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# AI Revolution Leading to a Welfare Revolution

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# AI Revolution Leading to a Welfare Revolution

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**Abstract**

South Korea is entering a super-aged society amid rapid demographic change, declining fertility, and escalating fiscal pressure on welfare systems. Despite sustained expansion of welfare expenditures, public satisfaction has stagnated while national debt continues to rise. This article argues that recent advances in artificial intelligence—particularly Physical AI—create a structural opportunity to transform welfare from income-centered redistribution to individualized, service-based systems that directly increase flourishing while reducing ill-being. By overviewing demographic trends, labor-market distortions, and institutional constraints, the paper shows how AI-driven welfare reform can simultaneously address aging-related service bottlenecks and revitalize economic productivity. I conclude by identifying the institutional conditions required to convert the AI revolution into a genuine welfare revolution.

## I. From an Aging Society to an Aged Society, and Toward a Super-Aged Society

The proportion of the population aged 65 and over is projected to rise rapidly from 19.2 percent in 2024 to 20 percent in 2025. As of 2023, life expectancy at age 65 is 19.2 years for men and 23.6 years for women, implying average lifespans of 84.2 for men and 88.6 for women. When the National Pension was introduced in 1988, life expectancy at age 65 was only 12.1 years for men and 16.3 years for women. Over the past about four decades, elderly men have gained 7.1 additional years of life and elderly women 7.3 years. Those facts force us to renovate the National Pension as well as to reset existing aging policies completely.

[1] This paper is based on a translated and updated version of Wonshik Kim's "AI Revolution Leading to a Welfare Revolution" (*World View*, Vol. 300, February 2026, pp. 78-84).

As families have become increasingly nuclearized, the share of living-alone elderly households (persons aged 65 and over) surged from 72.4 percent in 2017 to 89.7 percent in 2023. Only one out of ten elderly persons now lives together with their children. Accordingly, the burden of securing retirement income for older adults themselves, and the caregiving burden placed on their children, have grown substantially. To prevent these burdens from escalating into broader social problems, it is urgent to provide policy instruments that enable individuals to prepare their own retirement resources by themselves, along with systems that allow them to maintain independent living.

The total fertility rate for women continued to decline after 2015, but rebounded slightly from 0.72 in 2023 to 0.73 in 2024—the first increase in 15 years. Nonetheless, combined with population aging, the risk of national extinction through population decline has become a serious concern. The fundamental causes of declining fertility lie in young people's loss of confidence in childrearing ability or their low levels of satisfaction with it. The heavy burden of securing housing for marriage, along with the costs of childbirth, childcare, and education, makes it difficult for young people to achieve stable lives. Reliance on their children during old age is becoming increasingly unrealistic, and as a substitute, social security systems are increasingly perceived as the primary means of old-age security.

In particular, compared with other advanced countries, Korea imposes exceptionally high personal sacrifices on women who marry, form households, and raise children. Yet the family system has been socially the most efficient organization for producing value, and at the national level, fertility must be actively encouraged to ensure the sustainability of society.

An even more serious issue is that young people face severe barriers to establishing themselves in society. As of 2024, labor unions have benefited only regular employees in public institutions and large corporations - who account for only 13 percent of all workers – have enjoyed themselves with political vested interests and now dominate social policy. This dynamic exacerbates labor-market polarization by disadvantaging young people and non-regular workers on the periphery of the labor market. Legislation aimed at achieving "zero non-regular employment" has paradoxically produced more non-regular jobs. The 52-hour workweek system legally restricts overtime, fundamentally depriving young and vulnerable workers of opportunities to generate sufficient income. The so-called "Yellow Envelope Act (limiting employers' damage claims against striking workers)" blocks compensation claims for damages arising from illegal strikes, forcing labor-management negotiations on terms dictated by labor. The Serious Accidents Punishment Act makes

business owners criminally liable for fatal workplace accidents, potentially plunging firms into direct management crises. Yet fatal accidents have not declined.

