

What challenges for global governance of Big Science and not so big?

PANEL: GLOBAL GOVERNANCE, BIG SCIENCE AND EUROPEAN SCIENCE

ŽANETA OZOLIŅA

PROFESSOR OF INTERNATIONAL RELATIONS, UNIVERSITY OF LATVIA

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Some reflections

Innovating Europe out of crisis – 2012





«We are concerned by the fractural state of the ERA today: (it is) still too much driven by inward national policies (...) In view of the challenges our planet and Europe faces, we must act and act now. Otherwise, Europe will not only become marginalised in a global market, but will fail to contribute to solving our greatest challenges.»

ERAB, 2012

Is there something new after 2012?

A few examples of international governance

- ▶ 1947 – the Nuremberg Code – informed consent, voluntary participation in scientific experiments
- ▶ 1964 – World Medical Association's Declaration of Helsinki – to regulate research (revised several times)
- ▶ 1999 – Declaration on Science and the Use of Scientific Knowledge
- ▶ 2000 - European Charter of Human Rights – applicable to research policy; Ethic Review of all EU funded research projects – followed by ESF and ALLEA «European Code of Conduct for Research Integrity»
- ▶ More initiatives on the rise – Social Contract in the Age of Artificial Intelligence

Social Contract in the Age of Artificial Intelligence

- ▶ AI must respect fundamental human rights such as human dignity, rule of law, and privacy protection.
- ▶ AI systems must be considered from a multi-stakeholder perspective --- for the individual and for society as a whole
- ▶ The Social Contract for the AI Age is a basis to achieve sustainable and inclusive development for a global community that is fair, equitable, and prosperous. It is designed to apply the concept of a people-centered economy and to create a trustworthy AI, data, and Internet ecosystem for work and life.
- ▶ The Social Contract for the AI Age should be transparent and accountable, and follow standards based on policies driven by trustworthy data. The UN Sustainable Development Goals data metrics and the World Economic Forum Environmental, Social, and Governance (ESG) metrics, should provide citizens and organizations with reliable data that enables well-informed policy choices
- ▶ Communities must have control over their data. Data is the basis of self-determination and provides the ability to measure the impact of actions and policy in the AI realm
- ▶ Data literacy at all levels of society, together with open, trustworthy information, is the basis for an intelligent, thoughtful society.



What is the account of European expectations of global governance

- ▶ Open
- ▶ Transperant
- ▶ Inclusiv
- ▶ Accountable
- ▶ Effective
- ▶

▶ BUT

Challenges

▶ MISTRUST

In science (Astra zeneca case)

