Digital Transformation of European Industry – A Policy Perspective

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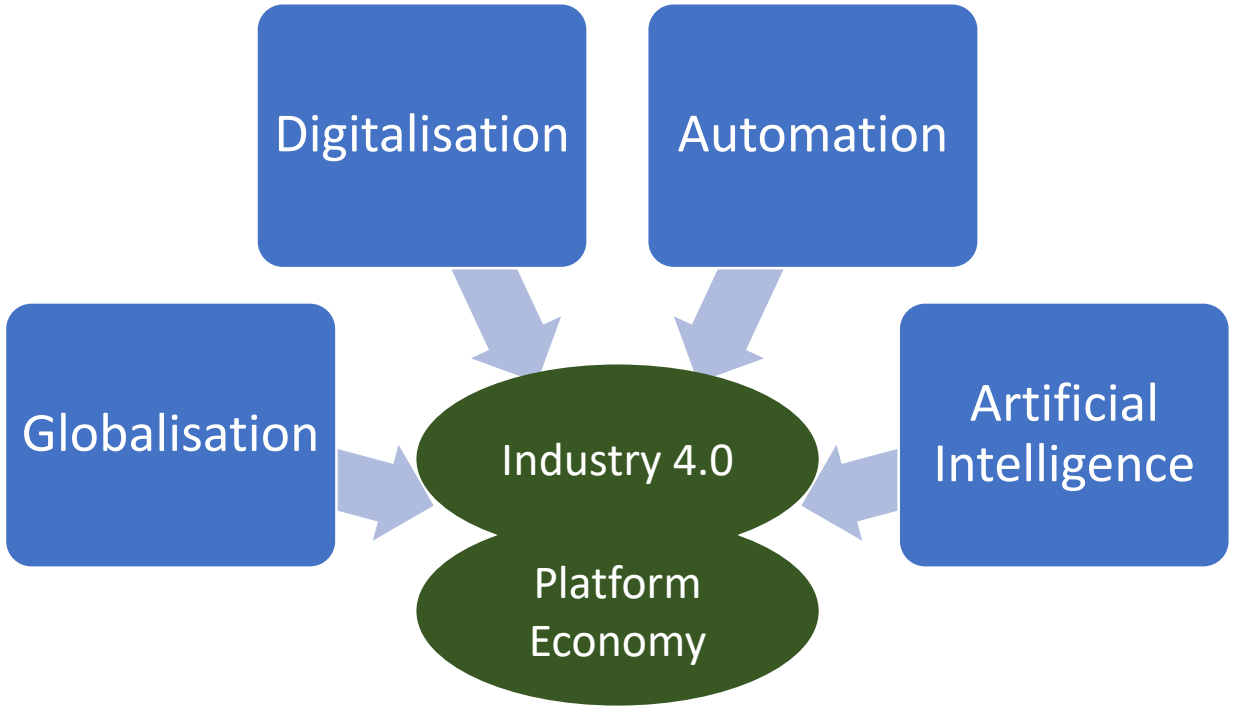
Key strengths of Europe will be reshaped



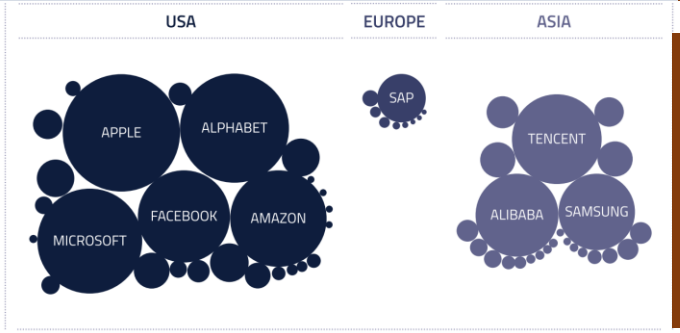
Key megatrends drive the change towards Industry 4.0 and platform economy

Roland Berger on platform economy:
Germany and Europe have core competences in industrial value added and production. However, the development of the economy is increasingly determined by digitalisation. Digital platforms in particular are increasingly becoming a main driver of growth, innovation, productivity and employment.

