China has recently abandoned its one-child policy, the over-65-year-old ratio is projected to double from the current 11% to 22% by 2040. Even in the US, where birth rates have been relatively high among developed economies at around 1.9%, they will face the tsunami of baby boomers retiring in mass over the next 10 years. Many European countries have been experiencing demographic challenges with their aging populations for decades and this is likely to continue. By 2020, for the first time in history, people aged 65 years and older will outnumber children under the age of 5. By 2060, the world's population of elderly is expected to double, from 8% today to 16%. Judging from this global demography, it is clear that aging populations are a global mega trend. Japan happens to be ahead of the curve, relative to other countries.

In this context, one can reasonably predict that a so-called "silver economy" has tremendous implications in Japan, as well as overseas markets. Combined with the most advanced technologies, innovative ideas to address the new demands of the aging society are limitless. Self-driving automobiles, nursing robotics, AI-controlled assisted living facilities are just a few examples. In addition to new products and services catering to senior citizens, innovative social infrastructure changes are being formulated to embrace this. For example, the concept of a "compact city" has proven effective in some model communities within Japan. Urban planning, which is designed to optimize social service infrastructures, such as public transportation and hospitals, is a unique scheme developed in Japan in order to minimize the fiscal burden of regional governments while providing necessary social services for senior citizens. Potential markets for these types of innovative products and services are vast and commercially attractive. Japan is well-positioned to enjoy a first-mover advantage in this regard.

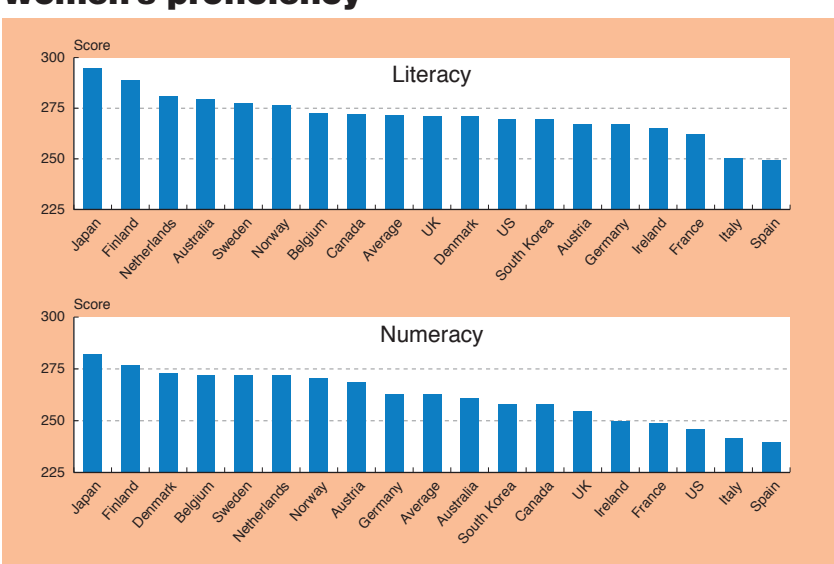
Womenomics

A declining population has also been a wake-up call for Japan to tap one of its most underutilized resources: women. The term "Womenomics", first coined in 1999 by Goldman Sachs Chief Strategist Kathy Matsui, urged Japanese leaders in business and politics to promote women in the name of economic growth. It was more than 10 years after Matsui's initial proposal, however, that the Japanese government recognized Womenomics as a core pillar for economic growth. Interestingly, it was Japan's shrinking population and labor shortage which forced Prime Minister Shinzo Abe to focus on Womenomics during his second term as premier. For the first time, promoting women in Japanese society was no longer merely a social policy issue but became a very important economic policy issue. Out of necessity, the Japanese government has been aggressively implementing policies to promote female workers in all areas of the economy.

Promoting Womenomics can offer obvious economic benefits for Japan. The OECD's PIAAC study shows Japanese women achieve the highest scores in literacy and mathematics among developed countries *(Chart 3)*. Despite the high educational achievements of

CHART 3

Women's proficiency



Source: OECD Survey of Adult Skills (PIAAC)

women, Japan's gender gap in salaries remains one of the largest in developed economies. The average level of wages for female workers is 72.7% of men. Utilizing highly educated and skilled women will undoubtedly boost economic growth. The OECD estimates Japan's growth potential can almost double to 1.9%, compared to a core scenario of 1.0%, if female labor participation increases to a level comparable to that of men by 2030.

