

Overview of the potential implications of Brexit for EU27 Industry and Space Policy

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EU Industrial Policy: setting the scene

Uncertainty around Brexit on the shape of the UK-EU27 (trade) relationships post-Brexit and the UK's future industrial or space strategy, which, depending on the direction it takes, will impact the EU27 industrial and space policy response

At this stage, we can only flag general principles for the EU27 industrial and space policy response

An assessment of what kind of EU industrial policy POST BREXIT is needed requires an understanding of the changing role of sectors and firms for Europe's growth

- Changing environment
- Needed policies for manufacturing/servicing Europe's growth
- Impact of Brexit for industrial policy making

Challenges & Changing environment

- **Globalisation** emerging countries as markets and sources of production (esp. China)
- **Rapid technology change** (esp. digital technologies)
- **Blurring of sector boundaries** servitisation of manufacturing
- **Blurring of firm boundaries** Global value chains
- **Shortage of supply** (national resources, specific skills)
- **Exposure to a more uncertain environment**
 - Global exposure
 - Costs/volatility of input prices;
 - Which depends on type of sector: low skilled, high skilled, energy costs
 - Government/political intervention:
 - Protectionism/trade wars/Brexit
 - Regulation

Challenges & Changing environment: GVCs and Innovative capacity

Economic activities in the EU have become more integrated within Global Value Chains

- Firms and countries increasingly specialise in specific stages and tasks within the GVC
- Value creation is increasingly joint across firms, sectors and countries
- For EU firms this participation in GVCs has a **strong EU orientation**: European Value Chains (EVCs)

Participation in Global Value Chains (GVCs) allows firms and countries to build sustainable competitive positions, even more so if accompanied with innovative capacity

Firms and Sectors contribution to EU economies is through productivity growth

- A shift towards high value added activities
- A greater importance of innovative capacity,
- Requiring a high quality human capital base with a well educated/trained workforce.

This shift towards more skill-, value- and innovation-intensive activities holds across all sectors

Impact of GVC/EVCs for Policy

Understanding the interconnectedness and reshaping thinking on policy

- **For countries to benefit from GVCs**, it is key that cross border flows of capital, labour, human capital and knowledge within GVCs become effectively linked to local productive capabilities in certain tasks.
- **The policy agenda is thus not only about ‘border’ (trade) policies;** instead a holistic policy framework is required where effective ‘behind-the-border’ policies leverage the participation in GVCs into competitiveness and growth

Openness is a necessary condition for countries to integrate in international production networks, but “behind-the-border” (economic) policies largely determine which position countries occupy in GVCs: which value they are able to create and capture.

GVC/EVC and Trade Policy

- In view of the **magnification effect of tariffs and non-tariff barriers** along the value chain: Open markets and elimination of T & NTB.
- As barriers between third countries upward or downward in the value chain matter as much as the barriers put in place by direct trade partners, **trade liberalisation should be even more than before pursued multilaterally.**
- **More uniform product standards** will ease the participation in GVCs for components suppliers.
- **Global production networks rely on the logistics chain**, which requires efficient network infrastructures and competitive complementary services.
 - Special attention to removal of barriers in sectors such as transport, (telecommunications, finance and business services.

GVC/EVC and Industrial Policy

- GVCs allow for more efficient value creation, also EVCs

But

- Which firms/countries within the value chain **CAPTURE** the value created in GVCs/EVCs?

Answer: conditional on well functioning product, financial, labour, technology markets & tax systems: **holders of UNIQUE skills, knowledge and complementary assets**

- Firms with unique innovative capabilities capture value through GVCs/EVCs

The policy target should be making Europe an attractive place for productive firms with unique innovative capabilities in efficient Value Chains

The EU policy agenda post-Brexit

Policy should be about enabling firms to join GVCs/EVCs

Policy should be to enable firms to capture value in these GVCs/EVCs)

The target should be making Europe an attractive place for productive firms with unique innovative capabilities in efficient EVCs

1. Provide the framework conditions to support firms' EVC innovation-based growth path
2. As these firms can be found in all sectors and activities, policies should be horizontal.

