

The bias in accounting for national income changes when pervasive processing trade is present

Topic: Analysis of factor inputs

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Abstract: The constraints and drawbacks of using ordinary input-output (IO) analysis to account for various changes have long been recognized. However, three problems have implicitly been overlooked in applying so-called structural decomposition analysis (SDA). Specifically, we refine the methodology (i) by taking substitution between primary input and intermediate input into account; (ii) by considering substitution within intermediate inputs; and (iii) by considering substitution between domestic and imported inputs within each element. The methodology is adopted to a case study of China's national income change using extended IO tables that explicitly distinguish processing trade from ordinary production for exports. The contribution of export growth to value added generation is found to be roughly one-third smaller compared with results obtained via using ordinary IO tables. At the industry level the difference is even more striking; for "high-tech" industries that mainly produce instrument related goods the bias in measuring the export contribution to value added growth is as high as four-fifth. These results may also be relevant to other developing countries with considerable processing trade.