



Pathways to the Revitalization of the Japanese Economy and Its Foundations

– Explanatory Notes on SBI Research Review Vol.9 –

Minoru Masujima, Principal Research Fellow, SBI Financial and Economic Research Institute

1. Introduction: A Juncture on the Road to 2040

The Japanese economy now stands at a critical juncture. By 2040, the entire second baby-boom generation (those born between 1971 and 1974) will have entered old age, accelerating the decline of the working-age population. Simultaneously, the global order that long underpinned Japan's postwar growth—characterized by free trade and globalization—is being destabilized by the rise of protectionism and intensifying Sino-American tensions. Against this backdrop of mounting headwinds, on the current institutional and policy trajectory, a harsh future lies ahead, designated as the "Stagnation Scenario¹." However, by reforming our economic and social systems with firm resolve and implementing innovative technologies throughout society, we can instead envision a "Revitalization Scenario²"—a future that offers renewed hope.

This grand design for revitalizing the Japanese economy is presented in the report *Well-being Society Pioneered by the Evolved Phygital Economy*, published by the "Study Group on the Economy and Society toward 2040" established by the SBI Financial and Economic Research Institute. This design is further elaborated through three closely integrated papers by Koji Nomura, Akihiko Shinozaki, and Takero Doi. The following sections outline the logic and analysis upon which these research results are based and how they are interconnected.

2. The Evolved Phygital Economy: The Foundation for Enhancing Well-being

The vision for the future economy proposed in the report is the "Evolved Phygital" economy. In this vision, the physical world and digital space are highly integrated, allowing massive volumes of real-time data and AI-based solutions to be fed back into physical society, thereby increasing productivity and generating new demand. For instance, the use of digital twins in factories enables the optimization of production processes, drastically improving productivity. Similarly, the implementation of autonomous driving technologies addresses social challenges including the securing of transportation access in depopulated areas, thereby sustaining

¹ In the Nomura paper, this corresponds to the BaU Scenario.

² In the Nomura paper, this corresponds to the TSI Scenario.

regional vitality.

Beyond this technological paradigm shift lies the realization of a "Well-being Society." Current expectations for growth generate hope for the future, which in turn enhances people's sense of well-being. This heightened sense of well-being raises people's motivation to work and productivity, leading to further economic growth. This "virtuous cycle of growth and well-being" represents the socio-economic vision that should be pursued.

3. Visualizing Structural Change through High-Resolution Model: Insights from the Nomura Paper

The empirical plausibility of the "Revitalization Scenario" is supported by the BIP model (High-Resolution Sectoral General Equilibrium Model for Assessing Business, Innovation, and Policy), developed by Nomura. In a sharp contrast to conventional abstract macroeconomic models, the BIP model is based on an exceptionally granular design, comprising 828 categories of economic activities and 167 categories of technological innovation. This structure enables the visualization of the transmission channels and impacts of technological innovation. Diverse dimensions of the economy—including production, employment, distribution, and energy consumption—can be captured in a consistent manner within a general equilibrium framework.

3.1 The Pathway to a Nominal GDP of 1,000 Trillion Yen

According to estimates presented in Nomura's paper, if the "Revitalization Scenario" is realized, Japan's nominal GDP in 2040 will reach approximately 1,000 trillion yen, representing an increase of approximately 260 trillion yen compared with the "Stagnation Scenario." The real economic growth rate is projected to accelerate from an annual average of 0.5% to 1.5%. The primary driver of this growth is real investment (gross fixed capital formation), which is projected to expand at an average annual rate of 3.5%. In terms of industrial structure, the service sector records the largest increase in value added, while the initial impetus for growth spillover originates in manufacturing. Enhanced competitiveness in manufacturing and expanded demand for intermediate goods stimulate the expansion of service sectors, particularly information services and business services. On the distributional side, productivity gains simultaneously enable shorter working hours and rising wages.

3.2 The Contribution of AI and Overcoming of Energy Constraints

A particularly noteworthy finding is that approximately half of the value-added expansion resulting from the social implementation of technological innovation is attributable to the utilization of AI. However, for the "Revitalization Scenario" to materialize—through accelerated investment, a revival of manufacturing, and the widespread social implementation of AI—an

industrial foundation of "affordable and stable electricity supply" is indispensable. To satisfy this, the analysis suggests the need to reassess existing decarbonization policies and to shift toward realistic policies that directly address energy stability and cost constraints.

