The Institute of Europe of the
Russian Academy of Sciences

Department of Economic Studies

Moscow, 12/06/2024

Evolution of European Automobile Manufacturing: Uneven Industrial Upgrading in Europe

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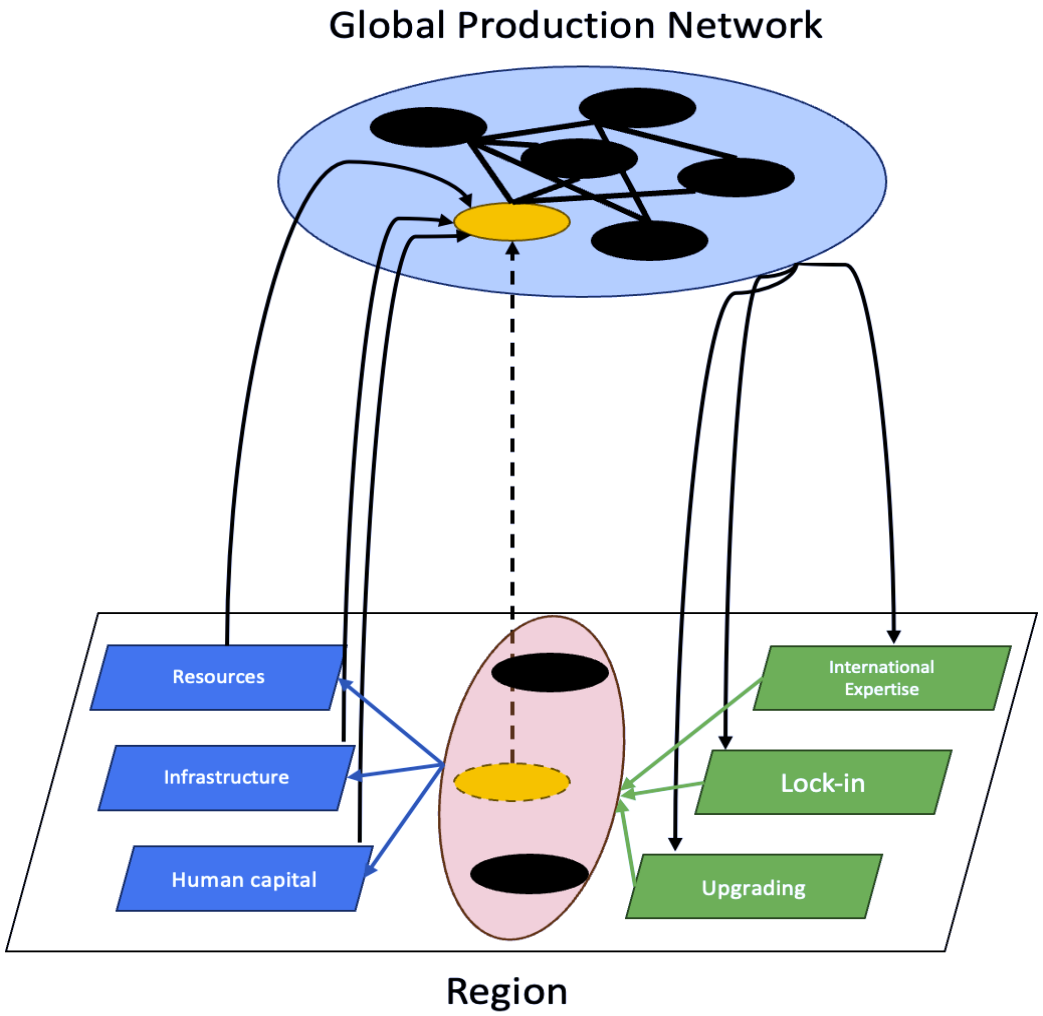
Contents

Source: ACEA.

