

Measuring Industrial Upgrading in Global Value Chains: A Latent Variables Approach

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A key question for promoting international competition is how to improve the position of nations and industries in global value chains (GVCs). The first step is to properly measure industrial upgrading in GVCs. This is not a trivial issue because upgrading has not been defined unambiguously. Several authors have used different (and sometimes related) measures, all of which are indicative of (certain aspects of) upgrading. Rather than trying to find the single, ultimate definition and measurement of upgrading, this paper proposes a different type of framework. We examine the multidimensionality of industrial upgrading, using nine existing indicators for upgrading in an Exploratory Factor Analysis. The indicators all adopt the GVC perspective and include, for example, the growth in market share of value added exports and the growth in high skilled workers involved in GVCs. We find that industrial upgrading has three dimensions: productivity upgrading, chain upgrading, and skill intensity upgrading. Finally, with these dimensions, we compare and analyze the upgrading of different countries and industries using WIOD tables.