

# Industrial policy: Is there a paradigm shift in Germany and what does this imply for Europe?

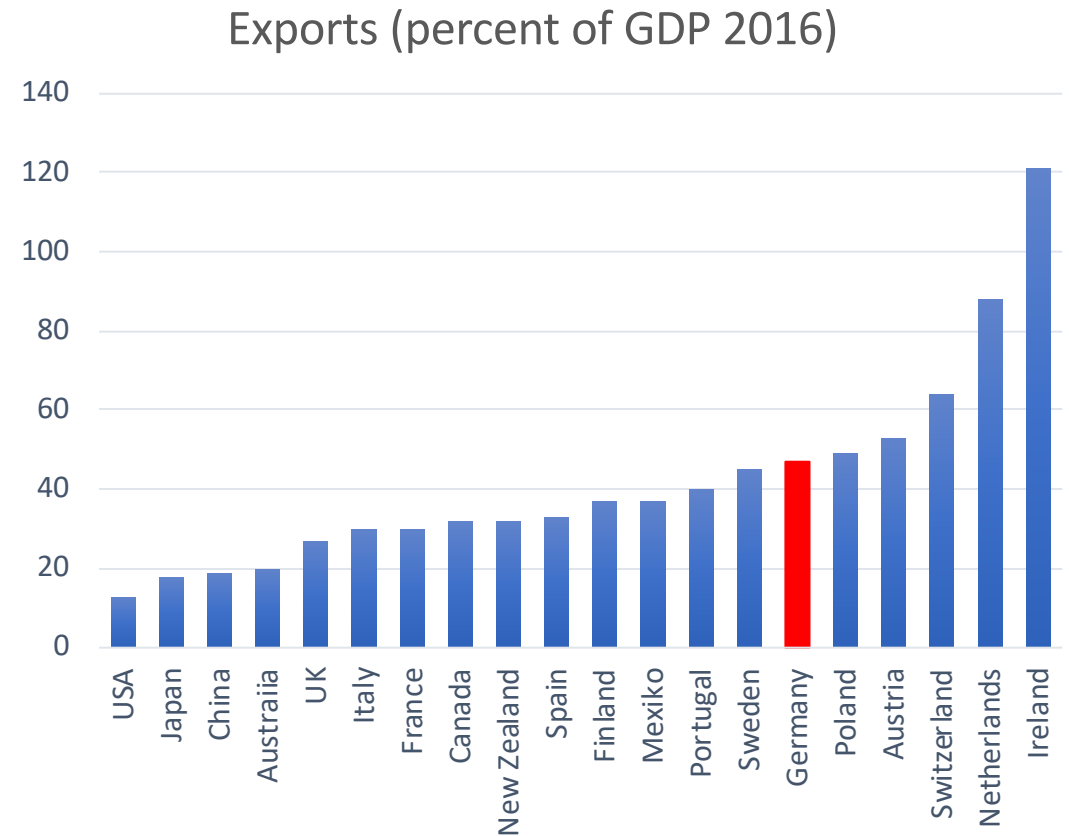
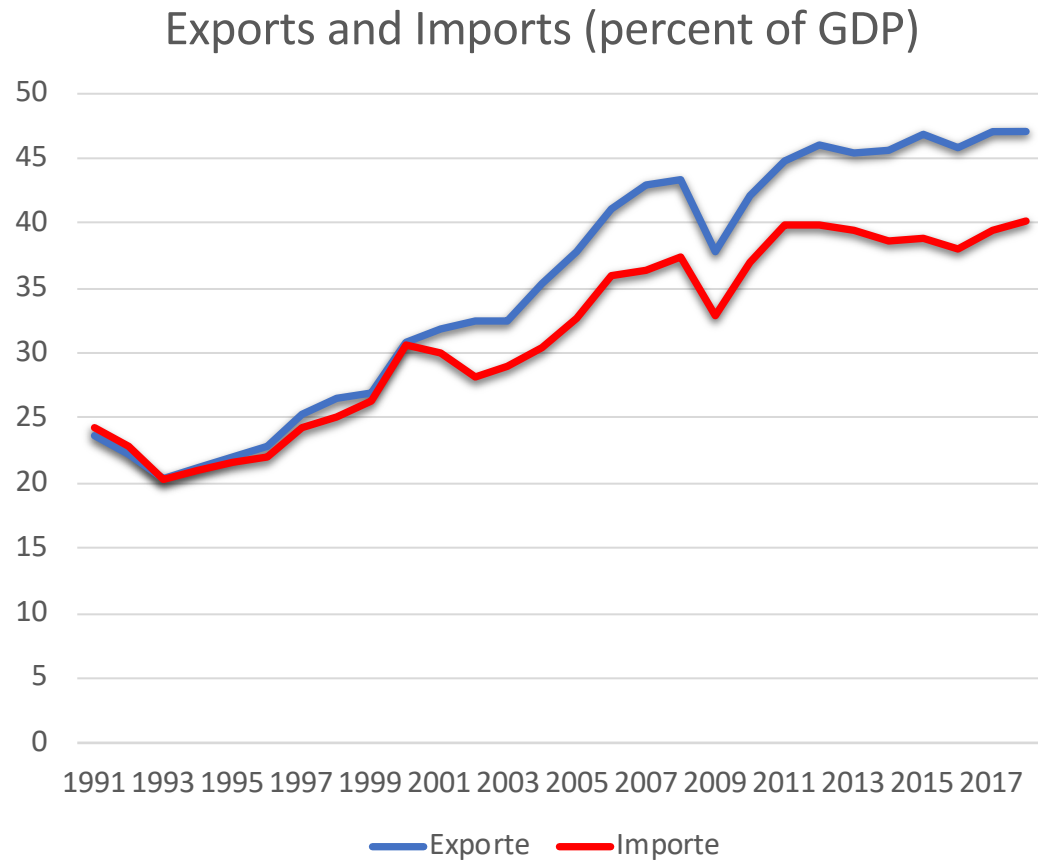
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# Epochal challenges

