

Fragmentation in Europe and East Asia:
Evidences from International Trade and FDI Data*

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Abstract

This paper analyzes the nature and characteristics of cross-border production sharing developed in the WE (Western Europe) -CEE (Central and Eastern Europe) nexus, applying the conceptual framework of two-dimensional fragmentation. Our empirical analysis using finely disaggregated international trade data and micro data of Japanese affiliates abroad confirm that a rapid development of fragmentation has occurred in the WE-CEE nexus since the 1990s, with active back-and-forth transactions of parts and components. At the same time, we find several important differences in the structure of international production and distribution networks in the WE-CEE nexus in comparison with East Asia. First, connection among CEE countries is weak and the WE market is predominantly the main destination for sales by CEE operations, while vertical production networking in East Asia involves many countries in the region and destinations for sales of East Asian products are more diversified. Proximity to the market seems to be crucial in selling products to the WE market, probably due to subtle adjustments to European tastes as well as international commercial policies. Second, upstream links with East Asia, particularly in machinery industries, are more important for CEE operations. Production networks seem not to be completed within the region; rather, imports of key parts and components as well as finished machinery products seem to be important in CEE. Third, agglomeration that would facilitate arm's length fragmentation is not sufficiently developed in CEE, and thus production networks in the WE-CEE nexus still depend on intra-firm transactions, while sophisticated combinations of intra-firm and arm's-length transactions are observed in East Asia. In CEE, production plants of multinational enterprises (MNEs) remain remotely located from each other, partially due to a low population density and decentralization policies. Moreover, local firms have not yet successfully penetrated into international production networks, partially due to a lack of agglomeration. These result in low local procurement ratios and inactive transactions among CEE countries. Given the differences discussed above, we address the importance for CEE to make some efforts to form agglomeration in order to stabilize their industrial structure. Decentralization policies on industrial sites may need to be critically reviewed, and tighter connection with manufacturing MNEs must be established.

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