

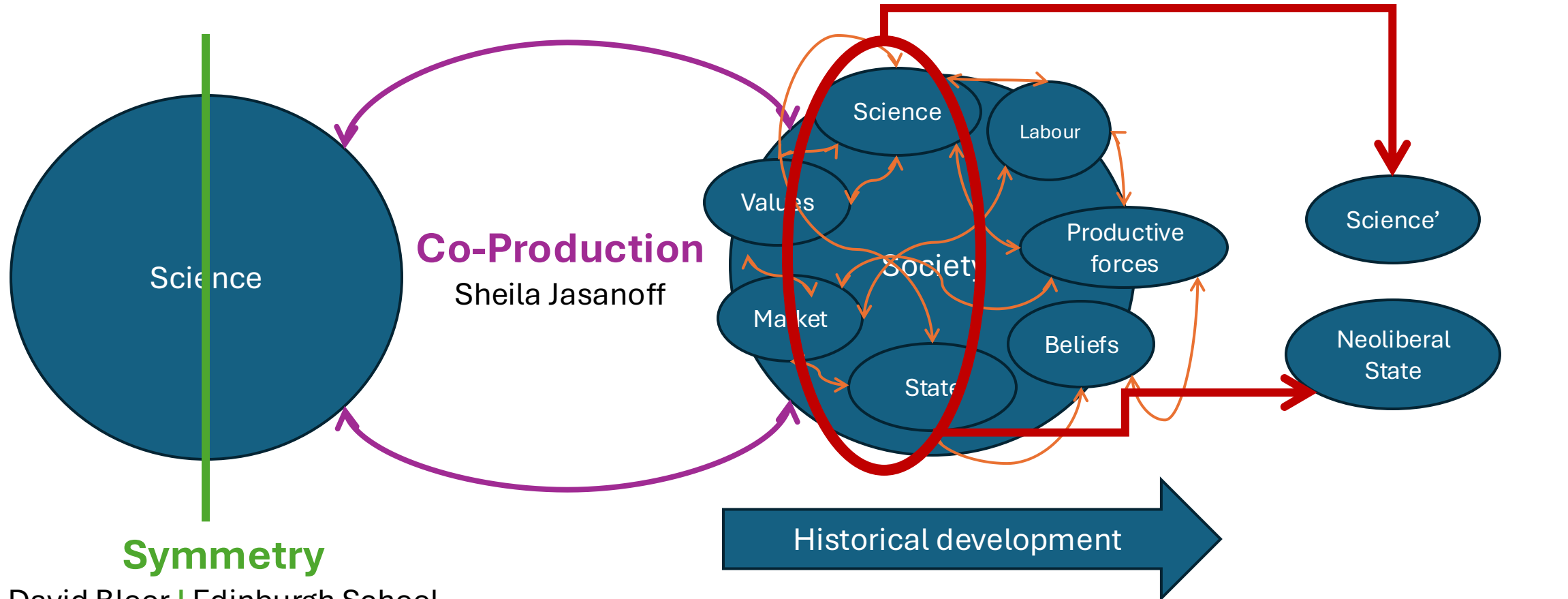
What is the role of the economy in regulating the relationships between science and political decision-making?

Dialectical Materialism

Hilary Rose, Steven Rose, Richard Levins, Richard Lewontin

Subsumption

Philip Mirowski, Luís Arboledas-Lérida

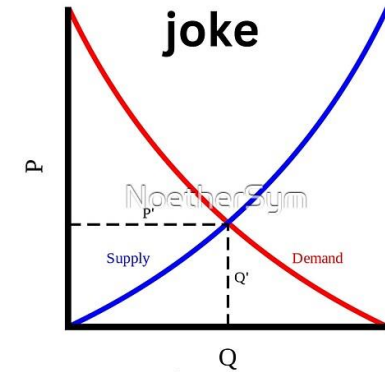


What is the role of the economy in regulating the relationships between science and political decision-making?

What is economy?



I have an economics
joke



but there is no demand

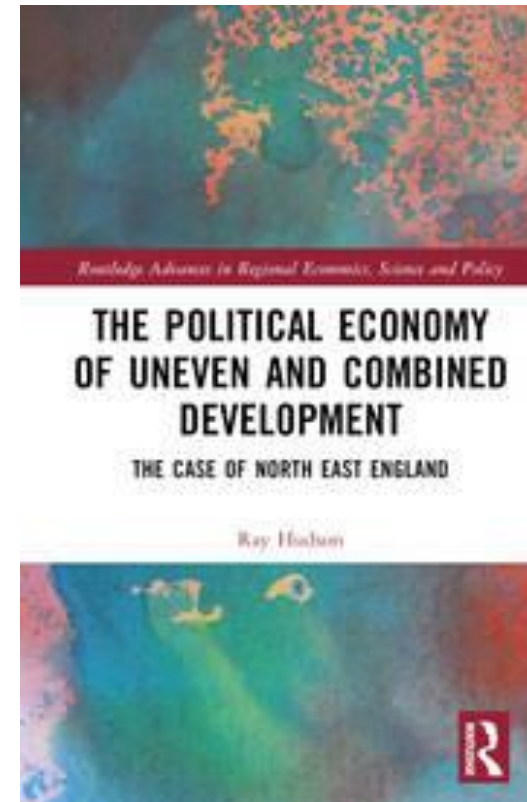
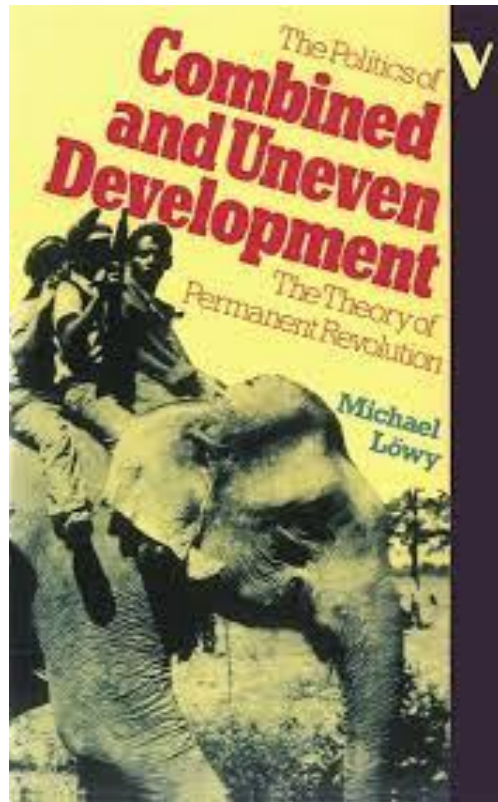
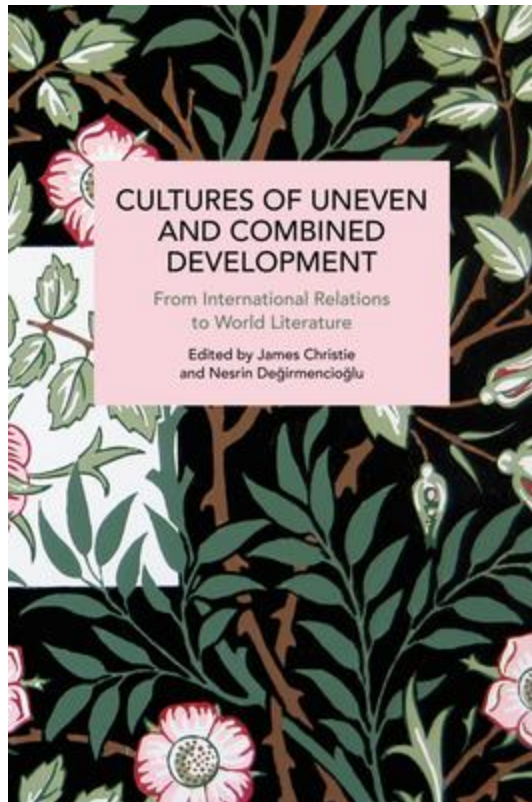
What is the role of the economy in regulating the relationships between science and political decision-making?