Together, these factors effectively make new hiring difficult, driving the perceived youth unemployment rate to as high as 15.6 percent in 2024 and making job searches extremely challenging. Government regulations that effectively recognize the vested rights of specific occupational groups suppress entrepreneurship and market entry, thereby preventing the creation of new jobs. This phenomenon renders even the most productive young workers idle, reduces national productivity, and ultimately leads to wage declines. In the long run, this not only sends a warning signal for young people's own retirement preparation, but also imposes limits on their ability to support the parent generation. Crises in retirement security and labor markets of this nature inevitably evolve into threats to social stability and economic growth.

Moreover, in a global economy that demands the construction of more competitive infrastructure through export-oriented industrial structures based on human capital, past growth engines can no longer be revived. Hence, it is imperative to actively promote the diffusion of artificial intelligence (AI), which can radically transform production methods and maximize productivity and convenience in daily life, in order to overcome economic and social crises. Countries around the world are competitively advancing AI as a core growth industry, and unless it is diffused throughout society and cultivated as a future national industry, it will be impossible to sustain growth. In this process, Korea must pursue a systematic strategy that simultaneously addresses the challenges of an aging society by leveraging AI. In other words, stabilizing an aging society through a welfare revolution driven by AI should become a catalyst for renewed economic takeoff.

## II. Why an AI Revolution?

The AI that has recently been widely spread and rapidly adopted is based on theoretical foundations dating back to Alan Turing's 1950 proposal of the "Turing Test," in which he discussed the possibility of machine intelligence. In this sense, AI represents the cumulative outcome of decades of research by numerous scholars. Development progressed through machine learning in the 1990s, driven by the internet and mass data generation; deep learning in the 2000s, supported by big data and increased computing power; and image-recognition-based deep learning in the 2010s. With the popularization of generative AI such as ChatGPT in 2022, creative production across multiple modes—including text, images, and speech—has become possible, driving innovation across industry and society.

An even more innovative change, however, is occurring through Physical AI—AI that goes beyond mere digital information processing to directly sense, reason about, and act within the physical world. Whereas past AI systems assisted human decision-making, Physical AI represents a revolutionary shift in which AI systems themselves directly make decisions and execute actions. Companies are replacing human workers with robots to higher productivity and to reduce labor disputes, and fully self-driving (FSD) vehicles without steering wheels are already being tested in many cities. Humanoid bipedal robots are expected to perform household chores at home, take on the roles of family members or caregivers, and even provide professional-level psychological comfort through interaction with humans. Accordingly, rather than merely collaborating with human labor or services, such systems will effectively replace most human labor. They will implement automation and cognition simultaneously—not just executing commands but perceiving surrounding environments, making predictions, and selecting optimal actions. Ultimately, the acquisition of specialized human resources - which has been the greatest bottleneck in welfare-sector development - may soon be replaced by Physical AI.

This transition signifies an AI revolution that surpasses what the World Economic Forum (2020) described as the Fourth Industrial Revolution, amounting instead to a Fifth Industrial Revolution. The first industrial revolution of the 1780s was driven by steam engines; the second of the 1870s by electricity and telecommunications enabling mass production; the third of the 1970s by computers that enabled informatization and automated production systems; and the fourth by the fusion of advanced technologies such as discriminative AI, IoT, drones, 3D printers, connected cars, and platform services like Uber. Now, in the ongoing fifth industrial revolution, generative AI and Physical AI increasingly replace human labor and undertake optimal production and decision-making, radically transforming patterns of production and consumption. Continuous high-speed advancement will not only dramatically boost productivity but also improve income levels and overall quality of life.

## III. The Need for the New Paradigm in Welfare Program

Until now, welfare system pursued by Korean society and government policy has been evaluated primarily through income – in other word, “money” - as its core indicator. The primary focus of welfare policy was to provide and guarantee barely nominal income necessary for subsistence. Correspondingly, income came to be regarded by the public as the benchmark of happiness or well-being. Politically, governments or political parties that distribute quasi-money have therefore gained absolute support. As a result, cash transfers

such as basic pensions, universal basic income, or living expense subsidies have become essential tools for winning elections.


