

# E arthquake, Tsunami & Nuclear Meltdown in Japan: Impact on the Japanese & Regional Economies



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Photo: Yoshiaki Sasaki



On this side of the man, the road is blocked by a power pole; on the other, it has collapsed.

## Structural Implications for Japan

The earthquake that struck on the afternoon of 11 March had a magnitude of 9.0, the biggest in Japan's recorded history, followed by a huge tsunami and a meltdown in the damaged Fukushima Dai-ichi nuclear power plant. The magnitude of this physical destruction and human calamities has been widely reported and is well-known. Officials, businesspeople and economists are now analyzing and estimating the costs and impact of such huge devastation on the Japanese and regional economies. Of all the complex relationships and consequences, one thing that is certain is that Japan will soon recover, as the Japanese are known for their resilience and fortitude in the face of destruction and calamities. In this sense, a stirring of the Japanese spirit of endurance and the revival of "gambatte" ("try hard") could potentially rouse Japan from two decades of lassitude, during which the country was adrift with its economic stagnation, ageing population, and politics bereft of visionary leaders. On the other side, an injured sense of pride could push Japan towards a sense of inwardness and nationalism. The history of Japan has shown that big changes in politics, society and economy have tended to follow overwhelming events in the past. After the Second World War, Japan espoused peaceful growth. The Kobe earthquake in 1995 reinforced Japan's

recent turning in on itself. The magnitude of change is dependent to a large extent on domestic elements and to some extent on the interdependence of Japan with the region and the world.

As a result of the physical damage, transportation interruption, and energy shortages in the Tohoku region, the production of cars, electronics and other industrial goods and components was stopped and reduced following the earthquake, tsunami and nuclear energy crisis. However, within a few weeks or months this production slowdown will gradually return to normal. What are the medium and long-term implications of this phenomenal triple crisis for the Japanese and regional economies?

On the assumption that the Fukushima Dai-ichi nuclear power station meltdown will be under control as planned based on the roadmap from the "emergency response phase" to the "planned and stabilizing action phase," the Japanese economy will fully recover within a reasonable time. The Kobe earthquake had a modest effect. Within 15 months industrial production in Kobe had almost reached pre-earthquake levels, and Japan as a whole suffered only one quarter of declining output. This time, the affected prefectures of Miyagi, Fukushima and Iwate account for just 3.6% of Japan's economy (based on calculations by Nomura), though many electronics factories are clustered there. Adding the neighboring areas of Nagano, Ibaraki and Niigata, which were also affected but less so, brings the affected area's contribution to GDP to 10.8%. It was estimated by Nomura that the direct hit to Japan's GDP will be limited to a range of 0.25% to 0.50%. However, a more important result of this national tragedy is the expected emerging sense of national purpose, to shake off Japan's 20 years of stagnation and deflation.

A big indication of Japan's willingness to shake off its lethargy will be the inevitable debate on nuclear energy that emerges from the disaster. Part of the public skepticism about the industry stems from a regulatory structure that remains mired in the past.

The rebuilding as well as the discussion about Japan's future energy sources might be easier if the political system would encourage debate and compromise, rather than partisan gridlock. To repair its social fabric and recover a sense of purpose, bipartisan political support for a strong coalition government is in order.

## Economic Implications

The full extent of the economic costs is not yet known, but early estimates of the cost are high. Rebuilding homes, factories, roads and bridges could cost as much as USD 200 billion. Quite apart from these direct costs, is the disaster likely to cause long-term harm to Japan's economy? Much will depend on the success of efforts to prevent a complete nuclear meltdown and catastrophe. The interruption or reduction of the electricity supply means that output has been affected even in areas far from the tsunami-hit regions.

Many automobile and electronic manufacturers in Japan and other countries halted production because of problems with the supply of parts and components. But such disruption is unlikely to persist. When production resumes, it is likely to be at a faster pace than usual. Studies of the economic effects of past natural disasters, as well as Japan's experience after the 1995 earthquake in Kobe, provide further reassurance. They suggest that the macroeconomic effects of the tsunami will not be devastating and will not last very long.

Reconstruction of the devastated Tohoku region will help offset the negative impact of a drop in output in the aftermath of the disaster. Business will boom for builders and producers of capital goods. At the same time, there are also uncertainties on the nuclear crisis, a lack of consumer and business confidence, interest rates close to zero, and the massive public debt – all factors that leave policy-makers little space to maneuver.

