GSBC - EIC

BRINGING INDUSTRIAL DYNAMICS AT THE EUROPEAN LEVEL

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A NEW INDUSTRIAL POLICY FOR THE EUROPEAN UNION

Industrial dynamics and innovation: a slowdown

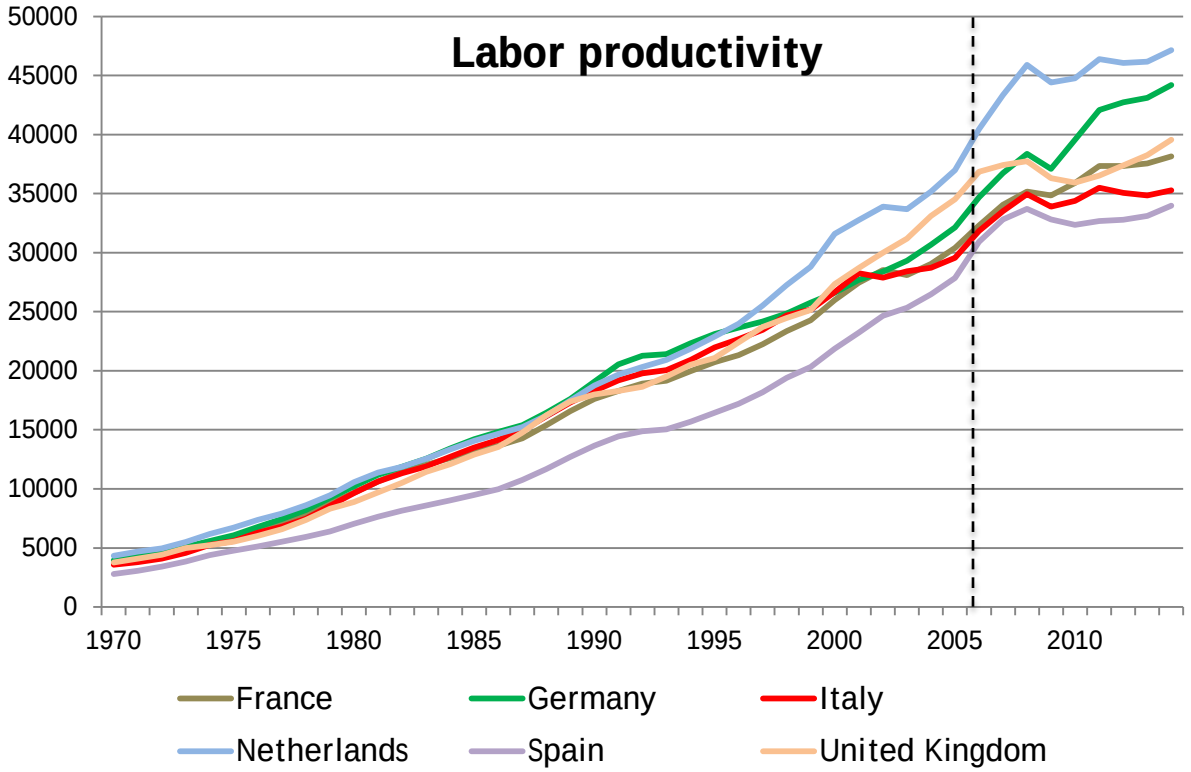
What is industrial dynamics?

Productivity and Innovation dynamics:
the European and the German case

- Innovation driven development of industries
- Industrial dynamics is not an uniform process
- From risk to uncertainty: Innovation and investment decisions
- New directions in innovative activities