- Climate change requires rapid decarbonisation of the economy
- Digitalisation and artificial intelligence are challenging traditional business models
- China is moving from being the driving force for the German economy to a competitor in technologies of the future
- Escalating trade war between United States and China

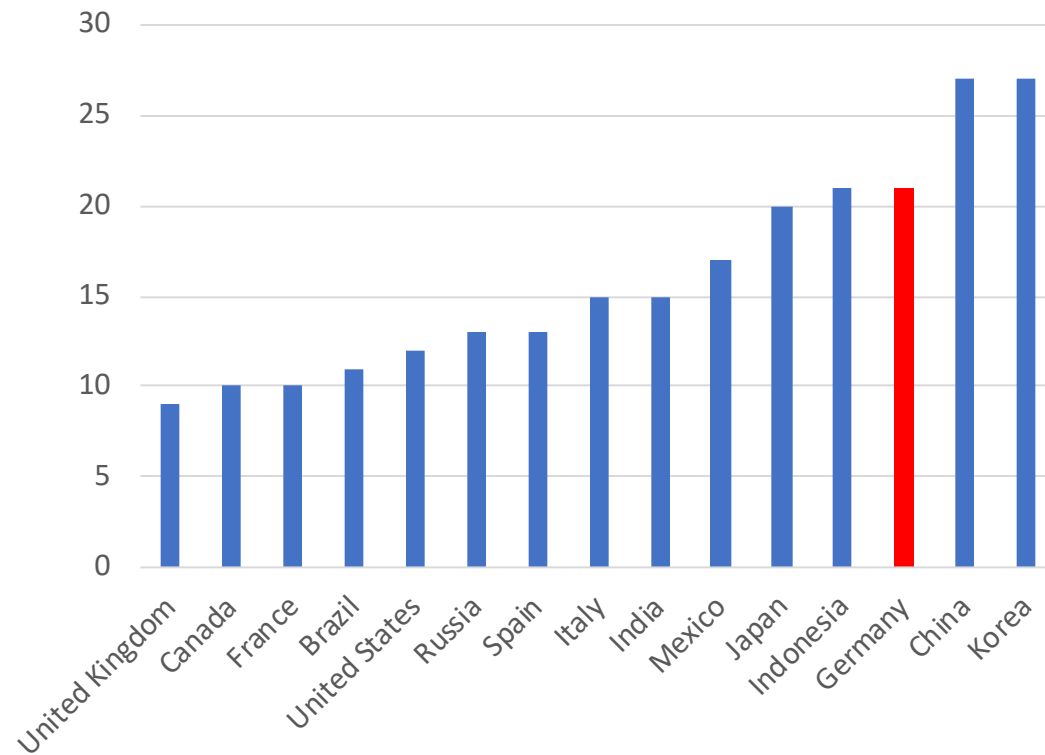
# Germany's export orientation



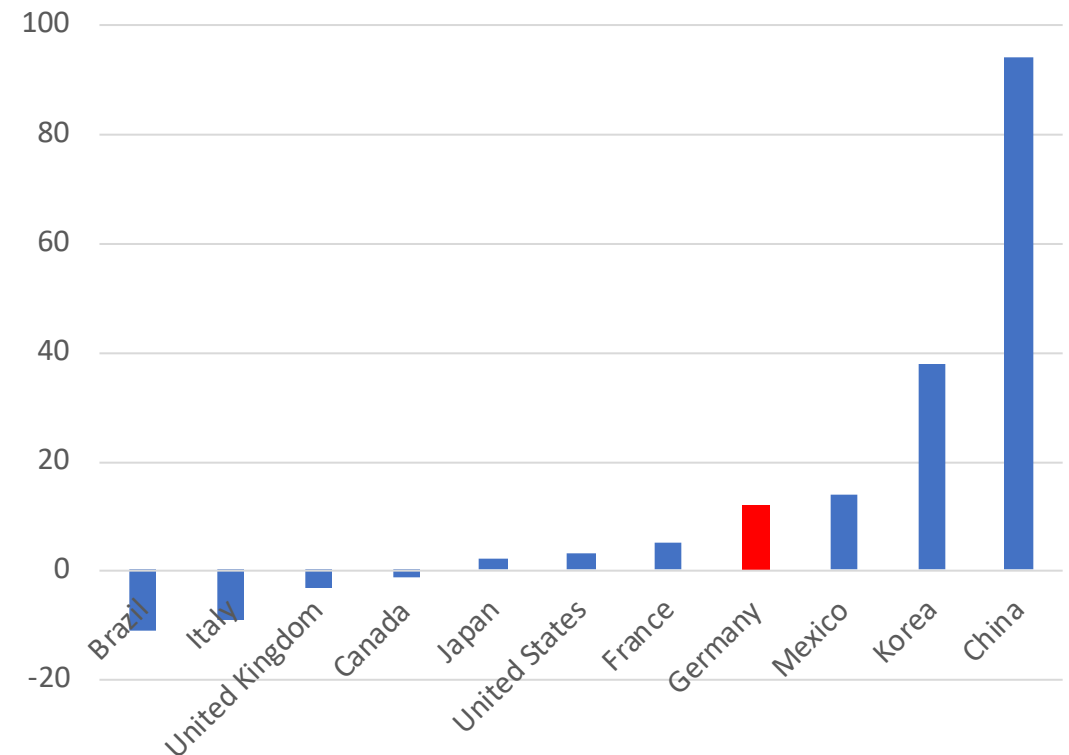
Source: Destatis and AMECO

# Germany's focus on manufacturing

Share in manufacturing in national economies  
Manufacturing value added as percentage of GDP, 2016

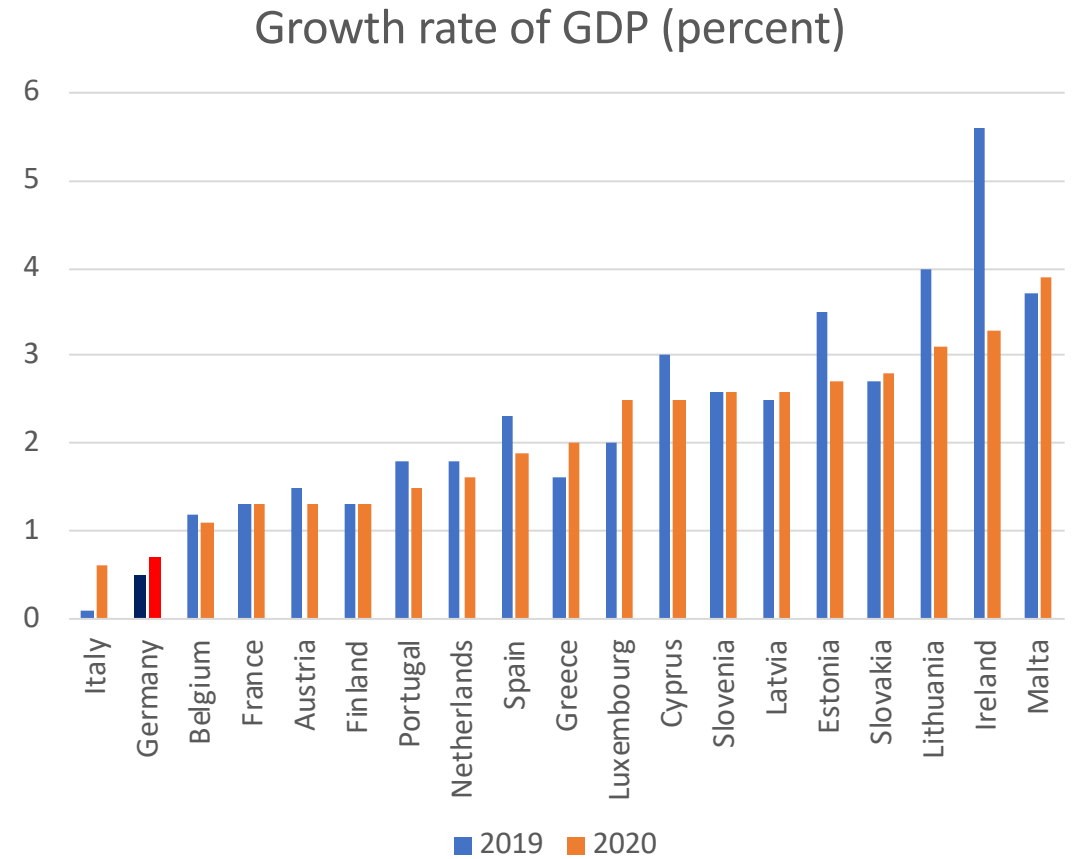
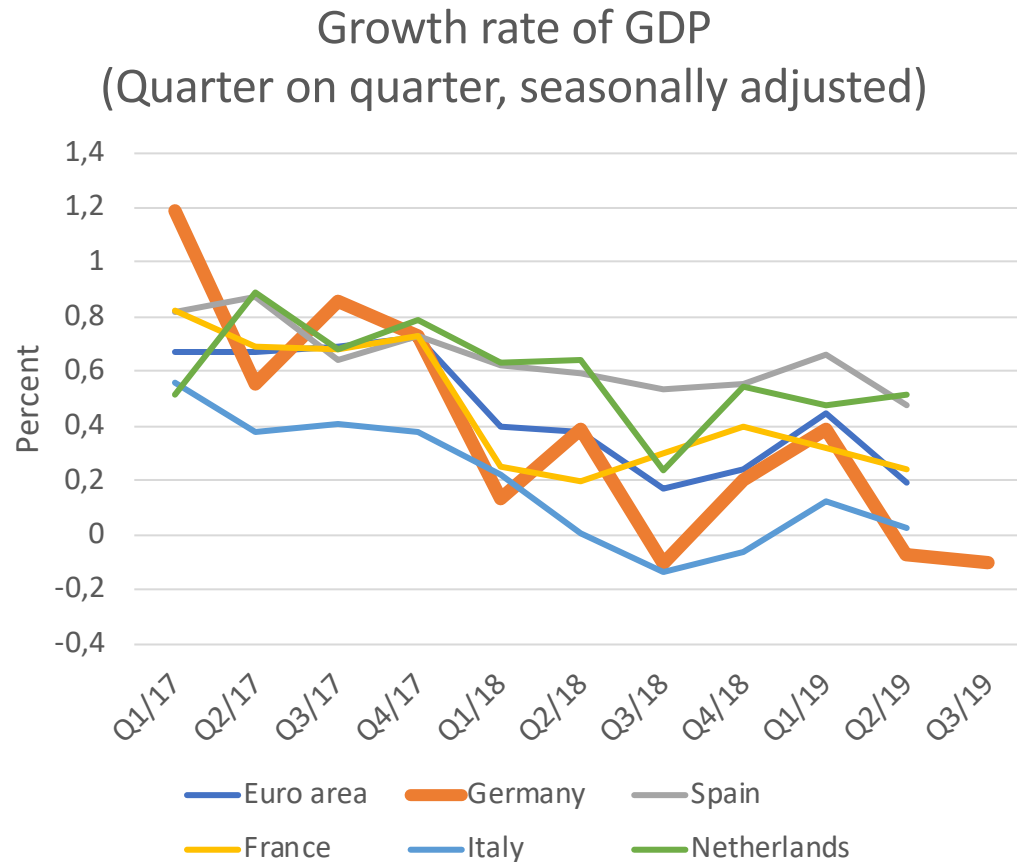


