Accounting for technology, trade and final consumption in employment: an Input-Output decomposition

Topic: 711X Employment Analysis (1)
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What are the driving forces of changes in employment in France over the last thirty years and how can we explain skill-bias changes in employment?

Based on an Input-Output analysis we provide a decomposition of changes in employment between the effect of final consumption, technology and trade. Our goal is to assess these effects on employment by skill level (expressed in terms of headcounts). We measure skill level based on the occupational classification data available in the French Labour Force Survey.

Few papers in the literature take into account the effects of these three channels altogether. However a part of this literature does so using Input-Output analysis. Our analysis builds on textbook methodologies of structural decomposition, but innovative data: Input-Output tables both in current and previous year prices, from 1980 to 2010 based on the new ESA 2010 concepts. The Input-Output approach we develop is nevertheless limited as it cannot reveal long term underlying links between technology, trade and final consumption. This approach captures what we may call first round, short term or partial equilibrium effects. It is however informative as it provides a comprehensive evaluation of these first round effects altogether.

Unlike previous works on the US, the UK and some European countries, we find no evidence of labour market polarization. However on a short-term basis, we find skill-bias effects of technology on employment, whereas trade and final consumption have limited skill-bias. The development of high-technology manufacturing and R&D over the last thirty years contribute the most to this skill-biased technological changes. Quite strikingly trade's overall effect on employment is positive for every level of skill.