

Opportunities from ideas and intangibles - digitalisation and cybersecurity policy

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**Safe and Ethical Cyberspace, digital assets and risks:
*How to assess the intangible impacts of a growing phenomenon?***

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Three transformations: Opportunities for economy and society, governments and citizens

- Knowledge economy and society: intangibles transform ideas, data and technology to innovations
- Digitalisation as critical infrastructure broadens the boundaries of communication and exchange in the economy and society (citizens)
- Globalisation opportunities in the global value chains

They are overall - Examples

- Digital business models up-scaled: Amazon, Facebook, Uber, Spotify.. among others
- Artificial intelligence, Industry 4.0
- e-government and digital society – Estonia
- Distinction between producers and users get blurred

The three transformations also challenge economies, societies and government

- Knowledge economy and society is highly competitive and potentially unequal – there are winners and losers
- Digitalisation can have negative social and unethical effects; cyberattacks can paralyse societies, economies, governments and even democratic foundations – high risk and social cost (trust)
- Globalisation increases competition and change in the economy and society further; winning or losing depends on your position in the global value chain and on your capacity to change; strategic assets can lose the value very fast

What are the conditions to exploit the three opportunities?

- Ideas production in the public and private research and use – from everywhere
- New innovative business models of start-ups and existing firms who take-up and combine ideas, big data, skills, organisational capital and digital skills
- Availability of finance and risk finance to start-ups, to modernise and to scale-up
- Digital infrastructure for the economy, society and governments in place
- Cybersecurity is an essential and necessary condition: trust and to feel safe on line, to fight cyber-criminality, espionage – but has a high cost
- Open trade system

Policies on cybersecurity

- Companies, governments and citizens need to invest in digital skills
- Investment in digital skills of everybody: education systems, in firms
- National cybersecurity strategies: cybersecurity acts and laws
- EC new cybersecurity package (13. September 2017)
 - European Cybersecurity Agency (ENISA) to ensure coordination and cooperation with all other stakeholders
 - investing jointly in cybersecurity (part of the defence)
 - EU wide certification system for the Internet of Things (mutual recognition of the national certificates and labelling)
 - to shape global standards on digital safety and security

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Thank you for your attention!

(remark: these are my personal views)