What is economy?

	<i>Liberal market economy</i>	<i>Coordinated market economy</i>	<i>Mixed market economy</i>
Examples	UK, Ireland	Germany, Belgium, Austria, Netherlands	France, Italy, Spain, Portugal, Greece
Growth model	Demand-led	Export-led	Demand-led
Asset specificity	Low	High	Low
Wage coordination	Low	High	Limited
Role of state	Limited	Coordinator	Compensator

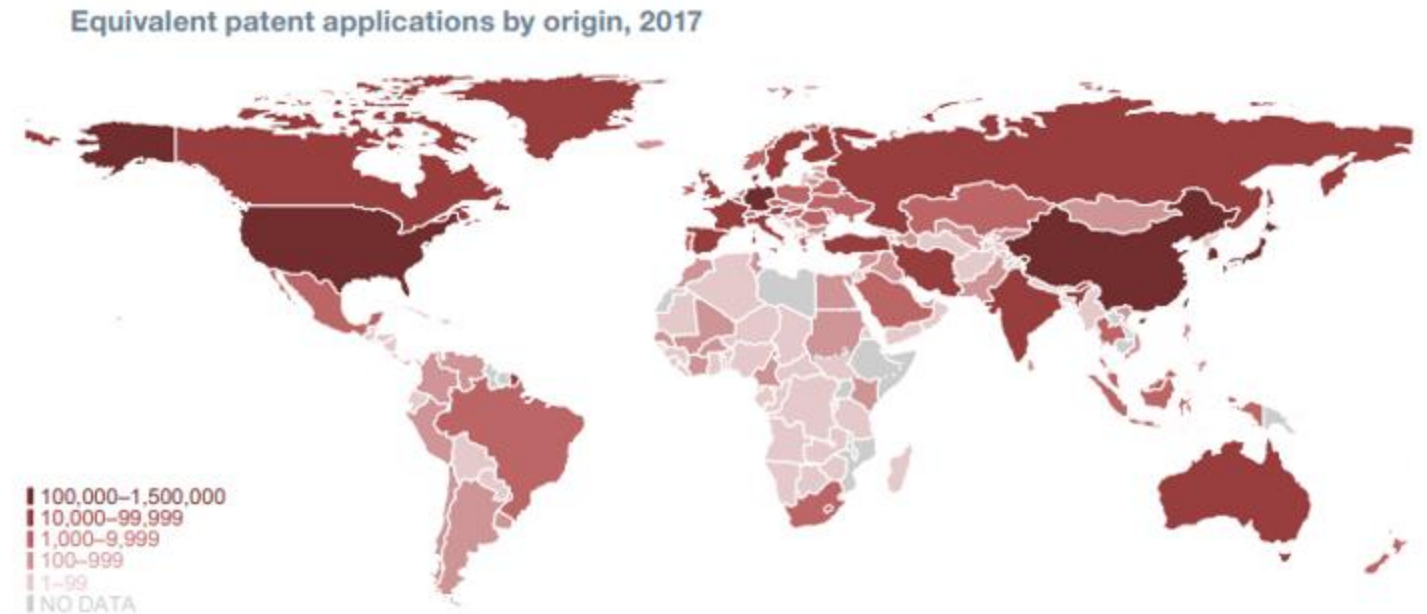
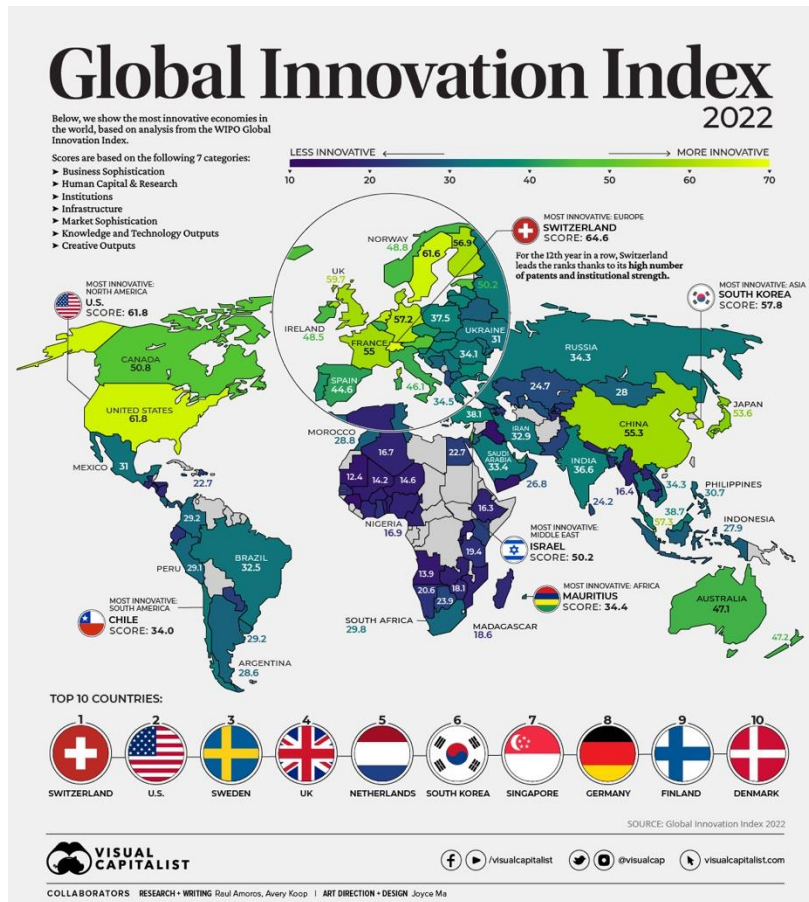
What is the role of the economy in regulating the relationships between science and political decision-making?

What is economy?



What is the role of the economy in regulating the relationships between science and political decision-making?

