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Mega industrial policies emerge as market fails

Major countries across the world are implementing large-scale industrial policies to strengthen the field of advanced technologies and accelerate responses to climate change.

The United States has announced **$52.7 billion** (about ¥7 trillion) worth of investment support, based on the CHIPS and Science Act, to rev up semiconductor development and manufacturing at home. It has also adopted a $430 billion (¥60 trillion) package over the next 10 years of policies, based on the Inflation Reduction Act, to carry out climate-related and other measures.

The European Union has agreed on a €2 trillion (about ¥300 trillion) package, dubbed Next Generation EU, to rebuild a post-COVID-19 Europe by accelerating the bloc's green transition and digital transformation.

These colossal industrial policies are obviously being spurred by policymakers' enthusiasm for achieving economic growth in the post-COVID-19 era and their reactions to the rise of geopolitical risks.

For its part, Japan envisages stimulating climate-related investment of about ¥150 trillion over the next 10 years under its Green Transformation (GX) initiative to realize a decarbonized society. As a starter, it plans to raise ¥20 trillion through the issuance of a new type of Japanese government bond, called GX bonds.

Additionally, it has embarked on providing massive investment support measures in the semiconductor area.

Up until a little while ago, it was a mainstream narrative in major countries that governments should refrain from intervening in the private sector's activities. But major countries have been notably reviving industrial policies — when governments support private-sector economic activities by leveraging fiscal and taxation measures — in recent years. Why is this happening?

It goes without saying that government intervention in market dynamics is essential in addressing the effects of climate change. Global warming has resulted from a prodigious "market failure." With no government intervention taking place in one way or another, it is difficult for necessary resources to be appropriately allocated.

How can people all over the world redress this failure on a global scale, not only as perpetrators of such a consequence but also as victims of it from the past to the future? There are multiple effective solutions, including market pricing adjustments via greenhouse gas emissions trading schemes and green finance, which refers to investment in and loans to environment-friendly projects. Equally important is to encourage climate-related investment in the private sector through industrial policies, an approach that is likely to help spur economic growth in line with the ultimate goals of the large-scale investment support packages of the United States and the EU.

INSIGHTS INTO THE WORLD

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Japan needs to make private-sector investment increase immensely enough to break away from the prolonged stagnation that had stymied its economy even prior to the outbreak of the COVID-19 pandemic. The sluggish levels of domestic investment are largely to blame for the continuation of deflation in Japan that has kept income and productivity in the country from increasing. To realize a virtuous cycle of growth in income and production, domestic investment is indispensable.

If and when the government's industrial policies successfully leverage an increase in private-sector investment, their macroeconomic impact will be very large. Massive investment can be expected to lead to innovation, be it for climate change measures or for chip manufacturing.

While it makes sense that the government comes up with industrial policies to tackle climate change, is there good reason to use similar industrial policies for cutting-edge technology areas such as chip manufacturing?

The cutting-edge technology fields have been more susceptible to geopolitical risks than climate change — the most typical example of this is the semiconductor sector. Given the growing tensions between the United States and China, it has become increasingly crucial for Japan to ensure that it is able to realize the agglomeration of chip production bases on its soil. In this connection, not only corporations in Japan but also those in Taiwan as well as South Korea, the United States and like-minded places are showing interest in expanding their operations in Japan.

The semiconductor sector is prone to trigger prodigious market failures in ways different from those causing climate change because economies of scale are at play in its development and production processes. Any corporation that succeeds in realizing a massive chip manufacturing system ahead of competitors will not only acquire highly advanced technologies, but also will be able to afford to substantially lower the manufacturing costs to the extent that it becomes unrivaled in the marketplace.

As such, each place has eagerly pursued large-scale industrial policies to foster chip manufacturers of its own. Back in the 1980s, Japan introduced a series of policies to help its semiconductor sector grow and gain international competitiveness. Nonetheless, it ended up encountering fierce trade frictions with the United States. Thereafter, it has continued to be outperformed by the United States in semiconductor design and by South Korea and Taiwan in manufacturing.

Impact of U.S.-China feud

Under such circumstances, semiconductors are all the more important as the "rice of industry," as they are called in Japan. The ongoing geopolitical landscape revolving around U.S.-China tensions is inflating expectations that the government's industrial policies will help Japan boost domestic chip manufacturing.

As for climate change responses, it seems that government intervention by means of industrial policies can be justifiable, but opinions are divided in respect to the semiconductor sector. For example, there are people in favor of importing chips from the United States, South Korea and Taiwan without expanding domestic development and manufacturing infrastructure. In fact, during the so-called Japan-U.S. chip war, Washington criticized the Japanese government's exorbitant internal support for impeding fair trade competition.

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However, this thinking has been changing recently, spurred by the fact that the importance of semiconductors is growing further than ever before and the increasing necessity in geopolitical terms to keep domestic chip manufacturing infrastructure active and updated.

Furthermore, an increase in the cross-border global division of labor in the semiconductor sector has prompted a change in the way industrial policies should be. Japan's latest industrial policies not only help Japanese corporations expand domestic operations — they now benefit corporations from the U.S. and Taiwan as well.

Whatever the case might be, sectors like semiconductors have been the subject of discussion for many years now. People have debated the extent to which industrial policies should be applied to shore up their capabilities, which can be strongly affected by technological innovation and economies of scale. Industrial policies do not always work well. The government fails as does the market.

That said, when taking into consideration the latest trends in technological innovation, the importance of semiconductors and geopolitical issues, failure may be more likely to occur if everything is left to the market than as a result of government intervention.

The fact that the Japanese economy has stayed stagnant for 30 years is largely attributable to the sluggish levels of private-sector investment as mentioned earlier. This consequence has caused demand shortfalls on the macroeconomic front, which in turn have resulted in deflation. The Bank of Japan, pledging to help spur aggregate demand, has kept monetary easing in place, but private-sector investment has not increased to a sufficient level thus far.

Japan's feeble investment activities have affected the supply side, too. Its productivity growth has been slow while its production capacity expansion was sluggish. Both deregulation and growth strategies have been insufficient to bolster the Japanese economy's supply capacity. During the pandemic, the government resorted to a series of extra fiscal spending measures, which turned out to be nothing but a temporary shot in the arm.

Even in an event that requires fiscal injections by the government, related measures must ultimately stimulate private-sector investment. Such effects can be expected of the government's industrial policies.

When considering the rights or wrongs of industrial policies, it is of course important to address individual issues, such as climate change and levels of competitiveness in the area of cutting-edge technology. At the same time, it is crucial to contemplate, within macro perspectives, how to ensure that an economic growth engine will be on hand for the post-COVID-19 era.

(Special to The Yomiuri Shimbun)

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