In governments

In institutions

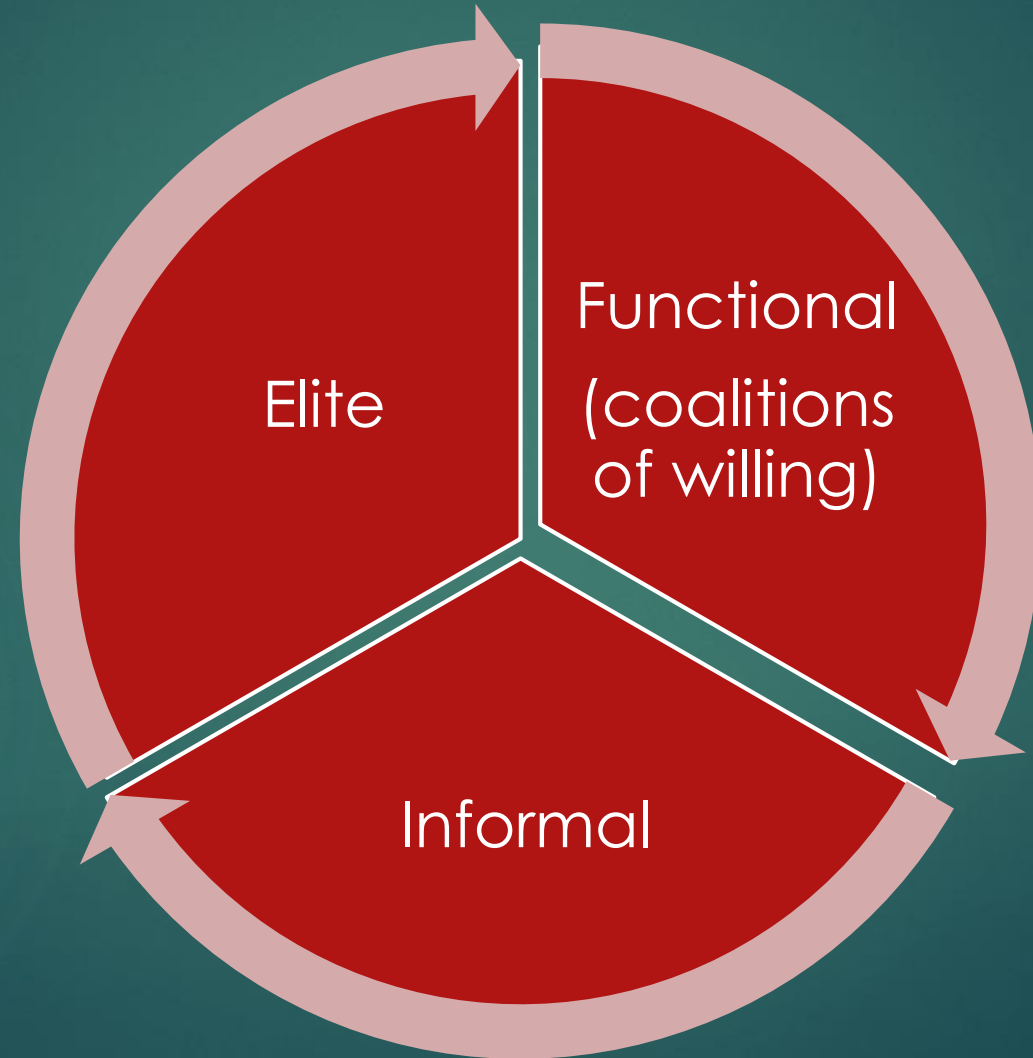
In law and international law

In multilateralism – role of international organizations

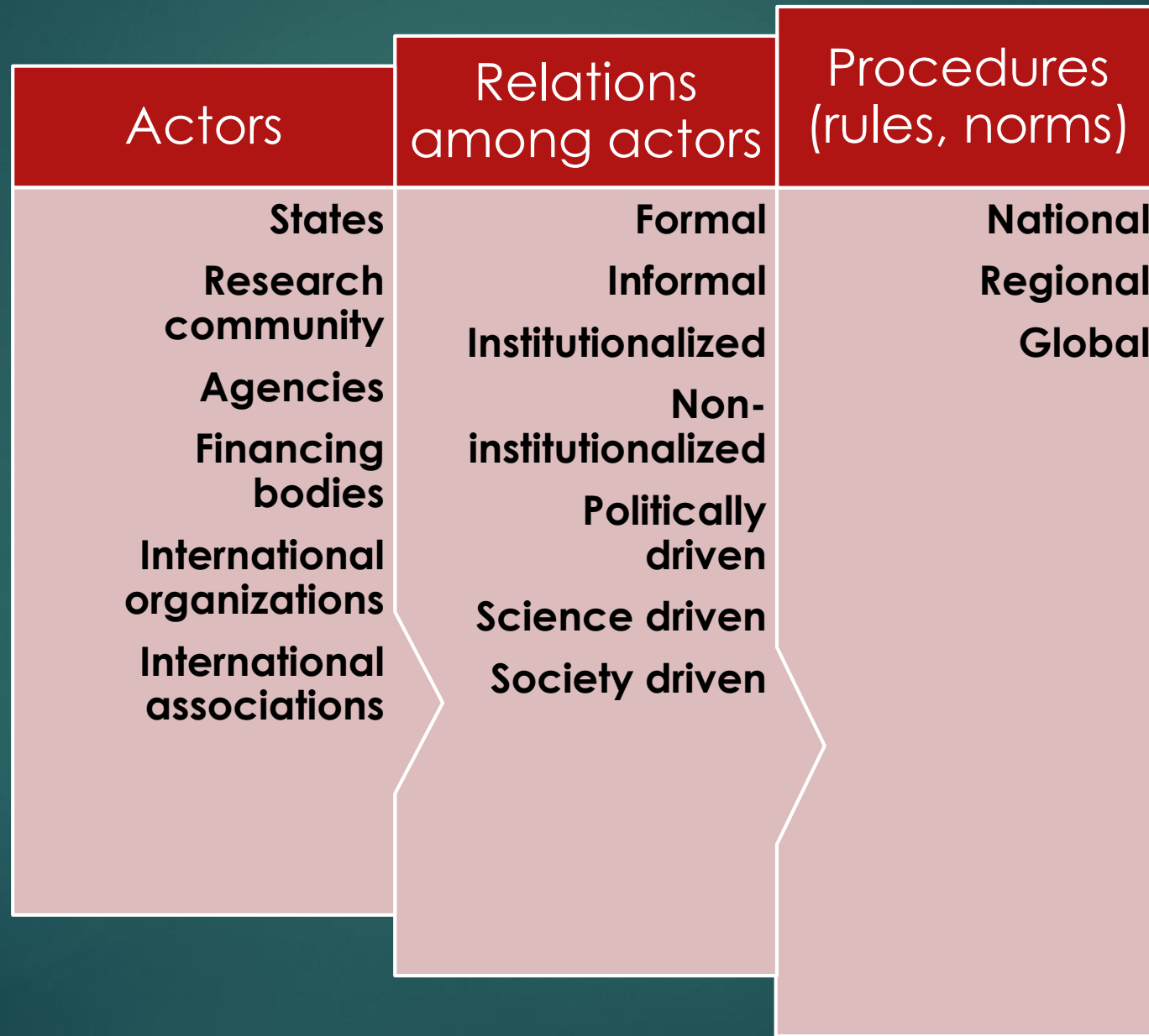
Multilateralism – what kind?