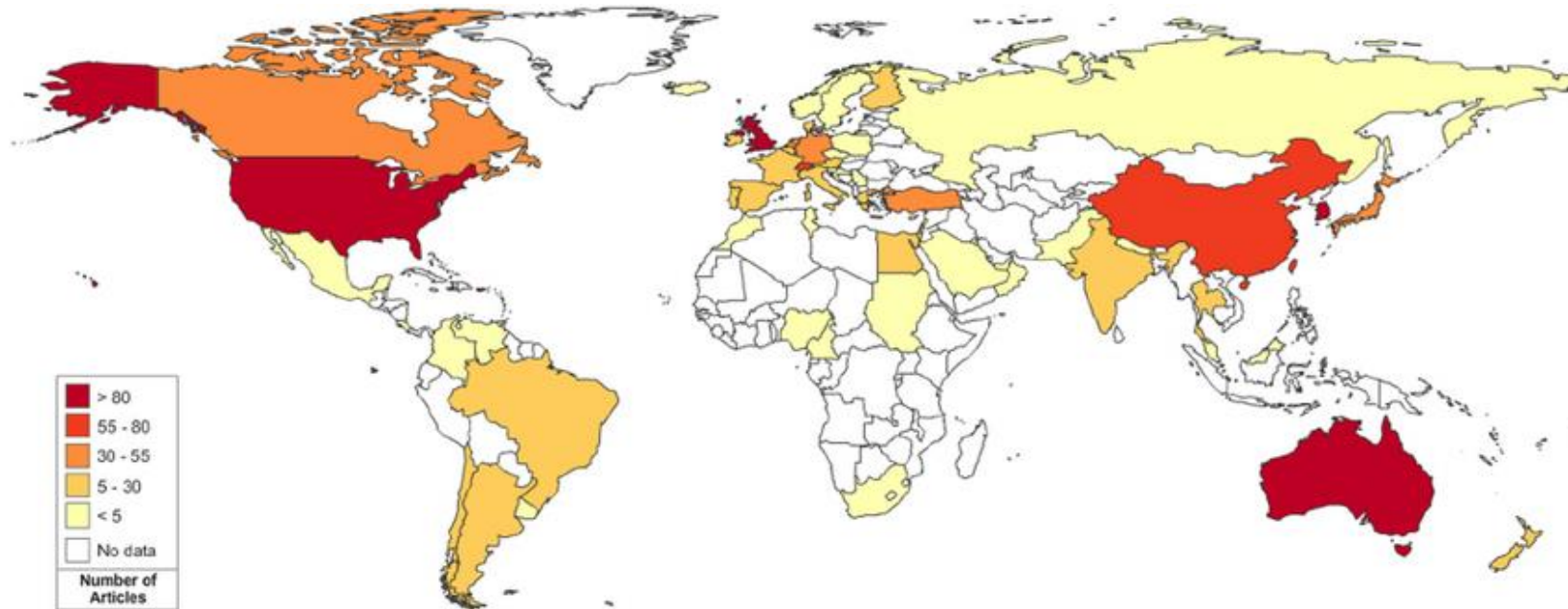
What is economy?



Demeter, M. (2019). The World-Systemic Dynamics of Knowledge Production: The Distribution of Transnational Academic Capital in the Social Sciences. *Journal of World-Systems Research*, 25(1), 112–144.
<https://doi.org/10.5195/jwsr.2019.887>

What is the role of the economy in regulating the relationships between science and political decision-making?

What is economy?



Demeter, M. (2020). *Academic Knowledge Production and the Global South: Questioning Inequality and Under-Representation*. Palgrave Macmillan.

What is the role of the economy in regulating the relationships between science and political decision-making?

What is decision-making?

Who gets what?

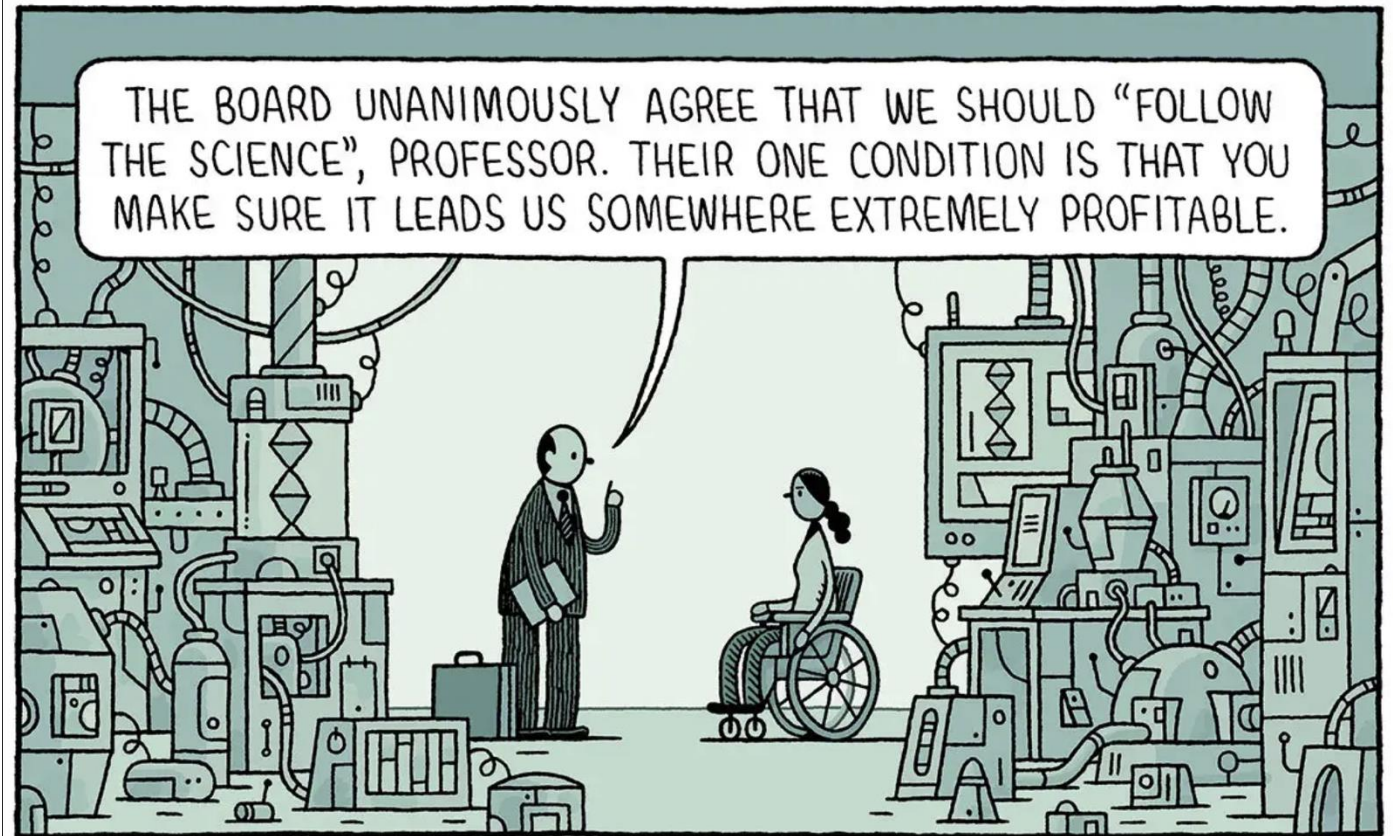
When?

How?



What is the role of the economy in regulating the relationships between science and political decision-making?

