

# The Yen's Depreciation & Its Impact on Trade in Asia & Japan

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## Background

Following the appointment of Prime Minister Shinzo Abe on Dec. 26, 2012, the Japanese government initiated a set of policies known as “Abenomics”. Their objective is to expand the economy of Japan by a combination of measures such as aggressive quantitative easing by the Bank of Japan (BOJ), a surge in public infrastructure and economic growth strategies to encourage private investment. Specific policies include inflation targeting at a 2% annual rate, correction of excessive yen appreciation, setting negative interest rates, radical quantitative easing, and expanding of public investment. Fiscal spending will increase by 2% of GDP, likely raising the deficit to 11.5% for GDP in 2013. In 2012, parliament passed a bill to increase the consumption tax rate to 8% in 2014 and 10% in 2015 to balance the national budget. The government has recently been debating whether the tax hike would reduce consumption. As of May 2013, it has achieved the depreciation of the yen to 102 yen to the US dollar. A mix of monetary and fiscal policies is important for the short-run objectives. What is more important for the success of Abenomics in the long run is the growth strategy in unleashing the potential of the private sector, maximizing utilization of human resources and developing new markets in order to achieve an annual average of 2% real growth or 3% nominal growth for the next 10 years.

The sources of growth of the Japanese economy are largely determined by the domestic economy. Therefore, the success of Abenomics will be equally determined by its success in increasing domestic private and public investment and consumption. Nonetheless, Japan's external trade will also play a vital role in spurring productive private investment as its export sectors are very efficient and competitive in global and regional markets. What will be the impact of the yen's depreciation on Japan's trade with its trade partners in Asia? The yen's depreciation tends to make Japanese exports more competitive. However, in addition to exchange rates, there are other important elements that are relevant in determining the competitiveness of Japanese exports.

## Impact of Exchange Rate Changes on Exports

Theoretically, exchange rate depreciation affects a country's export competitiveness in external markets by making its exports cheaper. The empirical evidence indicates that exchange rate effects differ between high-technology products such as computers and mobile

phones produced within production networks and simple labor-intensive products such as textiles and footwear produced primarily by domestic factors of production (RIETI Discussion Paper Series, April 2013). Put another way, exchange rate appreciations throughout the region would cause a larger decrease in exports than appreciations in final assembly countries. In the case of high-value added exports, the value-added comes from outside of the assembly country while the majority of the value-added of labor-intensive exports comes from the exporting country itself.

The impact of the yen's depreciation in the region is quite complex and must be seen from different perspectives. One approach is to assess the impact on South Korean and Taiwanese exports as these two countries are generally perceived to have direct competition with Japanese exports in electronic and high-end computer products. Another approach is to examine the impact through East Asian production networks. In Asia, production networks developed in response to the drastic appreciation of the yen against the dollar between 1985 and 1995. Japanese firms lost their price competitiveness and responded by shifting labor-intensive assembly operations initially to South Korea and Taiwan, and subsequently to ASEAN countries and China. Consequently, higher-skilled workers in Japan, South Korea, Taiwan and Singapore produced high-level technology-intensive parts and components and export them to ASEAN countries and China for assembly by lower skilled workers, and then re-export to the rest of world.

The resulting cross-border production networks involve complicated combinations of intra-firm trade, arm's-length transactions and outsourcing (Fukunari Kimura and Mitsuyo Ando 2005, Kimura and Ayako Obashi 2011). These networks have allowed East Asian multinational companies, especially Japanese, to exploit a comparative advantage by slicing up long production processes and allocating production blocks created in this way throughout Asia. In particular, the electronics industry has been split into fragmented production blocks that can be located in different countries based on differences in factor endowments in the fragmented production blocks between developing, emerging and developed economies in the region.

