Demographic change in high-income East Asian economies —Implications for human resource management

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Demographic Change in High-Income East Asian Economies—Implications for Human Resource Management

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ABSTRACT

The industrialized high-income economies of East Asia—Japan, South Korea, and Taiwan—are some of the most rapidly aging in the world. We examine the changing demographics of these economies and analyze how organizations can best manage the transition to a workforce that is rapidly aging and beginning to shrink. We synthesize from different sources an overview of the aging situation, explain how it affects businesses, and provide cases of organizations that have implemented human resource policies to make their workplaces more inclusive and supportive of older employees. Government efforts to promote active aging, family-friendly regulations, higher birth rates, and create more open immigration policies to attract talent are also briefly discussed. We point out some steps that organizations can take to better integrate older workers and provide insights for managers and policy makers to deal with emerging issues.

1 | Introduction

The industrialized high-income economies of East Asia have some of the oldest and most rapidly aging populations in the world. According to the World Bank (2021), high-income economies in East Asia comprise Japan, South Korea, and Taiwan (Republic of China). In 2024, they had populations respectively of 124 million, 52 million, and 23 million (International Monetary Fund—IMF 2024a). Their senior population (defined as the proportion of people over 65) proportions respectively were 30%, 18%, and 18% (World Bank 2024; National Development Council 2024). All three have low fertility rates (average number of children a woman has in her lifetime) which are significantly below the replacement rate of 2.1 (World Population Review 2024). Given the rapid aging of these economies, we see major changes in their business and societal environments. We see a population that is aging, a workforce that is shrinking, economic growth that is slowing, and healthcare and pension expenditures that are rising (World Economic Forum (WEF) 2017). This is coupled with some of the lowest fertility rates in the world, meaning that the proportion of seniors will continue to rise. A key question for businesses in this demographic environment is how they can best utilize their aging workforces so that productivity growth can be maintained, and knowledge and skills are not permanently lost as older employees retire. In this article, we discuss the aging populations of high-income East Asian economies and analyze how organizations can best transition to a workforce that maintains productivity while aging rapidly.

Changing global demographics have been identified as one of the "grand challenge" topics that international business researchers should focus on (Buckley et al. 2017). These grand challenges are often phenomenon driven, span multiple levels of analysis, and involve business, government, and society in a global environment. Demographics changes, including population shrinkage and a shortage of highly skilled workers, have been identified as a major shaper of upcoming global talent challenges and as one of the five megatrends that are driving the

future global business, social, and economic landscape (Schuler et al. 2011; Esposito and Tse 2018). Global talent challenges have been further exacerbated by major emigrant nations such as China and India, whose diaspora often provided skilled workers to high-income countries, becoming magnets for talent themselves (Holmes 2021; Aiyar 2018). The projected global shortage of skilled workers is expected to be almost 85 million workers by 2030 (Ferry 2022).

While we concentrate on high-income East Asian economies, the issue of aging is global. The United Nations (UN) estimates that by 2060, there will be 30 people above the age of 65 for every 100 working-age people, more than double the ratio of 2019 (Cascio 2019). Aging populations have been linked with slowing economic growth, inefficient labor markets, changing demand and consumption patterns, rising elderly poverty, generational inequity, and decreasing viability of pension programs (Chand and Markova 2019; Chand and Tung 2014). Demographic changes caused by aging are partly responsible for the global shortage of skilled workers as well as driving skilled immigration (Farndale et al. 2019; Horak et al. 2017). As talent shortages persist, attracting and retaining talent will be a key challenge for multinational corporations (MNCs) and other organizations (Festing and Schäfer 2014).

The Covid-19 pandemic and its accompanying workplace changes prompted a wave of resignations and retirements, leading to further talent shortages (Birken and Schmidt 2022; SAP Southeast Asia 2022). The last decade has also seen a slowing of globalization, with populism and economic nationalism on the rise, and increasing talk of slowbalization or deglobalization (Ghauri et al. 2021). The rising tide of economic nationalism, protectionist trade policies, and the continuing economic slowdown have further intensified the global shortage of talent (Showkat et al. 2023).

In this perspectives paper, we aim to fulfill three main objectives. First, we synthesize from different sources an overview of the aging situation in high-income East Asian economies and explain some of the reasons behind their rapid aging. Second, we examine how aging has affected businesses and organizations in these economies. Third, we analyze the implications for human resource management (HRM) and provide insights on how managers can address these changes while simultaneously collaborating with policy makers to address some of the larger societal issues brought about by aging populations.

We begin by examining aging in Japan, South Korea, and Taiwan, and how it is affecting their economies. Next, we look at how governments and organizations are responding to aging populations. We draw on past research and case evidence to illustrate organizational practices, HRM practices in particular, to address these challenges and seek potential solutions. We use the cases of Honda, Toyota, and Kirin Brewing in Japan, Samsung, Hyundai, and SK Hynix in South Korea, and Taiwan Semiconductor Manufacturing Corporation (TSMC) and SEMI in Taiwan to illustrate HRM approaches that are helping make their workplaces more productive and elderly friendly. We also discuss ongoing public policy initiatives such as changing immigration policy to address the aging challenge at the country level and the role of businesses in these initiatives. Finally, we outline the implications of these developments and identify potential directions for future research.

2 | Aging in High-Income East Asian Economies

In terms of the proportion of the senior population, Japan is the world's oldest country (Edmond 2019). South Korea and Taiwan are also among the world's fastest aging economies. Japan's working-age population (those between 15 and 64) started shrinking in 1995, while its total population started contracting in 2008. For South Korea, the working-age population started declining in 2017, while the total population started declining in 2021 (McCurry 2021; Obe 2019). In Taiwan, the decline of the working-age population started in 2015, while the overall population started declining in 2020 (National Development Council 2020; Strong 2020). Working-age populations are projected to drop by about 30% in Japan, 26% in South Korea, and 22% in Taiwan between 2020 and 2060 (National Development Council 2020; Obe 2019). Important economic and demographic data about these economies is provided in Table 1

In Japan's case, the reasons for its fertility rate decline include changing lifestyles, late age of marriage, people choosing not to marry, and economic insecurity among younger generations. Simultaneously, life expectancy has improved by about 12 years in the last 15 years because of improved health care. The aging population indirectly affects economic growth (negatively) by the reduction of the workforce and the increasing social security burden (Walia 2019). One of the biggest challenges facing Japan is maintaining the viability of its social security system given the rapidly rising health costs brought about by an aging population. Health and social security costs are major contributors to Japan's government debt—at almost 240%, Japan has one of the highest debt to GDP ratios in the world (Kanda 2018). A 2000 study by the UN Population Division found that to maintain its

TABLE 1 | Economy and demographics of Japan, South Korea, and Taiwan.

	Japan	South Korea	Taiwan
Population[a]	124 million	52 million	23 million
Population over 65[b,c]	30%	18%	18%
Population over 65 (2050 projected)[d,e]	37.7%	38.1%	36.5%
Fertility rate[f]	1.4	1.1	1.1
GDP per capita[g]	33,140	34,160	34,430

[a]IMF (2024a) population.
[b]World Bank (2024) (for Japan and South Korea).
[c]National Development Council (2024) (for Taiwan).
[d]OECD (2019) (for Japan and South Korea).
[e]National Development Council (2020) (for Taiwan).
[f]World Population Review (2024).
[g]IMF (2024b) GDP per capita.

current worker to retiree ratio, Japan would need to raise its retirement age to 77 (Walia 2019). The government in 2018 called for transforming Japan into an "age-free society" where people over 65 will notautomatically be considered senior and would be encouraged to stay healthy and keep working (Forbes 2019).

In the case of South Korea, its fast-aging population, along with its rapidly falling birthrates, is becoming a key concern as welfare costs rise for senior citizens. South Korea is expected to become a "super aged" society by 2025 when over 20% of its population will be aged over 65 (Min-kyung 2022) (Japan was the first country to reach this landmark in 2006). The Korean government projects that the working-age population will decline to about half the total population by 2050 (Chung 2021). South Korea's economic growth rate is projected to fall to 1.2% between 2020 and 2060, with demographic change being a key factor (Suk-yee 2020). It is projected that by 2055, the pension program will be unable to cover all pensions at current rates (Min-kyung 2022).

Taiwan is expected to become a "super aged" society by 2026, with its speed of aging being a serious concern. To put the speed of aging into context, it took the United Kingdom (UK) about 80 years to double the proportion of 65-year-olds in the population from 10% to 20%, while it took Taiwan just 20 years (Huang et al. 2019). Taiwan has among the lowest fertility rates worldwide, which makes reversing this trend extremely difficult (Chang 2020). The low fertility rate, coupled with low labor force participation for older adults, makes the decreasing working-age population a major challenge for Taiwan. Another significant concern is its relatively low retirement age, which effectively is 62 for males and 60 for females (Chou 2019).

Across all three economies, we see a rapidly aging and shrinking population. This is partly because of falling fertility rates caused by changing lifestyles, late ages of marriage, reduced desire to have children, and economic insecurities of the younger generation. Another important reason is the rapid increase in life expectancies brought about by improving public health facilities. Rapid aging is leading to serious concerns about labor shortages, slowing economic growth, the viability of pension and social support programs, and growing public debt to support an increasingly elderly population.