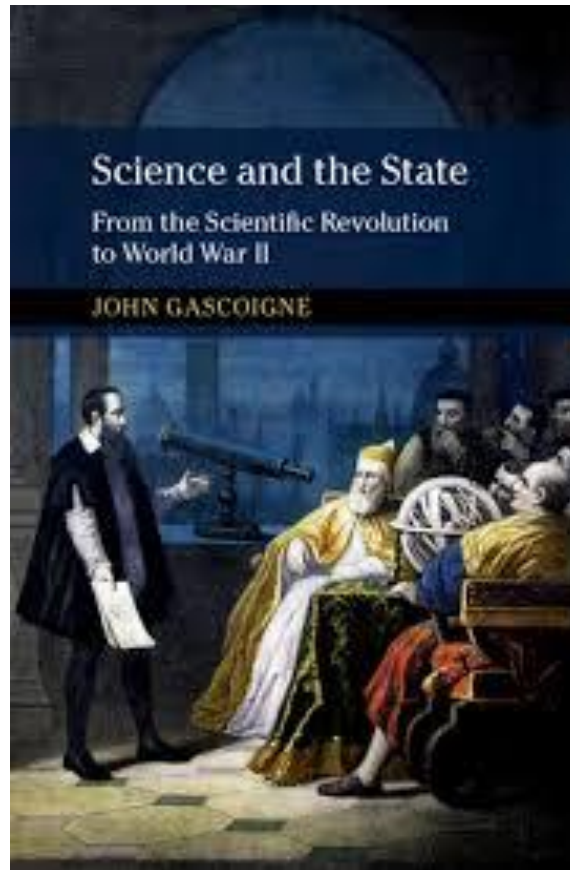
What is decision-making?



TOM GAULD for NEW SCIENTIST

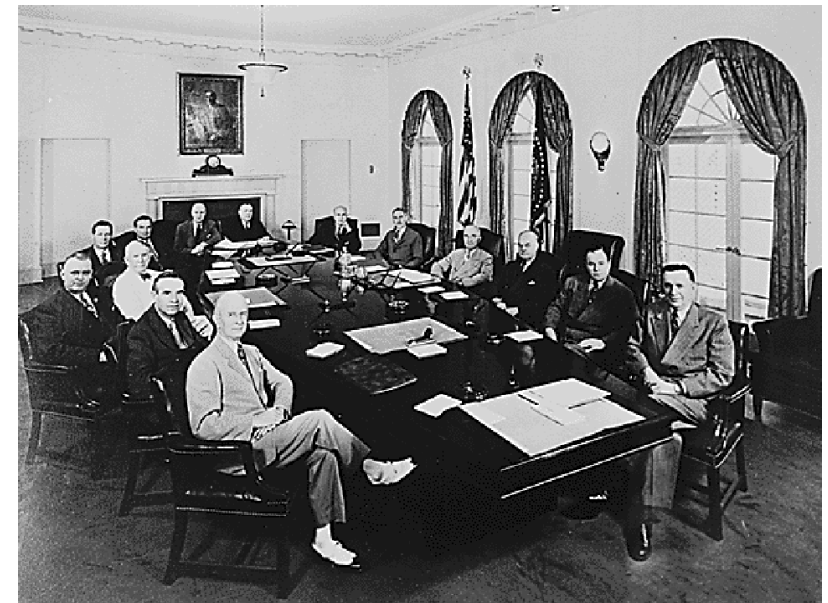
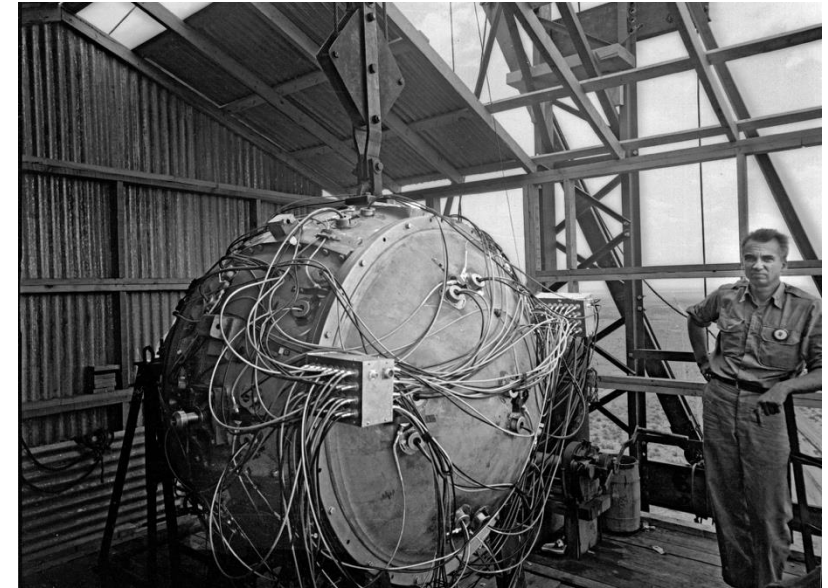
What is the role of the economy in regulating the relationships between science and political decision-making?

Science and the State



What is the role of the economy in regulating the relationships between science and political decision-making?

Science and the State

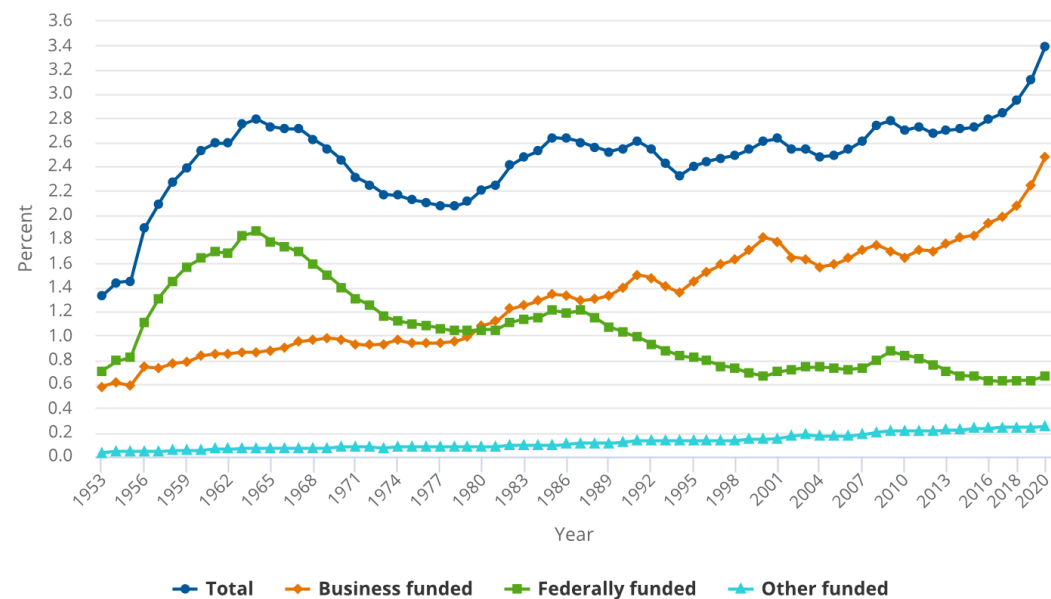


What is the role of the economy in regulating the relationships between science and political decision-making?

National Center for Science and Engineering Statistics | NSF 22-330

Figure 2

Ratio of U.S. R&D to gross domestic product, by source of funding for R&D: 1953–2020



GDP = gross domestic product.

