

**The resurgence of industrial policies Strengthening national industries and improving the quality and quantity of employment**  
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In open economies, the relevance of networks is increased. On the one hand, the opening up process and the consequential changes in specialization patterns and production structures lead domestic enterprises to participate increasingly in international production chains and to increase their degree of outward orientation. On the other hand, networks boundaries go beyond domestic borders and enterprises, institutions and legal frameworks (i.e. the industrial structures and the national innovation systems, facing global incentives and pressures in the development of local organization and production processes).

However, access to networks does not automatically guarantee the possibility of benefiting from the specialization patterns and potential technological spillovers. Positioning in international value chains and in international network hierarchies determines economic agents' capacity of retaining technology and the quality of employment. Actually positioning in international networks affects knowledge accessibility and appropriation capabilities of economic actors and, hence, deeply influences the innovative capacity of domestic enterprises and institutions. A dominant position in production networks guarantees the control of knowledge de-codification mechanisms. Hence, in this setting, innovation dynamics and access to codified and non-codified knowledge strictly depends on the positioning in international network hierarchies and on the stage of production process mastered by domestic agents in global production arrangements.

In abstract terms, knowledge in open economies is less identifiable with a public good that is freely accessible and usable, once it is slotted in the economic system. On the contrary, increased relevance of networks and changes in production organization lead knowledge to be more and more similar to a club good (i.e. a non-conflicting asset in consumption, but excludable in use). Hence, in this setting more suitable and pragmatic industrial and technology policies would overcome pure supply or demand perspectives and should promote coordination and articulation between the two, fostering the design and the implementation of a coordinated set of horizontal, vertical, selective and competition policies, having domestic repositioning in global networks as a major concern.

Horizontal policies deal with market failures and sort out information asymmetries; they foster human capital formation and facilitate widespread diffusion and assimilation of foreign generated knowledge domestically, thus creating the basic conditions for technological development. Vertical and selective policies encourage cooperation and articulation among universities, research centres and enterprises and are able to prioritize production activities, thus fostering technological accumulation and innovation through the creation of dynamic market failures. Competition policies promote the upgrading of domestic agents in international hierarchies and thus foster regional control over knowledge de-codification mechanisms and increase potential benefits of networking, in terms of knowledge and technology.