

Capabilities, GVCs and productive complexity:

Comparing frameworks to explore the green transition and supply chain vulnerability

When

April 23, 2024

Where

Enrico Fermi Research Center (CREF), Rome.

Description

The workshop aims at exploring the structural transformations and the accumulation/dispersion of capabilities within productive systems in this era of green transition and heightened supply chain vulnerability. The presentations will draw on standard input-output techniques for the analysis of global value chains, showcasing techniques and data. The morning's talks will also cover frontier data, techniques and open methodological questions, exploring: (i) the potential use of firm-level and trade data to link input-output tables to product-level information; (ii) the application of the Economic Fitness and Complexity approach to identify local and non-local capabilities; (iii) recent developments on supply chain reconstruction techniques; (iv) the role of geographical aggregation, from sub-national to national analysis.

The afternoon will be dedicated to exploring applied research questions to gain a deeper understanding of the multifaceted nature of the sustainability transition, wherein geographical, structural and institutional elements interact, and its potential impact on value chain reorganisation that the global economy is facing. In particular, the workshop will tackle different dimensions of supply chain vulnerability the European Commission's open strategic autonomy framework, the role of critical raw materials as well as hydrogen production, industrial pollution abatement and decarbonization strategies in shaping a pathway towards a more equitable sustainable transition.

We encourage the speakers to present their research agenda on these topics, emphasising crucial methods and data, main results and, especially, the way forward. The presentations will last about 15 minutes, and each Session will end with 20 minutes Q&A. At the end of the day, a wrap-up session will be devoted at sharing feedbacks and research proposals for possible common research avenues.

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| 10.00 - 10.30 | <p>Luciano Pietronero (CREF) and Angelica Sbardella (CREF)</p> <p><i>Welcome and introduction</i></p> |
| <p>Session 1 - GVC analysis: data, methods and microfoundation Chair: Aurelio Patelli (CREF)</p> | |
| 10.30 - 12.00 | <p>Renato Paniccà (IRPET)</p> <p><i>Estimating a multiregional SUT through a mixed bottom-up/top-down approach: scopes, methodological issues and results</i></p> |
| | <p>Juergen Amann (OECD)</p> <p><i>Assessing Global Value Chain integration in regions: novel approaches and key insights</i></p> |
| | <p>Ilaria Fusacchia (Università degli Studi della Basilicata)</p> <p><i>Microfoundation of ICIO tables through firm-level data: enhancing GVC participation and positioning indicators</i></p> |
| | <p>Lorenzo Cresti (CREF)</p> <p><i>Investigating automotive in Europe: input-output analysis and economic fitness and complexity</i></p> |
| 12.00 - 12.30 | <p>Giovanni Dosi (Scuola Superiore Sant'Anna)</p> <p><i>Capabilities, productive complexity and GVC: some questions from micro to macro</i></p> |
| <p><i>Lunch break</i></p> | |
| <p>Session 2 - GVCs specialization, dependency and capabilities Chair: Andrea Zaccaria (ISC-CREF)</p> | |
| 14.00 - 15.30 | <p>Tommaso Ferraresi (IRPET)</p> <p><i>Combining international trade data and input-output analysis to evaluate product criticality in a value chain perspective</i></p> |

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| | <p>Valentina Meliciani (LUISS)</p> <p><i>International interdependencies and the restructuring of European value chains</i></p> |
| | <p>Federico Riccio (Scuola Superiore Sant'Anna)</p> <p><i>Decarbonisation and Specialisation Upgrading: the double face of GVC Integration</i></p> |
| | <p>Dario Diodato (Joint Research Centre of the European Commission)</p> <p><i>European Open Strategic Autonomy and Economic Complexity</i></p> |
| <p>Coffee break</p> | |
| <p>Session 3 - Ecological transition and supply chain vulnerability Chair: Leonardo Ghezzi (IRPET)</p> | |
| <p>16.00 - 17.30</p> | <p>Carlo Pietrobelli (Università degli Studi Roma Tre)</p> <p><i>Critical minerals, downstream manufacturing and economic complexity</i></p> |
| | <p>Dario Guarascio (Sapienza Università di Roma)</p> <p><i>A sector-specific approach to assess technological hierarchies and supply chain vulnerabilities: the case of the PV industry (and some steps forward)</i></p> |
| | <p>Beatrice Negro (Scuola Superiore Sant'Anna)</p> <p><i>Hydrogen as a new paradigm? Technologies, diffusion and bottlenecks</i></p> |
| | <p>Francesco de Cunzio (CREF) and Andrea Tacchella (CREF)</p> <p><i>Green innovation, critical raw materials and industrial pollution abatement</i></p> |
| <p>17.30 - 18.00</p> | <p>Wrap-up</p> |

| | Participants | Affiliation | Email address |
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Instructions to reach the venue:

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Upon completing the security check, proceed through the main building of the Ministry until you reach a courtyard. The CREF building will be located on your left-hand side.

For visual guidance, please refer to the accompanying graphical instructions. If you encounter any difficulties in locating the venue or accessing the Ministry, feel free to contact us for assistance.

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