Global Production Networks: conceptual remarks

1. Fragmented yet coordinated (Coe, Yeung 2015)
2. Local, regional, global interplay (Dicken 2008)
3. Governance, lead firms, and value creation (Gereffi, Humphrey, Sturgent 2008)
4. Clusters, coordinators, multitier architecture (Kim et al. 2014)
5. Regional embeddedness, developing and dependent linkages (see Pavlínek 2018; Boschma 2024)

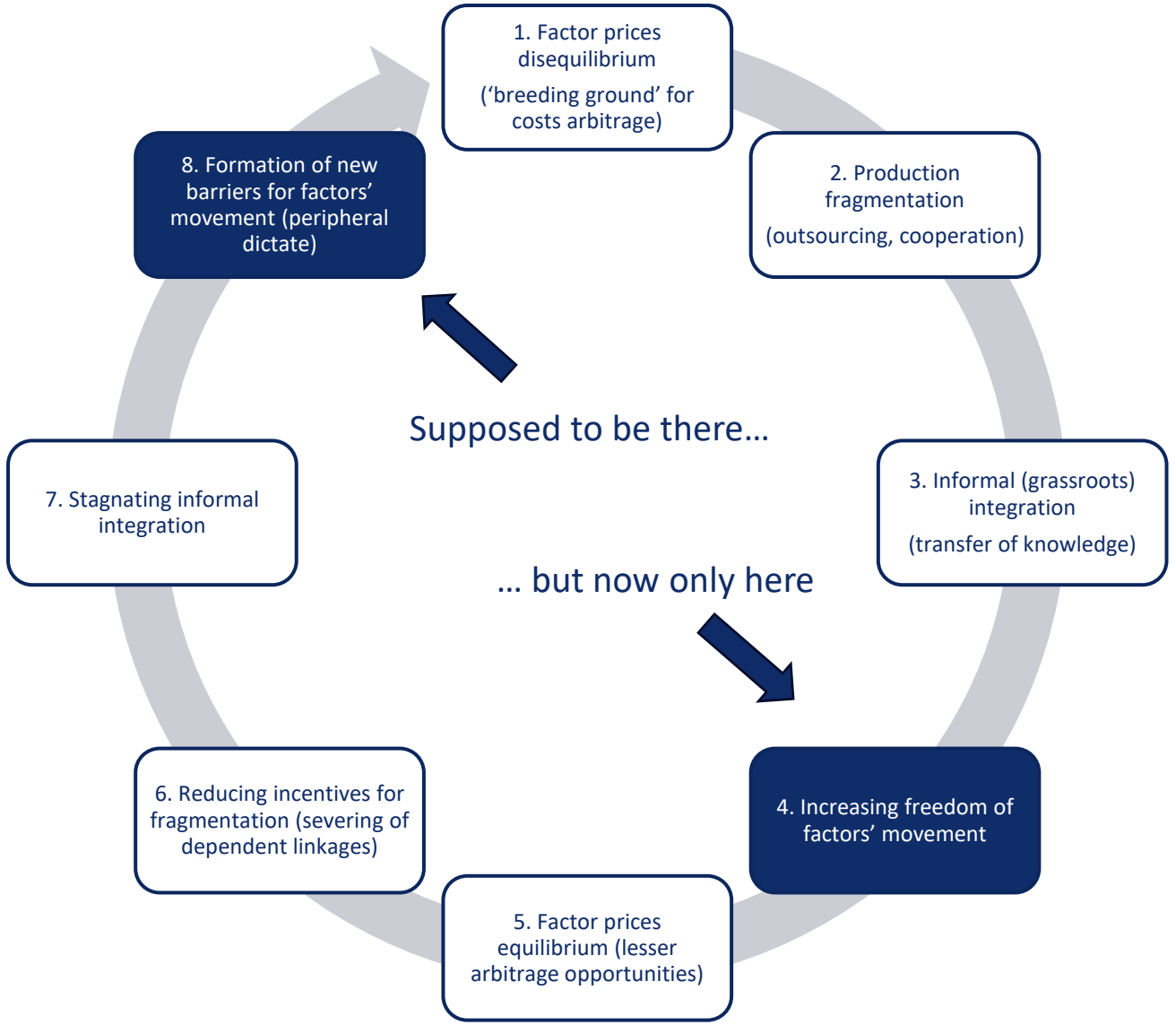


‘Core-periphery’ relations in global production networks

1. Historically, Germany, France and Italy were on the forefront of European automotive manufacturing
2. Eastern European countries, being in Comecon*, developed their own (barely competitive) production base
3. Skoda, for instance, was almost self-sufficient
4. With the collapse of the Warsaw Pact CEE** countries integrated with the Western Europe
5. So did their automobile sector
6. In hindsight, promises were high…

*Comecon - The Council for Mutual Economic Assistance

**CEE - Central and Eastern Europe



Problem

Question 1. What were the drivers of the evolution of European automobile manufacturing?

Question 2. Why CEE countries lag behind Western economies in automobile manufacturing?

Question 3. How the ‘Twin Transition’ might affect ‘core-periphery’ pattern?