Change in value-added in manufacturing  
2008-2016 (Adjusted for inflation)



Source: Marc Levinson: U.S. Manufacturing in International Perspective. February 21, 2018

# Germany: Again the sick man of Europe?



Source: Eurostat, Quelle: Gemeinschaftsdiagnose Herbst 2019

# View of the German Council of Economic Experts\*: Hands-off

- “(...) an innovation location should **refrain from a guiding industrial policy**, which sees it as a state task **to identify future markets and technologies** as strategically important.”
- “It is unlikely that policymakers have **sufficient knowledge and understanding of future technological developments** or changes in demand to make this a meaningful long-term strategy. “
- “If the government is concerned about sustainable progress, it should rather rely on the **decentralized knowledge and the individual actions of various actors** of the national economy.”
- “The government should provide an **appropriate infrastructure** and sustain an **effective competition** instead of supporting specific technologies or companies.”

\* *Annual Report (2018/19), majority view*

# GCEE Special report on climate policy (July 2019)

- “A guiding industrial policy to promote specific industries or technologies is not a successful industrial policy strategy. Rather, it makes more sense to pursue an innovation policy that is technology-neutral.
- A uniform and cross-sectoral CO2 price helps to achieve this goal”



# The mantra of the Ordoliberalists

- Lower taxes for the corporate sector
- Less regulation, less bureaucracy
- Lower energy prices for the corporate sector
- Better education
- Black zero as the guiding star for fiscal policy



# What is the evidence?

Christoph M. Schmidt (2014):

"(....) one should always develop a healthy mistrust when the consulting is presented in an undifferentiated way and with excessive certainty. One must always ask: 'What is the empirical evidence for the message presented and on what basis was it established?'"

„(....) man sollte immer dann ein gesundes Misstrauen entwickeln, wenn die Beratung undifferenziert und mit übergroßer Sicherheit präsentiert wird. Zu fragen ist stets: „Was sind die empirischen Belege für die vorgetragene Botschaft und auf welcher Basis wurden sie ermittelt?“ Perspektiven der Wirtschaftspolitik 2014; 15(3): 219–233

# Arguments for a technology-specific industrial policy

- Externalities associated with the development of new technologies
  - Interdependencies in value chains (**ecosystems**)
  - E.g. in **electromobility**: cobalt, battery cells, fuel cells, automobiles, buses, trucks, autonomous driving, car sharing, charging stations, energy supply
- “Uncertainty” (Knight/Keynes)
  - Bosch (8 February 2018): "After evaluating the economic factors relevant to the establishment of cell production, we came to the conclusion that the investment (...) is too risky. Such an investment is not justifiable in the overall interest of the corporation."
  - State has the deeper pockets
- Path dependencies:
  - Companies stick too long to conventional technologies (Diesel)
- Strategic trade policy:
  - When major competitors pursue a strategic industrial policy ("Made in China 2025"), it is dangerous to remain passive.

# Two philosophies: Hayek vs. Keynes

- **Hayek:** “It is indeed the source of the superiority of the market order, (...) that in the resulting allocation of resources **more of the knowledge of particular facts will be utilized which exists only dispersed among uncounted persons**, than any one person can possess.”

(Friedrich A. von Hayek (1974) The Pretence of Knowledge, Lecture to the memory of Alfred Nobel, December 11, 1974)

- **Keynes:** “The important thing for government is not to do things which individuals are doing already, and to do them a little better or a little worse; but **to do those things which at present are not done at all.**”

(John Maynard Keynes (1926), The End of Laissez-faire)

- “**Invisible hand**” of the market for allocation vs. “**visible hand** of the government for the coordination of ecosystems for new technologies

# Evidence for industrial policy

- **Europe:** Airbus, nuclear power, renewable energies (EEG with its feed-in-tariff as model for the world)
- **USA:** Smartphone (Marianna Mazzucato. The Entrepreneurial State)
  - DARPA: Microchip, Internet, Micro Hard Drive, DRAM Cache, Siri.
  - Department of Defense: GPS, cellular technologies, touch screen
- Development strategies in Japan, Korea, Taiwan, Hongkong, Singapur („Asian Miracles“)