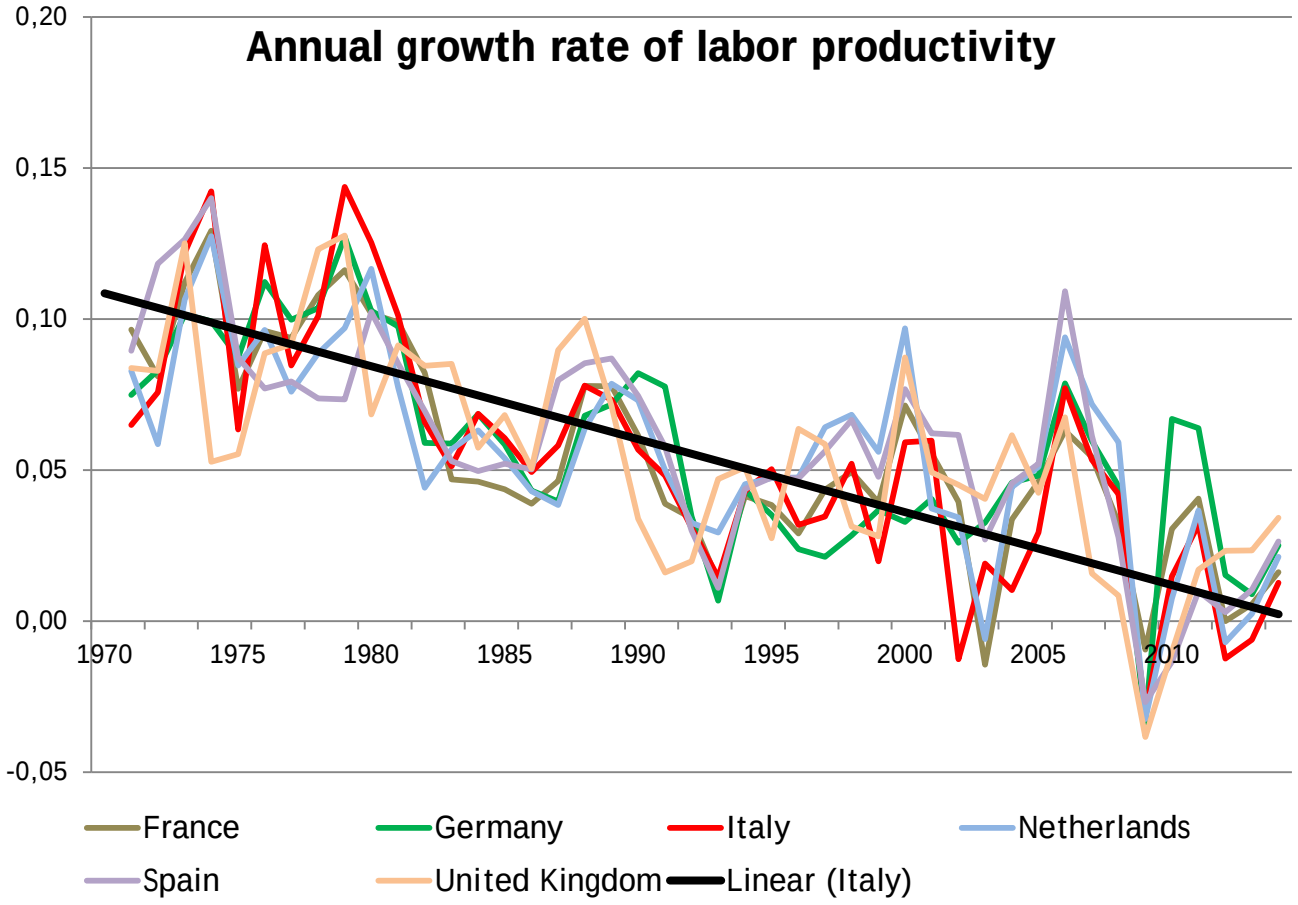
Productivity dynamics: the European and the German case

- Slowing down of labor productivity growth
- Especially after 2008
- Financial crisis ↔ technological exploitation?



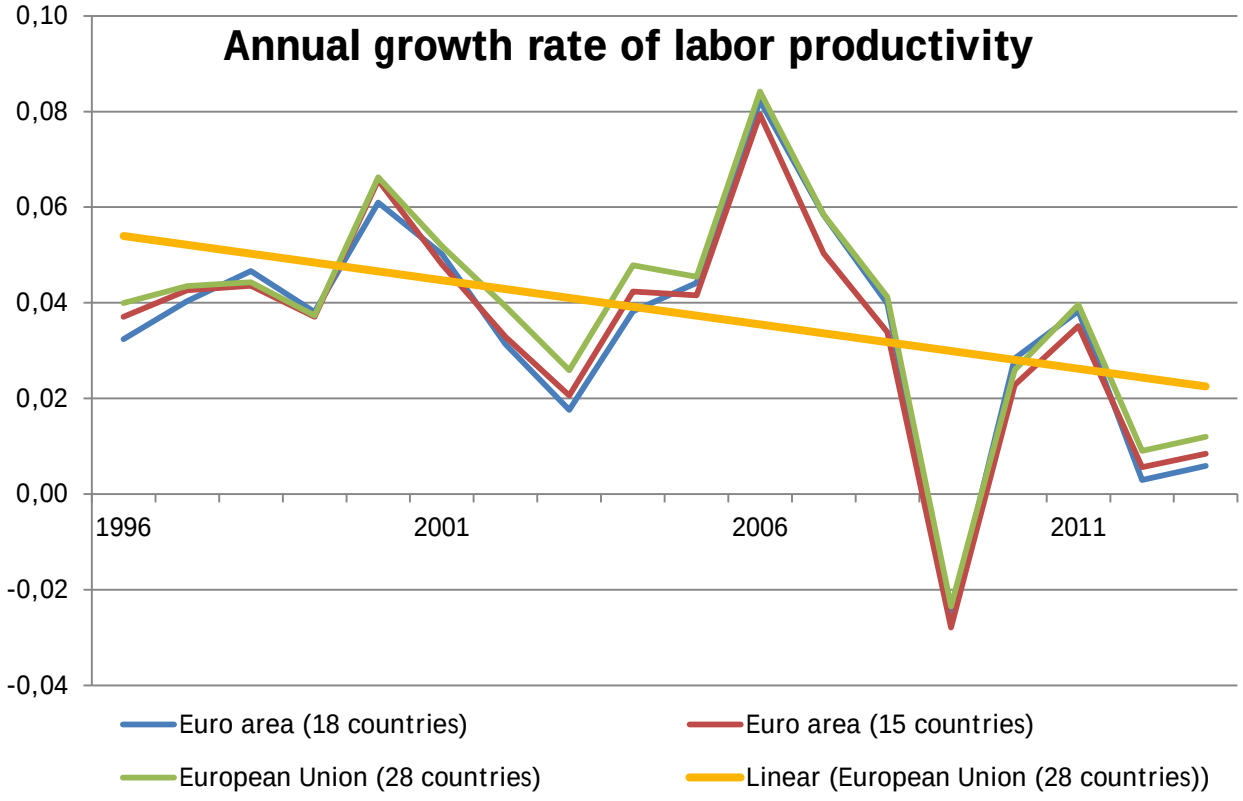
Productivity dynamics: the European and the German case