Following the monetary easing by the BOJ and the consequent depreciation of the yen, there has been much speculation that South Korea's exports, and to some extent Taiwan's, would be adversely affected by a substantially depreciating yen. These two economies are believed to compete directly with Japan. By May 2013, four months after Japan started to push for correction of excessive yen

appreciation, there was little evidence that the yen's depreciation had impacted South Korea's or Taiwan's exports (DBS Group Research, May 7, 2013). The export weakness in the first quarter of 2013 was a regional phenomenon. In fact, on a relative basis, export growth in South Korea and Taiwan outpaced Japan's in the first quarter. In the electronic sector where trilateral competition is intense, South Korea and Taiwan outperformed Japan by a wide margin. In addition, South Korea's automobile exports also fared better than Japan's in the first few months of 2013.

From Japan's perspective, the benefits of the yen's depreciation so far have been mainly reflected in higher yen-denominated export revenues rather than in volumes. Such a phenomenon reflects the fact that Japanese exporters are taking the opportunity of a weak yen to recoup their profit losses incurred during the strong yen period of 2008-2012, rather than cutting prices. From October 2012, Japan saw a reduction in the negative growth of exports until March and April 2013, in which months exports grew positively. What is interesting is that export increases did not come from export volume, as would be expected from the yen's depreciation, but from higher prices of export commodities. In addition to exchange rates, the changes in Japan's exports are a result of a complex of factors such as global and regional cyclical change in demand, price and income elasticity of the export products, intra-firm transactions, regional production networks and the technological contents of export products.

What would happen if Japanese exporters start to make reasonable price adjustments as a result of the yen's depreciation? If this occurs, the squeeze on South Korea and Taiwan would increase. However, many still believe that the impact would remain small as they believe the Korean won and Taiwanese currency are undervalued and the appreciation of these two currencies has been more gradual and moderate than the rates of other currencies against the yen. Moreover, production costs, productivity and non-price factors such as technology, product quality and brand could offset exchange rate changes. Japan's export weakness is in part structural, owing to insufficient innovation and technology advancement in some export products due to the long economic slowdown.

For example, as far as exports of machinery, electronics and transport equipment are concerned, Japan's share of export markets has been falling persistently over the past decade. On the other hand, South Korean and Taiwanese exporters, especially the former, have been gaining market share (DBS Group Research, May 7, 2013). While a weaker yen currently boosts corporate profits and offers Japanese firms a window of opportunity to spend on innovation and develop new products, success will be a long-term process. In the short term, the non-price core competitiveness of South Korean and Taiwanese exporters remains relatively strong. Japan's export

Photo: Jiji



*Japanese Prime Minister Shinzo Abe indicates the three arrows of his economic policy at an academic conference on Abenomics.*

competitiveness would have a significant impact on its close competitors such as South Korea if the yen's depreciation is quite severe, for example, more than 20% in the short run. Over a longer term, Japan's export competitiveness will be determined more by the technological innovation of its export products through sustained long-term product development.

## Production Network in Asia

The impact of the yen's depreciation will also be determined by the extent of Japan's production network in the region. For example, Japan has an extensive production network with Taiwan, Thailand, Malaysia, Singapore, Vietnam, the Philippines and Indonesia. East Asian economies have expanded and strengthened transactions of machinery parts and components with intraregional partners to a greater extent than with Japan's other trade partners outside the region. Along with the growing importance of machinery parts and components in the intraregional trade of manufactured goods, the importance of intraregional partners in East Asia's total exports of machinery parts and components has also increased.

In particular, the proportion of information and communication technology (ICT) related parts and components in intraregional trade has remained notably high, and the intraregional share of exports of ICT-related parts and components has increased. This is clear evidence of the development of international production networks within East Asia. In addition, since 2000 East Asian countries have started to increase intraregional exports not only of machinery parts and components but also of finished products, which indicates the growing importance of intraregional markets as a final source of

demand for their exports. Among ASEAN countries, Singapore and the Philippines have high percentages of parts and components in both exports and imports. As for Malaysia, Japan, South Korea and Thailand, the percentages of all machinery industries also exceed 50%, and that of parts and components exceeds 30% on both export and import sides, indicating their strong participation in regional production networks. Empirical evidence also shows that China, including Hong Kong, is actively included in such regional production networks as indicated by the fact that more than half of China's and Hong Kong's exports and imports of manufactured goods are accounted for by machinery. Machinery parts and components account for only 20% of exports but more than 40% of imports, which suggests an important role for China as the factory of final assemblies for the world market.