# „Asian miracle“

(Reda Cherif and Fuad Hasanov, 2019)

- At the onset of the acceleration of their growth, the governments set for themselves an **extremely ambitious goal** —to catch-up swiftly with the advanced world technologically and economically
- One of the key ingredients of the Asian miracles’ policies was their push into **technologically sophisticated sectors**, which were sectors beyond their comparative advantage at the time
- **Japan**: relatively limited experience in the automotive industry, lack of natural resources like rubber to make tires or oil to run these cars, and even the limited surface to drive cars should have precluded the emergence of the car industry in the 1950s and 1960s.
- **Korea**: its main export in the 1960s consisted of rice, silk, wigs (made of human hair) and tungsten, and yet it embarked in developing shipbuilding, electronics and car industries.

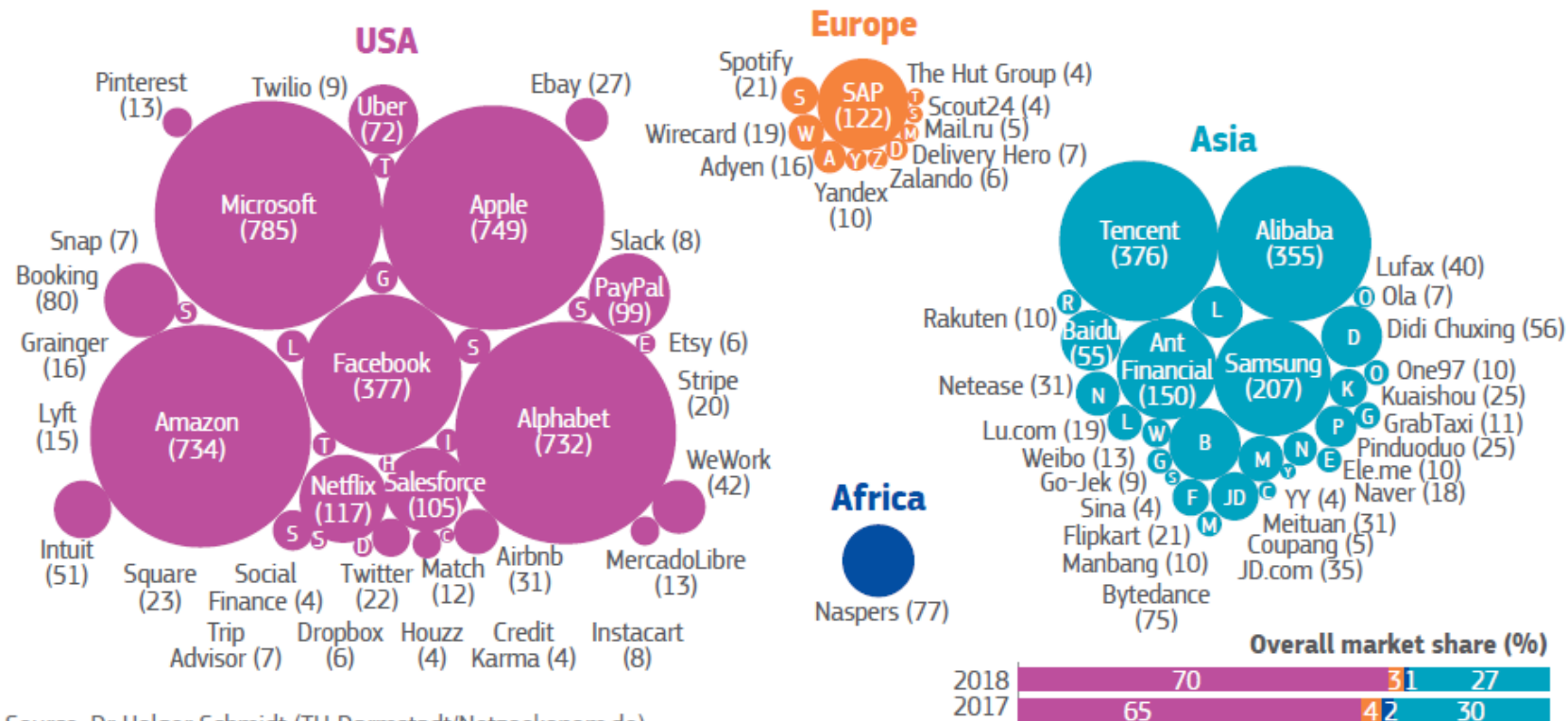
# Chinese miracle

- Solar cells: World market leader
- Battery cells: World market leader with Korea
- Electromobility. 1 million charging stations (June 2019)
- Telecommunication (5G)
- Artificial intelligence: „Catching up and overtaking – with massive capital investment” (Konrad-Adenauer-Stiftung (2018), Comparison of National Strategies to Promote Artificial Intelligence)
- Digital platforms

# China's position in the platform economy

Figure 2: The platform economy is increasingly binary, with Europe a distant third

Market valuations of online platforms by continent, in billion US dollars (December 2018)



Source: Dr Holger Schmidt (TU Darmstadt/Netzoekonom.de)

# Germans tend to underestimate China

Statement by the Scientific Council at BMWi (2019) on China

- “(...) a very active and, in some areas, successful industrial policy.”
- "But China's industrial policy also ensures the, the shrinkage of which is prevented for political reasons. **preservation of a highly subsidized heavy industry**
- To finance it, the **banking system is used**, which is showing the first signs of overburdening it with loss-making industrial loans similar to those in Japan. These are the downsides of decades of industrial governance.
- It remains to be seen whether Chinese industrial policy will still be successful once the **catch-up chase to the West** has been completed.
- At any rate, this policy has **nothing to do with a social market economy**.