Open Trade Policy with extra-EU (UK et al) and Industrial Policy (Innovation, Entrepreneurship Policy) intra EU

This is a shared policy agenda: EU together with national/regional specific policy agenda

The EU policy agenda post-Brexit

- **Trade policy with extra-EU in a GVC environment should be about removing barriers multilaterally**
- **Industrial Policy Intra-EU**
 - **Access to large, open and interconnected product markets**
 - **Access to efficient supporting-services**
 - Furthering the single market for supporting services
 - Interconnecting infrastructure for transport, telecommunications
 - **Access to specific skills and innovative capacity**
 - Furthering the European Research and Innovation Area, eliminating barriers to the cross-border and cross-sector transfer of skills, knowledge and ideas.
 - **Access to finance for small and new firms that want to develop on world markets their ideas for new innovative products.**
 - Addressing the fragility and the fragmentation of the financial sector in Europe, especially the risk-capital segments

EU Industrial Policy post-Brexit

- A horizontal policy agenda

Nevertheless needed:

- **Monitoring of pivotal sectors for innovation-based growth for EU**
 - Digital
 - Biopharma
 - Transport
 - AeroSpace
- **Market monitoring to assess**
 - Lower returns from investing in innovation capacity
 - Barriers to access resources for innovative capacity (skills, finance, science)
 - Effectiveness of policy instruments to address barriers

Background material

Additional information, for publication alongside the proceedings

European Value Chains

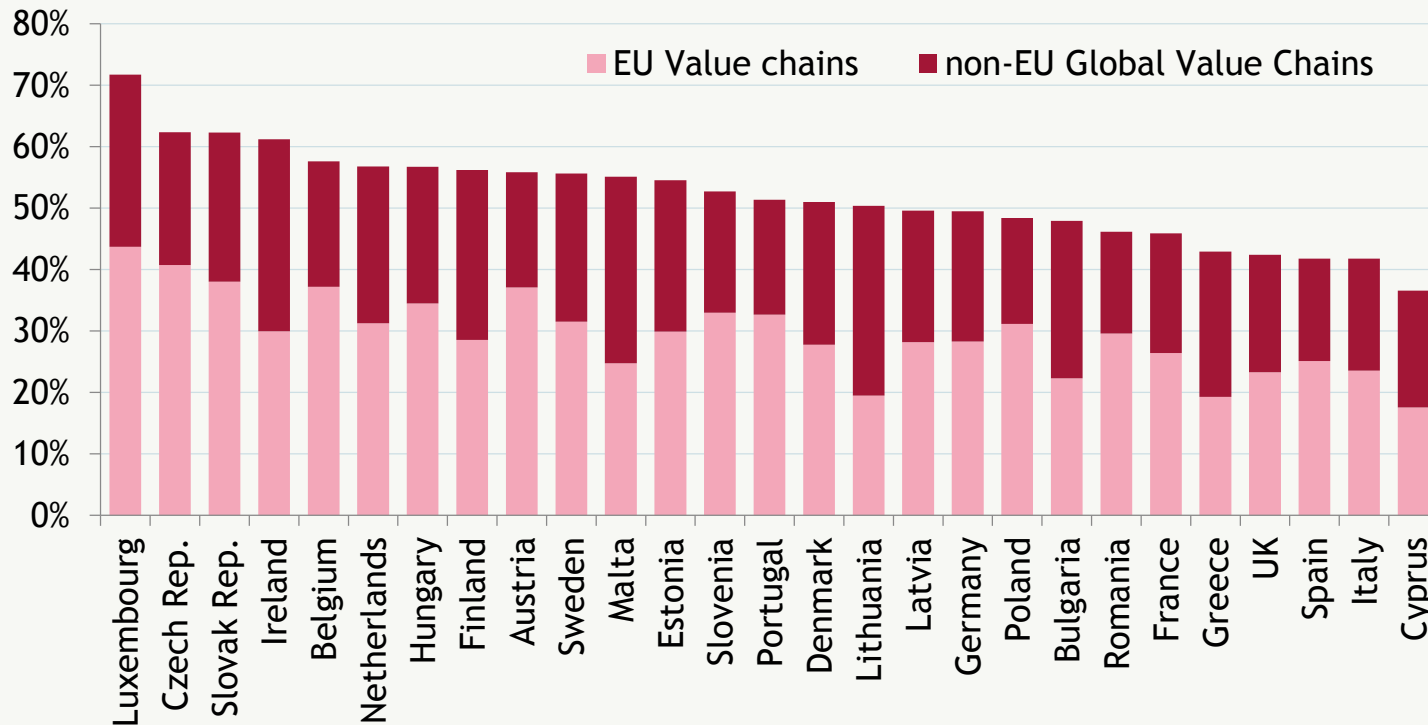
Manufacturing production in the EU became more integrated within “European value chains”