- Declining growth rates of labor productivity
- Potentials exploited?

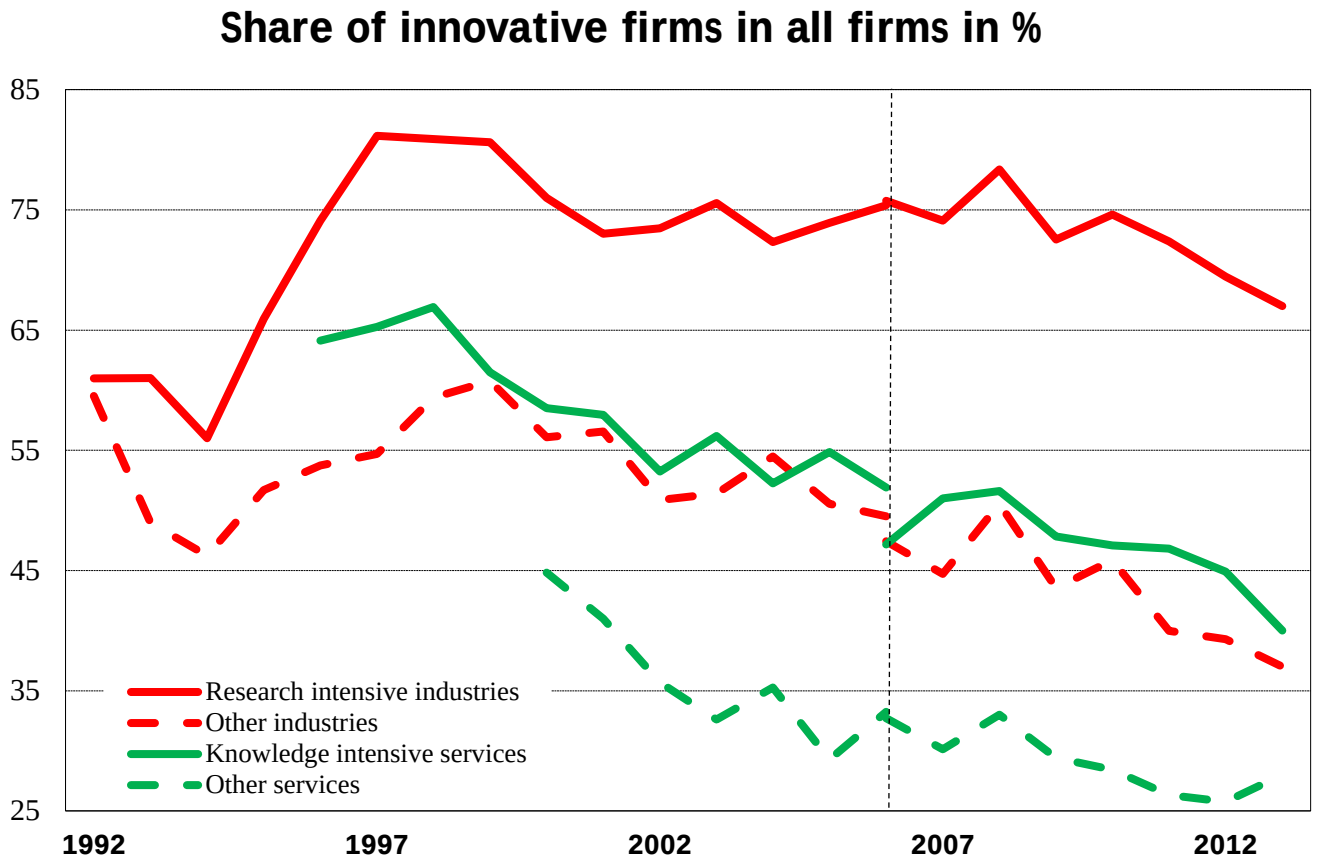


Productivity dynamics: the European and the German case

- Declining growth rates of labor productivity
- Different EU areas



- Declining innovation activities in **Germany**
- Clear decline already before 2008
- and also after 2008 despite
  - prosperous economic development
  - easy credit conditions