- ▶ Orderly or messy
- ▶ Hard or soft
- ▶ Formalised or informal
- ▶ And more...

Multilateralism (according to R. Haas)



Multilateral governance of science



Challenges

▶ VALUES

- ▶ Role of values – would like to argue that will increase but this would be a normative perspective
- ▶ Issue of values should be equally addresses by society of science, society of politicians, society of business and society at large. Interpretations could be diverse; even if on European level one language could be spoken, on the global level...
- ▶ Value of science, science as producer of values – peace, collaboration, openness,...
- ▶ Where is the line between big science and economics, political interests

Challenges

▶ FINANCING

- ▶ Who decides how big science should be financed and what science
- ▶ To what extent public bodies are capable to invest public funds in future relevant research
- ▶ To what extent public bodies are able to answer the question - What big science is for – problem solution, generating wealth, responding to public demand, create new knowledge, to drive innovation

Challenges

▶ INSTITUTIONS

- ▶ Role of Universities
- ▶ Role of public organizations
- ▶ Role of privat institutions

Challenges

▶ COHESION AND EQUALITY

Evaluated ERC starting grants by country

Country	2007	2015	2020
Austria	148	57	77
Bulgaria	44	3	2
Croatia	19	5	4
Estonia	11	2	13
Finland	226	99	112
France	691	206	285
Germany	988	339	478
Latvia	5	2	1
Lithuania	17	1	5
Slovakia	36	4	4
Sweden	454	91	154

Granted ERC starting grants by country

Country	2007	2015	2020
Austria	15	12	12
Bulgaria			(since 2007 - 1)
Croatia			(since 2007 - 2)
Estonia			(since 2007 - 5)
Finland	7	5	3
France	22	32	24
Germany	24	23	19
Latvia			(since 2007 - 0)
Lithuania			(since 2007 - 0)
Slovakia			(since 2007 - 1)
Sweden	11	13	21