Note(s):

The data for 2020 include estimates and are likely to later be revised. The federally funded data represent the federal government as a funder of R&D by all performers; similarly, the business funded data cover the business sector as a funder of R&D by all performers. The "other" category includes the R&D funded by all other sources—mainly, by higher education, nonfederal government, and nonprofit organizations. The GDP data used reflect the U.S. Bureau of Economic Analysis statistics of late October 2021.

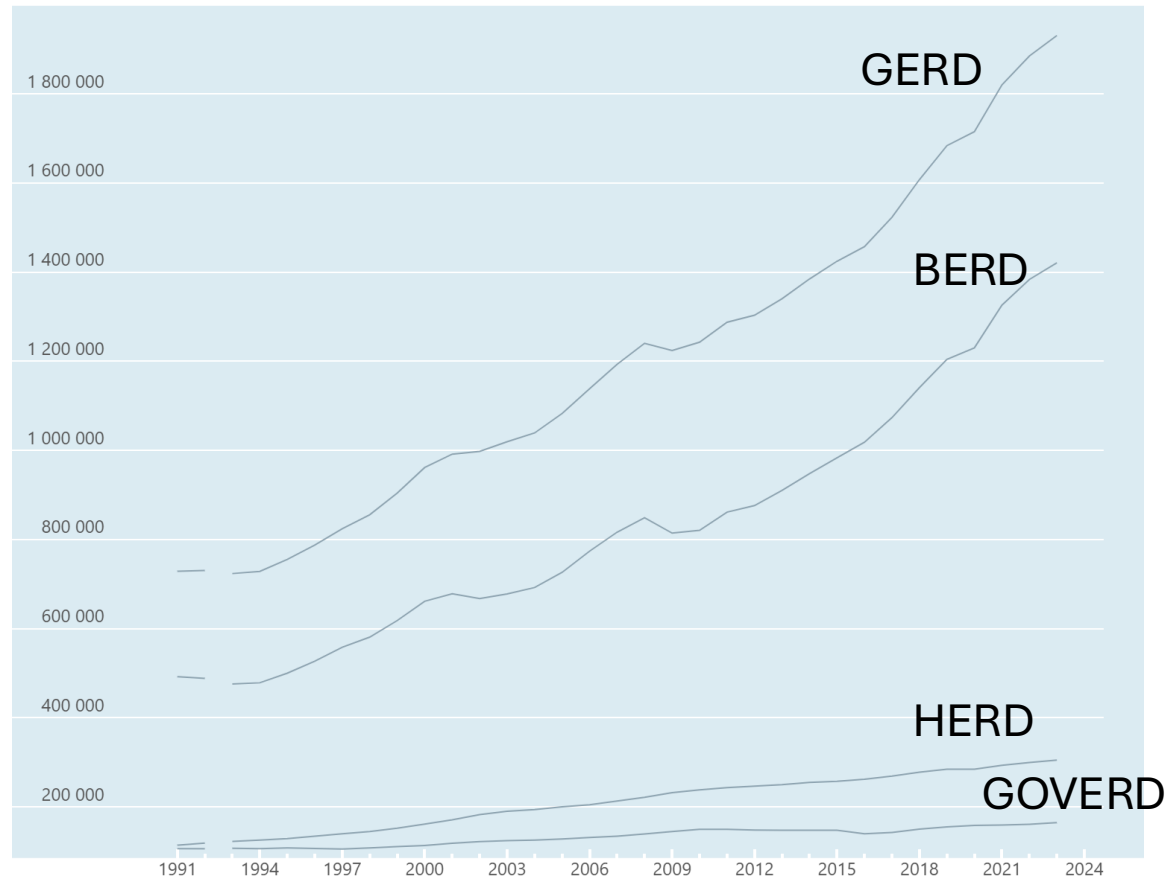
Source(s):

National Center for Science and Engineering Statistics, National Patterns of R&D Resources (annual series).

What is the role of the economy in regulating the relationships between science and political decision-making?

Main Science and Technology Indicators (MSTI database) ⓘ

Reference area: OECD



© Main Science and Technology Indicators (MSTI database) 

GERD - Gross Domestic Expenditure on R&D

Total intramural expenditure on R&D performed on the national territory in a given period, regardless of the source of funds.

BERD - Business Enterprise R&D

R&D expenditures performed by the business enterprise sector. It reflects private-sector R&D investment.

HERD - Higher Education R&D

R&D expenditures carried out by universities and other higher education institutions, including teaching hospitals and university research institutes.

GOVERD - Government R&D

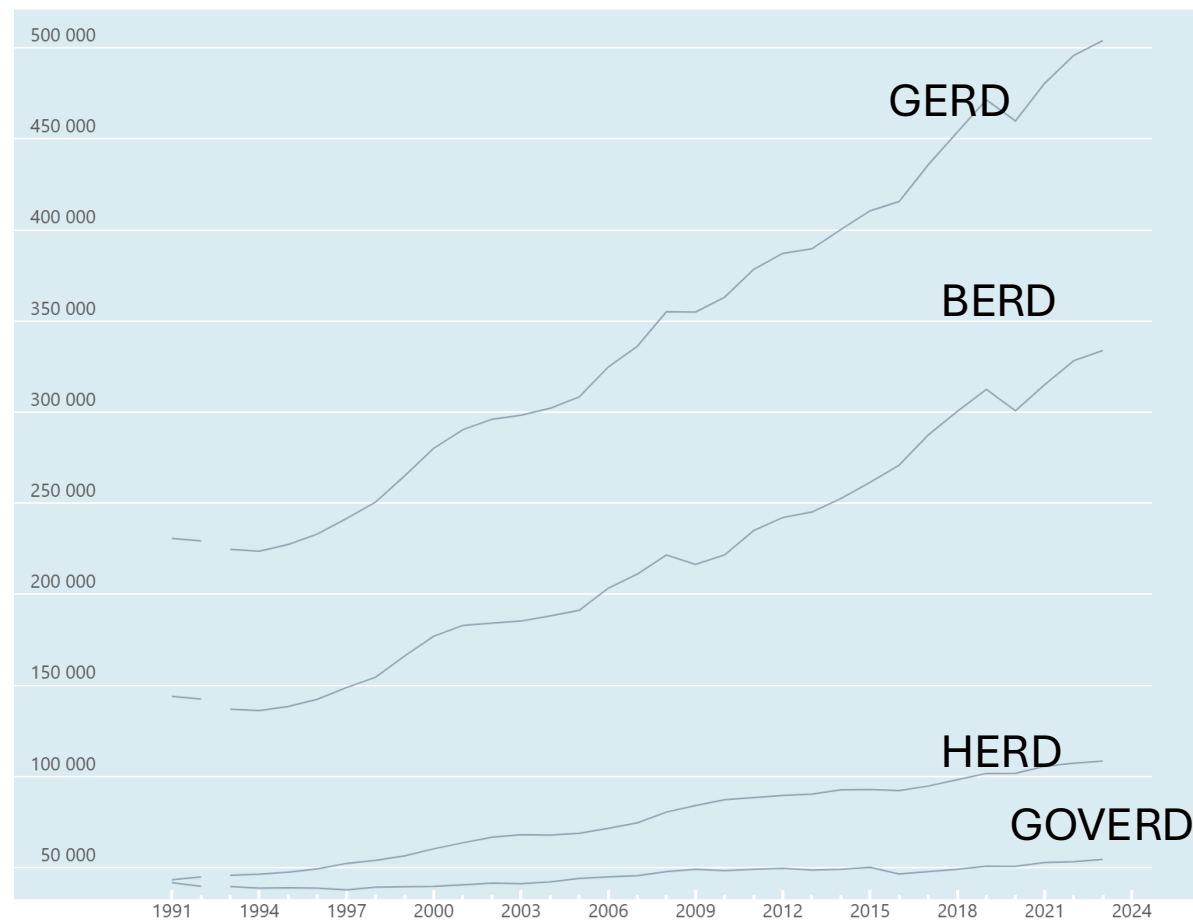
R&D expenditures performed by government institutions, including national laboratories and research agencies.

