Theme 2: Industry 4.0, value chains and logistics

The effects of Industry 4.0 on employment and jobs will also be affected by international trade and the possible restructuring of global value chains. A significant decline in production costs concentrated in the economies of developed countries could lead to reverse FDI and reshoring of manufacturing jobs resulting in some increase in demand for lower skilled workers in the developed countries. As the discussion on reindustrialisation points out, this might counterbalance to some degree manufacturing job loss in developed countries due to automation.

The deployment of Industry 4.0 implies increased interconnectivity, with machines and computer systems connected in the form of an intelligent network capable of greater adaptability of production all along the value chain. This interconnectivity will increase the capacity of firms to smoothly integrate production and delivery across different geographically dispersed stages of the value chain and will increase the scope for satisfying consumer needs in a rapid and flexible manner. Lean management and consumption are central to this process with an increased scope for identifying problems in production or delivery and rectifying them in real time.

In terms of competences, the increased scope for machine learning based on the use of big data and collaborative interfaces between humans and robots to replace or transform jobs at the intermediate or higher levels has led some observers to conclude that the impact of Industry 4.0 will be fundamentally different from previous waves of mechanisation and automation. The range of options which firms have at their disposal to improve their performance has increased, including increased agility (the possibility to easily shift from the production of smaller to larger production series), greater connectivity (through the enhanced use of digitisation to manage and control interconnected phase in production and supply), and improved collaboration (through better use of logistics). Industry 4.0 thus promises to impact

all enterprise functions (supply – production - maintenance - distribution - marketing – after sales service).

This theme raises the following set of questions:

1. What will be the impact of Industry 4.0 on the logistics industry?

2. How will the restructuring of global value chains impact on the geographical location of employment and production?

3. What will be the effects of Industry 4.0 on the functioning of supply chain management due to the use of AI, big data and collaborative robotics?

Proposed speakers

1) Bernhard Dachs (AIT Austrian Institute of Technology, Vienna), "Industry 4.0, Global Value Chains, and the Backshoring of Production Activities to Western Europe".

2) Stella Gatziu Grivas (Dozentin, Institut für Wirtschaftsinformatik, Suisse), "Digitalisation in Logistics and the Role of Cloud Computing".

3) Alban Quillaud (Kuhne & Nagel Integrated Logistics, Suisse), "Logistics Service Providers and Digitalisation".

4) Vincent Frigant (Université de Bordeaux, Gretha), "Global Value Chain and Global Production Networks".

5) Lapo Mola, Skema Business School, Sophia (Member of UCA), 'Digitisation of Supply Chain Mangement'