’Traditional’ model of European automobile manufacturing

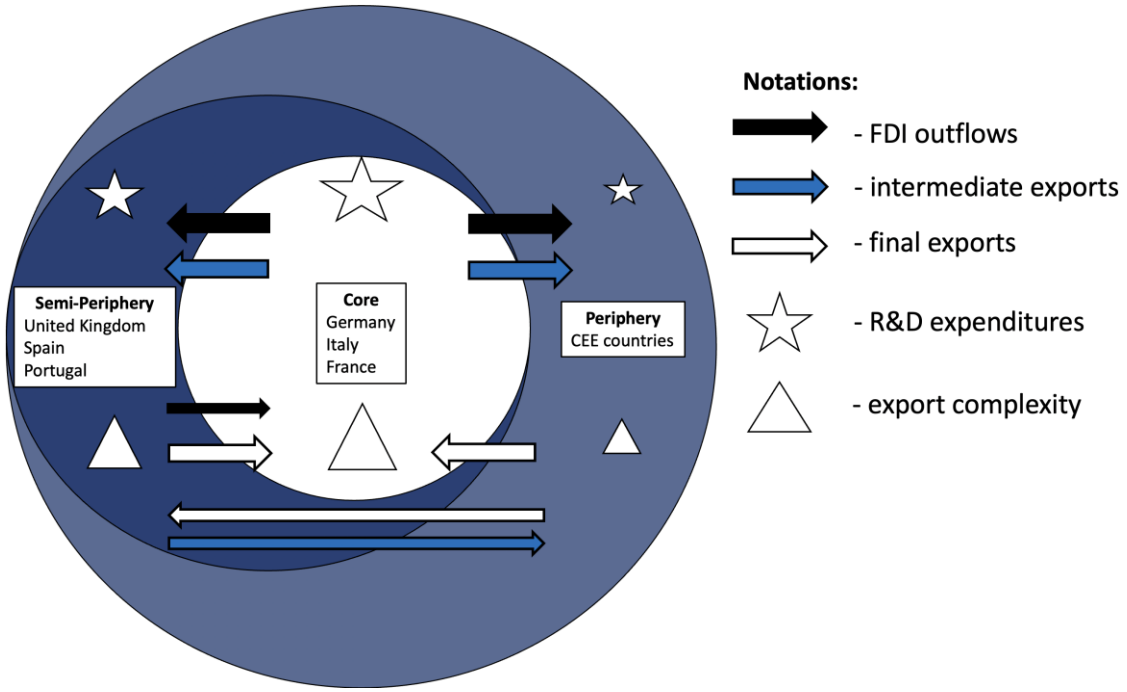
I. A rapid increase in the number of outsourcing and offshoring activities

II. ‘Core’ economies utilized cheap labor force in CEE countries
   a. Forceful transition to lead firms’ standards
   b. Anchoring in low-end activities

III. Dependent linkages became prevalent
   - Foreign-controlled assembly plants in Slovakia appeared poorly integrated in the local economy. Interactions with domestic suppliers were absent

IV. <u>Key drivers:</u>
   1. CEE market liberalization
   2. EU expansion
   3. Crisis of European automobile sector competitiveness

