

New Economic Growth Points: Preliminary Exploration and Research Logic Overview

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The Japanese government regards the post-pandemic recovery phase of 2022-2023 as a once-in-thirty-years opportunity for economic transformation, committed to extending short-term improvements into a virtuous cycle. To this end, the Japanese government also introduced comprehensive economic measures at the end of 2023 aimed at "thoroughly overcoming deflation," with five pillars: protecting people's livelihoods from the impact of high prices, achieving sustainable wage growth in regions, expanding domestic investment that can enhance growth potential, overcoming the issue of population decline, and strengthening national resilience. During the "lost three decades," while the Japanese economy experienced a gradual decline, it still maintained advanced production capacity and international competitive advantages in certain key industries. In recent years, the Japanese government has seized the opportunity of global industrial chain restructuring, actively promoting industrial policies, and encouraging corporate innovation through proactive policies to find and cultivate new economic growth points to drive sustainable economic development. The following sections will focus on analyzing four key areas that can serve as new growth points for the Japanese economy: semiconductors, artificial intelligence (AI), tourism, and the silver economy.

I. Semiconductor Industry

Industry Background and Importance

Semiconductors are the core components of modern electronic devices, widely used in fields such as computers, communications, automobiles, and consumer electronics. Japan was once a global leader in semiconductor production, but its market share has declined in recent years. At the end of the 1980s, the semiconductor industry, represented by companies like NEC and Hitachi, accounted for more than 50% of global production, a proportion that has dropped to 9% by 2022. However, with the surge in global demand for semiconductors, the Japanese government and businesses have re-emphasized this strategic industry.

The Japanese government has introduced a series of policies aimed at revitalizing the semiconductor industry.

In 2021, the Japanese government announced a 500 billion yen support for the chip factory that TSMC is building in Japan. In 2022, at the first meeting of the Japan-US Commercial and Industrial Partnership (JUCIP), the two sides agreed on the "Semiconductor Cooperation Basic Principles" and established a Japan-US "Next-Generation Semiconductor Development Joint Working Group," agreeing to jointly develop key technologies. In the same year, eight leading Japanese companies, including Toyota and Sony Group, jointly invested approximately 7.3 billion yen (about 48.3 million US dollars) to establish a new company, Rapidus, dedicated to the mass production of next-generation semiconductors for applications such as autonomous driving and artificial intelligence. Rapidus will collaborate with European and American institutions to develop advanced semiconductor technologies and will build its first factory in Hokkaido. The new factory aims to launch a prototype line for trial operation in 2025 and to mass-produce 2nm chips before 2030.

TSMC's first factory in Japan is already in production, mainly for mature process manufacturing, with an estimated monthly output exceeding 55,000 wafers. According to market news, TSMC has confirmed plans to build a second factory in Kumamoto, Japan, with the entire investment plan expected to be around 20 billion US dollars (145 billion RMB at current prices), and it will feature advanced 6nm process technology.

In April 2024, based on data submitted by a subcommittee under the Financial System Committee of the Ministry of Finance, Japan will invest 3.9 trillion yen over the next three years, equivalent to 0.71% of its Gross Domestic Product (GDP). The Japanese government has stated that it will subsidize one-third of the capital expenditure for domestic and foreign manufacturers producing designated types of semiconductor devices, equipment, materials, and raw materials. The subsidy requires related manufacturers to produce domestically for at least 10 years and demands that manufacturers prioritize domestic shipments in the event of a global supply shortage. The Japanese government plans to increase domestic semiconductor-related sales to over 15 trillion yen (approximately 95.3 billion US dollars at current prices) by 2030, which is three times the level of 2020.

Historical Industry Advantages

Japanese companies have unique advantages in semiconductor materials and equipment manufacturing. For instance, Sony holds a leading position in the image sensor field, accounting for half of the global market share; Disco's cutting machines have more than 70% of the global market share. Shin-Etsu Chemical and SUMCO together control about 60% of the global silicon wafer market; JSR, Sumitomo Chemical, and other Japanese companies hold 90% of the semiconductor photoresist market; Tokyo Electron's coating and developing equipment has a market share of nearly 90%, and in the field of EUV lithography equipment, Tokyo

Electron has 100% of the global market share; Advantest and Screen are in a leading position in the fields of chip testing equipment and cleaning equipment, respectively.

