

Distance-Based Measures of Globalization in a World with Fragmented Production

Topic: Special WIOD-session 5: Geographical Issues in International Trade

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Despite the widespread impression that improvements in communication technology and reductions in transportation costs should have led to more trade between distant countries, the empirical literature did not find anything that shows a tendency towards “the death of distance”. In this paper, we will investigate whether this is due to the implicit assumption in these studies that international trade relates to final goods only. We propose a simple but versatile method to estimate the expected distance a product will travel before it will end up somewhere as a consumption or investment good, after having gone through internationally fragmented production chains. The method is empirically applied using a time series of “World Input-Output Tables”, constructed by the World Input-Output Database (WIOD) consortium for the period 1995-2009. Our indicator shows that distances travelled by products have generally increased significantly.

A central element of our method is a distance matrix. We show that straightforward manipulations of this distance matrix allow for the computation of indicators of phenomena that play an important role in current debates regarding trade and relates issues: the extent to which outsourcing has grown, the extent to which our distance indicators change due to the emergence of China, the extent to which international trade is characterized by regionalization rather than globalization, etc. These questions can be addressed at the level of 35 industry outputs for each of 40 countries (the EU27 plus 13 major economies outside Europe).