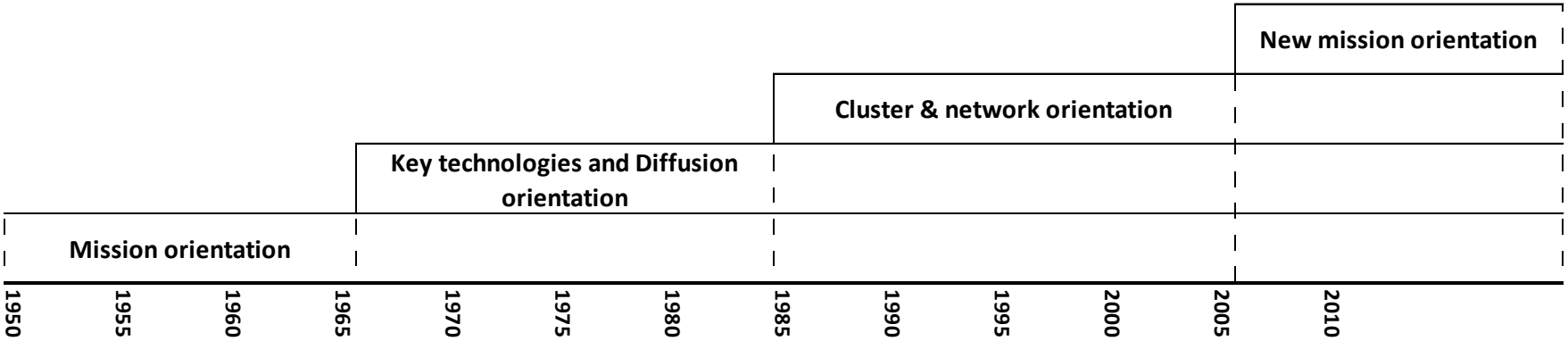


What is / can be the role of policy?