As the workforce progressively ages, it is important to consider the needs of older workers. Based on a meta-analysis on differences in work motivation, older employees tend to emphasize accomplishment, job security, and helping others compared to younger employees who usually emphasize knowledge gathering and career development (Kooij et al. 2011). Concern for helping and mentoring the next generation also tends to increase with age, while older employees are more sensitive to issues of corporate social responsibility (Kooij et al. 2011; Lang and Carstensen 2002; Zacher et al. 2011; Wisse et al. 2015).

3 | Aging Employees: Company Initiatives

As the demand for qualified employees grows globally (Farndale et al. 2010), employers increasingly recognize the need for HR programs that address the needs of the changing workforce that is getting older. We draw on the Lifespan Theory of Selection, Optimization, and Compensation (SOC—Baltes et al. 1999) to further inform the link between organizational policies and career goals. As people age, they experience both gains and losses over the course of their careers. Gains, for example, can include an increase in general knowledge, and losses, for example, can include deteriorating physical abilities (Warr 2001; Kanfer and Ackerman 2004). As people age, losses outnumber gains. The Lifespan Theory of SOC proposes that individuals strive to achieve different goals throughout the span of their lives to maximize gains and minimize losses. Older people attempt to maximize gains by choosing attainable outcomes and optimizing their resources to reach these outcomes. To minimize losses, they invest their remaining resources in offsetting these losses. At different stages of their careers, people strive to achieve three different lifespan goals: growth and development (i.e., reaching higher levels of functioning), maintenance (i.e., maintaining current levels of functioning or returning to previous levels of functioning) and regulation of loss (i.e., functioning adequately at lower levels; Baltes et al. 1999). The importance of each goal changes over the course of their life. Goal focus shifts from emphasizing growth and promotion in young adulthood to emphasizing maintenance and prevention in later adulthood (Freund 2006; Kanfer and Ackerman 2004; Ebner et al. 2006).

Some steps that organizations could take to address the shrinking labor market and the needs of an aging workforce include the following:

3.1 | Hiring Retirees

HR practices that encourage retirees to stay in or return to the workforce can have a positive impact on the skill shortage. Such initiatives could incentivize older employees to continue their participation in the workforce and encourage late-career advancement. Organizations need to seek ways to sustain job satisfaction and affective commitment for workers at any age and career stage (Drabea et al. 2015; Finegold et al. 2002; Conway 2004; Kooij et al. 2010, 2013). Armstrong-Stassen (2008) found that people in post-retirement jobs are drawn to organizations with HR practices tailored to the needs of older workers. Companies in the region are stepping up efforts by allowing older employees to stay in the workforce or bringing back retired employees. In 2015, Honda increased its retirement age from 60 to 65 (Japan Times 2015). This was followed by Mazda, which increased its retirement age to 65 in 2021. More recently, Toyota went a step further, raising the retirement age to 70 in all job categories that require advanced skills and knowledge (Japan News 2024). In 2022, Samsung Electronics decided to allow outstanding employees to continue to work after their retirement age (with implementation beginning in 2023) (Min-hee 2022). Hyundai Heavy Industries, which includes one of the world's largest shipyards, has a program to rehire retirees to manage workforce shortages. Based on a union-management agreement reached in 2008, retirees can continue working on contracts at between 70% and 90% of pay (Korea Herald 2011). Hyundai, over time, extended the hiring of retirees to other companies within its umbrella. In 2024, Hyundai Motors agreed to extend the contract period for hiring retired workers from 1 to 2 years (Korea Herald 2024).

3.2 | Phased Retirement Plans

These offer a gradual transition from full-time work to a reduced workload or fewer work hours. Older employees can step into advisory or mentoring positions where their experience is critical. Employees can reduce their hours while still contributing to the organization, ensuring a smooth handover of responsibilities. Companies may need to adjust work to better fit the needs of older workers through *accommodative HR practices* (such as semi-retirement or part-time work) aimed at reducing work responsibilities (Remery et al. 2003), lowering work demands, and providing additional leave (e.g., Taylor and Walker 1998a, 1998b; Remery et al. 2003). These HR practices help individual workers to function adequately at lower levels of job obligations, and thus remain in the workforce. Numerous companies in Canada, the UK, Germany, and Sweden have used phased retirement plans successfully since the early 2000s (Kassraie 2019; CIPD 2021). Toyota has also started to move in this direction for older employees wanting to stay in the workforce longer.

3.3 | Work Design Practices

These refer to the way work is organized and related to materials, processes, and people toward a final output (products or services). How work tasks are structured relates to the motivation and ability of employees to perform these tasks. Some of the characteristics of work design are skill variety, task identity, task significance, autonomy, and feedback (Hackman and Oldham 1975). Previous researchers have acknowledged the importance of work design for the experiences of older employees (Truxillo et al. 2015; Boyes and McCormick 2005; Goldberg 2000; Walker 2005). Because the need for autonomy increases with age (Kooij et al. 2011), Truxillo et al. (2012) suggest that autonomy allows older workers to capitalize on their accumulated work experience. This was echoed by Jung and Takeuchi (2018) who found similar results in a Japanese sample of 364 employees. Interesting and challenging job assignments are associated with perceptions of organizational support and career satisfaction (Armstrong-Stassen and Ursel 2009). Purposeful practices for aging employees have proven to be transformative in addressing workforce challenges associated with aging populations. These practices not only enhance employee satisfaction but also help organizations retain valuable talent and maintain productivity (Finsel et al. 2023).

Job redesign strategies ensure tasks align with the physical and cognitive abilities of older employees. Adjusting job responsibilities to focus on skill variety, autonomy, and meaningful work can significantly enhance motivation and job satisfaction. In 2018, SK Hynix, one of the world's largest memory chipmakers, introduced the Honored Engineer (HE) system that allows high performing technology experts to continue working after retirement age. It also created an in-house university where retired executives can become faculty and help transfer knowledge (Min-hee 2022). The HE system produced its first expert in 2020. SK Hynix has been impressed with the results from both programs and is looking to further expand on them (SK Hynix 2023). Programs like SK Hynix's HE system, which reassigns high-performing retirees to advisory and training roles, exemplify how job redesign can optimize the contributions of aging employees.

3.4 | Maintenance HR Practices

These include flexible work schedules and ergonomic adjustments. They support employees when they experience age and life stage-related challenges such as family responsibilities. Flexible work schedules, for example, allow older employees to adjust their hours to better suit their health or caregiving responsibilities, promoting work-life balance. Research shows that flexible schedules improve job satisfaction and engagement, reducing burnout and turnover (SHRM 2015). This is in line with North and Hershfield's (2014) four key principles for businesses to retain older workers and best utilize their talents: flexible part-time work and half retirements for older employees, prioritizing older workers skills in promotions and hiring, adapting or creating positions to best suit the talents of older workers, and changing workplace ergonomics.

As technology and job requirements evolve, older employees may need additional training to remain competitive. Reskilling and upskilling programs enable older workers to stay current with technological advancements and industry trends, fostering continuous learning and adaptability (WEF 2021; Yue and Huang 2021). Organizations like IBM in the US have implemented tailored training initiatives that enable older workers to transition into new roles while leveraging their experience. Career development of older employees is challenging to integrate into HRM practices (Mok et al. 2021) but would further ensure the continuous employability of these insdividuals. Developing policies that prevent age discrimination and promote diversity ensures that older workers feel valued and included, helping further enhance their productivity (CDC 2024).

In employee samples from industrialized Western countries, flexible work options are a priority for older workers and might be the key to their continued participation in an organization (Armstrong-Stassen 2008; Boyes and McCormick 2005; Walker 2005). Another important aspect of work design is autonomy—allowing employees to decide how to do their jobs (decision authority) is shown to increase the satisfaction of older construction workers more than that of their younger colleagues (Zaniboni et al. 2016).

3.5 | Health and Wellness Programs

These can be tailored for aging employees by addressing their specific health concerns while promoting well-being and reducing absenteeism (National Institute of Aging, CDC 2024). Wellness initiatives include ergonomic workplace adjustments, fitness programs, and health screenings. Kirin Holdings in Japan, which includes the beverage manufacturer Kirin Brewing, has set an example by implementing health-focused policies that prioritize employee happiness and productivity. It started allowing work from home 1 day a week since 2013 (Japan Times 2015). In 2017, it expanded on this by issuing the Kirin

Health Declaration that placed the highest importance on maintaining employee health and happiness so that they could enjoy their work. Kirin is a leader in flexible work styles that address employee health and lifestyle related conditions. Since 2018, it has been honored as one of the 'White 500' companies by the Ministry of Trade and Industry and the Japanese Health Council for its excellent employee health management practices (Kirin Holdings 2024).

In an example of a successful public-private partnership, Ercohs, a baby food company based in Daejeon, Korea, that had trouble with an aging workforce and high turnover for young workers, worked with the Korea Labor and Employment Service to design a successful program that included a more flexible work schedule, conditionally reduced working hours (two per week), accumulating overtime to take a day off, and job switching (Woo-hyun 2021).

The effect of technology on the participation of older employees is somewhat paradoxical—on the one hand, older workers might be less apt to use newer technology; on the other, new technology may better allow them to adapt to the demands of their jobs. For example, factory automation lowers the physical demand that some jobs impose. Technology, particularly the internet, greatly increases the possibility of telecommuting and flexible work schedules. Telecommuting and remote work allow greater autonomy, increasing the ability to meet family demands (Truxillo et al. 2015) As suggested by the SOC theory, workers in later years seek fulfillment by mentoring others, so companies can capitalize on this motivation by providing opportunities to do so at multiple levels.