- **A few large firms are intensively involved in GVCs**, but these large firms matter for Europe’s overall knowledge based growth and competitiveness performance
- Also smaller firms that take **intermediate positions in global value chain** have higher productivity premia, particularly when they can exploit unique innovative capacities
- European firms participation in GVCs is **strongly EU oriented**:
 - These European Value Chains (EVC) have resulted in a deeper integration of EU manufacturing
 - Firms involved in EVC are not disadvantaged relative to firms that develop more global value chains.

Participation in Global and European value chains

In 2009, (on average) **53%** of EU countries' exports were involved in Global value chains

...of which (on average) **56%** in European value chains.



Source: Bruegel Manufacturing Blueprint (2013)
 Participation in GVC is measured as the share of foreign inputs embedded in a country's exports (backward participation) plus the share of domestic inputs of that country embedded in other countries' exports (forward participation).

CHALLENGES for Europe's innovation capacity

There are many highly innovative European companies,
but on average

- Europe has consistently failed to exploit its potential for innovation-based growth,...
- ...despite a series of innovation policy strategies and targets.

EU's Innovation Capacity Problems are structural and longstanding

- **Europe's failing capacity for creative destruction:** missing specialization in new innovation based growth sectors and firms
 - Innovation Based Growth Sectors: *aerospace, biotech, computer hardware&services, health care equipment & services, internet, pharmaceuticals, semiconductors, software, telecom equipment*
 - Yollies: companies born since 1975 who have made it into the R&D scoreboard of world leading innovators
- **Europe's fragmented science, research and innovation area:** missing "European Innovation Value Chains".
 - transfer of new science and research insights into commercial ideas that can command world-leading positions
 - link regional and national innovation systems within a more integrated European innovation system

CHALLENGES for Europe's innovation capacity

Europe's corporate R&D fails to specialize in innovation based growth sectors

Europe's corporate R&D misses "Yollies" in innovation based growth sectors

RTA Indices

Specialisation in "Dynamic" Sectors

	EUR	US
<i>Aerospace & defence</i>	1,5	1,13
<i>Biotechnology</i>	0,32	2,2
<i>Computer hardware & Computer services</i>	0,08	1,39
<i>Health care equipment & services</i>	0,7	1,86
<i>Internet</i>	0	2,54
<i>Pharmaceuticals</i>	1,27	1,16
<i>Semiconductors</i>	0,5	1,72
<i>Software</i>	0,51	2,05
<i>Telecommunications equipment</i>	1,38	1,09
All IBG sectors	0.89	1.43

Specialisation in "Classic" Sectors

Industrial machinery	1,84	0,24
Industrial metals	1	0,3
Electrical components & equipment	1,56	0,18
Fixed & Mobile telecommunications	1,53	0,2
Chemicals	1,31	0,64
Automobiles & parts	1,26	0,58

	EU	US
Share of Yollies in number of region's leading innovators	23%	51%
R&D intensity of Yollies	4%	10%
Ollies	3%	4%
Share of the region's Yollies in Innovation Based Growth Sectors	62%	84%
R&D intensity of Yollies in Innovation Based Growth Sectors	13.9%	12.6%

Source: Veugelers, R. and M. Cincera, 2010, Europe's Missing Yollies, Bruegel Policy Brief 2010/06, Bruegel Brussels

Why is Europe missing Innovation Based Growth Capacity ?

- **Lower returns from investing in innovation capacity**
- **Higher barriers to access resources for innovation**
- **A systemic problem**
 - Segmented product markets
 - Risk-taking financial markets
 - Higher (Re-)entry & exit costs
 - Inflexible labour markets
 - IPR effectiveness
 - Insufficient linking in “innovation system”
 - Industry science links
 - Large incumbents and small new entrants
 - Public Private partnerships
 - Insufficient or ineffective policy support

Some Bruegel References

- Veugelers, R., 2018, **Are European firms falling behind in the global corporate research race?** Bruegel Policy Contribution 18-06, Bruegel, Brussels.
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