Impact of Exchange Rate Shocks on Japanese Exports:
Quantitative assessment using a structural VAR model

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In the policy debate over the Japanese macroeconomic performance, the impact of exchange rate fluctuations on Japan's exports has received considerable attention. However, if we take the period from the end of 2008 following the collapse of Lehman Brothers as an example, the "price shock" of the yen's rapid appreciation and the "quantity shock" because of the rapid decline in global aggregate demand were equally responsible for the significant reduction in exports. We analyze this problem using a structural vector autoregression (VAR) model, assuming that there are two exogenous shocks, namely, a foreign demand shock and an exchange rate-specific shock. We evaluate the relative importance of each shock to Japanese aggregate exports. We further expand our VAR system to incorporate and analyze the impact of fluctuations in oil prices as additional exogenous shocks. In the second half of the paper, the relative importance of foreign demand shocks and exchange rate shocks during historic episodes of large exchange rate fluctuations are compared, including the mid-1980s with the high-yen recession after the Plaza Accord, the sharp yen appreciation in the mid-1990s, and the period of the "trade collapse" after the Lehman Brothers bankruptcy in the late 2000s.

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