II. Artificial Intelligence (AI)

Industry Status and Prospects

Artificial Intelligence, as the core technology of the fourth industrial revolution, is profoundly changing various industries. Japan has strong capabilities in both basic AI research and application fields, especially with unique advantages in robotics, image recognition, and natural language processing.

Policies and Investments

On April 16, 2024, the Japan Association of Corporate Executives released recommendations urging the Japanese government to formulate a comprehensive industrial strategy aimed at around 2040. It emphasized that digitalization is effective in addressing the issues of declining birth rates and labor shortages, and called for the next three years to be a concentrated investment period for AI development, utilizing all measures including tax and regulatory reforms.

In April 2024, SoftBank announced plans to invest 150 billion yen by 2025 to accelerate the development of AI large models. SoftBank had already invested 20 billion yen in generative AI computing infrastructure in 2023, and this additional investment will set a new historical record for Japanese companies.

Microsoft announced in April 2024 that it will invest \$2.9 billion in Japan over the next two years to strengthen its large-scale cloud computing and AI infrastructure in the country. This is Microsoft's largest investment in Japan. Microsoft also stated that it will expand its digital training programs in Japan, providing AI skills to over 3 million people over the next three years. The company plans to open a laboratory in Japan focused on AI and robotics technology.

In the same month, Oracle announced that it will invest over \$8 billion in Japan over the next ten years to meet the growing demand for cloud computing and AI infrastructure in the country. This investment will expand Oracle's cloud infrastructure remote software services in Japan. In addition, to help customers and partners meet Japan's digital sovereignty requirements, Oracle will significantly expand its operations and staff its engineering team with personnel based in Japan.

Application Cases

In the manufacturing industry, on May 20, 2024, the Japanese Ministry of Economy, Trade and Industry officially announced the digital transformation strategy for the Japanese automotive industry. For the new generation of vehicles known as "SDV" (Software Defined Vehicle), major Japanese manufacturers such as Toyota, Honda, and Nissan will collaborate to develop new automotive technologies and share technologies in seven areas including AI, chips, virtual simulation, and high-precision autonomous driving 3D maps, thereby reducing development costs. The target for Japanese car sales is to reach 12 million vehicles globally by 2030, accounting for 30% of the global share.

In the medical field, AI is used for disease diagnosis and personalized treatment. For example, an AI system developed by the University of Tokyo can predict cancer risks with high precision by examining images; Fujitsu announced that it is conducting research with the University of Tokyo Hospital to use AI for clinical diagnosis, intending to use AI to analyze electrocardiograms and infer abnormalities in heart activity from changes in electrocardiogram data. They believe that this research will help diagnose heart disease more timely and accurately.

In the retail industry, Fujitsu also took the lead in integrating existing AI technology with generative AI, developing AI customer service solutions for retailers. The solution analyzes consumer behavior such as the time spent in front of different products and the comparison and selection of products, and generates virtual images on in-store digital signs to make appropriate suggestions to consumers, helping consumers achieve a more efficient shopping experience. The solution can also measure the effectiveness of the store's promotional plans and help retailers make decisions, helping retailers save labor and improve sales targets.

III. Tourism Industry

Industry Development and Advantages

The tourism industry is one of the important pillars of the Japanese economy. In 2019, Japan received more than 31.8 million international tourists, generating revenue of over 4.81 trillion yen (about 43 billion US dollars). Thanks to its rich natural landscapes, historical and cultural heritage, and modern cities, Japan has attracted a large number of international tourists.

Policy Promotion

During the epidemic, the Japanese government provided a large amount of financial support and preferential policies to help those in the tourism industry through difficult times. For example, providing low-interest loans, tax relief, and subsidies, supporting tourism enterprises

to maintain operations and employee employment. The Japanese government's "Go To Travel" plan allocated more than 1 trillion yen for tourism support measures, effectively alleviating the financial pressure on tourism enterprises. After the epidemic, Japan continues to adhere to the economic orientation of "tourism-based country," committed to increasing subsidies and stimulation for tourism. The government has introduced a package of plans to support 20 designated areas for governments and local communities to develop tourism promotion plans, and will promote innovative models to other areas. At the same time, Japan values the sustainable development of the tourism industry, improving tourism infrastructure, and is committed to solving the problem of "overcrowding" in tourism.