3.6 | Utilization HR Practices

Utilization HR practices entail task enrichment and lateral job moves, utilization of employees' existing knowledge and experience, and making job tasks interesting (Zacher et al. 2018). As employees may choose to spend more of their later years at work, it would be important for employers to offer programs designed to enhance late-career opportunities and to capitalize on the variety of abilities, career aspirations, and family demands among older workers. For example, Toyota has invested in about 500 highly skilled employees (takumis'), who are given the tools and time to master one technique. These workers then help mentor other employees, develop new techniques, and train robots. Since most of them are approaching retirement age, it is important that they pass on their knowledge to other workers (White 2020). The program has yielded impressive results. Robots trained to paint cars by takumis had higher quality outcomes and used less paint. Improvements in car door seals by takumis have yielded savings of millions of dollars (Rosen 2022).

3.7 | Other Retention Initiatives

Employee retention is usually the outcome of organizational initiatives to reduce voluntary turnover. A prevalent trend that demands action from employers is the large number of older individuals exiting the workforce while still employable. Fewer employers engage in intentionally managing employees' late career (Buyens et al. 2009), pointing to the need for programs that help retain some of this talent. Stay bonuses are a direct acknowledgment of the value older employees bring to an organization. These financial incentives motivate long-tenured employees to remain in the workforce, preserving institutional knowledge and reducing recruitment costs. Offering financial rewards for continued service acknowledges the value of experienced employees and encourages their retention, reducing turnover and preserving institutional knowledge (US Department of Labor 2008). TSMC, one of Taiwan's largest companies, increased wages for new employees by up to 25% in 2022 in response to growing talent shortages and employee turnover. This was on top of a 20% raise in 2021. It is also working on a plan to subsidize employee stock ownership (Taipei Times 2022). Wage increases were 5% in 2023; however, this left some employees dissatisfied partly due to previous higher raises (Zafar 2023).

Purposeful monitoring of older employees' engagement or potential disconnect from the organization may inform other HR practices. In industrialized Western countries, training availability is shown to improve retention of older workers (Armstrong-Stassen and Templer 2005). TSMC is also currently in the process of stepping up industry–academia collaboration and attracting more foreign experts to increase talent recruitment and retention (E. Chang 2022). In 2024, it announced plans to donate up to $123 million to four universities and select high schools to promote research on semiconductors and cultivate a talent pipeline. The projects that it funds are designed to encourage professors to engage in high-end semiconductor technology research and give students the opportunity for hands-on experience (Focus Taiwan 2024). SEMI, which includes representatives from the electronics manufacturing and design supply chain, established the *SEMI Taiwan Workforce Development Council* to promote talent and career development. Among its initiatives are recruiting scholars and experts to promote world-class research, extend age restrictions for attracting talent, strengthen female education in STEM (science, technology, engineering, and mathematics), and promote industry–academic collaboration (Su and Chang 2020).

While the programs being implemented in all three economies are helpful, it is also important to create a culture where employees do not hesitate to take advantage of these for fear of how they will be perceived by colleagues and managers. Researchers have identified that *perceptions of HR practices* rather than the actual practices may have greater impact on older employees' attitudes (Truxillo et al.'s 2014 review). In 2020, Toshiba Digital Solutions Corporation allowed employees to take on side jobs. This was part of an effort to make employees feel more empowered and promote self-actualization (Toshiba 2020), which can enrich jobs and encourage employment for aging employees as suggested by the SOC theory. The Samsung Group has designed policies to be more inclusive in the workplace, including operating 17 centers providing daycare services for children (Hopfner 2011). In South Korea, many grandparents provide care for their grandchildren (Ko and Hank 2014), so as more companies provide daycare, more grandparents can potentially stay in the workforce. Similarly, Sony in Japan started allowing leaves for child rearing and nursing care. Such initiatives will also help working parents and potentially expand labor availability.

While some older employees will benefit from *accommodative HR practices* such as reducing the workload, granting additional leave or semi-retirement, others would still seek *developmental HR practices* with ongoing training, continuous skill enhancement, and opportunities for promotions. While much of the research has been done in the western world (Zacher et al. 2018; Bal et al. 2013; Armstrong-Stassen and Schlosser 2008), companies in high-income East Asian economies may also capitalize on developmental HR practices.

A major challenge for employers seeking to hire older workers might be the cultural expectations associated with older individuals. Older workers seeking to stay in the workforce are likely to face ageism, discrimination, and cultural barriers for successful participation at work. Research shows that older workers have strong career adaptability (Kim and Kim 2022). Companies in the region would be well served by continuously engaging with late-career employees to better understand their needs and interests. *Training and development programs* for managers and employees might be a step toward promoting understanding and support for late-career employees. Such programs can facilitate the placement of older workers in the right jobs, provide them with career support, link them with potential peers, and promote healthy workplace relationships. Further, educating employees could possibly expand their end of career options and expectations. It might be effective to highlight the abilities and competencies of employees in their 60s or even 70s as employers create more opportunities for engagement at this career stage. Training and development practices tailored to the needs of older workers may also foster perceptions of organizational support and improve career satisfaction (Armstrong-Stassen and Ursel 2009). In addition, continuous investment in older employees would encourage longer career paths and may facilitate retention of competencies that organizations need (Lazazzara and Bombelli 2011; Buyens et al. 2009). Employee attitude toward aging is critical for their willingness to fully engage at work. A Taiwanese study of 289 older adults found that positive attitudes toward aging held by older people themselves and perceived subjective norms were positively related to continuing working in older age (Lu 2012). Intentional and systematic development can also greatly reduce socially acceptable ageism and improve collaboration across generations. Such retraining might be one of the few ways to close the gap between workforce availability and organizational needs.

As the workforce ages and more people work past traditional retirement ages, we see more generations working side by side (i.e., the "demographic scissor"—Festing and Schäfer 2014). While there are differences in values and behaviors across generations (Stewart et al. 2017; Guerrero et al. 2019; Smith 2021), it is important in a multigenerational workforce to collaborate with and appreciate individual preferences, habits, and behaviors of colleagues who grew up in different times. Some ways to benefit from a multigenerational work environment include challenging harmful stereotypes, communicating preferences openly, respecting boundaries, and not playing favorites (Waldman 2021).

Targeted programs for older employees in developed Western economies have demonstrated significant benefits and can serve as a model for industrialized East Asian economies. Companies like IBM, BMW, and Franklin International have pioneered initiatives to support older workers through reskilling programs, flexible work arrangements, and mentorship roles (Loch et al. 2010). IBM's "Reinvent Your Career" program provides training for older employees to transition into new roles (IBM 2024). Many of Franklin International's employees stay past the age of 70 because of the opportunity for phased retirement and part-time jobs (Martins 2017). These strategies help retain valuable experience and boost productivity while challenging age-related stereotypes.

Adapting Western programs for an aging workforce in industrialized East Asian economies, however, presents significant cultural challenges. In many Asian societies, traditional values and social norms often define aging as a time to step back from professional life and focus on family or community roles. For example, in Japan, older individuals are highly respected but are often expected to retire early to make way for younger workers. The Confucian emphasis on filial piety in countries like China and South Korea can lead to expectations that older individuals should prioritize caregiving for grandchildren or serving as family elders over remaining in the workforce. Furthermore, hierarchical workplace structures prevalent in many Asian companies may create resistance to initiatives like mentorship programs, where younger employees are encouraged to collaborate with or even guide their senior colleagues. Overcoming these challenges requires addressing deeply ingrained cultural beliefs while introducing policies that respect these values, such as offering part-time roles or advisory positions that allow older workers to balance work with family responsibilities.

Despite cultural barriers, Japanese companies like Toyota have begun leveraging the expertise of older employees by utilizing them in advisory and mentoring roles. Similarly, in South Korea, SK Hynix and Samsung have explored mentorship roles for senior staff, enabling knowledge transfer while maintaining their participation in the workforce. One way to incorporate successful Western practices is by implementing them with sensitivity to local cultural nuances. This can help companies in industrialized East Asian economies better harness the potential of their aging employees.

In conjunction with HR initiatives to mitigate the effects of an aging workforce, organizations may need to seek other sources of qualified employees. A pipeline of new talent might be optimized through cross-border efforts such as value chain relocation.

3.8 | Value Chain Relocation

MNCs from high-income East Asian economies can look to place different parts of their value chains in different countries to take advantage of demographic differences. Most MNCs do not vertically integrate all their activities; rather, they concentrate on core activities and contract out support activities (Ghauri et al. 2021). A key issue for global businesses is the extent to which they would need to restructure their operations and supply chains in response to their aging workforces. For example, South Korea's POSCO, one of the world's largest steel manufacturers, in response to its aging workforce

TABLE 2 | Company initiatives and their effectiveness.

Country	Company	Initiative	Assessment
Japan	Honda Mazda Toyota	Increased retirement age to 65	Most effective, especially in the short run
	Kirin Holdings	Introduced flexible work styles to enhance employee health	Effective
	Toyota	Assigned older experts to train other workers and robots	Effective
South Korea	Hyundai	Rehired retirees at 70%–90% of pay	Most effective, especially in the short run
	SK Hynix	Offered high performing retirees to serve in advisory/training roles ("Honored Engineer")	Effective
	Erochs	Created public-private partnership focusing on flexible work schedule for parents	Effective, even stronger with supportive government policies
	Samsung	Operating daycare centers for employees	Effective, especially when paired with supportive government policies
	POSCO	Relocated value chain to younger developing countries	Effective, with cooperation of host government
Taiwan	TSMC	Offered salary increases and bonuses	Least effective unless paired with other initiatives
	SEMI	Promoted long term talent development through industry academic exchange	Effective, limited in the short term

and falling steel demand in industrialized economies, is increasingly partnering with firms in India, Bangladesh, and Uzbekistan, all relatively young and growing economies. It is also implementing big data and artificial intelligence in its smart factories (POSCO 2017).