# Altmaier-Paper: Intentions are good, but ...

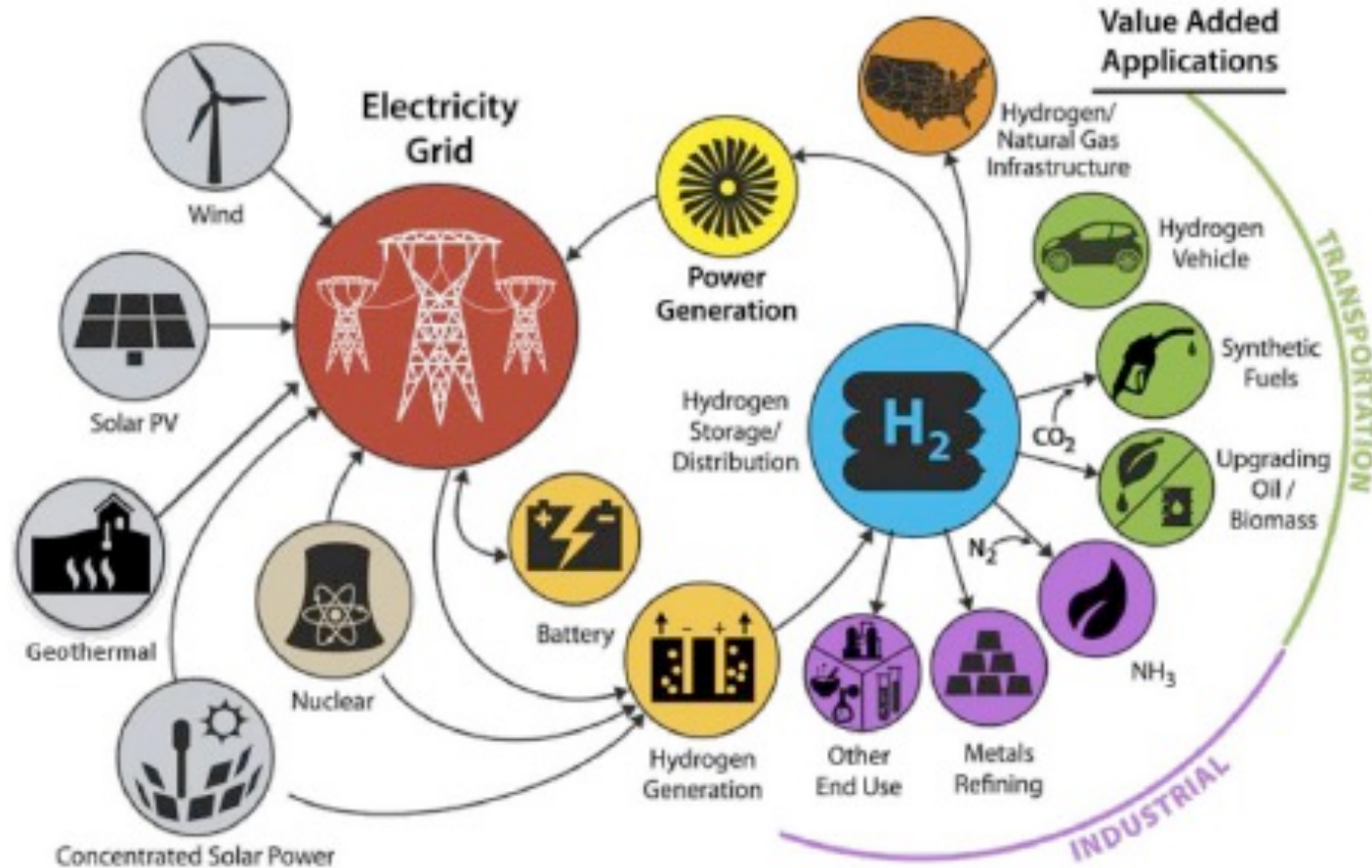
- 25 % target for the **share of industry** in gross value added
- Securing **national and European champions** ("size matters"): Siemens, Thyssen--Krupp, car manufacturers, Deutsche Bank
- Promoting **battery cells**
- "State Participation Facility"
- Review/reform of existing **state aid and competition law**, more effective **action against dumping**



# Altmaier 2.0

- European and not national
- Ecosystems instead of battery cells
- Ecological transformation instead preservation of jobs in manufacturing
- Offensive and not only defensive