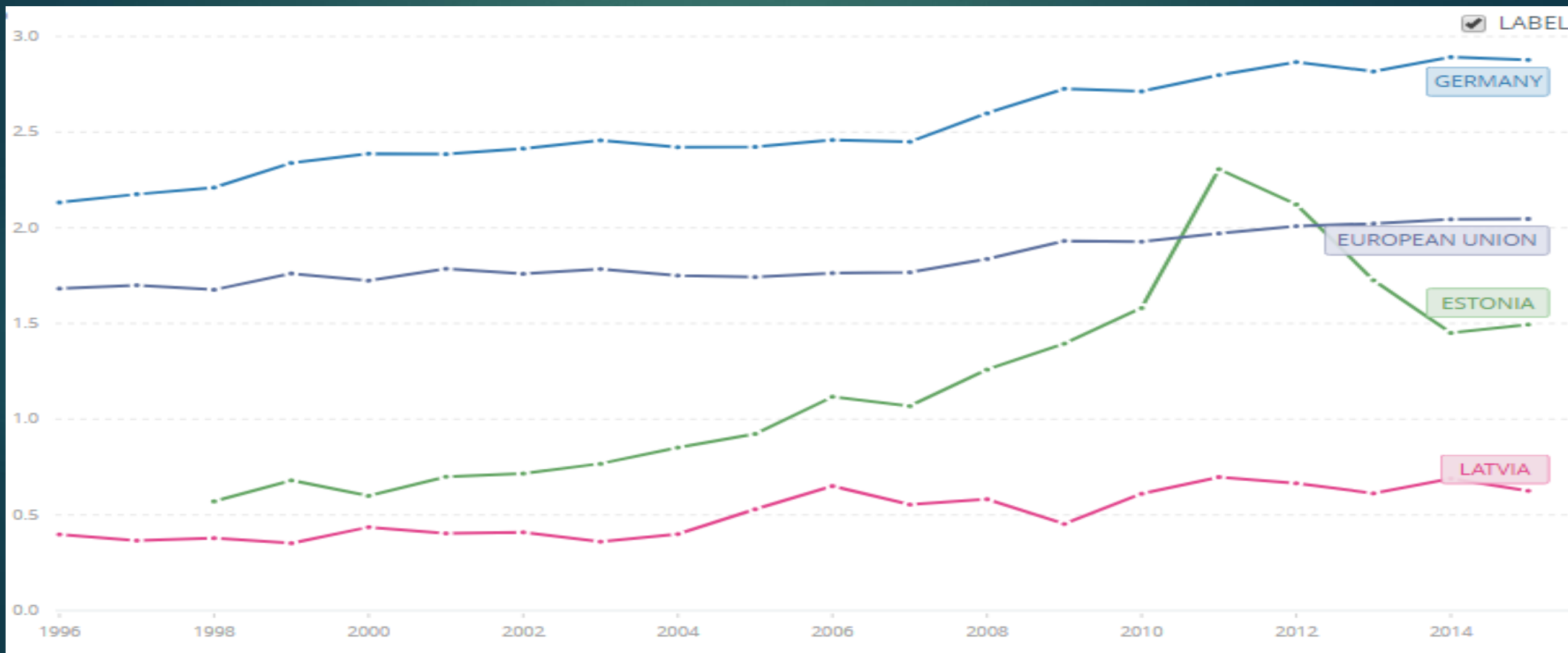
Granted ERC consolidator grants by country

Country	2013	2015	2020
Austria	5	7	18
Bulgaria			(since 2013 - 2)
Croatia			(since 2013 - 2)
Estonia			(since 2013 - 2)
Finland	4	6	6
France	42	31	34
Germany	45	46	50
Latvia			(since 2013 - 0)
Lithuania			(since 2013 - 0)
Slovakia			(since 2013 - 1)
Sweden	10	12	14