US dollars, PPP converted

What is the role of the economy in regulating the relationships between science and political decision-making?

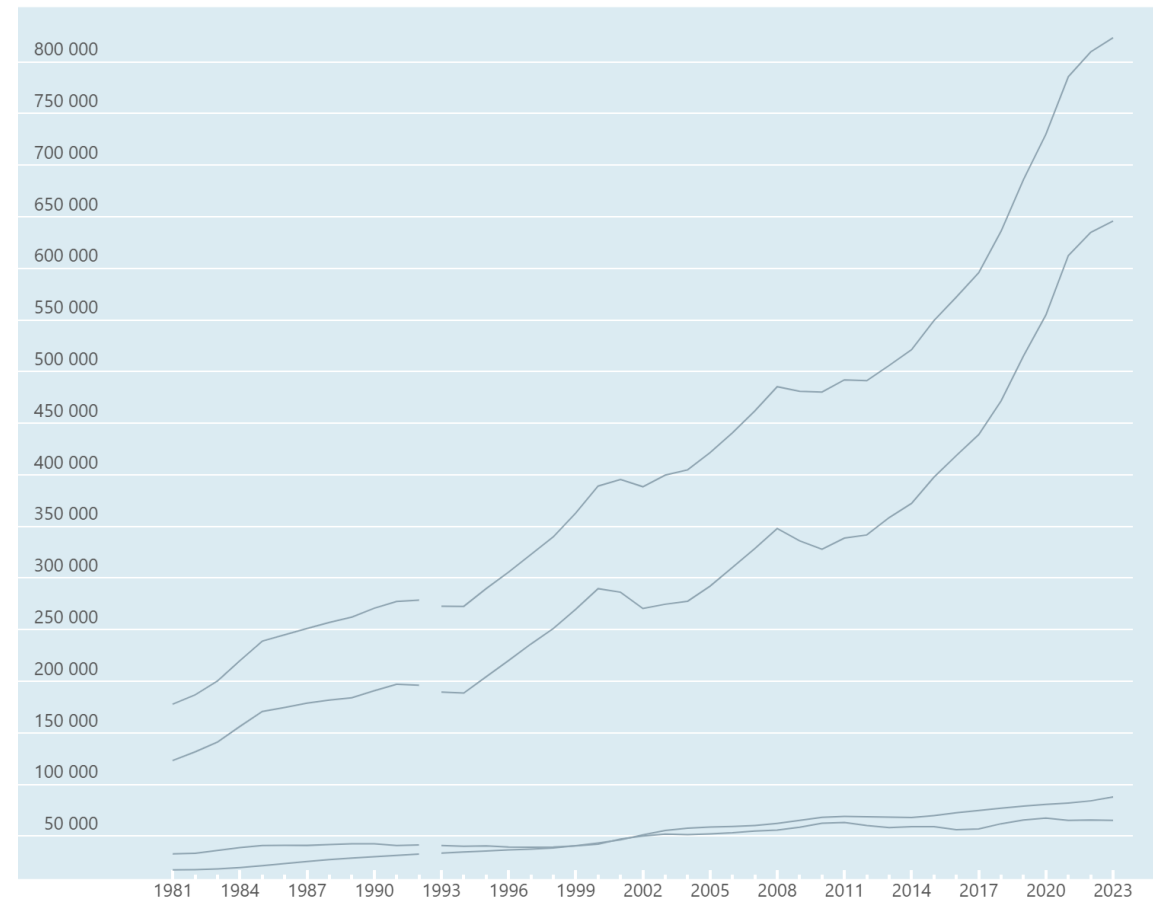
Main Science and Technology Indicators (MSTI database) ⓘ

Reference area: European Union (27 countries from 01/02/2020)



Main Science and Technology Indicators (MSTI database) ⓘ

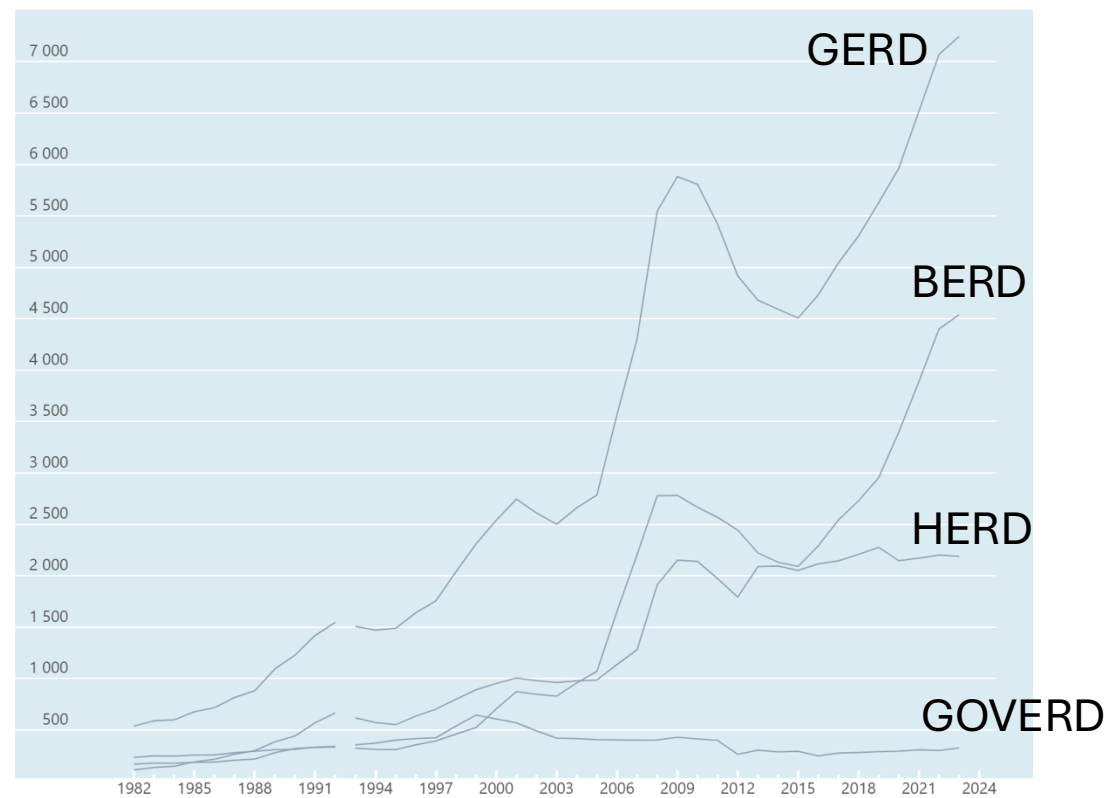
Reference area: United States



What is the role of the economy in regulating the relationships between science and political decision-making?