We summarize different company initiatives aimed at aging employees and evaluate their effectiveness in Table 2 below.

For employers, working with the government on mutually beneficial initiatives is critical to ensuring both the expansion of the domestic workforce as well as building a pipeline for new talent.

4 | Aging Population: Government Initiatives

All three national governments (Japan, South Korea, and Taiwan) have taken steps to manage their aging populations. These have included incentives to encourage family friendly workplaces, promoting natalist policies, and using skilled immigration to attract the required talent.

The Japanese government has put in place incentives to encourage greater participation by women in the workforce and foster technical innovation to raise productivity. It is also in the process of raising the mandatory retirement age for civil servants from age 60 to 65 and providing support to the private sector to retain retirement age employees (Bloom et al. 2018). Japan introduced the "Angel Plan" in 1994 to help boost the birth rate. This was followed by the "New Angel Plan" in 1999 and the "Plus One" Policy in 2009. The Angel Plans attempted to improve the work environment to better reconcile work and family responsibilities, enhance health and childcare services, and ease the cost of child rearing. The Plus One policy aimed to enhance parent-friendly working conditions and construct up to 50,000 more daycare facilities (Center for Public Impact 2017). Japan is gradually raising the qualifying age for pensions to 65 by 2025 for men and by 2030 for women (Clemens and Parvani 2017). Japan has also implemented more direct natalist policies to increase birth rates including up to $3000 for childbirth reimbursement, child monthly allowances of up to $100 for children up to 3 years and $70 for children between ages 3 and the end of junior high school, and free hospital visits for children till the end of high school. It has generous paternity leave provisions including 67% pay for the first 6 months and 50% for the next 6 months– however, in 2022 only 17% of eligible employees took it. A work culture that looks down on men taking paternity leave was cited as a major reason (Sok 2024).

A 2018 international talent shortage survey conducted by the International Manpower Group found that 89% of Japanese employers had difficulties in recruiting, the highest number among the 43 countries surveyed (Tzu-ti 2018). In response to labor shortages brought on by a shrinking workforce, Japan in 2019 made major changes to its immigration system and expanded long-term visa programs to allow more than 345,000 new workers to immigrate to Japan over the subsequent five years (Gelin 2020). The Japanese government is in the process of

expanding the 2019 immigration reform by allowing immigrant workers to stay indefinitely and bring their families with them (CNBC 2021).

The South Korean government since 2006 embraced a natalist policy, including tax incentives, expanded childcare, housing benefits, support for in vitro fertilization, and generous parental leave (Stone et al. 2019). It has provided multiple incentives for parents to help boost the fertility rate at a cost of over $70 billion between 2008 and 2018 (Poon 2018). In February 2022, it announced plans to introduce a continuous employment system for senior citizens so that they can continue to work after retirement age (Min-hee 2022). There are also plans to raise the retirement age from the current 62 to 65 by 2033 (Min-kyung 2022).

The South Korean government allows small and medium enterprises (SMEs) to bring in temporary workers in sectors experiencing labor shortages for up to 3 years under the Employment Permit System (EPS). These workers are legally obligated to work for their employers and can change jobs only with their consent. Between 2004 and 2010, South Korea implemented several major immigration reforms that allowed dual nationality, extended local voting rights to foreign permanent residents, permitted entry of some unskilled workers, and passed legislation that assists multicultural families and helped establish multicultural family centers countrywide (Chung 2021).

The government of Taiwan plans to invest about $50 million between 2020 and 2025 to build the future workforce needed for semiconductor industry research and development (Su and Chang 2020). It also plans to transform industries to increase labor productivity through the "five plus two innovative industries" plan (Chou 2019). This plan prioritizes innovation driven economic growth through targeting the following industries: smart machinery, internet of things, green energy, biotech pharmaceuticals, defense, as well as circular economy and new agriculture (Ministry of Economic Affairs 2019). The government has also taken steps to increase the availability of subsidized childcare and to reduce housing costs in a bid to help reverse the low fertility rate (Chou 2019). A public-private partnership since 2012 has provided incentives to build non-profit kindergartens, daycare centers, and afterschool services. Free preschool is available for children below five since 2011 (UN Population Division 2015). Retirement is no longer mandatory at 65 if both employer and worker agree (Lee 2024). Taiwan's direct natalist policies include support for in vitro fertilization, up to $150 in monthly allowances for children 0–6, and up to $200 monthly for a third child (Executive Yuan 2024). In addition, Taipei City provides a one-time maternity bonus of $1200 for the birth of a first child and up to $1500 for the birth of a third child (Everington 2024).

A 2018 international talent shortage survey conducted by the International Manpower Group found that 78% of employers in Taiwan had difficulties in recruiting (Tzu-ti 2018). In response to its need for talent, Taiwan has promoted skilled immigration through the "New Economic Immigration Policy" since 2018. Recruitment targets include foreign professionals (evaluated through a point-based system), foreign mid-level technicians (licensed or certified), overseas Taiwanese, and immigrant investors (investing at least US$500,000 and creating at least five jobs) (Executive Yuan 2018).

As demographic changes brought about by aging reduce the working-age population, finding qualified employees will be a major challenge for employers, along with the need to manage a more culturally diverse workforce (Cascio 2019). This could become an even greater challenge as immigration numbers that were greatly reduced during the pandemic begin to recover, while simultaneously, other industrialized countries look to attract more skilled immigrants to tackle their own workplace shortages (Cave and Schuetze 2021).

We summarize government initiatives relevant to aging employees and evaluate their effectiveness in Table 3 below.

5 | Discussion and Managerial Implications

It is important for managers to recognize the implications of rapidly aging populations in high-income East Asian economies. As the working-age population shrinks, managers increasingly need to be prepared for a multigenerational workforce with a larger proportion of seniors. We identified numerous cases of organizations across the region, such as Honda, Mazda, Toshiba, and Toyota in Japan, Hyundai, Samsung, and SK Hynix in South Korea, and TSMC in Taiwan, that are utilizing different HRM policies and practices to manage the effects of an aging workforce. This is happening side by side with government efforts to raise retirement ages, promote family friendly workplaces, and create more open immigration policies. Organizations in these economies are evolving in light of these changes, highlighting a number of important managerial implications.

5.1 | More Seniors and Fewer Traditional Working-Age People in the Population

In all three economies, the proportion of people over 65 is projected to rise to between 37% and 38% of the total population by 2050 (OECD 2019; National Development Council 2020). This rapid rise in the senior population is accompanied simultaneously by a contracting working-age population. This means that the proportion of the working-age population to the senior population (the senior support ratio) shrinks rapidly, leading to each shrinking working-age cohort supporting an increasing cohort of seniors. It is estimated that by 2050, the senior support ratio will shrink from about 2:1 to 1.3:1 for Japan (OECD 2018), from about 5:1 to 1.4:1 for South Korea (Korea Herald 2017) and from about 4:1 to 1.5:1 for Taiwan (National Development Council 2020). Rising support ratios call into question the viability of social support programs, including social security and healthcare. However, it should be noted that potential fixes have been proposed for these concerns. Some possible solutions include raising productivity levels, possibly through increased automation and use of robotics, raising the retirement age, so that the working-age population rises while the retired population decreases, encouraging seniors to work past traditional retirement ages,

TABLE 3 | Government initiatives and their effectiveness.

Country	Policies and initiatives	Benefits	Assessment
Japan	Raising retirement age and qualifying age for pensions	Enlarge available workforce for employment	Most effective in the short run
	Implement work-life policies in cooperation with companies	Encourage more workers to stay in the workforce and may lead to higher productivity	Effective
	Indirect subsidies to companies (e.g., childcare)	Encourage more workers to stay in the workforce	Effective
	Import foreign temporary workers	Increase the available labor force in targeted sectors	Effective in the short term, needs better cultural acceptance of foreigners
	Natalist Policies	Offer direct payments to parents for having more children	Least effective
South Korea	Raising retirement age	Enlarge the available workforce for employment	Most effective
	Continuous employment system for older adults past retirement age	Encourage more workers to stay in the workforce past traditional retirement age	Most effective
	Importing temporary workers and immigration reform	Increase workforce availability in targeted sectors; makes country more attractive as potential longer term immigration destination	Effective in the short term, needs better cultural acceptance of foreigners
	Natalist policies	Offer direct payments to parents for having more children	Least effective
Taiwan	Increase subsidized childcare, daycare spaces	Make it easier for parents, especially women, to stay in workforce	Effective
	Natalist policies	Offer direct payments to parents for having more children	Least effective
	Promote skilled immigration	Increase workforce availability in targeted sectors	Effective, especially with better cultural acceptance of foreigners
	Eliminating mandatory retirement (if both sides agree)	Expand the workforce	Conceptually very effective, no practical evidence yet (new)

encouraging more women to remain in the workforce, and increasing skilled immigration to help raise the working-age population as well as attract the required talent.