Europe needs to better prepare to capture opportunities for growth

+ 1.9% GDP growth in Europe	if the top 100 EU manufacturers use **big data analytics** (European Policy Strategic Centre EPSC)
+ 1% GDP growth in Germany p.a. over 10 years + 350,000 jobs (net) + €250b manufacturing investments	through **Industry 4.0** (Boston Consulting)

75% of EU firms see them as an opportunity,	41% have yet to adopt digital tech
over next 15 years, EU firms	need to invest €90b p.a. to catch up with global competitors



Europe needs industrial platforms to capture the value in Europe

Maintaining the European social contract requires policy actions

Digital innovation is strongly associated (statistically) with increasing inequality	Market rents extracted from digitalisation accrue to top managers, capital investors and employees of dominant firms, whereas income of average workers is stagnant and declining
New jobs created are increasingly “non-standard” jobs	• Two-tier labour markets with sharp gaps between workers in standard work and those in non-standard work, • Wage differentials • Inequality and access to welfare benefits
Lower tax and social security contributions	Expenditure for social protection unsustainable due to smaller workforce, larger low-income fraction

Future of work and market platformisation: opposing views

Future of work*: *Not so dramatic

Full automation only If the **long-run rental rate of capital is lower than the wag**e. Otherwise, automation and creation of new tasks for labour can go hand-in-hand

Future of work: Singularity

Machine – human substitution eventually reaches also high skilled tasks and **becomes massive** as part of both Industry 4.0 and Government 4.0

Platforms*: *efficiency and innovation

Lower transaction costs enable the emergence of innovative ecosystems: **community role** to create connection as in social networks; **infrastructure role** to provide the layers and functionalities enabling users and partners to innovate and create value; **data role** to make data accessible and standardise data processing

Platform: polarization and less pluralism

- Supply side: platforms have **zero marginal cost**
- **Network effect**: more users beget more users, triggering a self-reinforcing cycle of growth.
- **Concentration of power**, extraction of rents
- **Rising inequality**
- **Reduce discontinuity** and, as a consequence, pluralism

Ingredients for smart policy scenarios

Labour Market

Flexisecurity 4.0 – social investment in human capital

- Extended social protections
- Training and active labour market policies
- Supporting transition to open-ended contracts

- Selective re-standardisation of labour contracts
- Tax reductions on labour
- Tax neutrality
- Selective R&D support

Taxation

Robot Tax

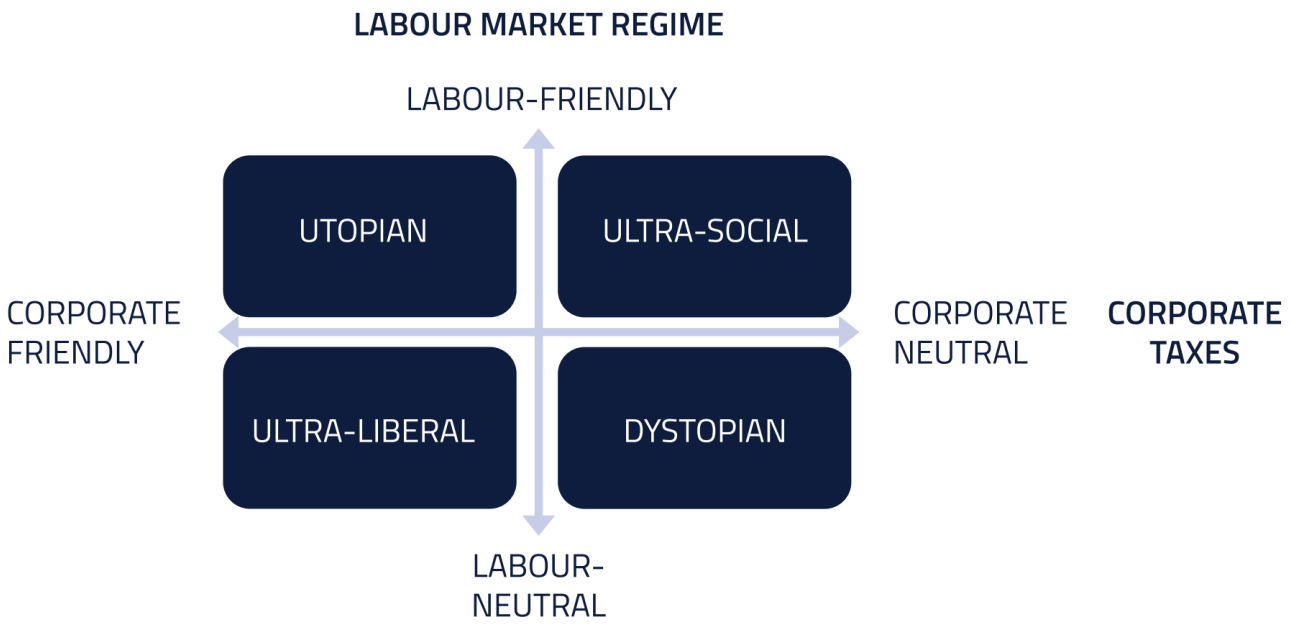
- Reduced tax incentives on business investing AI/automation
- It can stifle innovation