# Example of the hydrogen ecosystem

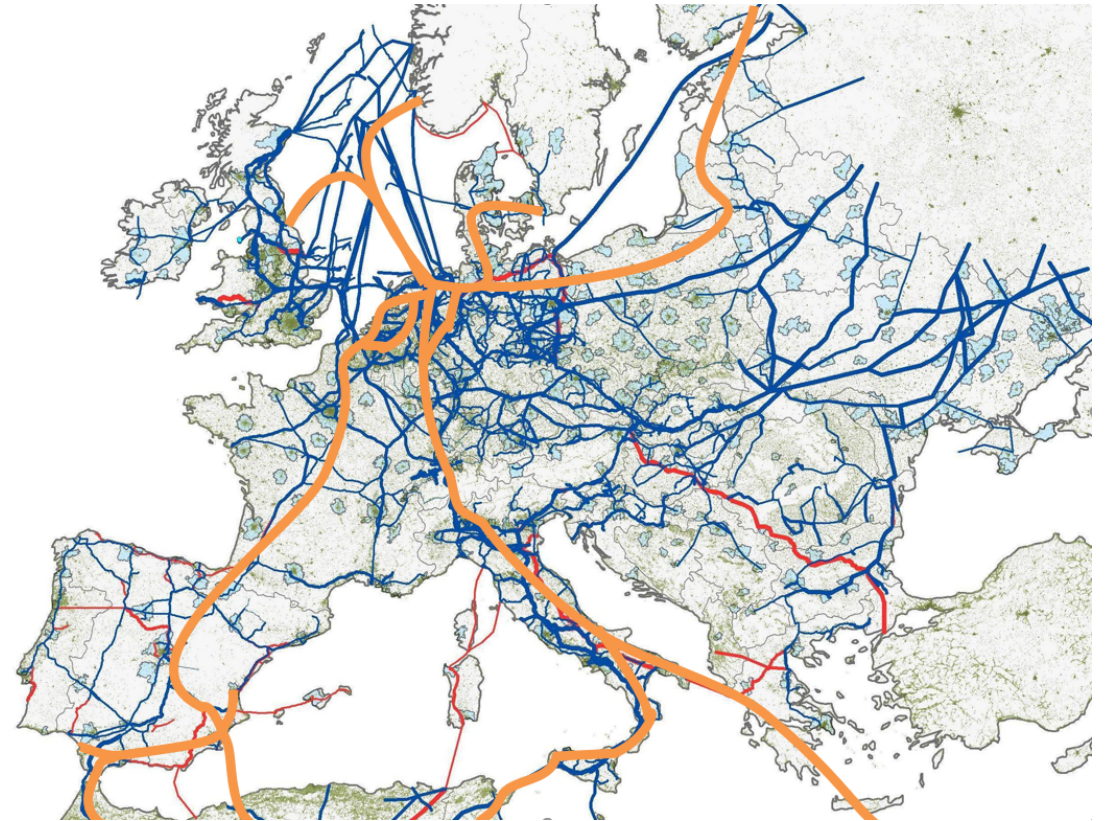


Quelle: National Renewable Energy Laboratory

# A European hydrogen strategy

(Manifest by Wouters und van Wijk)

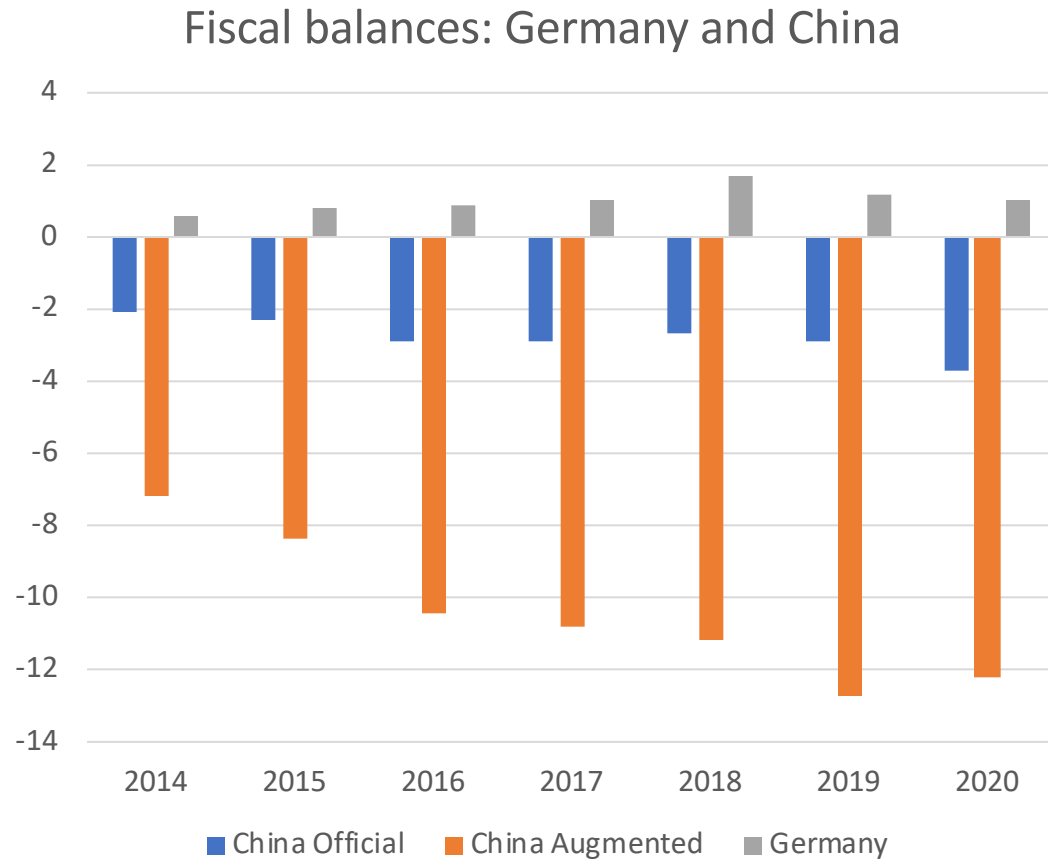
- **Europe's electric grid can't cope with 100% electrification**, yet hydrogen would use the **existing gas pipe networks**.
- The authors lay out a plan to deliver 50% of Europe's energy from hydrogen by 2050. Done rapidly at scale, hydrogen would soon be **as cheap as gas**.
- It will also make **Europe the hydrogen market leader**: what technologies Europe (or anywhere!) masters first, it can sell to the rest of the world hungry for clean energy solutions.



