Measuring Smile Curves in Global Value Chains

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The concept and logic of the â€œsmile curveâ€• in the context of global value chains has been widely used and discussed at the individual firm level, but rarely identified and investigated at the country and industry levels by using real data. This paper proposes an idea, based on an inter-country input-output model, to consistently measure both the strength and length of linkages between producers and consumers along global value chains. This idea allows for better mapping of smile curves for countries and industries according to their positions and degrees of participation in a given conceptual value chain. Using the 1995-2011 World Input-Output Tables, several conceptual value chains are investigated, including exports of electrical products from China and Mexico and exports of automobiles from Japan and Germany. The identified smile curves provide a very intuitive and visual image, which can significantly improve our understanding of the roles played by different countries and industries in global value chains. Further, the smile curves help identify the benefits gained by these countries and industries through their participation in global trade.