Japanese firms have the most extensive production networks in the region. Therefore, the implication of the yen's depreciation for the exports of Taiwan and ASEAN countries would be less, especially for machinery, electrical, electronic parts and components, and ICT products. This is supported by the fact that, as of the first part of 2013, there are very few Japanese firms that have announced plans to reduce their foreign investment in ASEAN countries. Initially, there was a fear that the yen's depreciation would tend to reduce Japanese foreign investment in the region as it becomes more expensive to invest overseas. However, the available statistics do not substantiate this (Credit Suisse Securities Research & Analytics, Jan. 16, 2013). This is a clear manifestation of the importance of regional production networks for Japanese firms. In fact, with the success of Abenomics, many ASEAN countries are expecting an increase in Japanese investment in Thailand, Malaysia, Vietnam and Indonesia, with a possible relative decline of Japanese investment in China.

While there is no evidence that an appreciation in the importing country would substantially increase imports for processing, there is empirical evidence indicating that exchange rate volatility between supply chain countries would deter processing trade. This effect arises because the service link cost for production blocks separated by national borders is an increasing function of risk and uncertainty and exchange rate changes and worse volatility increases risk and uncertainty. In a study of Japanese MNCs (Takatoshi Ito et al. 2008) found that exchange rate stability between Asian currencies is essential for the uninterrupted flow of parts and components within regional production networks. In addition, Willem Thorbecke (2008), Kazunobu Hayakawa and Kimura (2009) presented econometric evidence that exchange rate volatility reduces the flow of parts and components within regional networks.

While East Asian economies export large volumes of sophisticated processed exports, they also export huge amounts in labor-intensive manufactured goods. These goods tend to be produced largely with domestic inputs and much of the value-added is supplied

domestically. For example, a study done by Robert Koopman, Zhi Wang and Shang-Jin Wei (2008) reported that China's value-added in electronic computers was less than 5% in 2002, while its value-added in clothing was almost 70%. The main exporters of labor intensive exports are China, Indonesia, Vietnam, the Philippines and Thailand. One would expect significant competition between China and ASEAN countries in exporting labor-intensive exports to third markets. With the yen's depreciation and possible fluctuations in exchange rates, exporters will face added pressure to pass exchange rate changes onto import prices. Thorbecke (2010) found labor-intensive exports from China and ASEAN countries to be very sensitive to both exchange rates in the exporting country and to exchange rates in other countries exporting labor-intensive exports to third markets. In that study, Thorbecke found that for ASEAN countries a 10% appreciation in the exporting country would reduce that country's labor-intensive exports by about 20%. This result suggests that ASEAN countries' labor-intensive exports are quite elastic with respect to prices and exchange rate changes.

Various studies have clearly indicated that the relationship between exchange rates and trade in Asia is important and exports produced within regional production networks depend on exchange rates throughout Asia. The continuous flow of parts and components within production networks also depends on relative exchange rate stability in the region. While Asian economies cooperate in regional production and distribution networks, they also compete in the export of labor-intensive manufacturing goods to third markets. This competition makes individual ASEAN countries resistant to allowing their currencies to appreciate unilaterally relative to the currencies of neighboring countries. In this context, it would be desirable for changes in Asian currencies to move in concert against external currencies while maintaining relative stability *vis-à-vis* each other.

It is therefore incumbent on Japan to see that the yen's depreciation does not set off a competitive devaluation and volatility in regional exchange rates. If the depreciation is within a reasonable range and as an exigency monetary measure to provide a jump-start to the Japanese economy to be followed by effective fiscal and structural changes in the Japanese economy, it is more likely that there would be no competitive exchange rate depreciation in the region.

### Enhancing Production Networks & Developing New Markets

As thus indicated by the most recent available evidence, the yen's depreciation has not adversely affected the exports of South Korea, Taiwan and ASEAN countries. The reason could be that the effects of the yen's depreciation have been offset by technological and non-price factors, as some South Korean exports of electronic and ICT

products have technological advantages over Japanese exports in the same categories. In addition, many analysts suspect that the Korean currency was undervalued against the yen before the introduction of Abenomics. The yen's depreciation does not have much negative impact on Taiwan's exports because of the fact that Japan and Taiwan have close production networks in electronics, machinery and transport equipment.