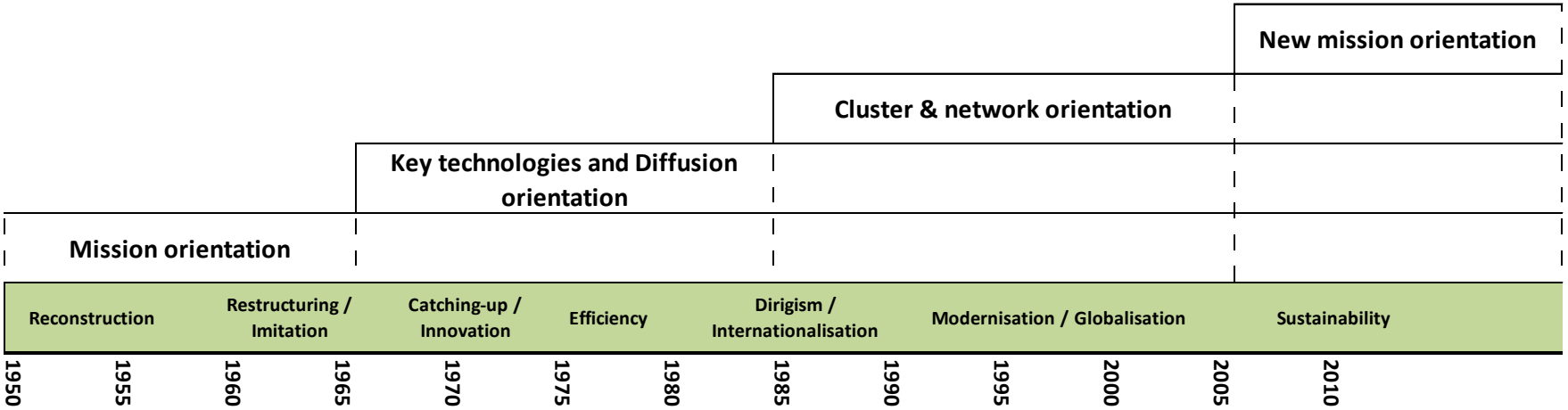
Policy styles and their „times“

The new mission oriented policy

Policy styles and their „times“



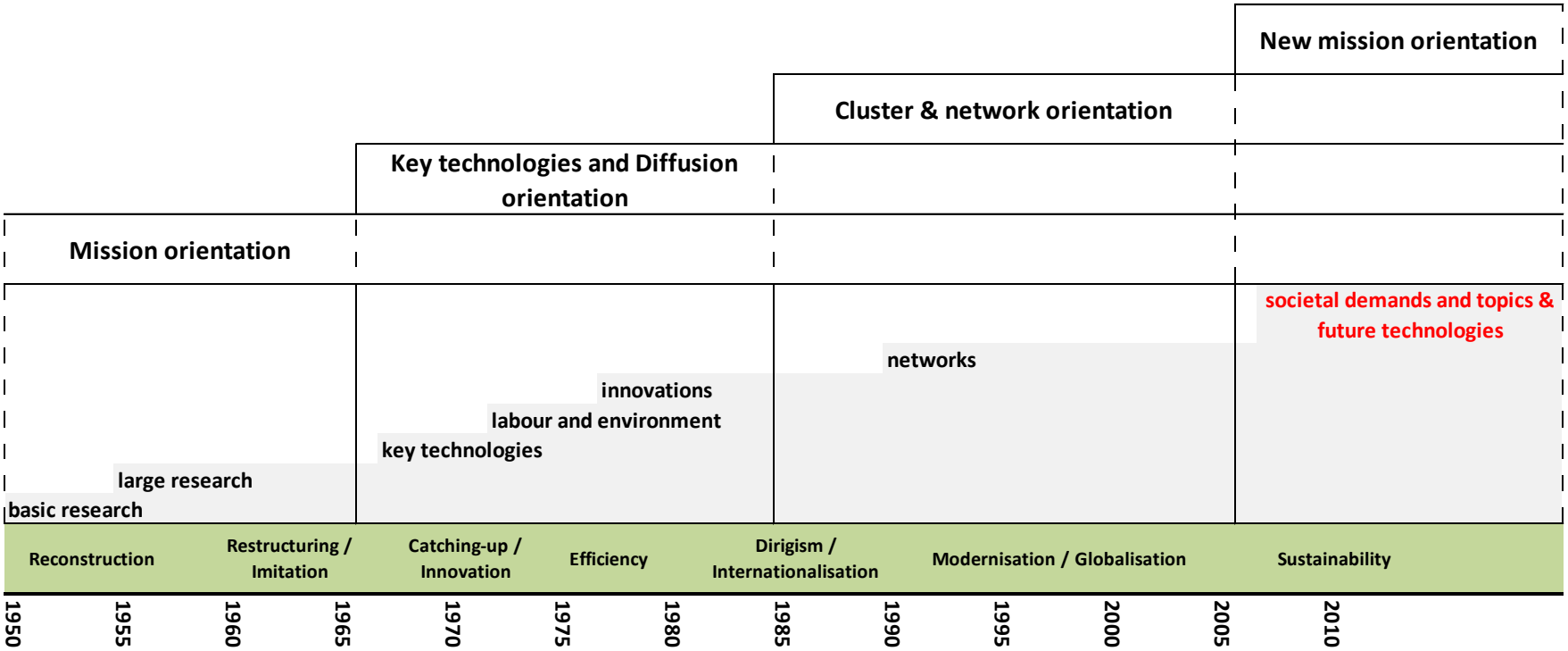
Policy styles and their „times“



- Changing styles, targets and means

Along Fier/Harhoff (2002)

