

Exchange Rate Pass-Through in Production Chains: Application of Input-Output Analysis

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Abstract

This study proposes a new empirical approach to the exchange rate pass-through (ERPT) in Japanese imports using an Input-Output (IO) analysis. We analyze how exchange rate changes are transmitted from import prices to domestic producer prices through numerous stages of production by employing the Japanese IO tables of 2000, 2005, and 2011. Specifically, calculating input coefficients among 108 industries at numerous production stages, we demonstrate that, contrary to the stylized fact, the extent of ERPT to domestic producer prices should be significantly higher than empirical results of the conventional ERPT analysis. Conducting a panel estimation of ERPT determinants, we show that a large dependence on intermediate input imports tends to increase the extent of ERPT. More importantly, we reveal that if manufacturing sectors tend not only to import intermediate inputs from abroad but also to export their products to foreign countries, the degree of import pass-through to producer prices increases significantly. Thus, growing international production sharing will have a positive impact on ERPT to domestic producer prices.

Keywords: exchange rate pass-through, Input-Output table, production chain, Japanese imports, producer prices, invoice currency, international production network

JEL classification: E31, F31, F41

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