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China–Japan–United States integration amid global rebalancing: A computable general equilibrium analysis

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ABSTRACT

Using a global general equilibrium trade model, this paper assesses the long-term implications of global rebalancing for Asian economies and explores the benefits of China–Japan–United States (US) integration. The analysis suggests that consumption evaporation, a growth slowdown in the US, and the consequent current account correction would force China, Japan, and other East Asian economies to undergo substantial structural adjustments. A combination of domestic reform aimed at boosting service sector productivity and external liberalization aimed at fostering broader economic integration will be critical for East Asian economies to facilitate their economic rebalancing and sustained growth. Our global computable general equilibrium (CGE) analysis suggests that China and Japan need to strengthen their economic ties with the US while at the same time bringing other East Asian economies into this integration process.

1. Introduction

China's rapid integration into the world economy has been a prominent feature of the global economic landscape over the past two decades. In 2008, the ratio of China's trade (the sum of merchandise exports and imports) to gross domestic product (GDP) reached 58.7%, nearly double the 32.6% level in 1990. Its share of world merchandise trade has also risen from a mere 1.6% to 8.0% over the same period. China is now the world's third-largest merchandise exporter after Germany and the United States (US). On the investment front, China is the largest foreign direct investment (FDI) recipient in the developing world. Its share of the world stock of inward FDI rose from 1.1% in 1990 to 2.2% in 2007.[1]

Despite efforts to diversify its export markets in recent years, China's trade is still heavily oriented toward affluent developed economy markets, with the US, EU, and Japan—the G3 economies—as its most important export markets. In 2008, the G3 markets accounted for 46.3% of China's total exports. The share of exports to the G2 markets—excluding Japan—was 38.2% in the same year, a significant increase from 18.7% recorded in 1990.

Underlying the increased dependence of China's exports on western markets is the changing pattern of regional production and trade in Asia. In recent two decades, rising vertical integration of production chains has been the key feature, driving the changes in trade in China and other Asian economies. Underpinned by low labor costs and massive FDI inflows,

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[1] See the United Nations Conference on Trade and Development (2008). China's share in the developing world's FDI stock grew from 3.9% to 7.7% over the same period.

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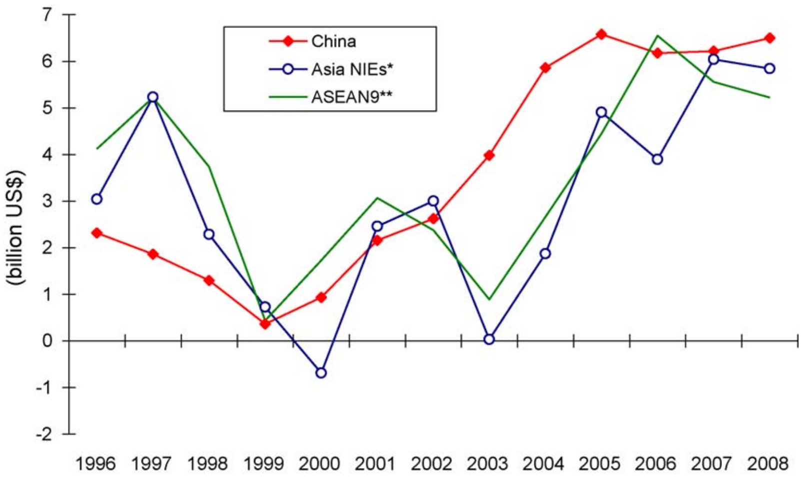

Fig. 1. Flow of Japanese outward FDI, 1996–2008. *Notes:* *Asia NIEs include Hong Kong, Korea, Singapore, and Taipei China. **ASEAN9 includes Indonesia, Thailand, the Philippines, Malaysia, Brunei, Viet Nam, Laos, Myanmar, and Cambodia. *Source:* Bank of Japan.

China has established a strong comparative advantage in the downstream stages of production processes of various products. As the final stages of production were relocated from neighboring Asian economies to China, the country's demand for intermediate parts and components from other parts of Asia has grown sharply while its exports of final goods to developed economies have also increased significantly. As a hub for regional production chains supported by trade and investment, China has played a unique role as an essential assembly center for many exports from Asia to the US and EU.

With economic growth stagnant for more than a decade in Japan, its role as a leading regional market for manufactured products has declined. During the period 1990–2008, the share of Japan in China's total exports declined from 14.7% to a mere 8.1%. However, as the largest and most advanced economy in Asia, Japan is still a very important trade partner for most East Asian economies, including China. Moreover, FDI from Japan has been essential for the economic development of East Asian economies. Actually, Japanese multinational corporation (MNC) FDI in developing/emerging Asian economies, stimulated by the appreciation of the yen following the 1985 Plaza Accord, has played a vital role in shaping Asian regional production networks, especially in electrical machinery, electronics, automotive, and other machinery sectors (Kawai & Urata, 2004). In the 1990s, four Association of Southeast Asian Nations (ASEAN) economies—Indonesia, Malaysia, Thailand, and the Philippines (ASEAN4)—were the key host countries for Japanese FDI in Asia. With the Asian financial crisis hitting Southeast Asian economies in 1997–1998 and China's World Trade Organization accession in 2001, China has emerged as the most favored destination of Japanese FDI among Asian countries (Fig. 1). Some Japanese MNCs shifted their operations from ASEAN4 to China to both tap the abundant supply of low-cost labor and to target the potentially huge domestic market.

The three giants—the US, Japan, and China—play critical roles in Asian regional production networks. The US serves primarily as the final destination of a large proportion of Asia's final output. Once the US demand for Chinese exports goes down—as it did amid the recent global financial crisis—many emerging and developing Asian economies are clearly affected, through shrinking Chinese demand for imports of parts and components from them. Japan plays the leading role of providing finance, technology, and marketing know-how for the operation of regional production networks and supply chains. The global strategy of Japanese MNCs is a key determinant of regional production, supply networks, and trade in Asia. China's strong competitive edge in downstream, labor-intensive stages of manufacturing production makes it a conduit for many exports from Asia to western countries. China's high penetration in the manufacturing markets of advanced countries, together with its fast-growing domestic market, has provided important export opportunities to its Asian neighbors.

The market-driven economic integration of China, Japan, and the US over the past two decades has reshaped the economic landscape of Asia and the world, and significantly contributed to the recent vast increase in economic prosperity in developing Asia. However, this has not come without costs. The heavy reliance on the final demand in the US makes China and other Asian economies extremely vulnerable to the turbulence in the US economy. Moreover, this triangular trade pattern between non-China Asia and the US through China has partly contributed to the global current account imbalances, under which the US runs unsustainably large trade deficits, and China, Japan, other East Asian economies as well as oil-producing countries run significant surpluses.[2] As the global imbalances are unsustainable and need to be corrected in order to settle down to a new, more sustainable level, an adjustment in the trade pattern among China, Japan, and the US is also inevitable.

With the eruption of the global financial crisis, originating from the US, a market-led, disorderly adjustment in global imbalances has already started. A sharp increase in US household savings has contributed to the significant improvement of the US current account deficit. However, this adjustment has been rapid and disorderly—despite the absence of a US dollar

[2] Although oil-producing countries have also run large surpluses reflecting high oil prices, this paper does not discuss these countries' adjustment issues.