Digital Intermediary Tax (DIT) - levy on

- online advertising
- seller/buyer fees transacted via online intermediaries and marketplaces
- the sale of user data.
- Neutral to innovation investment

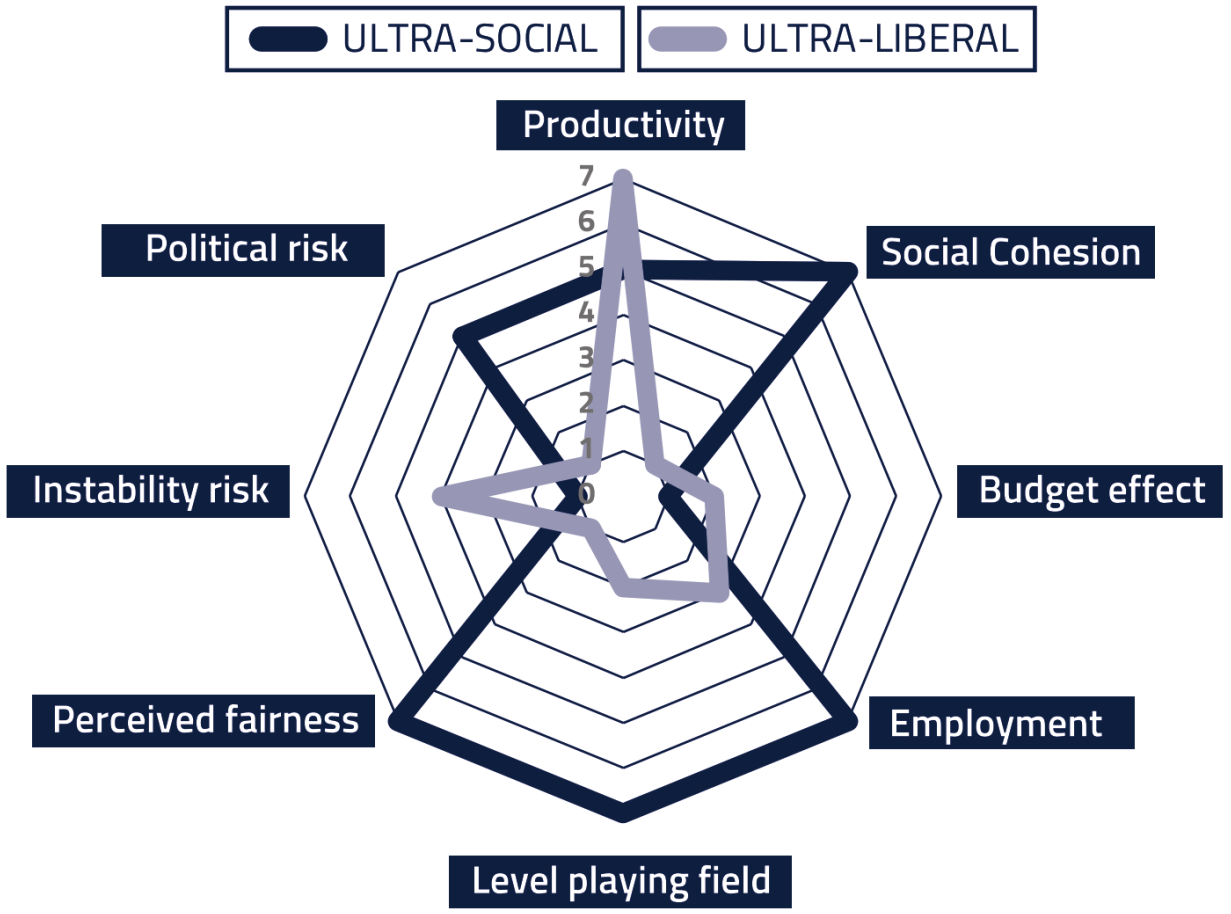
Four scenarios

Utopian	Lower taxes, increased spending on social topics
	Welcomed by social groups, leads to financial crises and political instability
Dystopian	Higher taxes, spent on R&D, no social protection
	High automation, but slow growth; more non-standard work, pressure on social systems
Ultra-Liberal	Corporate taxes cut; additiona machine-related R&D incentives; no social spending/investment
	Productivity and growth increasing, industrial employment decreasing; social cohesion eroding, no barriers to entry for non-EU incumbents
Ultra-Social	DIT, „Flexicurity 4.0“, cut on tax wages, human-side R&D incentives, invest in both human capital and R&D
	Increased wages and social cohesion, level playing field (platform, neutrality), political stability, Geopolitical risks and competition

