

The White Paper on Monozukuri 2022 uses statistics and various surveys to analyze the trends and recent situation surrounding Japan's manufacturing industry, and compiles trends and examples of major changes in the business environment, namely, "carbon neutrality," "human rights," and "DX (digital transformation)."

1. Outline of White Paper on Monozukuri 2022

The White Paper on Manufacturing Industries is a statutory report based on the Basic Act on the Promotion of Core Manufacturing Technology (enacted and put into effect in 1999). This is the 22nd annual report, and was jointly prepared by three ministries, namely the Ministry of Economy, Trade and Industry (METI), the Ministry of Health, Labour and Welfare (MHLW) and the Ministry of Education, Culture, Sports, Science and Technology (MEXT).

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3. Outline of White Paper on Monozukuri 2022

The business environment encompassing Japan's manufacturing industry is changing rapidly due to accelerating initiatives to achieve carbon neutrality and respect human rights, the increasing importance of DX (digital transformation) and strengthening supply chain resilience, soaring crude oil prices, material shortages, in addition to the effects from COVID-19 spreading.

Current situation facing Japan's manufacturing industry

- Business conditions had been on a recovery trend from the second half of 2020 to 2021, mainly for large manufacturers, but in 2022, both large and small-to-medium-sized manufacturers started to decline.
- Operating profit had been on a decreasing trend due to the pandemic, but nearly half of the firms had started to recover in FY2021.
- The mining and industrial production had been on a recovery trend since it bottomed out in May 2020, but it declined due to the global semiconductor shortage in the second half of 2021. The raw material price hikes and shortage of parts/materials such as semiconductors are major changes in the social situation that have had a significant effect on businesses in addition to COVID-19 spreading.
- Capital investment is currently on a recovery trend after falling sharply in the first half of 2020.

Changes in the business environment surrounding the manufacturing industry

(1) Crude oil price hikes

Crude oil prices had originally been on a rising trend, but they had soared even further due to the tension of the situation in Ukraine. This in turn has led to increased production costs, mainly in materials-related industries. To address this, the government is implementing initiatives to ensure a stable energy supply and appropriate pass-throughs.

(2) Material shortages

There have been various material shortages since 2021. In particular, the semiconductor shortage has had a widespread effect not only on processing and assembly manufacturing industries, but also on basic material manufacturing industries. The government has provided assistance by developing domestic manufacturing bases while carefully monitoring trends regarding supply and demand of important goods to ensure that such material shortages do not adversely affect the people's lives and economic activities.

(3) Carbon neutrality

Over 150 countries and regions have declared their intention to become carbon neutral while international discussions such as those at the COP26 held in 2021 are progressing and solidifying toward achieving the goal. In the industrial sector, initiatives led by private companies toward carbon neutrality and market formation are making progress. In addition, initiatives are spreading throughout Japan to decarbonize whole supply chains including suppliers, and to make CO₂ emissions/reductions visible.

(4) Businesses and human rights

There is a growing trend toward developing legal systems regarding respect for human rights in supply chains, mainly in Europe and the United States. Japan is also working to develop cross-industry guidelines for respecting human rights in companies' supply chains, based on the results of surveys conducted mainly on listed companies.

(5) Digitalization

While IT investment in Japanese manufacturing industries is levelling off, managers are changing attitudes as they seek to solve problems that IT investment can address, from work-style reform and strengthening of internal communication, to business model changes. While cybersecurity measures across supply chains, including in SMEs, are becoming increasingly important, existing measures such as antivirus software have not been able to prevent threats. The government is promoting unified efforts by the public and private sectors such as spreading the use of services that SMEs can easily introduce.