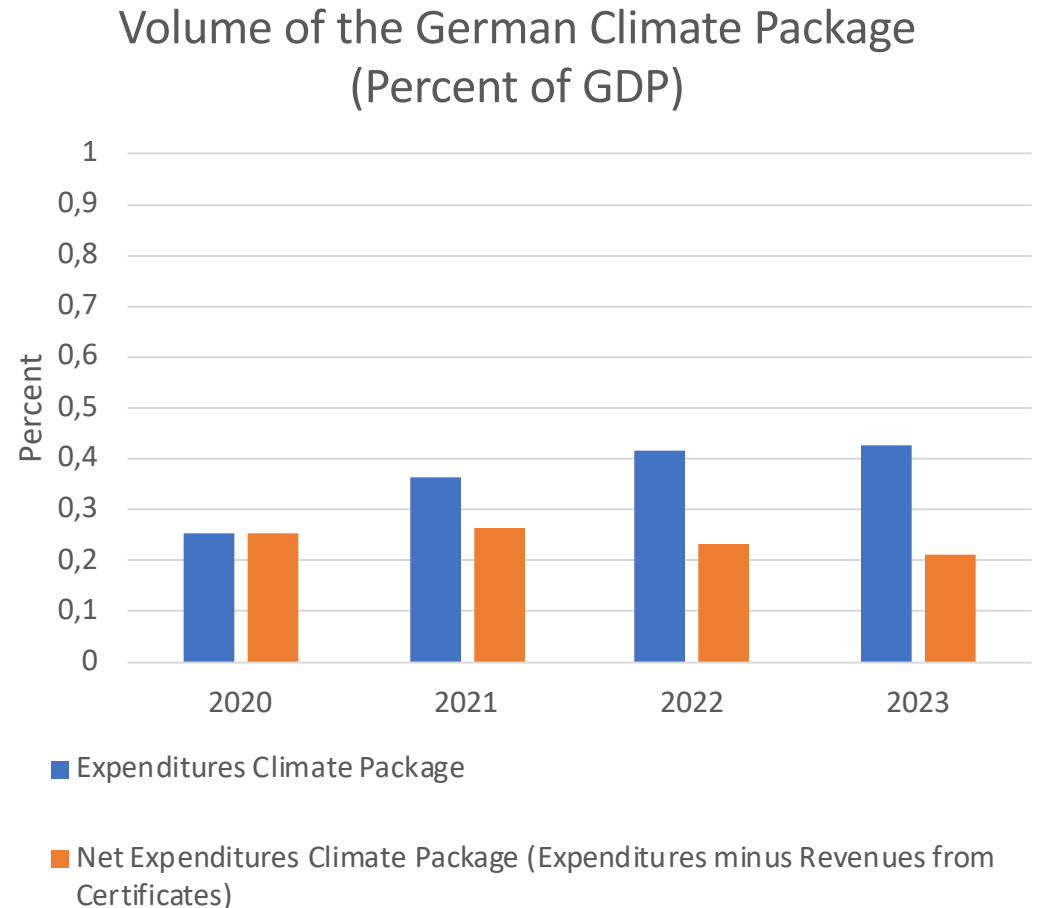
# International Energy Agency: The Future of Hydrogen (2019)

- The risk that today's interest in hydrogen does not translate into sustainable deployment and instead leads to a further cycle of disappointment is very real.
- Governments have a central role to play in avoiding this outcome and in helping hydrogen to achieve its potential.
  1. Establishing targets and/or long-term policy signals.
  2. Supporting demand creation.
  3. Mitigating investment risks.
  4. Promoting R&D, strategic demonstration projects and knowledge sharing.
  5. Harmonising standards, removing barriers.

# Effective industrial policy is difficult to finance with a „black zero“



Source: IMF



# Green new deal for Euro area

## Joint program for

- **Stability and Growth Pact:**
  - Exemption for green investments for all member states:  
1 % of GDP  $\approx$  120 EUR Billion p.a.
  - Surveillance by the Commission that funds are adequately invested
- **European Green Bonds**
  - Joint and mutual liability

# Bonds issued by a European institution

De Grauwe proposal:

- European authorities give a mandate to the European Investment Bank (EIB) to finance, say, €1,000 billion of environmental investments.
- The EIB would issue bonds to obtain the resources necessary to fund these investments.
- The ECB buys EIB bonds at a pace dictated by the expiry of the old bonds on its balance sheet.

<https://www.socialeurope.eu/green-money-without-inflation>



# German Ordnungspolitik: Time for a paradigm change

- No evidence for fundamental criticism of industrial policy
- Even in countries with very high CO2 prices (Sweden, Switzerland, Norway) the electric mobility is ecosystem massively promoted.
- Pure CO2 pricing is politically dangerous and/or the tax is too low.
- With a European hydrogen strategy the problem of the "picking winner" is small.
- Hydrogen strategy a key element for a European Green New Deal
- For fundamental technological changes: Visible hand of the state for more effective than invisible hand of the market