The impact on ASEAN countries is quite different compared to South Korea and Taiwan, as Japanese exports are not in direct competition with ASEAN countries' exports. In fact, Japan and ASEAN countries have complimentary economic structures. There are close production networks in electronics, machinery and ICT export products between Japan and ASEAN countries. As a result, the yen's depreciation is transmitted through intra-industry trade and intra-firm transactions that might offset exchange rate changes. It is clear from this discussion that the success of Abenomics in the long term is good for regional exchange rate stability and the sustainability and expansion of production networks.

In the long term, the success of monetary easing and fiscal expansion is very much dependent on the three pillars of the growth strategy, namely the unleashing of the potential of the private sector, maximum utilization of human resources and the development of new markets. The first and second pillars of this strategy are very much domestic-oriented policies and measures that the Japanese government must initiate, galvanize and sustain. However, the third pillar of development of new markets and opportunities is dependent on maximizing regional production networks and regional economic integration. The extent of success in this area will be dependent on the success of domestic-oriented measures, such as unleashing the private sector's dynamics and the creativity of Japanese firms with their proven record of research and development in scientific and industrial fields.

Japan's continued expansion in foreign investment in the region and in ASEAN countries constitutes an important policy to create new markets for Japanese companies. The extent of success of the ASEAN Economic Community (AEC) will be affected by the success of the Regional Comprehensive Economic Partnership (RCEP), which in turn would be facilitated by the ongoing negotiations for the China-Japan-Korea free trade agreement (FTA). It is an interrelated process as the extent of success of one FTA is dependent on other closely related FTAs.

In this respect, a vibrant Japanese economy and robust Japanese foreign investment and technology transfer to other Asian countries will be an important element in the overall success of Abenomics, as well as the economic prosperity and stability of Asia. There is so much scope for Japan's market expansion and economic dynamism through a fuller utilization of existing and emerging regional FTAs through better physical, institutional and market connectivity as

described in the Comprehensive Asia Development Plan and the ASEAN Master Plan for Connectivity. In the process of widening and deepening of regional markets through AEC, RCEP and the Trans-Pacific Partnership agreement, economic growth will simultaneously narrow development gaps and sustain Asia's economic dynamism.

It is useful to note that based on the latest report from the Japan External Trade Organization there is no indication that Japanese firms are reducing their foreign investment in the region, especially in ASEAN countries, following the yen's depreciation after monetary easing. It is also worth noting that Japan is known for its small and medium enterprises (SMEs) which constitute a vital production link as sub-contractors to large manufacturing industries. Japanese SMEs should be encouraged to invest and undertake joint ventures with ASEAN firms, especially SMEs. The role of SMEs in the AEC has been greatly focused on and encouraged as an important method of creating growth and narrowing development gaps.

Unleashing the private sector is not only critical to the growth strategy under Abenomics but is an equally vital policy measure to engender more effective regional economic integration through FTAs, economic cooperation and trade facilitation. Such policy measures and direction would bring more sustainable growth for Japan and Asia at large.

In short, the impact of the yen's depreciation would be focused and directed toward the greater good of Japan and Asia. Initially, Abenomics may engender fear and expectations that such monetary easing, fiscal expansion and growth strategy would have an adverse trade and investment impact on South Korea, Taiwan and even some ASEAN countries. A more elaborate and wider examination indicates that the reverse might be the case in the long run.

Strong growth in the Japanese economy after two decades of stagnation will have positive spillover effects in Asia. However, it is important for Japanese policy makers to pursue strong and consistent policies with respect to the implementation of the three arrows of Abenomics. The first and second arrow have largely achieved their primary objectives. The third arrow should be released as scheduled, coupled with long-needed regulatory reforms affecting agriculture, health care, education, foreign workers and energy. Any hesitation in implementing the growth strategy schedule, including the consumption tax increases in 2014 and 2015, would alter the outcome as market participants, investors and consumers would have to recalculate the risks of changing the trajectory of Japan's growth strategy.

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