Formal representation of the ‘traditional’ model

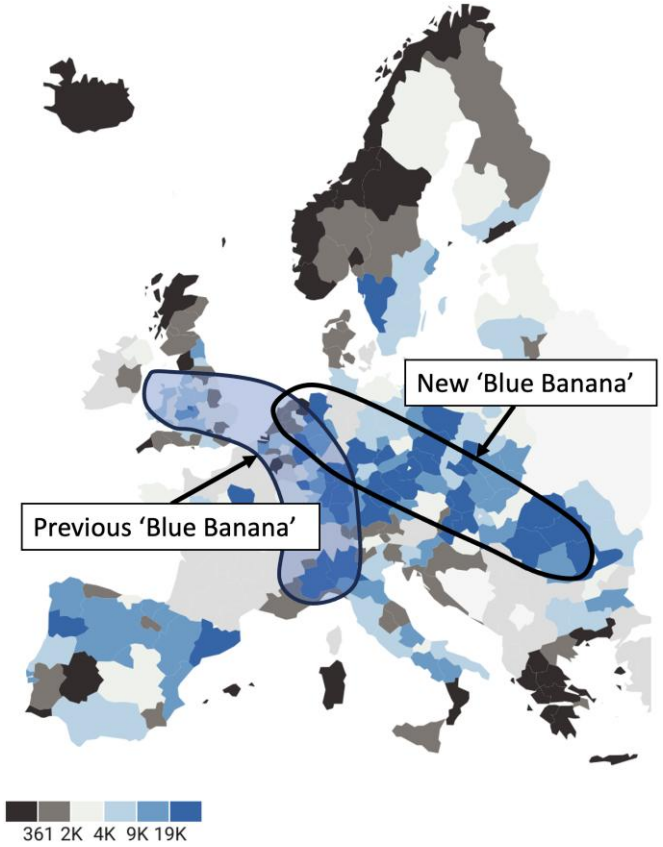


Source: author’s elaboration.

’Consolidative’ model of European automobile manufacturing

I. Triple consolidation
   a. Technological (limited number of unified modules and platforms)
   b. Geographical (key suppliers migrated closely to factories)
   c. Organizational (fusion of suppliers and lead firms)
II. Peripheral suppliers were supplanted by well-established partners of the lead firms
III. CEE economies relied extensively (and imprudently) on automobile sector
IV. Co-location of suppliers in close vicinity to assembly plants hampered spill-over effects for the rest of the economy
V. <u>Key drivers:</u>
   1. Modular production technology
   2. Agglomeration forces
   3. Mega-suppliers

Production corridor of European automobile manufacturing (number of jobs, 2019, NUTS2 regions)

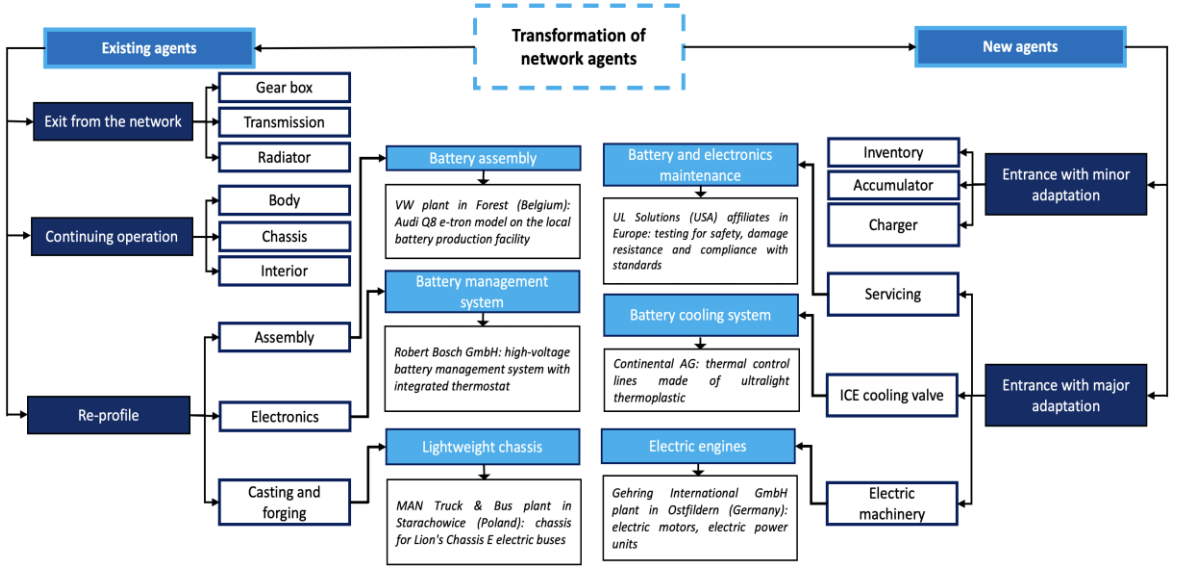


Source: author’s elaboration following Lung, Gerpisa (2004).

’Transformative’ model of European automobile manufacturing

I. Revolutionary technologies
   a. Electric engines instead of ICE
   b. IoT
   c. AI
II. Reassembly of the whole value-chain
   a. Less stages
   b. Some in, some out
   c. Greater lead firm control
III. ‘Unexpectedly uneven’ regional development
   a. New ‘growth poles’: Portugal, Finland, …
   b. ‘Giants from scratch’ (battery and assembly plants in Hungary)
IV. Long live the new master?
   I. Chinese FDI are not costless…
   II. Withdrawal of Western MNEs (dismissals in Poland and Slovakia)
V. <u>Key drivers:</u>
   I. ‘Twin transition’
   II. Chinese ‘frenzy’ expansion
   III. Pulsating emergence of new actors and locations

Changing roles of automobile production agents amidst ‘electric transition’



Source: author’s elaboration.