However, citizens' everyday needs are not for money itself, but for improvements in the quality of life—housing, education, childcare, health—and for satisfaction derived from income generation and consumption. Consequently, it is imperative to move beyond conventional welfare concepts and pursue a welfare revolution that satisfies citizens' practical needs. With tax revenue redistributed by the government, only material needs such as food, clothing, and shelter can realistically be addressed. Yet citizens increasingly demand that the government also resolve needs across all five stages of Maslow's hierarchy: (1) physiological needs; (2) needs for safety and social stability; (3) needs for social belonging and communication; (4) needs for respect and recognition; and (5) needs for self-actualization.

Of these, only the most basic physiological needs can be partially addressed through cash-based policies. No matter how much money the government distributes, higher-order needs remain unresolved, rather deteriorated. Instead, citizens become more dependent on the government spending, while inflationary pressures may even reduce real income. In a modern society characterized by diverse individual preferences, uniform cash transfers to everybody provided indiscriminately by the government are one-time measures that have little to do with genuine welfare enhancement. Even though the vulnerable try to get over ill-being, they remain left behind.

Regarding the second stage, *needs for safety and social stability*, social insurance systems such as the National Pension and Health Insurance, along with the Basic Pension, can no longer be considered sufficient security as they have already reached a point of unsustainability. The third stage, *needs for social belonging and communication*, which involves social solidarity and communication, shows any improvement as society becomes increasingly dominated by powerful labor unions and entrenched vested interests. In terms of the fourth stage, *needs for respect and recognition*, we are instead witnessing an increase in tragic indicators such as high suicide rates and deaths in isolation (lonely deaths). Finally, in the fifth stage, *needs for self-actualization*, discrimination and unfair treatment have become widespread, while the judgments and regulations of a biased government suppress individual choices.

The problem is that the government's cash-oriented policies, aimed at satisfying basic physiological needs, fail to meet the actual desires of the beneficiaries and instead lead to corruption among related vested-interest suppliers and organizations. Furthermore, despite objective social progress, the intensity of social and individual **"ill-being"** is deepening, and the public is becoming increasingly fearful of the misfortunes that may befall them.

The majority of the public wants to move beyond "well-being policies" that merely target physiological needs; they desire **"ill-being policies"** that provide social and individual stability by suppressing misfortune. The challenge lies in the fact that solving these issues requires personalized welfare policies and the professional human and material resources to support them. Therefore, the ongoing development of **Physical AI** can serve as a vital tool to eliminate the bottlenecks that have kept welfare confined to the physiological level, significantly enhancing the efficiency of the entire system.

For instance, the humanoid robot NEO announced by the U.S. company 1X can automate household tasks such as folding laundry, organizing shelves, tidying spaces, and performing human-level manual dexterity, while incorporating remote-control and learning capabilities. In Japan, which experienced population aging far earlier than Korea, caregiving robots now provide mobility assistance, muscle support, toileting assistance, bathing, daily-life support, and emotional and communication support. Japan has implemented programs such as the "Policy for Supporting Elderly Care through Robots" (2015) and the Robot Care Dissemination Project (2018). In particular, SOMPO Holdings, Japan's largest insurance group, operates approximately 470 senior housing facilities and provides elderly care services based on digital technology and data. These shifts signify a transition from past industrial productivity improvements via mechanical robots to a future where **humanoid robots equipped with Generative AI** fundamentally transform human daily life.

## IV. Turning the AI Revolution into a Welfare Revolution

The benefits of the AI revolution discussed above are expected to become widespread within the next decade—sooner than in any previous stage of industrial revolution—given the unprecedented speed of change. Accordingly, governments must urgently accelerate AI diffusion to enhance national competitiveness, improve welfare, and achieve renewed economic growth. If action is not taken swiftly, the global IT foundations built thus far risk becoming sunk costs by the characterization of AI industry whose worldwide dominants win market.