The new mission oriented policy



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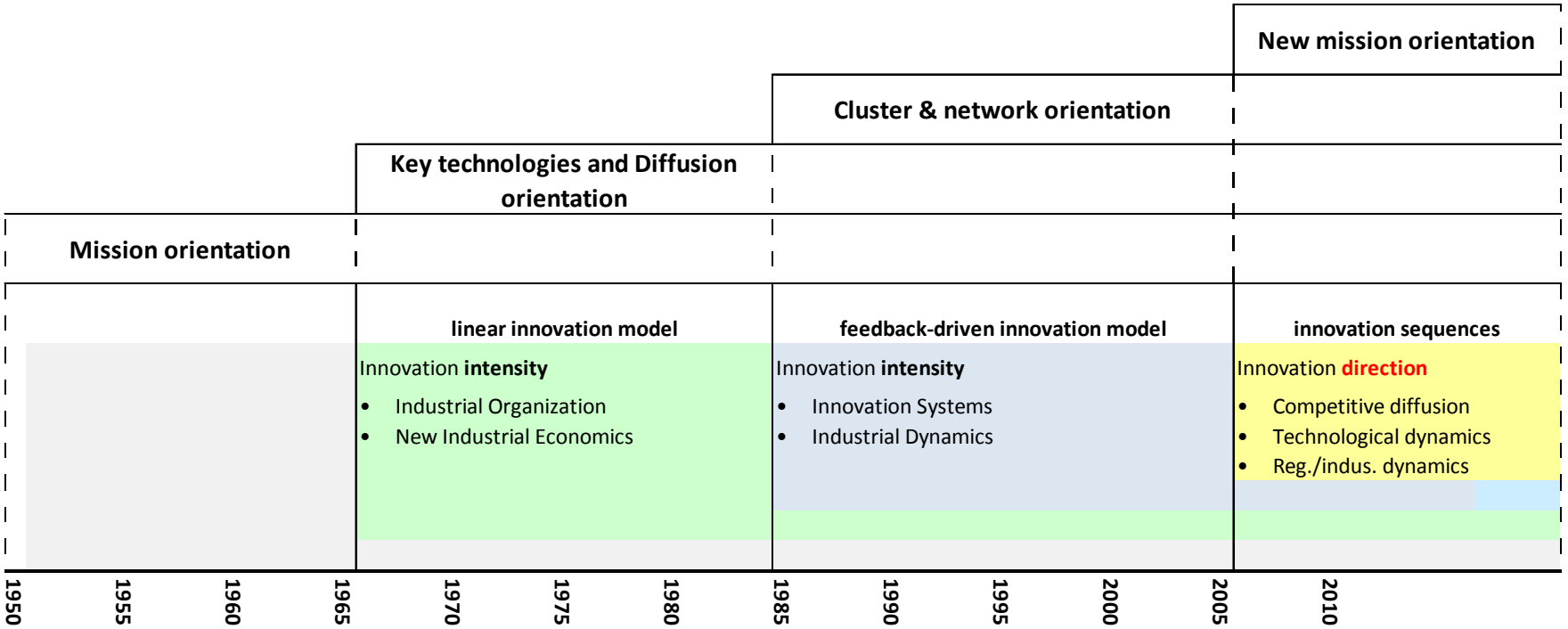
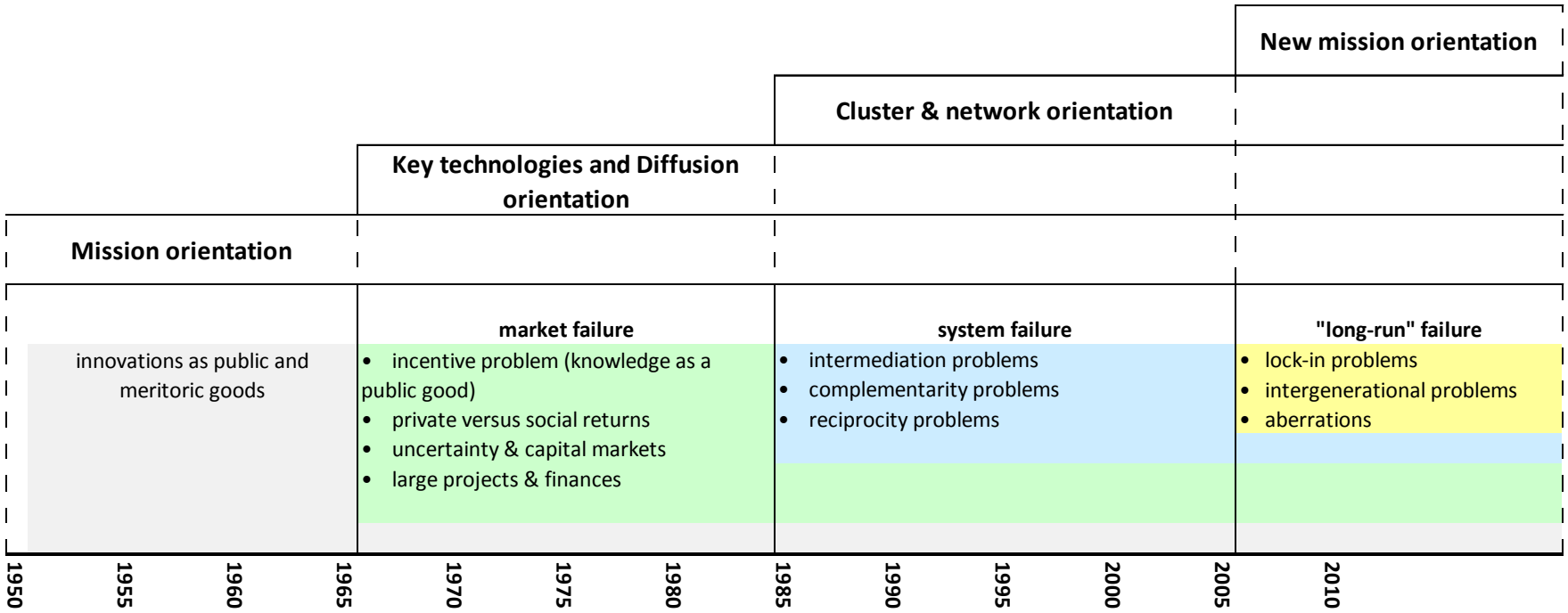


- Theoretical foundations and viewpoints
- FAZ end of the 1980ies / early 1990ies
  - Weak innovation in the German economy! ➔ A problem of incentives or of competencies?