Future Development

A series of sightseeing-based country measures taken by Japan after the epidemic not only helped the tourism industry recover in the short term but also laid a solid foundation for sustainable development in the future. By improving service quality, attracting international tourists, promoting a variety of tourism products, and supporting related industries, Japan is striving to achieve its grand goal of "sightseeing-based country." On January 17, 2024, the Japan Tourism Agency announced that the consumption of foreign visitors to Japan in 2023 in terms of accommodation, shopping, etc., reached a record high, breaking through 5 trillion yen for the first time. As the global tourism market gradually recovers, Japan is expected to reshape its position as an international tourism destination with its unique tourism resources and high-quality services.

IV. Silver Economy

Background and Potential

Japan is one of the most severely aging countries in the world, with the proportion of the elderly population increasing year by year. Data released by the Japanese Ministry of Internal Affairs in September 2023 showed that people aged 65 and above in Japan accounted for 29.1% of the total population, ranking first in the world. The silver economy (i.e., economic activities targeting the elderly population) has tremendous development potential in Japan.

Industry Status

Japan has a comprehensive system in areas such as elderly medical care, nursing, and health management. To cope with the challenges brought about by population aging, but also to transform it into an opportunity for economic growth, the Japanese government and related

organizations have introduced a series of policies and measures to actively develop the silver economy. The Japanese government has formulated the "Outline of Measures for an Aging Society," which clarifies the development direction and specific measures of the silver economy. The outline aims to improve the quality of life for the elderly and promote the development of industries related to the elderly. Many companies focus on developing elderly-friendly products and services, such as assistive medical devices, health foods, smart home devices, etc.

Policies and Innovation

The Japanese government has formulated a number of policies to support the development of the silver economy. For example, by providing financial subsidies and tax incentives, it encourages enterprises to research and develop and promote products and services specifically for the elderly.

Japanese companies are actively researching and promoting wearable health devices, such as smartwatches and health monitors, which can monitor the health status of the elderly in real-time.

The Japanese government is implementing policies to support the re-employment of the elderly, encouraging enterprises to hire elderly employees through tax incentives and training subsidies. Statistics from the Japanese Ministry of Internal Affairs show that in 2022, the number of elderly people aged 65 and above employed was 9.12 million, an increase for the 19th consecutive year. The proportion of the elderly in the total employed population is 13.6%, which is equivalent to one out of every seven employed people being over 65 years old. In addition, the government also provides entrepreneurial support to help the elderly realize their entrepreneurial dreams.

The Japanese government actively promotes the construction of retirement communities, which integrate medical care, nursing, and living services to provide convenient and comfortable living environments for the elderly. As of 2023, there are more than 500 retirement communities in Japan, with more than 300,000 elderly people living in them.

Market Prospects

With the advancement of technology, the application of smart technology and big data in the silver economy is becoming more and more extensive. For example, the smart home system launched by Panasonic, designed specifically for the elderly, has functions such as remote medical treatment, health monitoring, and emergency calls. With the increase in the degree of aging, the pursuit of health continues. According to a survey by the Japan Policy Finance Public Corporation, as age increases, Japanese consumers' pursuit of health as a new

consumption gradually increases, especially after the age of 60, and the demand for health has surpassed economic demand as the first choice for consumers since 2010. The demand for simplicity has also gradually increased since 2008. Japan's development of the silver economy, through the efforts of government support, technological innovation, and social participation, not only improves the quality of life for the elderly but also provides new momentum for economic development.