5.2 | An Increasingly Cross-Generational Workplace

As the number of seniors rises and as social support programs come under increasing financial pressure, we are likely to see a growing number of seniors continue working. To some extent, this is already happening as more people stay in the workplace past traditional retirement ages (The Economist 2017). This makes it even more important to make the workplace senior friendly. Samsung and SK Hynix's programs to allow high performing employees to continue working past retirement ages and Toyota's plan to let employees nearing retirement age to mentor younger workers are positive steps in this direction. We also see continuing efforts by governments across East Asia to promote active aging and create "age-free" societies.

5.3 | A More Diverse Workforce That Calls for a More Inclusive Workplace

The growing numbers of seniors who choose to stay in the workplace past traditional retirement ages, the rising numbers of women, and growing immigration levels are all having the effect of making the workforce more diverse. This is especially important as historically these economies have had workplaces with limited ethnic and cultural diversity and with mostly male senior management (West 2020). As the workforce diversifies at multiple levels, it is important to make the workplace more inclusive so that employees from diverse backgrounds feel valued and can make their own unique contributions to their organizations. An important issue for businesses is optimizing the workplace

to make it more inclusive of the social needs and work-life balance of all employees. Increasing the labor force participation of women by investing in child-care facilities and promoting flexible employment can help reduce labor shortages and partially counteract the effects of aging on economic growth (WEF 2017). Human resource managers also need to be cognizant of societal and cultural issues that affect the workforce. Wage disparities between men and women, for example, which have been one of the reasons for women dropping out of the workforce, need to be addressed (Takenoshita 2020). Governments in the region have put in place policy measures that encourage a more inclusive workplace that promotes a work-life balance. For example, Japan's "New Angel" and "Plus One" plans that aim to improve working conditions for parents, South Korea's policy designed to expand childcare benefits and flexible working conditions, and Taiwan's providing incentives to build non-profit kindergartens and daycare centers are examples of these continuing efforts.

The rising level of immigration in all three economies (partly to deal with the talent shortages) also has the effect of making these societies and their workplaces more diverse. The continuing discussion on immigration is an important avenue for businesses to work with governments to craft an immigration policy that is inclusive and helps attract and retain talent. This could include deciding on issues such as immigrant quotas, immigrant selection criteria, availability of permanent residence and/or citizenship, integration plans, and any special rules for citizens from specific countries. Immigration policies should ideally be based on a constant monitoring of the overall environment, be flexible, innovative, open to adapting best practices from the experiences of others, and have broad-based public support (Chand and Tung 2019).

5.4 | Global Value Chain Disaggregation

MNCs from high-income East Asian economies should analyze the disaggregation of their global value chains (GVCs) to arbitrage demographic differences. It would make sense to keep more labor-intensive jobs in countries with a younger labor force, while jobs that are less labor-intensive may be more suited to countries that have an older population, all other things being equal. Thus, an aging population need not be seen simply as a challenge; it can also provide opportunities for growth and diversification. A related issue that needs to be considered is the recent slowdown of globalization and the rise of populism (Ghauri et al. 2021). This would mean that in considering the location of GVCs, businesses need to analyze "friendshoring" (countries with shared values deploying policies encouraging companies to spread manufacturing within themselves with the aim of insulating supply chains from external disruption and realigning value chains to ensure suppliers and production in friendly countries) and 'nearshoring' (moving production and supply chains close to home) as viable options. To a certain extent, this is already happening. For example, US Secretary of Commerce Gina Raimondo, speaking in May 2022 at the launch of the US trade partnership with Indo-Pacific countries, called for a friendshoring strategy that would move production to American allies (Stickings 2022). While the debate on nearshoring/friendshoring continues, it is important for managers to strategically choose locations and partners to minimize political risk and supply chain disruptions keeping in mind the evolving political and demographic situation.

6 | Conclusion

The rapid aging of the workforce in high-income East Asian economies can create major challenges for organizations in the region, but also some interesting opportunities. The experiences of these economies and the steps that they are taking to address the challenges of aging workforces can offer valuable lessons for businesses and economies worldwide. We have identified several HR initiatives that businesses in these economies can use to facilitate the employability of older workers, thus partly addressing the labor shortage that they are facing. In terms of company initiatives, hiring retirees, especially from the same industry or company, seems to be an important solution to consider. These employees already have most of the required skills, though it is important to understand their unique situation and adopt flexible workplace practices that allow for work-life balance. It would also help to have programs in place where highly skilled older workers can mentor younger workers coming into the workforce and help transfer knowledge. Flexible workplace practices, such as allowing remote work when possible, accumulating overtime for extra vacation, and encouraging work-life balance, are important to maintaining an engaged and productive workforce. It is also important to promote a culture of taking advantage of these workplace benefits. In the longer term, it is important in an aging environment to foster relationships with academia and the government to encourage applied research as well as to cultivate a talent pipeline. We further explored the applicability of the SOC theory to a new cultural context in high-income East Asian economies. We also discuss how GVCs can be best configured to take advantage of demographic changes happening at different rates in different countries. As more workers stay in the workplace past traditional retirement ages, and as more immigrants enter the workforce, the importance of managing diversity and leveraging its strengths is further magnified.

In terms of government initiatives, we discussed the importance of a number of policies and practices to increase the labor force: raising the retirement age and qualifying age for pensions, working with companies to implement work-life balance practices, investing in indirect subsidies such as childcare and daycare spaces, and increasing the availability of foreign labor. All these initiatives can yield benefits growing the labor force either by increasing the number of working-age adults or making it easier to stay longer in the workforce. Pure natalist policies designed to increase fertility rates seem to have limited effectiveness, especially in the short run. This trend holds true for most countries in Europe as well (Chand 2024).

A key takeaway from this paper is the importance of making the workplace more inclusive, family friendly, and responsive to cross-generational work teams. As older workers are more likely to emphasize accomplishment, job security, and mentoring (Kooij et al. 2011), organizations need to tailor their benefits to meet these needs. In line with previous findings (Kooij et al. 2011; Lang and Carstensen 2002; Zacher et al. 2011), this can also help transfer tacit knowledge and bring about the

benefits of a multigenerational workforce to their respective organizations. Another important takeaway is the need for the continuous involvement of businesses as a key stakeholder in formulating immigration policies that are flexible, inclusive, and help attract and retain talent. We also help answer the call for more phenomenon-based research on contemporary issues in international business (Doh 2015; Buckley et al. 2017).

Our conclusions must be considered in light of some limitations. This is a perspectives piece based on secondary data and does not provide an empirical testing of the issues. Further empirical analysis can greatly contribute to our understanding of how individual countries and organizations manage their aging workforces. The future estimates of country populations and demographics are by necessity based on projections from a variety of sources and may need to be revised going forward as more data becomes available.

Future studies should empirically examine the ideas discussed in this study and demonstrate the extent to which HR practices can effectively improve the engagement of older employees in other developed economies with different cultures. An avenue for future research is comparing some of the policies and practices that organizations in this region have adopted to manage aging workforces with those of other rapidly aging countries (most of which are in Europe) and analyzing their similarities and differences. Another important research direction is examining the evolving immigration policies of these economies and comparing them with the policies of countries with a longer history of immigration. It is also imperative to investigate the issue of the 'great resignation' as it evolves in high-income East Asian economies and understand how it compares to other industrialized countries. While we discussed some challenges for the inter-generational workplace, virtual work and evolving technologies might be other factors that require better understanding in the region.

As aging populations and graying workforces become a major concern for more countries, the experiences of high-income East Asian societies will become an important dimension of understanding and proactively managing this global phenomenon. Policymakers and managers alike need to be cognizant of these trends and work with multiple stakeholders on an ongoing basis to help create policies and practices to manage their effects and take advantage of the opportunities that this offers.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

References

Aiyar, S. A. 2018. "India Must Take Steps to Attract Global Talent for Cutting-Edge Technology." The Economic Times, July 29. https://economictimes.indiatimes.com/blogs/Swaminomics/india-must-take-steps-to-attract-global-talent-for-cutting-edge-technology/.

Armstrong-Stassen, M. 2008. "Organizational Practices and the Postretirement Employment Experience of Older Workers." *Human Resource Management Journal* 18, no. 1: 36–53.

Armstrong-Stassen, M., and F. Schlosser. 2008. "Benefits of a Supportive Development Climate for Older Workers." *Journal of Managerial Psychology* 23, no. 4: 419–437.

Armstrong-Stassen, M., and A. Templer. 2005. "Adapting Training for Older Employees: The Canadian Response to an Aging Workforce." *Journal of Management Development* 24, no. 1: 57–67.

Armstrong-Stassen, M., and N. D. Ursel. 2009. "Perceived Organizational Support, Career Satisfaction, and the Retention of Older Workers." *Journal of Occupational and Organizational Psychology* 82: 201–220.

Bal, M., D. Kooij, B. Simon, and S. B. De Jong. 2013. "How Do Developmental and Accommodative HRM Enhance Employee Engagement and Commitment? The Role of Psychological Contract and SOC Strategies." *Journal of Management Studies* 50, no. 4: 547–572. https://doi.org/10.1111/joms.12028.

Baltes, P., U. M. Staudinger, and U. Lindenberger. 1999. "Lifespan Psychology: Theory and Application to Intellectual Functioning." *Annual Review of Psychology* 50: 471–507.

Birken, E. G., and J. Schmidt. 2022. "The Great Resignation and Your Retirement." Forbes. https://www.forbes.com/advisor/retirement/the-great-resignation/.

Bloom, D., P. Kirby, J. P. Sevilla, and A. Stawasz. 2018. *Japan's Age Wave: Challenges and Solutions*. CEPR. https://cepr.org/voxeu/columns/japans-age-wave-challenges-and-solutions.