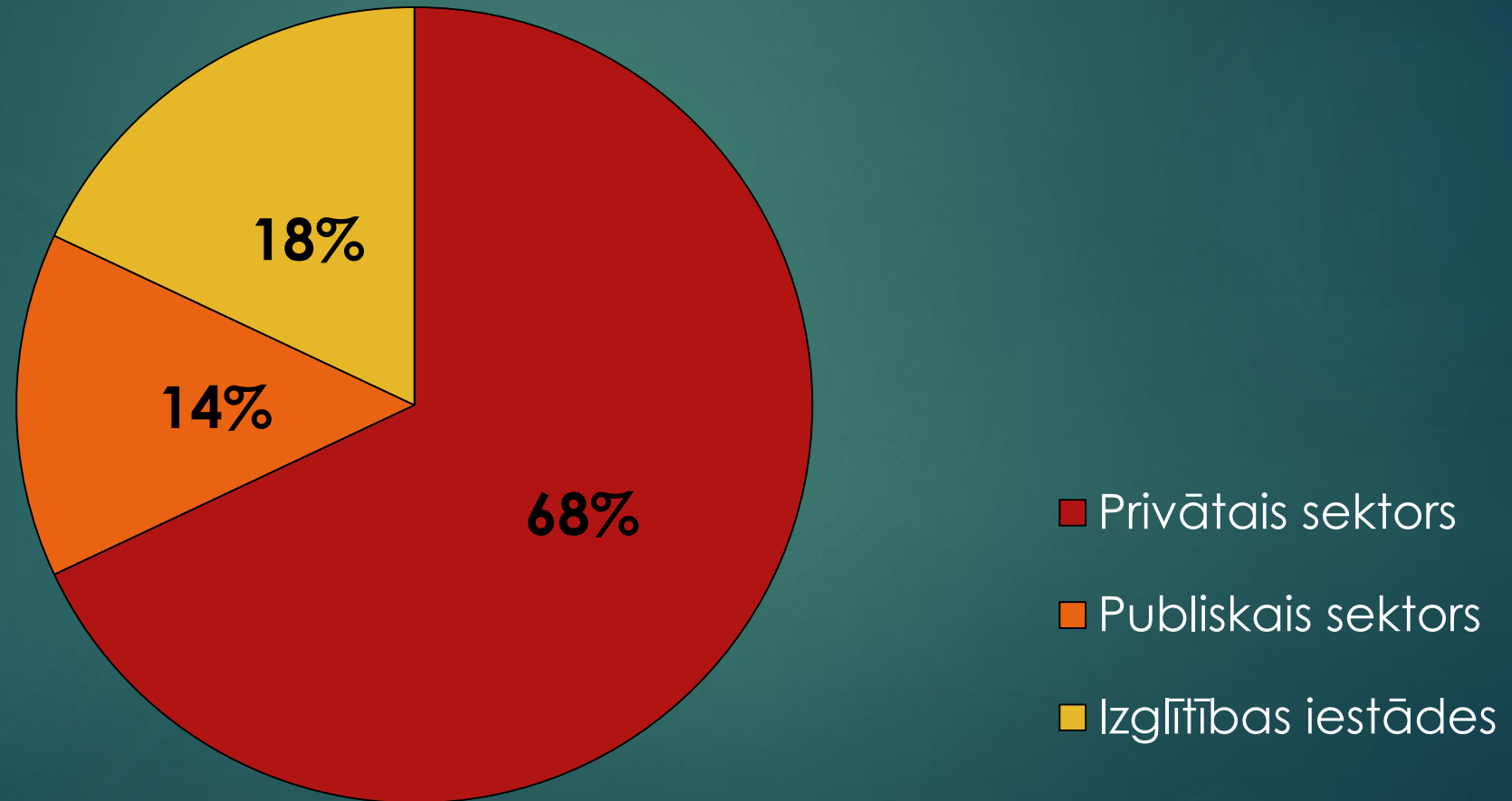
Horizon 2020

Country	Success rate (%)	Participation rank	Budget share rank
Austria	16,26	10 out of 28EU	9 out of 28EU
Bulgaria	11,24	21 out of 28EU	23 out of 28EU
Croatia	14,19	23 out of 28EU	25 out of 28EU
Estonia	13,56	22 out of 28EU	21 out of 28EU
Finland	13,26	13 out of 28EU	12 out of 28EU
France	15,41	4 out of 28EU	3 out of 28EU
Germany	15,08	1 out of 28EU	1 out of 28EU
Latvia	14,57	27 out of 28EU	26 out of 28EU
Lithuania	14,36	26 out of 28EU	27 out of 28EU
Slovakia	13,60	24 out of 28EU	24 out of 28EU
Sweden	14,73	9 out of 28EU	8 out of 28EU