### Regional Implications

At this juncture, the rebuilding of Japan's economy could divert its resources and focus from its long-standing commitment and economic connectivity with the region. But this is unlikely, judging from the economic impact through global and regional production networking. Production disruption in Japan has affected the production of cars, electronics and machinery in other major countries, especially in East Asia. It is expected that Japan will reshape itself into a more dynamic economy, harnessing the support and solidarity offered to the country from all over the world. The Japanese economy has been in a weak state for the past two decades and its gross public debt now amounts to 200% of GDP. After money owed by one part of the government to another is netted off, the figure is still around 120%. So how can Japan afford this reconstruction? At this time of national crisis, the government should face no serious difficulty in borrowing more, as the Japanese people will be prepared to make sacrifices and share the national burden, and a special reconstruction tax could even be levied. The critical element is public confidence in the credibility of the Japanese government in navigating and managing this national disaster.

The long-term impact on Japan and the region will revolve on the safety and use of nuclear energy, the opening up and liberalization of the foreign investment and financial sector, and further regional integration through production networking and economic connectivity.

With 88 nuclear power plants currently operating in South Korea, Japan and China, governments are under pressure to establish a regional mechanism to strengthen the International Atomic Energy Agency. The coming summit of South Korea, China and Japan on May 21-22 in Tokyo will focus on nuclear safety and prepare a regime for closer regional cooperation.



*Chinese Prime Minister Wen Jiabao (left), his Japanese counterpart Naoto Kan (center), and South Korean President Lee Myung Bak attend a joint press conference in Tokyo on May 22, 2011.*

### Implications for Nuclear Plants

The use of nuclear energy for Japan and other countries in the region will continue, as nuclear power is the most efficient and economical source of energy. Nuclear power provides nearly 30% of Japan's energy. To abandon nuclear power is to commit the country to massive imports of gas and coal that would be economically costly to consider. After the negative sentiment on the Fukushima nuclear power plant crisis quiets down, a realistic assessment will prevail. The major issue is how to manage nuclear energy safely and in an environmentally sustainable way. It is perhaps somewhat comforting to learn from the Director General of the OECD's Nuclear Energy Agency that, although Japan has classified Fukushima as being equal in seriousness to Chernobyl, the amount of radiation released so far at Fukushima is still only one-tenth of that at Chernobyl. A roadmap was recently published for resolving the nuclear crisis. This document sets out steps to stabilize the situation at the Fukushima Dai-ichi plant by the end of this year, so that the still-present threat of a potentially catastrophic meltdown can be avoided. Japan's Foreign Ministry called the roadmap an important first step in resolving the Fukushima situation. The outcome of the nuclear crisis remains to be seen. In this context, the role of the Japanese government in managing the Fukushima nuclear plant crisis and in restoring public confidence will indeed be crucial for subsequent measures to revitalize Japan.

### Opening of Japanese Economy

The second possible long-term implication is the opening up of the Japanese economy to more foreign investment, particularly in the financial, banking and tourism-related service sectors. These sectors need more foreign competition to make them more competitive in allocating scarce resources in the midst of an ageing and declining population. It would not be easy for the government to liberalize these domestically sensitive sectors. However, with a strong political mandate from a possible coalition government, it is possible under the extraordinary circumstances following the triple crisis. In this context,

it would be appropriate for Japan to seriously consider joining the negotiations of the Trans Pacific Partnership (TPP) Agreement.

On the sidelines of the APEC Summit in November in Yokohama, Japan asked for a delay of six months before deciding whether or not to enter the TPP negotiations. At the sixth meeting in Singapore on March 28, 2011, Japan requested a further six-month postponement before entering negotiations on TPP. Before the Singapore meeting, officials had been able to talk in general terms about TPP objectives. Rather than talking abstractly, officials at the sixth meeting were arguing over specific texts and drafting new rules that will apply in nine very diverse economies. Japan should seriously consider entering the TPP negotiations, as it is a comprehensive agreement covering all the main pillars of a free-trade agreement, including trade in goods, services, rules of origin, sanitary and phytosanitary measures, technical barriers to trade, intellectual property, government procurement, and competition policy. Joining TPP would be a viable mechanism for a major overhaul of Japan's economic structure, including reforming agriculture, and in the process make Japan a more open and competitive economy. Under normal political, social and economic conditions, it is unlikely that such radical change could occur in Japan. But the triple crisis provides such a window of opportunity.