Periphery as the second (or even third) fiddle

I. Creation of new jobs is induced by cost minimization of lead firms

II. Upwards of 80% of workers satisfy foreign demand

III. Specialization patterns have not changed significantly

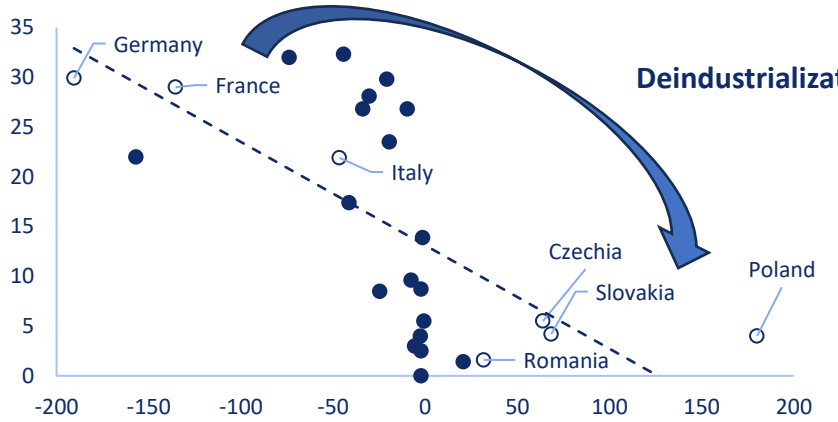
IV. On average, the share of complex goods in exports increased by 6 pp, while the share of primitive goods increased by 15 pp

V. Counter OODA

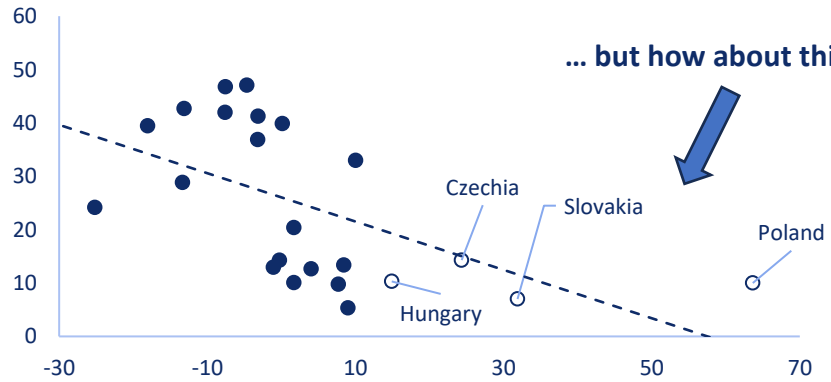
   a. Should be: Observe, Orient, Decide, Act

   b. In reality: Obey, Owe, Depend, Adjust

Jobs created (horizontal axis) and labor cost index (vertical axis) in automobile production (by country)



2002-2008



2016-2023

Source: author's elaboration on Eurostat and ERM.

Core-periphery convergence is contestable

I. On the one hand, value added created in the 'periphery' grows faster than in the 'core' (beta convergence)

II. On the other hand, dispersion of the same metric increases steadily (sigma convergence)

III. In other words, CEE countries lack economies of scale to catch up with the 'core' effectively

IV. Why lagging is so glaring?

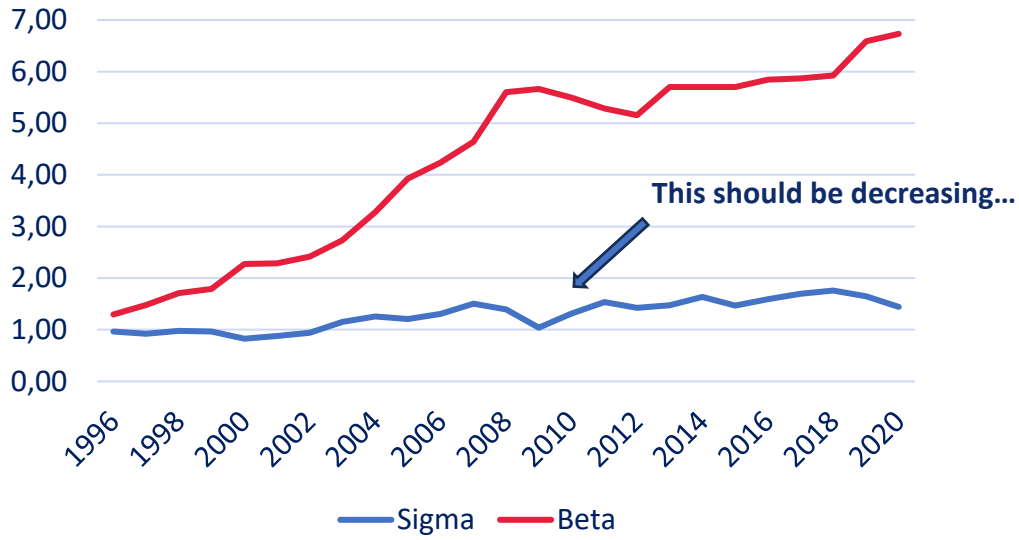
   a. Technology transfer is limited (IP protection)