Main Science and Technology Indicators (MSTI database) ⓘ

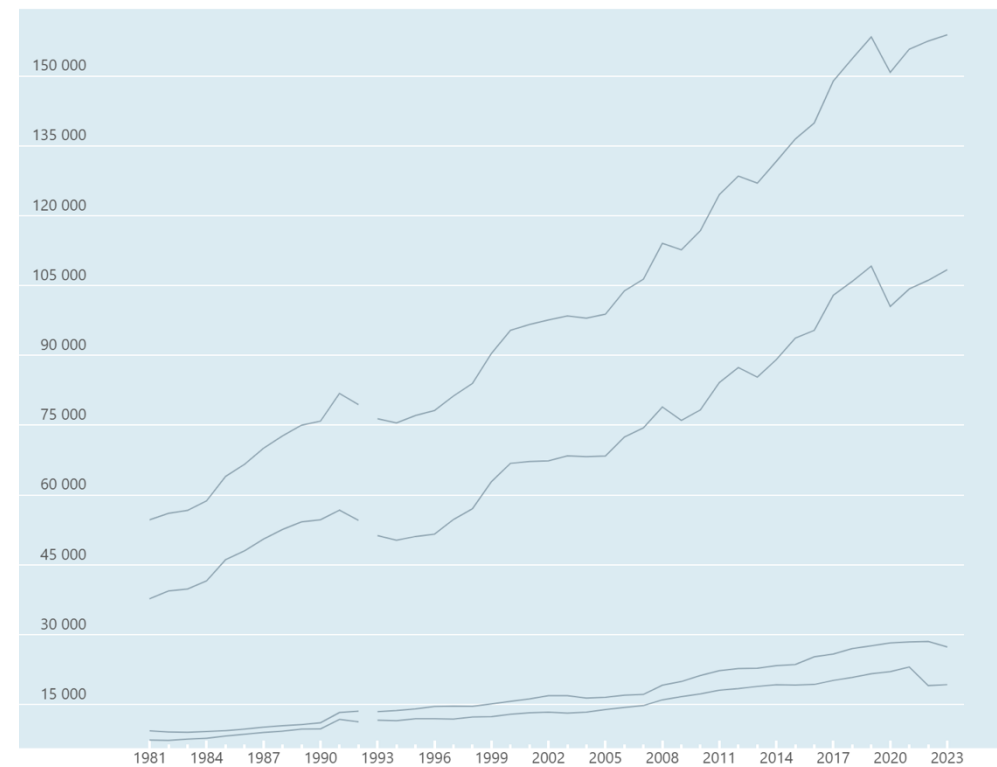
Reference area: Portugal



© Main Science and Technology Indicators (MSTI database) OECD

Main Science and Technology Indicators (MSTI database) ⓘ

Reference area: Germany

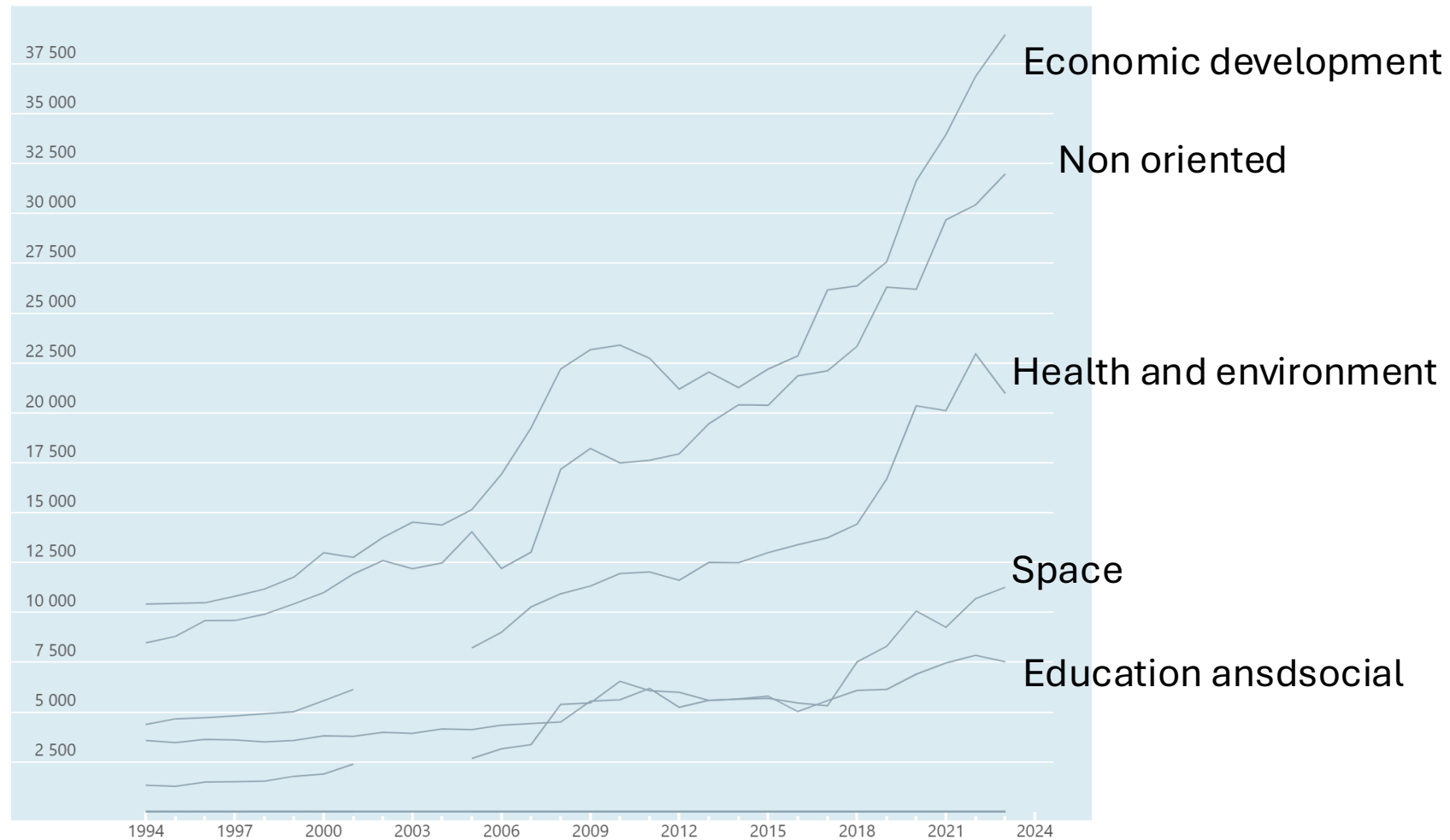


© Main Science and Technology Indicators (MSTI database) OECD

What is the role of the economy in regulating the relationships between science and political decision-making?