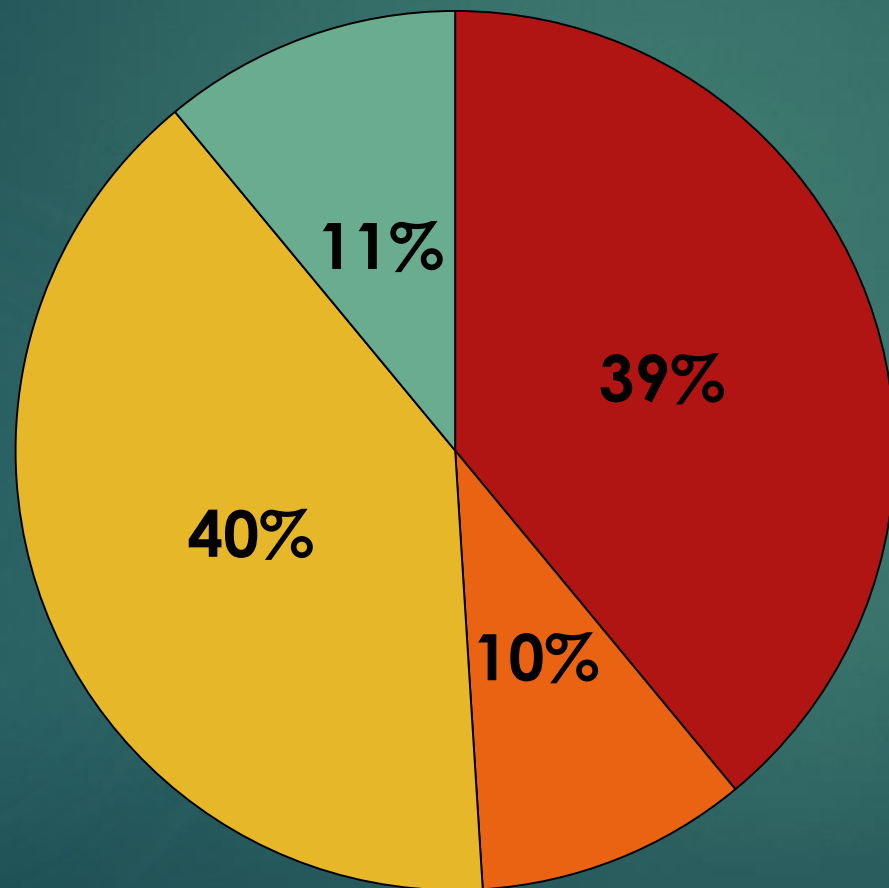
R&D spending as % of GDP



Finansing – Germany



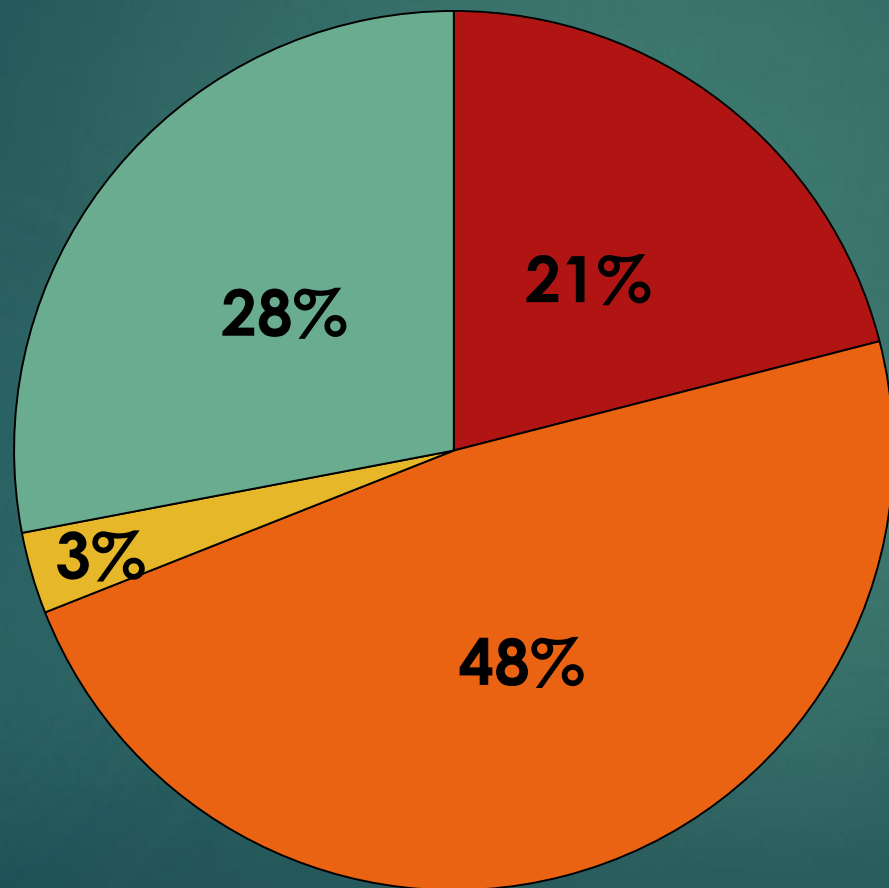
Estonia



- Privātais sektors
- Publiskais sektors
- Izglītības iestādes

2015

Latvia



- Privātais sektors
- Publiskais sektors
- Izglītības iestādes

Added value for global governance

- ▶ Global science diplomacy
- ▶ Increased networking
- ▶ Increased mobility
- ▶ Communication
- ▶ Engagement in International Organizations



THANK YOU!