There are two primary reasons why the AI revolution must lead to a welfare revolution. First, despite dramatic increases in national welfare budgets, public satisfaction with welfare program has not improved. Second, future generations cannot bear the burden of rapidly growing national debt fueled by welfare expenditures.

Under the Lee Jae-myung administration in 2026, the overall budget growth rate is at 8.1 percent, while government spending on health, welfare, and labor increases by 8.5 percent. Compared with the Bank of Korea's projected economic growth rate of 1.8 percent for 2026, welfare budget growth is 4.7 times higher. Even the average annual growth rate of health, welfare, and labor spending from 2020 to 2026 stands at 6.9 percent which is more than three times the economic growth rate.

The problem is that such spending trends are likely to continue, leading inevitably to explosive growth in national debt, accompanied by recurring cycles of exchange-rate instability, inflation, and economic downturns. Avoiding this outcome requires radical efficiency improvements in welfare—in other words, there is no alternative to comprehensively embedding AI technologies into welfare systems at the level of a "Welfare Revolution."

Socialism oriented administrations, from President Moon Jae-in through President Lee Jae-myung, have treated polarization as a core issue and regarded welfare policy simply as a problem of exploited low income. Consequently, they have expanded debt-financed welfare spending. By ignoring the structural causes of low income among individuals and emphasizing income-preservation policies such as universal basic income and living expense subsidies - often as election-season populist pledges - they have exacerbated the national debt problem rather than enhancing growth potential. According to the "Key Contents of the 2025–2029 National Fiscal Management Plan" (2025), national debt is

projected to surge from 49.1 percent of GDP in 2025 to 58.0 percent in 2029. Including public corporations' liabilities and unfunded public pension liabilities, the ratio is estimated to exceed 100 percent. In a low-growth scenario, the debt ratio would spike even further as GDP—the denominator—declines, severely undermining national economic sustainability alongside demographic decline. Lee Jan-Myung has insisted that the ratio is much lower than in advanced countries.

Although cash-based welfare policies are politically tempting during elections, they trigger inflation, destabilize public finances, and reduce economic resilience. This is why advanced economies exercise extreme restraint in welfare pledges during elections. In Korea, welfare has effectively devolved into "political welfare" rather than welfare genuinely designed for the public. Since the government's proper role is to improve public welfare through economic growth, welfare policy cannot take precedence over growth policy.

Physical AI will create a turning point to effectively resolve "ill-being," which existing welfare programs failed to address. For instance, it can provide lonely elderly conversation and comfort to marginalized individuals who previously went unnoticed due to a lack of financial and human resources. People with disabilities and the elderly, whose mobility was restricted, will be able to move wherever they want without relying on family members or caregivers. The elderly who previously had to entrust household chores to others will gain the autonomy to manage their own homes. By fulfilling the demand for welfare-related labor, physical AI will alleviate the burden on families and resolve various social, human, and practical side effects that arise in daily life.

It is true that there are concerns that AI's replacement of human roles might reduce labor demand, causing unemployment or widening income inequality. However, I believe that the active utilization of AI will create new occupations and services, ultimately making our daily lives more enriched and prosperous.

## V. Prerequisites for Linking the AI Revolution to a Welfare Revolution

To ensure that the AI revolution leads to a true welfare revolution, more proactive and meticulous policy-making is required. Because AI technology absorbs and utilizes all individual and social information while continuously improving itself, it may produce unfamilier side effects different from those of the past or, at times, entail substantial social costs. Therefore, as prerequisites for a successful welfare revolution, at least the following elements must be satisfied.