Efforts to promote women in the workplace have resulted in higher female employment rates in Japan. The most recent data show the female employment rate in Japan, aged 15 to 64, is now above the OECD average and stands at 63.6%. However, most of these women are engaged in lower-wage segments of the labor market and their presence at more senior levels at organizations is still rare. The proportion of female managers stands at 13% and female board executives at a meager 3.4%. These numbers place Japan near the bottom of gender equality comparisons on a global basis. For Japanese companies to promote gender equality in the true definition of the word, they need to promote women into leadership positions.

Labor Market Structure Reform

In order to fully utilize a currently underutilized talent pool, including women, senior workers, retrained workers with new skills, and non-traditional workers (foreigners), Japan needs to implement important structural reforms within its rigid labor market. Labor mobility needs to increase within in order to resolve a mismatch between demand and supply for skilled talent. As the life cycle of business models becomes shorter and shorter with rapidly changing technology, companies need to be able to tap the labor market for needed talent and skill in a Just-In-Time manner. Agility is required on both sides, employees and employers alike.

Through a lifetime employment philosophy, Japanese companies demonstrate a long-term commitment to employees. Companies typically train their employees by rotating them every few years thorough various locations and divisions. Through on-the-job training, employees accumulate in-depth knowledge of a company's businesses and operations, and often their profound loyalty is born out of lifelong contracts with their employers. While this loyalty and a high retention of workers gives Japanese companies stability and predictability, it also prevents them from developing a diversified workforce, which is a key element for any successful company in the context of today's global economy. In reality, most Japanese companies still operate with unusually homogeneous employee profiles, especially at senior executive levels. Because it is difficult for companies to predict future needs for skill and talent in a rapidly changing business environment, they need to adopt a more flexible human capital strategy. They need to hire laterally from outside sources as needed and at the same time continue to train their long-term employees in new skills. This hybrid strategy, which accommodates the long-term nature of traditional Japanese employment culture and embraces a more agile Western approach, should give Japanese companies more flexibility and a wider range of solutions.

A hybrid human capital strategy will address the issue of labor shortages and will also foster a more innovative environment for companies. According to the OECD's Science, Technology and Industry Scoreboard, which assesses the "innovation friendliness" of business environments in various countries, Japan underperforms the OECD average in the area of networks, clusters and transfers, despite the fact it ranks highly in most other areas, such as infrastructure, education, and R&D budgets. This means Japan possesses most of the necessary ingredients for innovation, namely human capital, financial capital, and knowledge capital.

These ingredients are, however, not connected in a way that actually creates innovations. For example, Japan ranks in the top three globally in patent applications in key technology fields and yet falls short of the OECD average in commercialization of new products and services. The OECD points out that a lack of international networks, as well as intra- and inter-sectorial networks, hurts companies' abilities to nourish and develop new business ideas. By integrating long-term employees with lateral hires, companies can develop internal and external networks which can foster out-of-the-box, unconventional thinking.

A diversified workforce also is a critical component of an innovative work environment. Having women and young people in decision-making positions can give companies a more robust approach to management strategies, as opposed to one-dimensional minded management teams. By introducing more flexible hiring practices, companies can develop a deep bench of talent. On a more practical level, companies can shift from a seniority-based promotion system to a results-based promotion system. The government should also play its role. There are a number of policies that can help increase labor mobility, including deregulations on dismissals and introduction of pension portability.

Japan Inc. is sitting on a tremendous gold mine, with a highly educated population capital, first-class technologies, and abundant capital. Combining all these elements, Japan has a very good chance to emerge as one of the most innovative countries in the world. A rapidly shrinking population should act as a catalyst in unleashing the potential of this hidden treasure. Even though structural reforms in Japan's labor market will come with some growing pains, Japan needs to address and overcome the oncoming demographic tsunami. After all, necessity is the mother of all innovations. JS

Yumiko Murakami has been at the forefront of policy discussions between the OECD and governments, businesses and academia in Japan and Asia, covering a wide range of economic policy areas since she joined the OECD in 2013 as Head of OECD Tokyo Centre. She has an MBA from Harvard University, MA from Stanford University and BA from Sophia University.