

## **Decomposition of Supply, Demand, Trade and Value Chain Driven Determinants of Structural Change**

Topic: Structural Decomposition Analysis (Chair: Jose M. Rueda-Cantuche, European Commission)

Author: Klemen Knez

We address the question of long-term structural changes in intersectoral employment. The two main research questions are: What are the country specific supply-driven, demand-driven, trade-driven and value-chain-driven determinants of long-term employment changes (1.) from manufacturing to services and (2.) from agriculture to the rest of the economy. We conduct a comprehensive multiregional input-output analysis using structural decomposition. We decompose annual employment changes in each country-sector into real changes in the labour productivity, real changes in the structure of supplier linkages, fabrication effects, and real changes in final demand. To solve the problem of the dependence between the value-added coefficients and the Leontief inverse, we use the solution proposed by Dietzenbacher and Los (2000) and generalise it to the multiregional level. This leads to the following decomposition: real changes in the structure of domestic supplier linkages, real changes in the structure of domestic import supplier linkages, real changes in the domestic intermediate import propensity, and real changes in the structure of all foreign supplier linkages. We also undertake a separate decomposition of domestic and foreign fabrication effects and a detailed decomposition of domestic and foreign final demand effects. Using WIOD, WIOD in previous year prices, and SEA, we undertake a separate structural decomposition of employment changes for each of the 43 available countries. We construct two indices of structural change by summing the changes in employment from manufacturing to services and from agriculture to the rest of the economy over the entire period to identify a unique set of determinants of structural change for each country as well as for the world. The main novelty of the study is the systematic consideration of separate domestic and foreign real changes in supplier linkages and fabrication changes on the dynamics of structural change, which sheds new light on the country-specific determinants of structural change.