## Regional Production Networking

Related to policy measures for opening up Japan's economy are the implications for further connectivity with East Asian economies. Production networking has been expanding and accelerating in the region as part of global value chains. As a result of this natural disaster, production stoppages in Japan have affected production in other parts of the world, especially in East Asia. Consequently, Japan should accelerate its production networking and physical connectivity with the region. The Economic Research Institute for ASEAN and East Asia (ERIA), in collaboration with the Asian Development Bank (ADB) has published the "Comprehensive Asian Development Plan," which provides a master plan and roadmap for economically connecting East Asian economies through a massive air, sea and land connectivity. Such a grand scheme of constructing economic linkages in the region would revitalize more developed and mature economies such as Japan, Korea and Taiwan as well as the less developed southeastern economies. In the process, wider and deeper regional integration would simultaneously narrow the development gap and provide economic stimulus to more developed economies.

## Japan-ASEAN Relations & Northeast Asia Cooperative Framework

ASEAN has prepared the ASEAN Economic Community Blueprint and the ASEAN Strategic Connectivity Master Plan in the light of realizing an ASEAN Economic Community by 2015. The goal is to become a single market and production base on the basis of a competitive and equitable community of ten southeast Asian nations. In view of Japan's extensive production networking and massive foreign investment in ASEAN countries, the reconstruction and revitalization of Japan would be in synergy and a complementary mechanism in realizing the objective of an ASEAN Economic Community. By creating a wider and deeper market space in East Asia, it would be beneficial to the reconstruction and opening up of Japan's economy.

It is expected that, in the post-tsunami reconstruction, Japan-ASEAN relations will move to a higher level of cooperation, as ASEAN and Japan have complementary economic roles. In assisting ASEAN to achieve an ASEAN Economic Community (AEC) by 2015 through increased investment in infrastructure and production networks, Japan would be offered a wider market space to invest. In the process, both Japan and ASEAN would benefit from a close partnership in growth and in narrowing the development gap in East Asia. In addition, ASEAN as the default hub of East Asian economic integration could provide a useful role in creating a framework of cooperation and stability in northeast Asia as well, among Japan, China and Korea.

The implication of deeper regional integration is enhancing regional macroeconomic cooperation that would help reduce the vulnerability of the region against external shocks. At the same time, macroeconomic cooperation would open up domestic financial institutions to more transparency and competition, as regional cooperation in macroeconomic policies lags behind other forms of cooperation. Such initiatives would strengthen financial viability and stability both domestically and regionally. More effective cooperation on macroeconomic and financial policies within the existing framework of regional cooperation would accelerate the opening up of Japan's financial and capital markets and foreign direct investment in East Asia.

Japan has been an important source of foreign investment in East Asia and the world. Would the need for mobilization of capital for domestic reconstruction divert Japan's investment overseas? Considering the extent and magnitude of Japanese firms operating in the region, it is highly unlikely that Japan would reduce its commitment of foreign investment, as it is driven by the private sector. However, it is likely that concessionary loans and other official assistance would be reduced, as public debts have reached a high proportion of GDP.

A revitalized Japan would have a more open and competitive economy through major restructuring of its domestic economy and acceleration of deeper integration with the East Asian economies. In this context, it is vital for northeast Asia to have a workable and functional cooperative framework among Japan, China and Korea, while maintaining a strategic partnership with the US. The natural disaster has proven the strategic importance of the bilateral relationship between the US and Japan. Therefore, Japan is expected to forge closer relations with major countries in East Asia while concurrently maintaining a strong and strategic relationship with the US.

## Pessimistic Outcome

On the other hand, the natural disaster could turn Japan inward and lead it to become more nationalistic if the government mismanages the reconstruction effort. This would lead to a loss of both public confidence in the government and any semblance of authority. This would be the ugly side of the progress and transformation of Japan in the wake of the triple disaster. The consequences would be worrisome for Japan, the region and the world at large. A revitalized, active and engaged Japan would be good for all concerned, and especially for Japan-ASEAN relations and East Asia as a whole. **JS**

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