   b. MNEs are not interested in competitors

   c. Lobbying and bargaining opportunities are incomparable

   d. Lock in, path-dependence and financial constraints

Sigma and beta converge of the level of value-added created in automobile manufacturing in the 'core' and the 'periphery' (1996-2020, index, 1995=1)



Source: author's elaboration on OECD Trade in Value Added.

What does the future hold? (it's not easy to unfold)

I. First and foremost, 'technology - territorial capital' interplay will matter

II. We don't know yet how far will the 'twin transition' go

III. Chinese potential to expand its FDI in CEE is unknown…

IV. …however, existing 'greenfields' ensure long-standing influence in the region

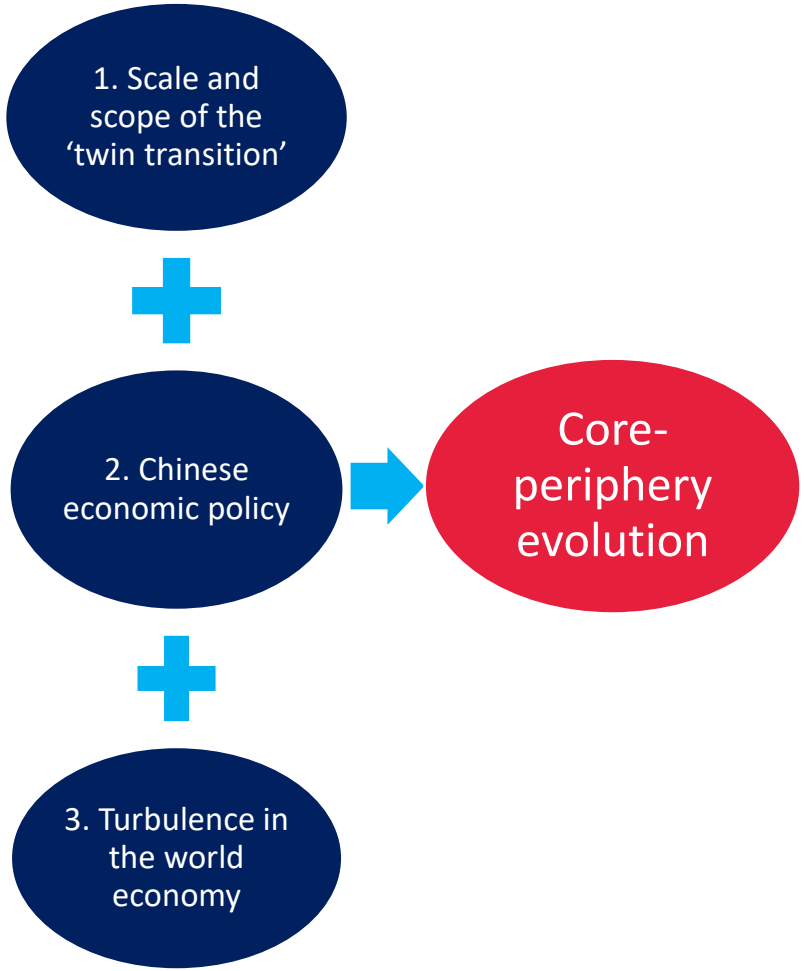
V. Today the last thing to do… is to make predictions

VI. But still some projections can be outlined:

   A. Core-periphery patterns may become less distinct (analytically wise)

   B. Value creation and distribution in the industry will reshape

   C. But for concerted and extensive innovation policy, Europe risks to become Chinese backyard…



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