

Structural Changes in the Global Value Chain:
Analysis of Length and Position in East Asia

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Abstract

This study uses several global input-output tables to analyze changes in the global value chains (GVCs) from the 1990s to the 2020s, with a focus on East Asia. The main feature of the study is that we combine upstreamness and downstreamness, which express GVCs quantitatively, to calculate two indicators "length of GVC" and "position on GVC" for analysis. Our findings are as follows: First, the values of these indicators are consistent with our intuitive perceptions of the position of each country and industry in GVCs. Second, these indicators capture structural changes in GVCs. The length of GVCs in the world has increased in the 2000s and slowed down in the 2010s, which is consistent with the expansion of global trade in the 2000s and stagnation in the 2010s, known as slow trade. Third, these figures can also be used to analyze current specific issues in the 2020s, such as the impact of the US-China trade friction, COVID-19 and rising commodity price. Finally, the position on GVCs could be used in analyzing the competitiveness of industries in combination with the value-added ratio.

¹ SOMPO Institute Plus (currently the Bank of Japan). This paper represents the view of the author at the time the research was conducted at SOMPO Institute Plus, and do not necessarily reflect the views of the Bank of Japan.