4. Social Implementation of AI and Creative Destruction: Insights from the Shinozaki Paper

Like the Nomura paper, the Shinozuka paper starts from the premise that the effective social implementation of AI will be pivotal in both problem-solving and growth strategies for the Japanese economy facing supply-side constraints. He further argues that to fully capture these economic effects, a wide range of complementary investments—both tangible and intangible—are essential.

4.1 Physical AI as "Offensive AI"

Shinozaki criticizes Japan's current use of generative AI for remaining largely confined to "Defensive AI"—focused on improving operational efficiency and alleviating labor shortages—and calls for a shift toward "Offensive AI," aimed at creating added-value through new business expansion and innovation. He highlights the importance of "AI-enabled Biz" that makes previously unprecedented business feasible. Furthermore, "Physical AI," which combines Japan's competitive advantages in manufacturing with AI, is identified as a promising domain. A symbolic example is the autonomous taxi business. Japan's complex and high-density urban environments are argued to possess exceptional strategic value, both data accumulation for AI training and commercialization, and are attracting strong interest from U.S. companies.

4.2 "Exit" as the Key Driver of Industrial Renewal

The conclusions derived from Shinozaki's causal structure analysis using Bayesian networks are highly suggestive. While the vitality of corporate and industrial turnover is crucial for improvements in macroeconomic productivity, the analysis reveals that "exit" (business closure) plays a more critical initiating role than "entry." To promote the "creative destruction" associated with Schumpeterian innovation, it is essential to establish mechanisms that facilitate the smooth reallocation of resources from legacy domains to emerging domains. This insight provides a conceptual bridge to subsequent policy recommendations, including the safety-net theory advanced in the Doi paper.

5. A Safety Net to Support Challenges: The Institutional Design in the Doi Paper

Technological innovation and changes in industrial structure inevitably entail painful adjustment costs. The Doi paper presents concrete and quantitative proposals for the

institutional design of an "Earned Income Tax Credit," positioning it as a social foundation that enables people to embrace change and continue taking risks.

5.1 Removing the "Income Threshold"

First, to address the "1.3-million-yen barrier" that discourages labor participation, the paper proposes a "Social Security Premium Discount Tax Credit." This mechanism alleviates the additional social security contribution burden incurred when earnings exceed the 1.3-million-yen threshold by offsetting it through an income tax credit. Micro-simulations suggest that the total required fiscal outlay would amount to at most approximately 1 trillion yen—even if expanded to spouses enrolled in National Health Insurance system. This corresponds to 0.35 percentage point of the consumption tax roughly half the budget of existing child allowances. The paper argues that this system can be easily implemented by leveraging the existing year-end tax adjustment framework and should therefore be introduced promptly.

5.2 Toward an Integrated System of Income Redistribution

Furthermore, as the medium-term objective, the Doi paper advocates a shift toward an integrated system of income redistribution by scaling back or abolishing existing income deductions—including the employment income deduction—and transitioning to a scheme that integrates tax credits and social benefits. This would maintain labor supply incentives while increasing the disposable income of low-income individuals who are not covered by existing benefit programs. Part of the funding could be secured through an increase in the consumption tax rate, potentially facilitating a shift in Japan's tax system from income taxation toward consumption taxation, and in turn making it possible to reduce intergenerational disparities in benefits and burdens and to enhance overall economic welfare.

6. Conclusion: An Integrated Response to Policy Challenges

The report, which brings together the research of the three authors, presents recommendations for addressing "Ten Policy Challenges."

These challenges underscore the importance of ensuring that human resources, capital, and energy are supplied appropriately in response to changes. Achieving this requires the implementation of three breakthroughs, together with the establishment of a safety net. Specifically, the creation of a flexible labor market enables the optimal labor allocation; a digital financial revolution facilitates the provision of risk capital; and an affordable and stable supply of electricity underpins the industrial foundation. Additionally, the introduction of earned income tax credits serves as a safety net that prevents social exclusion while supporting new challenges.

Concurrently, it is necessary to implement a range of policies, including investment in intangible assets including human capital and research and development to support digitalization and the social implementation of AI, clarifying labor immigration policies to address labor shortages, sustaining regional economic vitality and social functions through agricultural policy reform and "smart shrinking," and reducing the cost of public service provision through digitalization.

By addressing these policy challenges in a resolve and integrated manner, the revitalization of the Japanese economy can be realized.

The body of research presented in this volume serves as a compass for the Japanese economy as it looks toward 2040. Readers are invited not only to grasp the precise logic of each paper, but also to sense the strong commitment toward realizing a "bright and hopeful future."