Determinants of Trade in Value-added: Market Size, Geography and Technological gaps

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Abstract:

Using productivity database under KLEMS projects and Trade in Value Added (TiVA) derived from the latest version of OECD's Inter-Country Input-Output (ICIO), this paper examines the differences in participation in global value chains (GVCs) of selected economies in each region focusing on three factors that may determine the share of domestic value added in exports and foreign final demand: (1) home market effect; (2) geographical location; and (3) technological gaps of economies through organisation of multinationals. We also present the methodology which consists of analysing possible determinants that separate "headquarter economies" and "factory economies, after controlling for market size and proximity, based on typical New Geographical Economy (NGE) models. Identifying such determinants requires the combination of a "knowledge capital model", often used to explain organisation of multinationals, together with certain gravity equations.

As Baldwin and Taglioni (2011) and Miroudot, Lanz and Ragoussis (2009) point out, the standard gravity equation do not explain bilateral flows of "gross" trade under global value chains vary well. On the other hand, gravity equations using TiVA data show good performances to predict bilateral flow in terms of "value added trade". Value added trade flow reflects bilateral technological gap in terms of TFP level better than "gross" trade flow, though bilateral differences in factor endowment does not explain trade patterns similarly to previous studies based on Heckscher-Ohlin model.