The German experience with Industry 4.0 and the country's nascent approach to artificial intelligence

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Outline

1. Germany’s role in Digital Capitalism
2. Economy
3. Politics
4. The corporativist Debate
5. Social Conflict
1. Germany’s role in Digital Capitalism

Hasso Plattner (2013):
If someone wanted a european IT-Industry „one shouldn’t have let it die 20 years ago“

vs.

ICT-heavy export industry
2. Economy

- Some European countries talk about digitalization of the welfare state, the broader economy, or both

- Germany talks about Industry 4.0

- What is Industry 4.0?
  - A: Fictitious debate with real consequences
Industry 4.0 (fictitious)

• How to win industrial capital for expansion (post 2008)?

• Moving targets – nebulous phenomena:
  • Big Data (2011-2013)
  • Robotics, IoT, Automation (2014-2016)
  • Artificial Intelligence (2017-2018)  
    (meaning what exactly?!!)

• While nothing much happens in the industrial sector...
Industry 4.0 - real effects

- Increase in private investment & corporate spending
- Experiments with strategies of labor control (not so much automation)
- Revitalization of the entrepreneurial state
- Revitalization of the coordinated market economy
- Advertising program for export-heavy industries
3. Politics

- Investment in Research & Development (BMBF, Fraunhofer etc.)
- Investment in ‘neutral’ infrastructure (f.e.: RAMI 4.0)
- Attempts at ‘taming GAFA’
  - GDPR
  - “Netzwerkdurchsetzungsgesetz” (Lex Facebook)
  - Antitrust Legislation
  - Taxes
  - “Digital Capitalism”-Debate & White Papers
4. The corporativist debate

- No political conflict over major goals
  - government coalition, unions, business organizations, research institutions
  - +side: coordinated action
  - -side: based on German interests

- Goal I: Taming GAFA
  - Privacy & civil rights combine with economic interests

- Goal II: Industry 4.0 as leading framework of global production
Example: Can there be an Android of Production?

**Big scare:** classical producers, small & medium sized Enterprises

**Big hope & global race:**
SAP, Siemens, Salesforce, Google Analytics, Microsoft Dynamics

**Practical Answer: RAMI 4.0**
(Reference Architectural model - 'neutral‘ framework for industrial software)

**Source:** Small & medium business organizations, Plattform I4.0

**Sympathetic:** IG Metall

**Perspective:** on its way to become the global manufacturing standard?
BUT...

- GAFA is in on Industry 4.0 (no SAP without AWS, no mindsphere without AWS & iOS)

- Industry 4.0 will not deliver large-scale productivity growth
  - Instead: perpetuates Germany’s export-led growth model

- ‘Taming GAFA’ doesn’t work (so far) and creates problems of its own

- No real entrepreneurial state at the European level

- Political paralysis in Germany (Macron vs. Merkel)
On the other hand...

5. Social Conflict

• With geopolitical reorganization, new political and economic options may arise (trade, public alternatives,...)

• The German program
  • brings together economic and social factors (benefiting a European production and social model?)
  • Is still open to strategic debate
  • Theoretically enables new political alliances

• Unions have a voice again (control issues, corporativist framework)
Thank you.