Boyes, L., and J. McCormick. 2005. *A Coming of Age: Experiences of Work and Sustaining Workability*. Joseph Rowntree Foundation.

Buckley, P. J., J. P. Doh, and M. H. Benischke. 2017. "Towards a Renaissance in International Business Research? Big Questions, Grand Challenges, and the Future of IB Scholarship." *Journal of International Business Studies* 48, no. 9: 1045–1064. https://doi.org/10.1057/s41267-017-0102-z.

Buyens, D., H. V. Dijk, T. Dewilde, and A. De Vos. 2009. "The Aging Workforce: Perceptions of Career Ending." *Journal of Managerial Psychology* 24, no. 2: 102–117.

Cascio, W. F. 2019. "Training Trends: Macro, Micro, and Policy Issues." *Human Resource Management Review* 29, no. 2: 284–297. https://doi.org/10.1016/j.hrmr.2017.11.001.

Cave, D., and C. F. Schuetze. 2021. "Contending With the Pandemic, Wealthy Nations Wage Global Battle for Migrants." The New York Times. https://www.nytimes.com/2021/11/23/world/asia/immigration-pandemic-labor-shortages.html.

Center for Decease Control. 2024. "National Center for Productive Aging and Work." https://www.cdc.gov/niosh/centers/productive-aging.html?utm_source=chatgpt.com.

Center for Public Impact. 2017. "Tackling the Declining Birth Rate in Japan." BCG Foundation. https://www.centreforpublicimpact.org/case-study/tackling-declining-birth-rate-japan.

Chand, M. 2024. "Aging and Shrinking Populations in CEE Countries: Implications for Practitioners and Policymakers." *AIB Insights* 24, no. 1. https://doi.org/10.46697/001c.92945.

Chand, M., and G. Markova. 2019. "The European Union's Aging Population: Challenges for Human Resource Management." *Thunderbird International Business Review* 61, no. 3: 519–529. https://doi.org/10.1002/tie.22023.

Chand, M., and R. L. Tung. 2014. "The Aging of the World's Population and Its Effects on Global Business." *Academy of Management Perspectives* 28, no. 4: 409–429. https://doi.org/10.5465/amp.2012.0070.

Chand, M., and R. L. Tung. 2019. "Skilled Immigration to Fill Talent Gaps: A Comparison of the Immigration Policies of the United States,

Canada, and Australia." *Journal of International Business Policy* 2, no. 4: 333–355. https://doi.org/10.1057/s42214-019-00039-4.

Chang, C. 2020. "Taiwan Needs New Blood for Economic Growth: Taiwan News: 2020-03-25 16:06:00." Taiwan News, March 25. https://www.taiwannews.com.tw/en/news/3903549.

Chang, E. 2022. "Taiwan's TSMC and Other Chipmakers Facing Labor Shortage: Taiwan News: 2022-01-04 13:06:00." Taiwan News, January 4. https://www.taiwannews.com.tw/en/news/4397608.

Chou, W. G. 2019. "Aging Right in Taiwan." Taiwan News. Aging Right in Taiwan | Taiwan News | 2019-09-29 12:55:00.

Chung, E. A. 2021. "How South Korean Demographics Are Affecting Immigration and Social Change." Carnegie Endowment for International Peace. https://carnegieendowment.org/2021/06/29/how-south-korean-demographics-are-affecting-immigration-and-social-change-pub-84819.

CIPD. 2021. "Flexible and Phased Retirement Policies." Chartered Institute of Personnel and Development. https://www.cipd.co.uk/knowledge/strategy/hr/phased-retirement.

Clemens, J., and S. Parvani. 2017. "The Age of Eligibility for Public Retirement Programs in the OECD." https://www.fraserinstitute.org/sites/default/files/age-of-eligibility-for-public-retirement-programs-in-the-oecd.pdf.

CNBC. 2021. *Japan Looking to Allow More Foreigners to Stay Indefinitely in a Major Immigration Policy Shift*. CNBC. https://www.cnbc.com/2021/11/18/japan-could-allow-more-foreigners-to-stay-indefinitely-in-major-shift.html.

Conway, E. 2004. "Relating Career Stage to Attitudes Towards HR Practices and Commitment: Evidence of Interaction Effects?" *European Journal of Work and Organizational Psychology* 13: 417–446.

Department of Labor. 2008. "Current Strategy to Employe and Retain Older Workers." https://www.dol.gov/agencies/eta/research/publications/current-strategies-employ-and-retain-older-workers?lang=en&utm_source=chatgpt.com.

Doh, J. P. 2015. "From the Editor: Why We Need Phenomenon-Based Research in International Business." *Journal of World Business* 50, no. 4: 609–611. https://doi.org/10.1016/j.jwb.2015.08.002.

Drabea, D., S. Hauffb, and N. F. Richtera. 2015. "Job Satisfaction in Aging Workforces: An Analysis of the USA, Japan and Germany." *International Journal of Human Resource Management* 26, no. 6: 783–805. https://doi.org/10.1080/09585192.2014.939101.

Ebner, N. C., A. M. Freund, and P. B. Baltes. 2006. "Developmental Changes in Personal Goal Orientation From Young to Late Adulthood: From Striving for Gains to Maintenance and Prevention of Losses." *Psychology and Aging* 21: 664–678.

Edmond, C. 2019. "Elderly People Make Up a Third of Japan's Population—and It's Reshaping the Country." World Economic Forum. https://www.weforum.org/agenda/2019/09/elderly-oldest-population-world-japan/.

Esposito, M., and T. Tse. 2018. "DRIVE: The Five Megatrends That Underpin the Future Business, Social, and Economic Landscapes." *Thunderbird International Business Review* 60, no. 1: 121–129.

Everington, K. 2024. "Taipei Mayor Offers Residents NT$50,000 Bonus for 3rd Baby." Taiwan News. https://www.taiwannews.com.tw/news/5898356.

Executive Yuan. 2024. "National Child Care Policy 2.0 for Ages 0–6." https://english.ey.gov.tw/News3/9E5540D592A5FECD/7b033800-d295-4a7a-8fba-dfbf617142d6.

Farndale, E., S. Horak, J. Phillips, and M. Beamond. 2019. "Facing Complexity, Crisis, and Risk: Opportunities and Challenges in International Human Resource Management." *Thunderbird International Business Review* 61, no. 3: 465–470. https://doi.org/10.1002/tie.22037.

Farndale, E., H. Scullion, and P. Sparrow. 2010. "The Role of the Corporate HR Function in Global Talent Management." *Journal of World Business* 45: 161–168.

Ferry, K. 2022. *The $8.5 Trillion Talent Shortage*. Korn Ferry. https://www.kornferry.com/insights/this-week-in-leadership/talent-crunch-future-of-work.

Festing, M., and L. Schäfer. 2014. "Generational Challenges to Talent Management: A Framework for Talent Retention Based on the Psychological-Contract Perspective." *Journal of World Business* 49, no. 2: 262–271. https://doi.org/10.1016/j.jwb.2013.11.010.

Finegold, D., S. Mohrman, and G. M. Spreitzer. 2002. "Age Effects on the Predictors of Technical Workers' Commitment and Willingness to Turnover." *Journal of Organizational Behavior* 23: 655–674.

Finsel, J. S., A. M. Wöhrmann, and J. Deller. 2023. "A Conceptual Cross-Disciplinary Model of Organizational Practices for Older Workers: Multilevel Antecedents and Outcomes." *International Journal of Human Resource Management* 34, no. 22: 4344–4396. https://doi.org/10.1080/09585192.2023.2199939.

Focus Taiwan. 2024. "TSMC to Donate NT$4 Billion to Schools for Research, Training." https://focustaiwan.tw/business/202406050019#:~:text=Taipei%2C%20June%205%20(CNA),cultivation%2C%20according%20to%20a%20company.

Forbes. 2019. "Japan Brandvoice: Why Japan's Aging Population is an Investment Opportunity." Forbes. https://www.forbes.com/sites/japan/2018/11/12/why-japans-aging-population-is-an-investment-opportunity/?sh=5a69dc81288d.

Freund, A. M. 2006. "Differential Motivational Consequences of Goal Focus in Younger and Older Adults." *Psychology and Aging* 21: 240–252.

Gelin, M. 2020. "Japan Radically Increased Immigration-and no One Protested." Foreign Policy. https://foreignpolicy.com/2020/06/23/japan-immigration-policy-xenophobia-migration/.

Ghauri, P., R. Strange, and F. L. Cooke. 2021. "Research on International Business: The New Realities." *International Business Review* 30, no. 2: 101794. https://doi.org/10.1016/j.ibusrev.2021.101794.

Goldberg, B. 2000. *Age Works: What Corporate America Must Do to Survive the Graying of the Workforce*. Free Press.

Guerrero, M., J. E. Amorós, and D. Urbano. 2019. "Do Employees' Generational Cohorts Influence Corporate Venturing? A Multilevel Analysis." *Small Business Economics* 57, no. 1: 47–74. https://doi.org/10.1007/s11187-019-00304-z.

Hackman, J. R., and G. R. Oldham. 1975. "Development of the Job Diagnostic Survey." *Journal of Applied Psychology* 60, no. 2: 159–170. https://doi.org/10.1037/h0076546.

Korea Herald. 2024. "The Korea Herald." Hyundai Motor Union Secures Wage Deal Without Strike for 6th Consecutive Year. koreaherald.com.