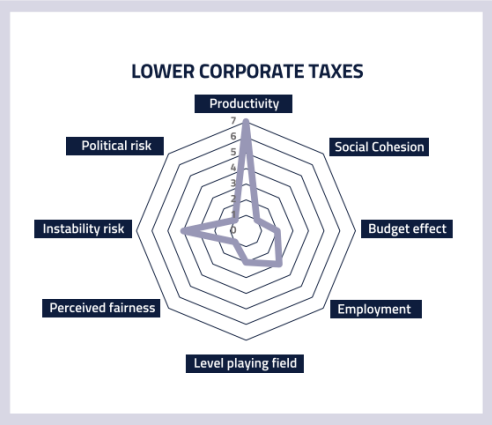


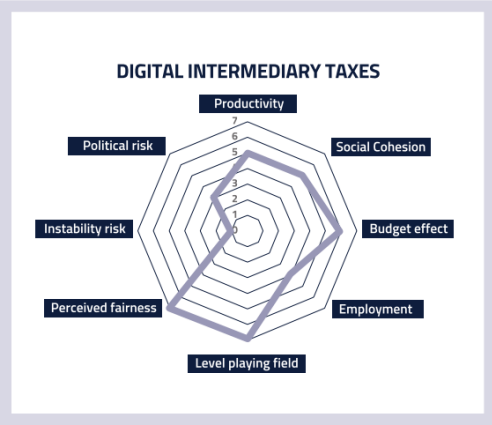
Ultra-liberal and ultra-social policies

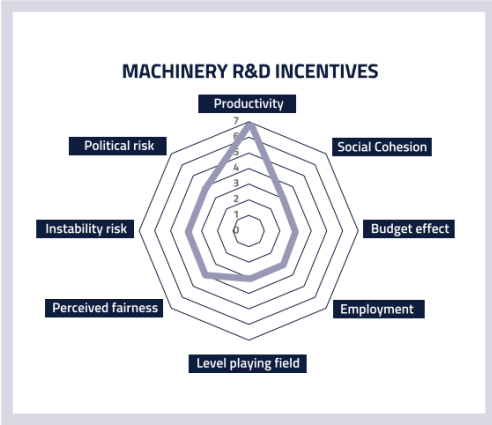
Quantified impact (relative scales) on policy outcomes in various fields

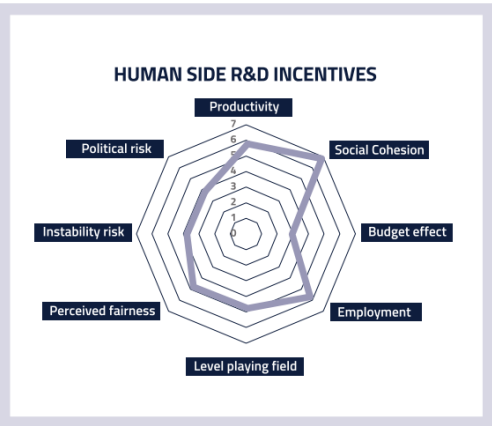


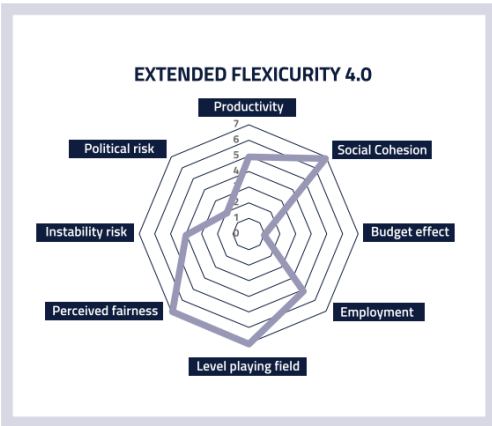
Policy measures must be combined to achieve a balance between seizing opportunities and managing risks

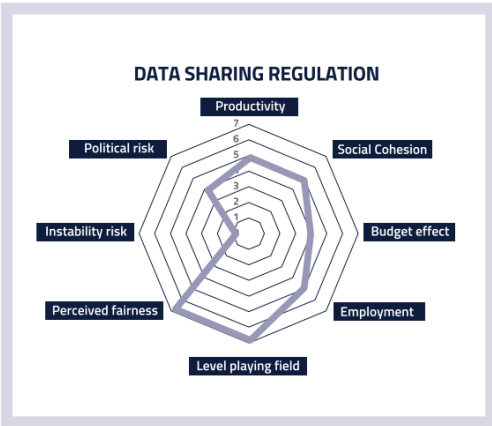












In Summary

Digitalization of European industry is a must for staying competitive

Growth opportunities entail major economic and social transformations

Policy makers must create the environment so that economic and social interests balance out

Crucial to achieve the right balance is **political cohesion internal to EU**

Report available here

https://www.eitdigital.eu/newsroom/publications/