

## **Decoupling and Sources of Structural Transformation of East Asian Economies: International Input-Output Decomposition Analysis**

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This study aims to answer two questions: 1) Have East Asian emerging economies decoupled? 2) What are the sources of structural transformation of East Asian economies related to the first question? We use so-called input-output decomposition analysis by which the sources of structural changes in total outputs and value added of East Asian emerging economies can be identified. The sources of the shifts in total outputs and value added of East Asian economies between 1990 and 2000, as well as between 2000 and 2006 can be ascribed to changes in technology in terms of input coefficients and value added coefficients, domestic final demand, and intra-regional and extra-regional final demand. The magnitude of each factor of the sources is quantified by means of input-output decomposition analysis. We make use of Asian International Input-Output Tables for 1990 and 2000 compiled by the Institute of Developing Economies Japan External Trade Organization (IDE-JETRO) and Asian International Input-Output Table for 2006 updated by Pula and Peltonen (2009).

The main findings of the study are as follows. First, the changes in the impact of the final demand components on total output and value-added of emerging Asia show that since 1990, there is a trend of increasing dependence on exports, indicating no sign of “decoupling”, but rather an increasing integration of emerging Asian countries into global trade. In other words, the exposure of emerging Asia to extra-regional markets has increased. Second, even though this study does not support the decoupling of emerging Asia, there is a contrasting feature in the sources of structural changes in gross output and value-added between non-China emerging Asia and China. Dependence of non-China emerging Asia on intra-regional trade has increased, in line with the strengthening of economic integration in East Asia, but China has disintegrated from the region. Third, there have been differing trends in changes in the sources of extra-regional demand during 1990-2006. The contribution ratio of EU demand to changes in total output and value-added of emerging Asia increased between 1990-2000 and 2000-2006, while the shares of Japan and the United States declined. As a result, the dependence of emerging Asia’s output and value-added on the G3 economies decreased. However, the higher exposure of emerging Asia to extra-regional markets during 2000-2006 than 1990-2000 was due to stronger trade linkages with the rest of the world, with their higher share in emerging Asia’s total output and value-added.

**Keywords:** East Asian emerging economies, decoupling, Asian International Input-Output table, input-output decomposition analysis, factors of economic growth

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