Our Institution's Future Research Direction for the Japanese Economy

In summary, semiconductors, artificial intelligence, tourism, and the silver economy are currently and will continue to be important growth points for the Japanese economy. With government policy support, corporate innovation, and international cooperation, these fields are gradually forming new economic drivers to help Japan achieve economic transformation and sustainable development. Against the backdrop of increasingly fierce global economic competition, Japan's new economic growth points will provide important protection for maintaining a competitive edge. In this context, our institution is committed to identifying investment opportunities in the industries that represent the four major new economic growth points in Japan and making strategic recommendations for investors. To achieve this vision, a comprehensive investment strategy system is essential. In the current market, where information on Japanese companies is scarce, our institution hopes to leverage its deep-rooted advantages in the Japanese capital market to gradually establish a database of leading and potential enterprises in the target industries, ensuring timely updates and traceability. At the same time, we will use AI algorithms to accurately predict the future value of target companies, and link with macro policy analysis in Japan to determine the scale that enterprises can achieve with policy support in the future, presenting it to investors in the form of visual data reports. In the current situation where Japanese investment strategy reports are highly homogenized, we believe that our institution's investment strategy system will help investors to carve out a new path for wealth appreciation.

Appendix

Representative Companies in Japan's Semiconductor, AI, Tourism, and Silver Economy Sectors.

I. Semiconductors

Tokyo Electron Ltd. (8035.T)

Tokyo Electron is a global leader in semiconductor manufacturing equipment, providing equipment for wafer manufacturing and packaging. The company holds over 20% of the global semiconductor equipment market share and provides core equipment and technical support to major semiconductor manufacturers worldwide.

Shin-Etsu Chemical Co., Ltd. (4063.T)

Shin-Etsu Chemical is the world's largest supplier of silicon wafers, offering high-quality semiconductor silicon wafers and other chemical materials. Its products hold a significant share of the global market and are key suppliers to many leading semiconductor manufacturers.

Renesas Electronics Corporation (6723.T)

Renesas Electronics is a global leader in microcontrollers and analog semiconductors, serving the automotive, industrial, and consumer electronics markets. Its products are widely used in automotive electronic systems, contributing to the development of smart cars and autonomous driving technology.

II. Artificial Intelligence (AI)

SoftBank Group Corp. (9984.T)

SoftBank Group is a globally recognized technology investment company, investing in many leading AI startups through its Vision Fund. SoftBank's investments cover various fields of AI, including robotics, autonomous driving, and medical AI, providing significant financial support for the development of global AI technology.

Fujitsu Limited (6702.T)

Fujitsu is one of Japan's largest IT service companies, offering AI solutions, cloud computing, and big data analysis services. Fujitsu has a leading advantage in AI technology fields such as image recognition and natural language processing, and its AI technology is widely used in finance, healthcare, and manufacturing industries.

NEC Corporation (6701.T)

NEC is a global leader in IT and network technology, providing advanced AI technology and solutions. NEC has unique advantages in AI application fields such as facial recognition and video analysis, and its technology is widely used in public safety and smart city construction.

III. Tourism Industry**Japan Airlines Co., Ltd. (9201.T)**

Japan Airlines is one of Japan's largest airlines, providing domestic and international flight services. As the national airline of Japan, Japan Airlines plays an important role in promoting international tourism and the recovery of domestic tourism.

ANA Holdings Inc. (9202.T)

ANA Holdings is another major airline in Japan, offering a wide range of route networks and high-quality services. ANA actively promotes tourism resources in various parts of Japan and attracts international tourists through innovative tourism products.

JTB Corporation (Not Listed)

JTB is Japan's largest travel agency, providing a wide range of travel services, including travel planning, accommodation reservation, and tour guide services. As a leading company in the tourism industry, JTB has significant influence in promoting domestic and international tourism exchange and development.

IV. Silver Economy**Japan Post Holdings Co., Ltd. (6178.T)**

Japan Post provides comprehensive postal, banking, and insurance services, with a special focus on the financial needs of the elderly. Its financial products and services exclusive to the elderly provide important support for the development of the silver economy.

Panasonic Corporation (6752.T)

Panasonic is a globally renowned manufacturer of electronic products, offering smart home, health care, and elderly assistance devices. Panasonic's developed smart home systems and health monitoring devices are widely used among the elderly population, enhancing the quality of life for the elderly.

SOMPO Holdings, Inc. (8630.T)

SOMPO Holdings is a comprehensive insurance company, providing health and life insurance products. SOMPO holds a leading position in the elderly health and life insurance market,

launching various insurance products suitable for the elderly, and actively participates in the nursing service industry, improving the living security of the elderly.