First, welfare indicators themselves must be reformed. The practical benchmark of Korean welfare policy has long been money or income-based happiness. To meet increasingly diverse welfare demands, ill-being must also be adopted as a policy indicator additionally. At the same time, the implicit policy framework that has remained detached from the people's actual needs since the government's objectives must be revised.

For example, the government demands equality for all people by framing society as one in which "everyone is treated unfairly." It distributes money by framing society as one in which "everyone is poor." It justifies higher taxes on the rich by framing society as one in which "everyone is a victim of inequality exploited by the rich." It demands every owner concessions to labor unions by framing society as one in which "all workers are weaker party." In reality, not all citizens are treated unfairly, impoverished, or victims of polarization, nor are all workers weak. In essence, these are forms of political gaslighting and framing designed to plunge the entire nation into a sense of defeat and self-loathing.

Second, the labor market must be made more flexible, transitioning from a labor union-based market to an individual choice based one to enable young people to enter society earlier. Current pro-union policies are not designed for all workers but are instead tailored for regular employees in public institutions and large corporations. This trend is expected to intensify following the Lee Jae-myung administration.

Regulations such as the "Non-regular Workers Act," the 52-hour work week system, the "Yellow Envelope Law," and the "Serious Accidents Punishment Act" are either irrelevant to the MZ generation or inconsistent with their preferences. These measures only serve as barriers to their entry into the professional world. Furthermore, all such regulations are actions that completely block the opportunity for AI to upgrade national industrialization and enhance global competitiveness.

Third, regulations must be abolished so that AI entrepreneurs can settle into market and engage in economic activity. Entrepreneurship inevitably generates employment, creating not only new jobs but also higher incomes for workers. At the same time, it reduces the demand for government-driven welfare programs and contributes to fiscal stability, facilitating the construction of individualized, private-sector welfare systems and a transition toward an affluent society.

Fourth, the vested interest cartels across all levels of society must be dismantled. The greatest obstacle to deregulation is the resistance from those with vested interests. While it is fortunate if deregulation policies are adopted, a failure inevitably leads to even stronger

solidarity among these interest groups. For example, due to opposition from taxi unions, attempts to introduce robot taxis - which are already being driven in major metropolitan cities - have been blocked. Remote medical services have failed to take root due to opposition from doctors, and pharmaceutical delivery services cannot be introduced because of resistance from pharmacists.

Finally, unequal social opportunities—where children's educational outcomes depend on parental income—must be resolutely addressed through robust AI-driven education reform. The introduction of AI must not be led to further widen the educational gap. Under the pretext of resolving polarization, politicians have introduced basic pension, quasi-basic income, and living expense subsidies as tools for elections or "winning rewards." These are by no means measures intended to meet the public's welfare needs or provide genuine income preservation. Such handouts do not resolve polarization, nor do they lead to sustainable income growth.

Fundamentally, to resolve 'greater income difference' rather than polarization, we must innovate education to ensure that every individual's starting point in life is objectively fair. This will enable young people to begin their social lives on an equal footing and compete through their own efforts. In other words, achieving educational reform through AI as a means to eliminate educational inequality is the starting point for true and just welfare society. It will provide the next generation with the foundation to dream of a sustainable, flourishing, and long-term future.

## VI. Conclusion

South Korea faces a compound crisis driven by population aging, ultra-low fertility, rigid labor markets, and rapidly expanding welfare expenditures. Family-based support has weakened, while cash-centered welfare policies have failed to improve quality of life and have intensified fiscal risks. Young generations encounter structural barriers to labor-market entry, undermining income formation and long-term retirement security.

This article contends that artificial intelligence - especially Physical AI capable of sensing, deciding, and acting in the physical world - offers a structural alternative. By enabling personalized welfare services such as caregiving, mobility assistance, and daily-life support, AI can reduce ill-being rather than merely redistribute income. To realize this potential, the article argues for reforms to welfare indicators, labor institutions, regulatory frameworks, vested-interest cartels, and education systems, with AI-based education reform identified as the cornerstone of sustainable and just welfare.

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