The new mission oriented policy



- Not intensity but direction of innovation as a policy relevant problem
- From explicitly emphasizing the technological solution (mission) toward emphasizing the problem solution (new mission policy)

- Side effect: Industrial policy and (sustained) (international) competitiveness

A new direction - how to get it right!

Germany's High Tech Strategy

Catalytic policy

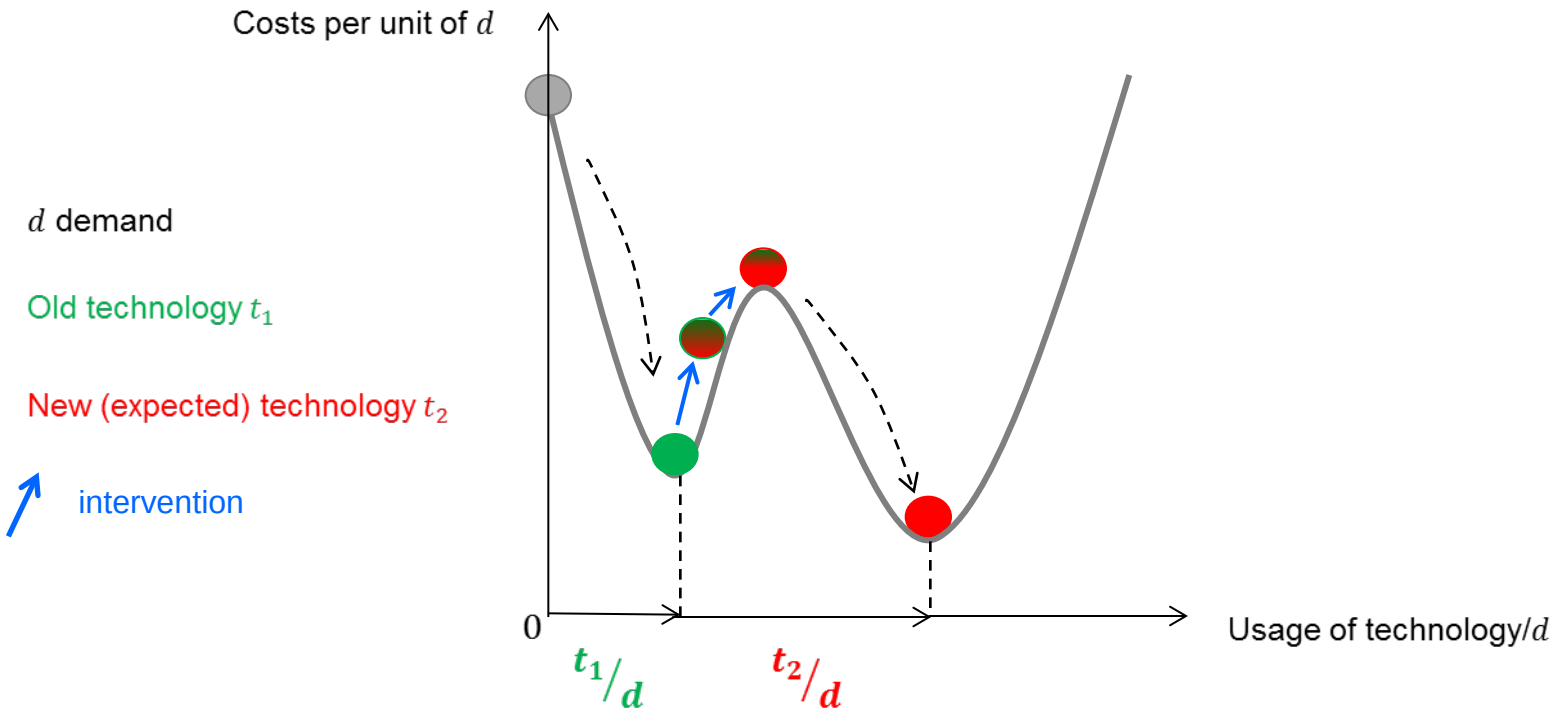
Two examples

Example for New Mission Policy : High Tech Strategy

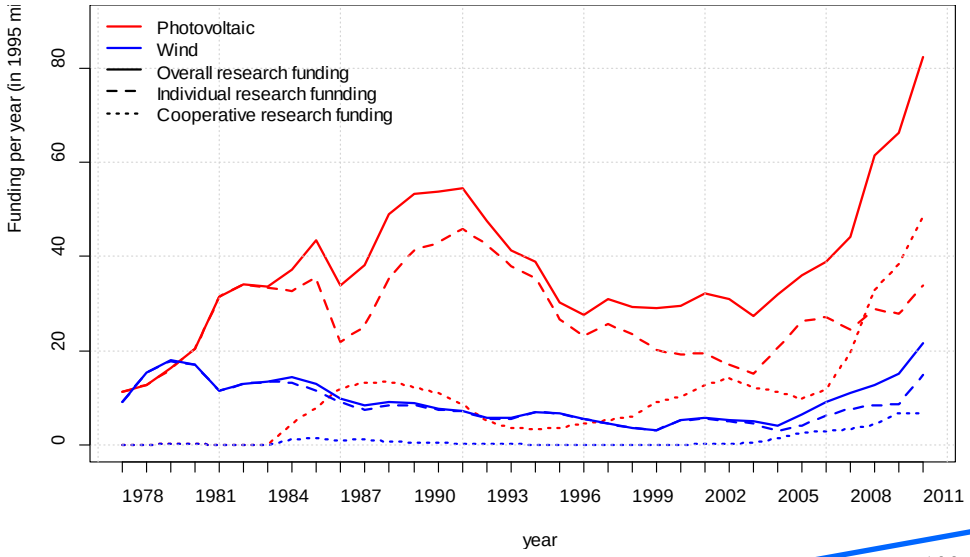
- **High Tech Strategy in Germany**
  - prioritising future challenges relative to prosperity and quality of life
  - **strengthening the dynamism of innovation in industry**
  - consolidating resources and promoting transfer
  - creating favourable conditions for innovation
  - strengthening dialogue and participation

- Digital economy and society:
  - ***Industrie 4.0 // Internet of Things***
- Sustainable economy and energy
  - ***Energiewende***
- Innovative workplace
- Healthy living
- Intelligent mobility
- Civil security

The catalytic principle



From fossil to renewable energy technologies – a two-sided policy approach

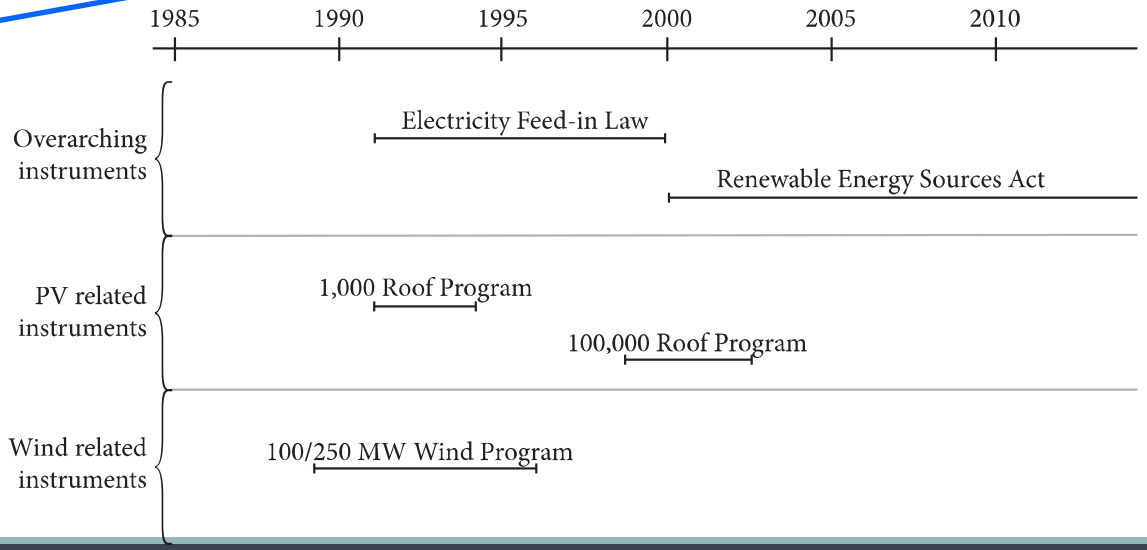


Case: Energy technologies

- Overcoming system lock-in
- Policy mix
- **Transition to a new trajectory**

Demand-pull

Technology-push



Cantner/Graf/Hermann/Kalthaus (2015)

Entrepreneurial dimensions and the hint towards entrepreneurship policies

- **The initial problem: Incumbents**
  - in favor of dominant design
  - once motivated, power to achieve mass market adoption
    - strong influential power, financial resources, cost reductions (incremental innovation & economies of scale)

stimulate incumbents

- **The solution: Entrants**
  - stimulate incumbents' R&D
    - (1) direct: competitive & complementary forces
    - (2) indirect: stimulate demand, enlarge scope of niche markets, master new technologies
  - entry barriers, liability of newness, fail to reach mass market penetration

Case: Alternative Technical Vehicles

- Policy focus on SME
- **Transition to a new trajectory**

Cantner/Dieckhoff (2015)

Conclusion

- Slow down of industrial dynamics & innovation activities in Europe
- Indicates exploited tech potentials, uncertainty and/or lock-in of potential innovators
- **New mission policy** ➔ flagging societal needs, inducing major technological changes
- *Germany's High-Tech Strategy* as an example
- **"Catalytic" policy ➔ enabling transition to a new trajectory**

  ➔ **Role model** for an European wide strategy

THANK YOU!