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A JOURNAL ON FERROUS AND ALLIED SECTORS

Japan and its Manufacturing Industry





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- Publisher



Sakuntala, Editor & Publisher

How is Japan balancing “Beyond Zero” in the manufacturing sector with GDP growth?

Japan's economy is driven significantly by its manufacturing sector, which constitutes 20% of its GDP, making it the third largest in the world. Key industries include automobiles, robotics, semiconductors, and machine tools, which are globally recognized for their advanced innovation. The country implements a cohesive innovation program involving academia, government, and industry, with strategic roadmaps for science, technology, and manufacturing competitiveness that are well-funded.

A critical component of Japan's strategy for maintaining global competitiveness is developing its human resources. Despite moving forward with an aggressive competitiveness strategy without direct government intervention, Japan emphasizes that innovation transcends mere technological advancements. It encompasses broad social transformation achieved through new ideas, discoveries, inventions, and the creation of new social systems and values.

Japan's policies to foster innovation include:

- Leveraging global environmental issues for economic growth and international contributions.
- Doubling investments in education.
- Reforming universities.
- Increasing investments in science and technology.
- Reviewing regulations and social systems to promote innovation.
- Establishing government mechanisms to drive innovation.

However, Japan faces significant demographic challenges with a rapidly aging and declining population. The population is projected to decrease from 123 million to 87 million by 2060, with those over 65 increasing from 29% to 40%. This demographic shift will impact economic growth and government resources, influencing demand and opportunities throughout the economy. In 2023, Japan's economy encountered difficulties. After a significant GDP decline of 3.2% in the third quarter, the country narrowly avoided a recession with a 0.4% GDP growth in the last quarter. Household and government consumption remained weak, though business investment saw a late-year rebound. A weak yen has boosted exports, but the modest recovery and yen depreciation caused Japan to fall to the fourth largest economy globally, behind the US, China, and Germany. A stronger recovery and yen appreciation could potentially return Japan to the third spot by 2025.

Looking ahead to 2050, Japan aims to develop strategies to reduce global CO₂ emissions to "Beyond Zero," integrating economic growth with environmental protection. This sustainable growth roadmap includes nature-positive strategies that encourage companies to adopt nature preservation methods in their value creation processes. Key measures involve ecosystem conservation and restoration, sustainable resource extraction practices, and investment in green infrastructure. The development of Other Effective area-based Conservation Measures (OECM) sites on private lands is part of this strategy, promoting biodiversity and ecosystem services. Such initiatives are expected to enhance resilience to climate change, generate carbon credits, and foster new economic growth through natural capital.

S. Chanda
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