Main Science and Technology Indicators (MSTI database)

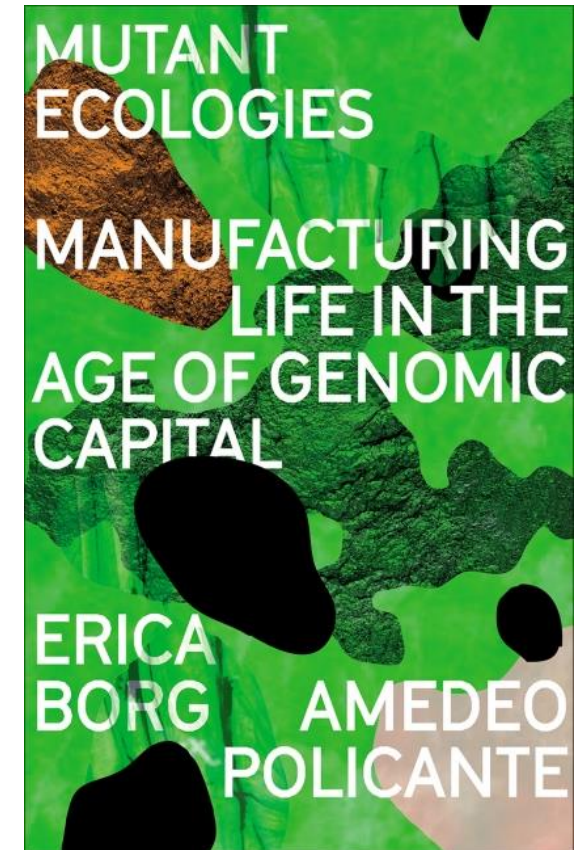
Reference area: European Union (27 countries from 01/02/2020)



What is the role of the economy in regulating the relationships between science and political decision-making?

Real subsumption

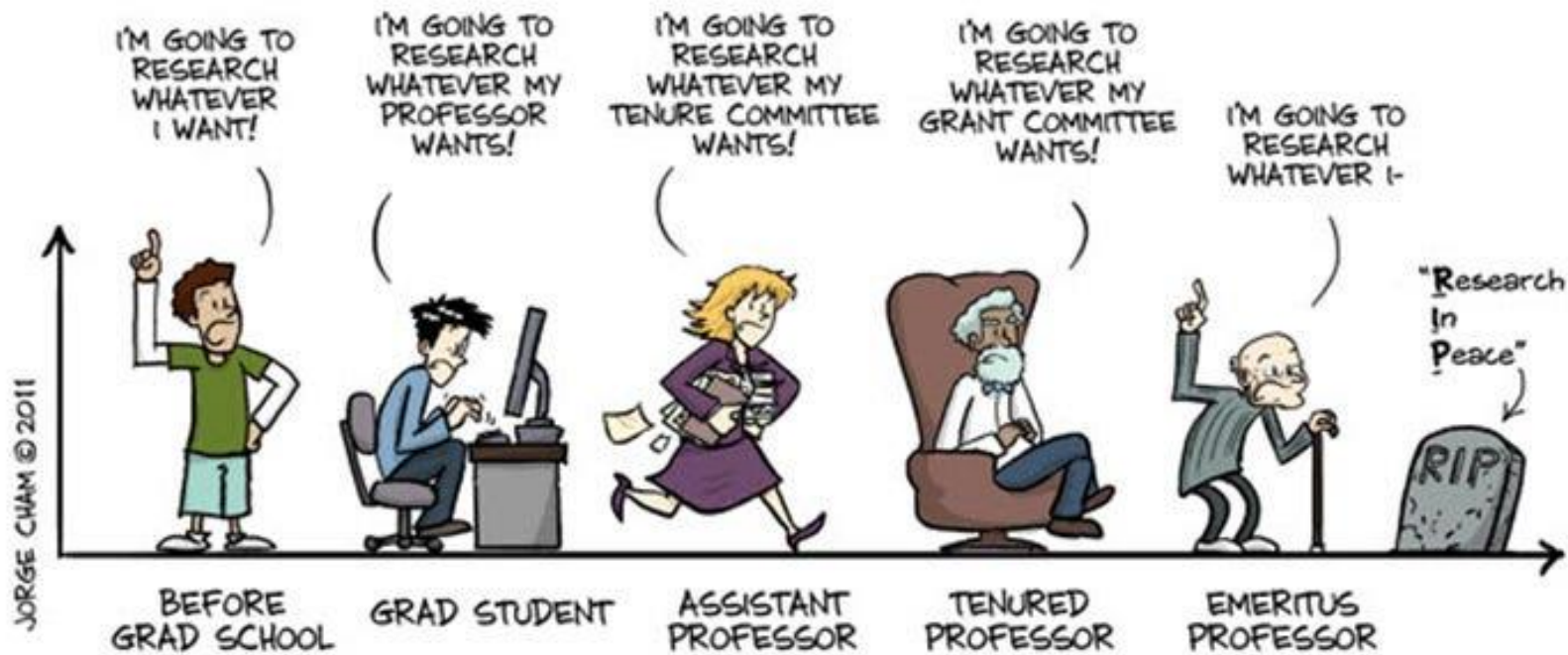
- **Defunding of Public Institutions**
- **Incentive for Private Investment** - SBIR/STTR Programs (USA); European Innovation Council (EIC) Fund, Advance Market Commitments (AMCs), Pre-Commercial Procurement (PCP); Stevenson-Wydler Technology Innovation Act (1980, USA)
- **R&D Tax Credits** - Allow companies to deduct a portion of their research and development expenses from their tax bill. Such as: United States: The Research & Experimentation Tax Credit (since 1981); United Kingdom: The R&D Tax Relief Scheme and Patent Box
- **Competitive Grant Structures/Mission-Oriented Grants**
- **Public-Private Partnership Frameworks** - Joint Technology Initiatives (JTIs – EU), such as Innovative Medicines Initiative (IMI); Co-funded by the European Commission and EFPIA (pharmaceutical industry). Bio-Based Industries (BBI): Brings together public funding and bioeconomy corporations. EU provides matching funds or even majority funding to incentivise private co-investment.
- **Privatisation of Outputs** - Bayh–Dole Act (USA, 1980); Patent and Trademark Law Amendments Act (1984, USA); European IP policies; Science Parks & Innovation Clusters - Silicon Valley, Cambridge Science Park (UK), Sophia Antipolis (France), Fraunhofer Institutes (Germany);
- **Court Decisions That Reinforced Commodification of Science** - Diamond v. Chakrabarty (1980, U.S. Supreme Court); Madey v. Duke University (2002, U.S. Court of Appeals), Association for Molecular Pathology v. Myriad Genetics, Inc. (2013, U.S. Supreme Court)



What is the role of the economy in regulating the relationships between science and political decision-making?

Real subsumption

THE EVOLUTION OF INTELLECTUAL FREEDOM



What is the role of the economy in regulating the relationships between science and political decision-making?

Contradictions

- **Epistemic logic of science**
- **Labour**
- **Science's ideological role vs critical potential**
- **Institutional contradiction**
- **Access**

What is the role of the economy in regulating the relationships between science and political decision-making?

Reclaiming the Public Good

- Reinvesting in Public Funding
- Democratising Governance
- Advancing Open Science
- Decolonising Knowledge Production
- Forging Strategic Alliances



What is the role of the economy in regulating the relationships between science and political decision-making?