Holmes, T. 2021. "The Secret to Attracting and Keeping Tech Talent? In India, It Starts With Pay Hikes and Motorcycles." LinkedIn. https://www.linkedin.com/business/talent/blog/talent-acquisition/secret-to-attracting-and-keeping-tech-talent-india.

Hopfner, J. 2011. "Insight: South Korea Stares Down Demographic Dilemma." Reuters. https://www.reuters.com/article/us-korea-demographics-idINTRE79105Q20111003.

Horak, S., E. Farndale, M. Y. Brannen, and D. G. Collings. 2017. "International Human Resource Management in an Era of Political Nationalism." *Thunderbird International Business Review* 61, no. 3: 471–480. https://doi.org/10.1002/tie.21959.

Huang, W.-H., Y.-J. Lin, and H.-F. Lee. 2019. "Impact of Population and Workforce Aging on Economic Growth: Case Study of Taiwan." *Sustainability* 11, no. 22: 6301. https://doi.org/10.3390/su11226301.

IBM. 2024. "IBM." https://www.ibm.com/blogs/jobs/reinvent-your-career-with-the-ibm-apprenticeship-program/.

International Monetary Fund (IMF). 2024a. "Population." https://www.imf.org/external/datamapper/LP@WEO/OEMDC/ADVEC/WEOWORLD.

International Monetary Fund (IMF). 2024b. "GDP Per Capita, Current Prices." https://www.imf.org/external/datamapper/NGDPDPC@WEO/OEMDC/ADVEC/WEOWORLD.

Japan Times. 2015. "Honda to Raise Retirement Age to 65 in Recognition of Demographic Shift." The Japan Times, December 1. https://www.japantimes.co.jp/news/2015/12/01/business/corporate-business/honda-raise-retirement-age-65-japan-inc-copes-aging/.

Jung, Y., and N. Takeuchi. 2018. "A Lifespan Perspective for Understanding Career Self-Management and Satisfaction: The Role of Developmental Human Resource Practices and Organizational Support." *Human Relations* 71, no. 1: 73–102. https://doi.org/10.1177/0018726717715075.

Kanda, K. 2018. "Financial Pressures Mount as Japan's Population Ages. East Asia." Forum. https://www.eastasiaforum.org/2018/10/09/financial-pressures-mount-as-japans-population-ages/.

Kanfer, R., and P. L. Ackerman. 2004. "Aging, Adult Development and Work Motivation." *Academy of Management Review* 29: 440–458.

Kassraie, A. 2019. *What We Can Learn From Other Countries' Phased Retirement Plans*. AARP. https://www.aarp.org/retirement/planning-for-retirement/info-2019/phased-and-partial-retirement.html.

Kim, H. K., and Y. H. Kim. 2022. "Older Workers' Career Adaptability and Career Success." *Baltic Journal of Management* 17, no. 2: 192–205.

Kirin Holdings. 2024. "Five Kirin Group Companies Certified Again as "White 500" Companies." https://www.kirinholdings.com/en/newsroom/release/2024/0311_02.html.

Ko, P. C., and K. Hank. 2014. "Grandparents Caring for Grandchildren in China and Korea: Findings From CHARLS and KLoSA." *Journals of Gerontology, Series B: Psychological Sciences and Social Sciences* 69, no. 4: 646–651.

Kooij, D. T., A. H. De Lange, P. G. Jansen, R. Kanfer, and J. S. Dikkers. 2011. "Age and Work-Related Motives: Results of a Meta-Analysis." *Journal of Organizational Behavior* 32, no. 2: 197–225. https://doi.org/10.1002/job.665.

Kooij, D. T. A. M., D. Guest, M. Clinton, T. Knight, P. Jansen, and J. Dikkers. 2013. "How the Impact of HR Practices on Employee Well-Being and Performance Changes With Age." *Human Resource Management Journal* 23: 18–35.

Kooij, D. T. A. M., P. G. W. Jansen, J. S. E. Dikkers, and A. H. De Lange. 2010. "The Influence of Age on the Associations Between HR Practices and Both Affective Commitment and Job Satisfaction: A Meta-Analysis." *Journal of Organizational Behavior* 31: 1111–1136.

Korea Herald. 2011. "Hyundai Heavy Rehires Retirees to Stem Skills Shortage." The Korea Herald. http://www.koreaherald.com/view.php?ud=20110119000758.

Korea Herald. 2017. "Korea's Dependency Ratio to Rise Fast: Report." The Korea Herald. https://m.koreaherald.com/view.php?ud=20170525000181.

Lang, F. R., and L. L. Carstensen. 2002. "Time Counts: Future Time Perspective, Goals, and Social Relationships." *Psychology and Aging* 17, no. 1: 125–139. https://doi.org/10.1037/0882-7974.17.1.125.

Lazazzara, A., and A. C. Bombelli. 2011. "HRM Practices for an Ageing Italian Workforce: The Role of Training." *Journal of European Industrial Training* 35, no. 8: 808–825.

Lee, C. 2024. "Taiwan Raises Mandatory Retirement Age of 65." Taiwan News. https://www.taiwannews.com.tw/news/5901040.

Loch, C., F. J. Sting, N. Bauer, and H. Maurtmann. 2010. "The Globe: How BMW Is Diffusing the Demographic Time Bomb." *Harvard Business Review* 3: 99–102.

Lu, L. 2012. "Attitudes Towards Aging and Older People's Intentions to Continue Working: A Taiwanese Study." *Career Development International* 17, no. 1: 83–98. https://doi.org/10.1108/13620431211201346.

Martins, L. 2017. "10 Companies That Really Care About Their Older Employees." https://www.monster.com/career-advice/article/companies-friendly-toward-older-workers-1217.

McCurry, J. 2021. South Korea's Population Falls for First Time in Its History The Guardian. https://www.theguardian.com/world/2021/jan/04/south-korea-population-falls-for-first-time-in-history.

Min-hee, J. 2022. *Samsung Electronics and SK Hynix Abolishing Retirement Age*. BusinessKorea. http://www.businesskorea.co.kr/news/articleView.html?idxno=87565.

Ministry of Economic Affairs. 2019. "Industrial Development Bureau Important Policies." https://www.moeaidb.gov.tw/ctlr?lang=1&PRO=english.rwdAbout02.

Min-kyung, J. 2022. "Young Koreans May be Left With No Pension." The Korea Herald. http://www.koreaherald.com/view.php?ud=20220113000765.

Mok, I., L. Mackenzie, and K. Thomson. 2021. "Career Development and Human Resource Management of Older Workers: A Scoping Review." *Australian Journal of Career Development* 30, no. 3: 226–239. https://doi.org/10.1177/10384162211069208.

National Development Council. 2020. "Population Projections for the R.O.C. (Taiwan): 2020~2070." https://www.ndc.gov.tw/en/cp.aspx?n=2E5DCB04C64512CC.

National Development Council. 2024. "Population Aging." https://www.ndc.gov.tw/en/Content_List.aspx?n=85E9B2CDF4406753.

North, M., and H. Hershfield. 2014. "Four Ways to Adapt to an Aging Workforce." Harvard Business Review. https://hbr.org/2014/04/four-ways-to-adapt-to-an-aging-workforce.

Obe, M. 2019. "Asia's Worst Aging Fears Begin to Come True." Nikkei Asia. https://asia.nikkei.com/Spotlight/Asia-Insight/Asia-s-worst-aging-fears-begin-to-come-true.

OECD. 2018. *Working Better With Age: Japan, Ageing and Employment Policies*. OECD Publishing. https://doi.org/10.1787/9789264201996-en.

OECD. 2019. "Health at a Glance 2019." https://www.oecd-ilibrary.org/sites/c05578aa-en/index.html?itemId=/content/component/c05578aa-en.

Poon, L. 2018. "South Korea Is Trying to Boost Its Birth Rate. It's Not Working." Bloomberg.com. https://www.bloomberg.com/news/articles/2018-08-03/south-korea-is-trying-to-boost-its-birth-rate-it-s-not-working.

POSCO. 2017. "What the Demographic Cliff Will Mean for the Steel Industry." https://newsroom.posco.com/en/demographic-cliff-will-mean-steel-industry/.

Remery, C., K. Henkens, J. Schippers, and P. Ekamper. 2003. "Managing an Aging Workforce and a Tight Labor Market: Views Held by Dutch Employers." *Population Research and Policy Review* 22: 21–40.

Rosen, C. 2022. "Toyota's Master Craftsmen: Takumi." https://www.allaboutlean.com/toyotas-takumi/.

SAP Southeast Asia. 2022. "The Great Resignation Hits 91% of Asia Pacific & Japan SMEs' Digital Transformation Plans." SAP Southeast Asia News Center. https://news.sap.com/sea/2022/04/the-great-resignation-hits-91-of-asia-pacific-japan-smes-digital-transformation-plans/.

Schuler, R. S., S. E. Jackson, and I. Tarique. 2011. "Global Talent Management and Global Talent Challenges: Strategic Opportunities for IHRM." *Journal of World Business* 46: 506–516.

Showkat, S., T. Wani, and J. Kaur. 2023. "'New Normal' Implications for Global Talent in the Wake of Economic Nationalism and Slowdown." *Thunderbird International Business Review* 65, no. 1: 161–175. https://doi.org/10.1002/tie.22270.

