

Figuring out the Chinese high-tech export dynamics: What is the impact on the global trade frame?

Michele Alessandrini

"LUISS "University of Rome and T33 Ancona

Tullio Buccellato,

University of Rome Tor Vergata, Fondazione Masi, Rome (Italian Institute for Foreign Trade)

Abstract

This paper examines the evolution of Chinese trade patterns over the period 1991-2010; the focus is on the shift of Chinese specialization towards more technology-intensive products and its impact on the global economy. We consider a pool of eight countries, two emerging (Brazil and India) and six industrialized economies (France, Germany, Italy, Japan, United Kingdom, USA), to have a direct assessment of the structural change induced by Chinese export mix on countries with different specializations and comparative advantages. We start looking at the specialization pattern of China making use of the Lafay index, particularly suitable for this kind of analysis since it controls for intra-industry trade. The Lafay index is also computed net of processing and assembling trade for which we make use of Chinese revenues and customs data in combination with the UN Comtrade database. The analysis also measures to what extent China has been increasing exports in sectors considered more dynamic in terms of technological content and world demand. We then compare the degree of similarity between Chinese specialization structure and those of the eight countries above by making use of the Finger-Kreinin index in order to have a better idea of what countries might have been more exposed to Chinese competition. Finally, we directly quantify the gains/losses of sector market shares realized by China with respect to the countries considered. Our results confirm that China is shifting towards more technology-intensive productions while still increasing market shares in more traditional labour-intensive sectors. Furthermore, our results go in favour of the hypothesis that the shift of Chinese export towards more technology-intensive productions is not just depending on a measurement bias due to processing and assembling goods. Overall this brings a situation in which China is experiencing remarkable gains with respect to more industrialized countries (especially Italy, UK and Japan) while still competing with emerging economies (e.g. Brazil).