SHRM. 2015. "SHRM Foundation's Effective Practice Guidelines Series: Leveraging the Talents of Mature Employees." https://www.shrm.org/content/dam/en/shrm/topics-tools/news/employee-relations/The-Aging-Workforce-Leveraging-the-Talents-of-Mature-Employees.pdf?utm_source=chatgpt.com.

SK Hynix. 2023. "Meet TL Park Cheol-Wham, a Technology Expert With No Retirement Age, Selected as the '2023 SK Hynix Honored Engineer' (news-skhynix-co-kr.translate.goog)."

Smith, A. 2021. "Generational Mindsets Affect the Workforce." SHRM. https://www.shrm.org/resourcesandtools/hr-topics/global-hr/pages/generational-mindsets-affect-workforce.aspx.

Sok, E. 2024. "Government Benefits for Having Children in Japan." https://savvytokyo.com/government-benefits-for-having-children-in-japan/.

Stewart, J. S., E. G. Oliver, K. S. Cravens, and S. Oishi. 2017. "Managing Millennials: Embracing Generational Differences." *Business Horizons* 60, no. 1: 45–54. https://doi.org/10.1016/j.bushor.2016.08.011.

Stickings, T. 2022. "Davos 2022: US Aims to 'Friend-Shore' Industry With Indo-Pacific Pact." The National. https://www.thenationalnews.com/world/us-news/2022/05/25/davos-2022-us-aims-to-friend-shore-industry-with-indo-pacific-pact/.

Stone, L., L. DeRose, and W. B. Wilcox. 2019. "How to Fix the Baby Bust." Foreign Policy. https://foreignpolicy.com/2019/07/25/how-to-fix-the-baby-bust/.

Strong, M. 2020. "Taiwan's Population Decline Has Started Two Years Early: NDC." Taiwan News. https://www.taiwannews.com.tw/en/news/3989834.

Su, J., and W. Chang. 2020. *SEMI Taiwan Talent and Public Policy Initiatives One Key to Industry Growth*. SEMI. https://www.semi.org/en/blogs/semi-news/semi-taiwan-talent-pipeline-and-public-policy-initiatives-one-key-to-industry-growth.

Suk-yee, J. 2020. *Korean Society Is Aging Rapidly*. BusinessKorea. http://www.businesskorea.co.kr/news/articleView.html?idxno=51074.

Taipei Times. 2022. "Editorial: Tech Firms Competing Over Talent." Taipei Times. https://www.taipeitimes.com/News/editorials/archives/2022/05/03/2003777604.

Takenoshita, H. 2020. "The Gender Wage Gap in Four Asian Countries: Japan, Singapore, South Korea, and Taiwan." In *Low Fertility in Advanced Asian Economies*, 41–59. Springer. https://doi.org/10.1007/978-981-15-0710-6_3.

Taylor, P., and A. Walker. 1998a. "Policies and Practices Towards Older Workers: A Framework for Comparative Research." *Human Resource Management Journal* 8: 61–76.

Taylor, P., and A. Walker. 1998b. "Employers and Older Workers: Attitudes and Employment Practices." *Ageing and Society* 18: 641–658.

The Economist. 2017. "As Japan Ages, So Too Does Its Workforce." https://www.economist.com/asia/2017/01/07/as-japan-ages-so-too-does-its-workforce.

The Japan News. 2024. "Toyota to Raise Maximum Retirement Age to 70; Aims to Retain Expertise." Reduce Burden on Factory Floor—The Japan News (yomiuri.co.jp).

Toshiba. 2020. "When Work Norms Change—Why Toshiba Supports Side Jobs." https://www.toshiba-clip.com/en/detail/p=2680.

Truxillo, D. M., D. M. Cadiz, and L. B. Hammer. 2015. "Supporting the Aging Workforce: A Research Review and Recommendations for Workplace Intervention Research." *Annual Review of Organizational Psychology and Organizational Behavior* 2: 351–381. https://doi.org/10.1146/annurev-orgpsych-032414-111435.

Truxillo, D. M., D. M. Cadiz, and J. R. Rineer. 2014. "The Aging Workforce: Implications for Human Resource Management Research and Practice." In *The Oxford Handbook of Research Implementation*, edited by M. Hitt, S. Jackson, S. Carmona, L. Bierman, C. Shalley, and M. Wright. Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199935406.013.004.

Truxillo, D. M., D. M. Cadiz, J. R. Rineer, S. Zaniboni, and F. Fraccaroli. 2012. "A Lifespan Perspective on Job Design: Fitting the Job and the Worker to Promote Job Satisfaction, Engagement, and Performance." *Organizational Psychology Review* 2: 340–360.

Tzu-ti, H. 2018. "Taiwan Facing the 3rd Worst Talent Shortage in the World: Survey: Taiwan News: 2018-06-27 13:50:00." Taiwan News. https://www.taiwannews.com.tw/en/news/3467849.

UN Population Division. 2015. "Can Pro-Natalist Policies Reverse the Fertility Decline in Taiwan Province of China?" United Nations Exert Group Meeting on Policy Responses to Low Fertility. https://www.un.org/en/development/desa/population/events/pdf/expert/24/Policy_Briefs/PB_Taiwan.pdf.

Waldman, E. 2021. "How to Manage a Multi-Generational Team." Harvard Business Review. https://hbr.org/2021/08/how-to-manage-a-multi-generational-team.

Walia, S. 2019. "How Does Japan's Aging Society Affect Its Economy?" The Diplomat. https://thediplomat.com/2019/11/how-does-japans-aging-society-affect-its-economy/#!#:~:text=There%20are%20two,next%20three%20decades.

Walker, A. 2005. "The Emergence of Age Management in Europe." *International Journal of Organizational Behavior* 10: 685–697.

Warr, P. 2001. "Job Performance and the Ageing Workforce." In *Introduction to Work and Organizational Psychology: A European Perspective*, edited by N. Chimel, 407–423. Blackwell.

West, J. 2020. "Asia's Shameful Gender Discrimination." Lowy Institute. https://www.lowyinstitute.org/the-interpreter/asia-s-shameful-gender-discrimination.

White, G. 2020. "Highly Trained Takumi Employees Give Toyota the Edge." Manufacturing Digital. https://manufacturingdigital.com/ai-and-automation/highly-trained-takumi-employees-give-toyota-edge.

Wisse, B., R. van Eijbergen, E. F. Rietzschel, and S. Scheibe. 2015. "Catering to the Needs of an Aging Workforce: The Role of Employee Age in the Relationship Between Corporate Social Responsibility and Employee Satisfaction." *Journal of Business Ethics* 147, no. 4: 875–888. https://doi.org/10.1007/s10551-015-2983-8.

Woo-hyun, S. 2021. "Kles Helps Local Baby Food Firm to Solve Workforce Issue." The Korea Herald. http://www.koreaherald.com/view.php?ud=20211124000612.

World Bank. 2021. "World Bank Country and Lending Groups." https://datahelpdesk.worldbank.org/knowledgebase/articles/906519#High_income.

World Bank. 2024. "Population Ages 65 and Above (% of Total Population)." https://data.worldbank.org/indicator/SP.POP.65UP.TO.ZS.

World Economic Forum (WEF). 2017. "This Is the Cost of Asia's Ageing Population." https://www.weforum.org/agenda/2017/05/this-is-the-cost-of-asias-ageing-population.

World Economic Forum (WEF). 2021. "How Can We Best Engage Older Workers in Reskilling Efforts?" https://www.weforum.org/stories/2021/05/how-can-we-engage-older-workers-in-reskilling-efforts-jobs-reset-summit-ageing-workforce-longevity-upskilling/?utm_source=chatgpt.com.

World Population Review. 2024. "Total Fertility Rate 2024." https://worldpopulationreview.com/country-rankings/total-fertility-rate.

Executive Yuan. 2018. "New Economic Immigration Policy." https://english.ey.gov.tw/News3/9E5540D592A5FECD/693dad1b-b897-4f52-af33-a8ec3cf2da49#:~:text=Executive%20Yuan%2C%20R.O.C.%20(Taiwan)&text=To%20address%20these%20issues%2C%20the,job%20opportunities%20or%20wage%20levels.

Yue, L.-Y., and W.-D. Huang. 2021. "Age and Job-Specific Skill Obsolescence: The Moderating Effects of Human Resource Practices." *Evidence-Based HRM: A Global Forum for Empirical Scholarship* 9, no. 4: 305–320. https://doi.org/10.1108/EBHRM-04-2020-0043.

Zacher, H., D. T. A. M. Kooij, and M. E. Beier. 2018. "Active Aging at Work: Contributing Factors and Implications for Organizations." *Organizational Dynamics* 47, no. 1: 37–45.

Zacher, H., A. Schmitt, and M. Gielnik. 2011. "Stepping Into My Shoes: Generativity as a Mediator of the Relationship Between Business Owners' Age and Family Succession." *Ageing and Society* 32, no. 4: 673–696. https://doi.org/10.1017/s0144686x11000547.

Zafar, R. 2023. "TSMC Workers Salty About 5% Pay Raise—Say Intel Isn't This 'Stingy'." https://wccftech.com/tsmc-workers-salty-about-5-pay-raise-say-intel-isnt-this-stingy/.

Zaniboni, S., D. M. Truxillo, J. R. Rineer, T. E. Bodner, L. B. Hammer, and M. Krainer. 2016. "Relating Age, Decision Authority, Job Satisfaction, and Mental Health: A Study of Construction Workers." *Work, Aging and Retirement* 2, no. 4: 428–435. https://doi.org/10.1093/workar/waw006.