



The Role of Universities in Economic Growth – The German Situation

PD Dr. Ulrich Schmoch



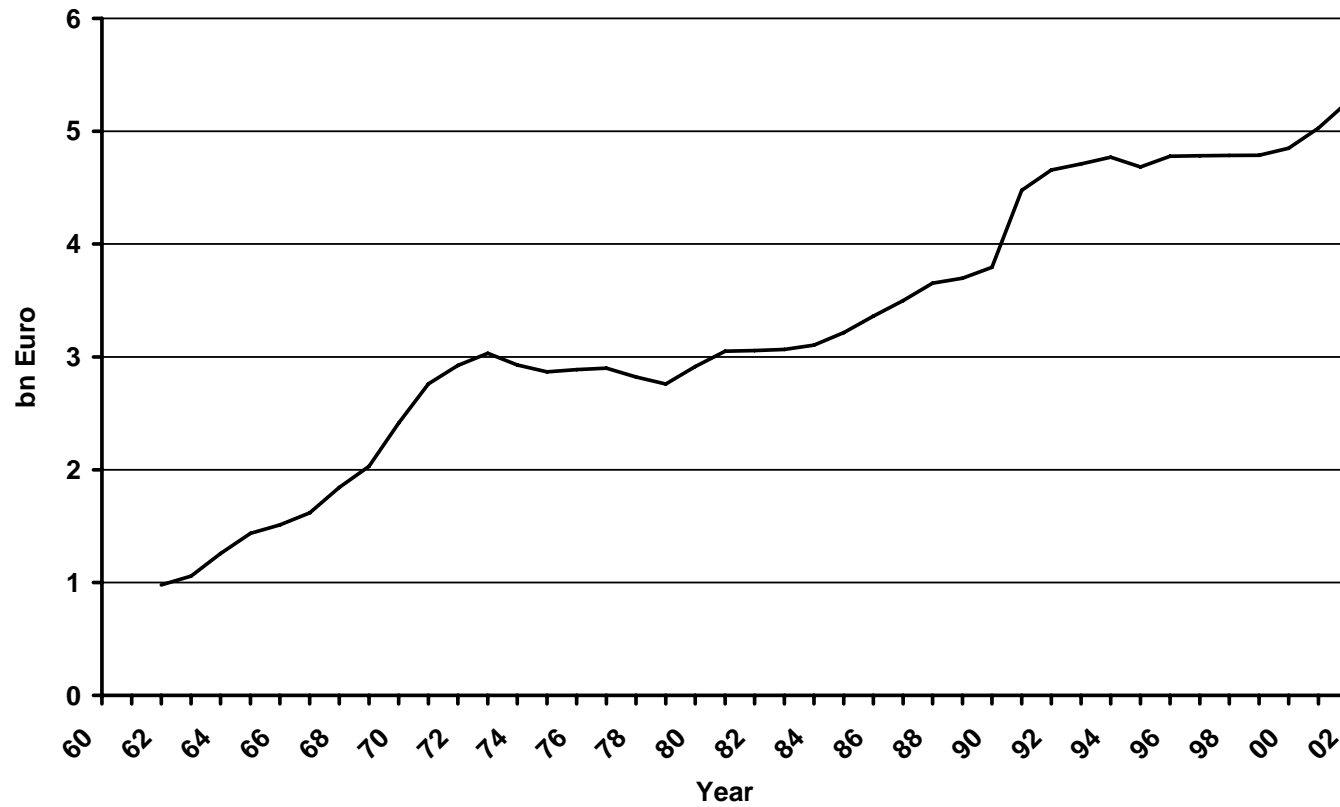
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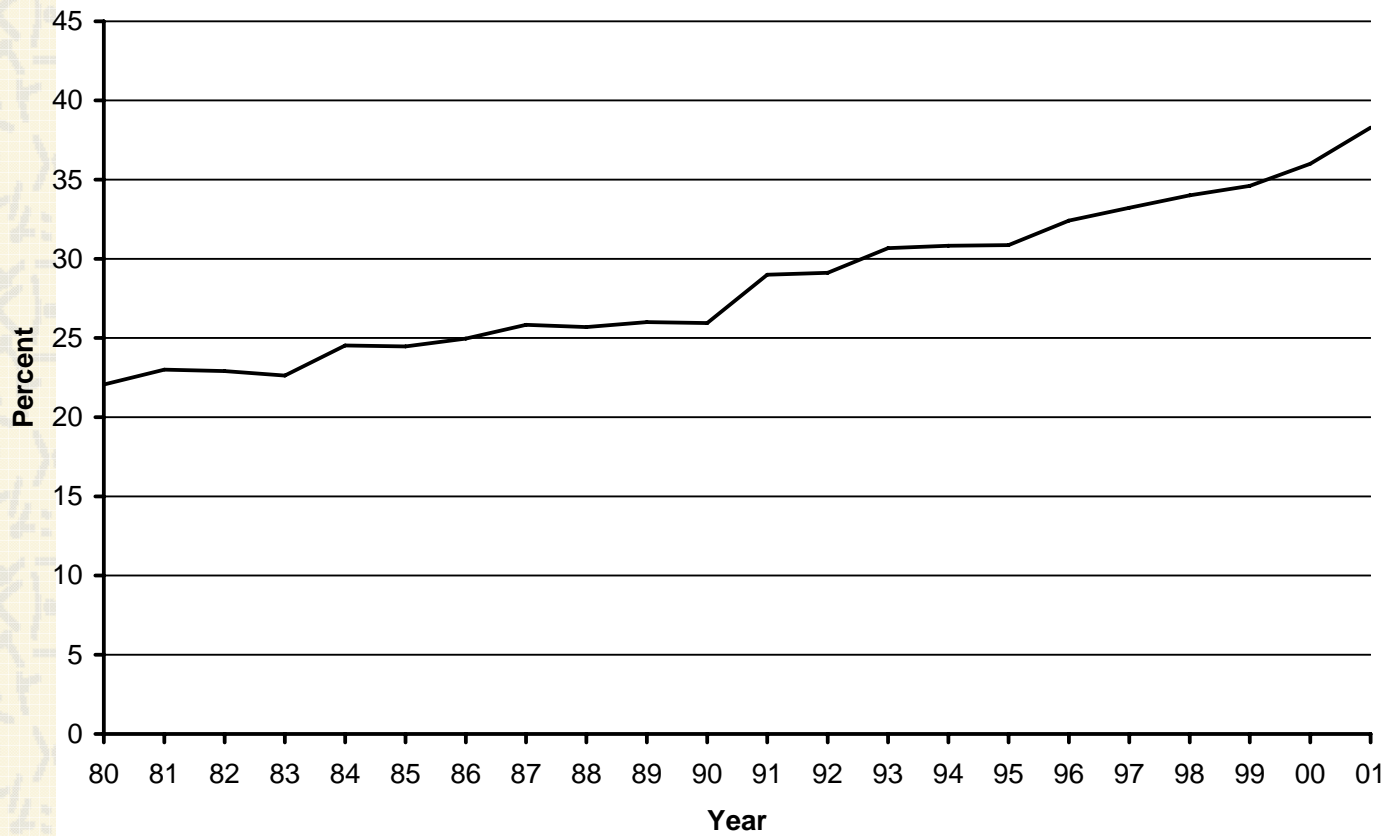
Topics of the presentation

- ✦ Present structures of university research
- ✦ Specific contributions of universities to society
- ✦ Problems linked to knowledge and technology transfer

Tremendous increase of universities' R&D budgets



Tremendous increase of external funds in R&D



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Types of high-level education institutions

Institution	Number
Universities thereof	100
with clinics	35
with engineering dpts.	17
Pedagogical schools	6
Theological schools	16
Art schools	52
Polytechnical schools	168
Administration schools	29
Total	371

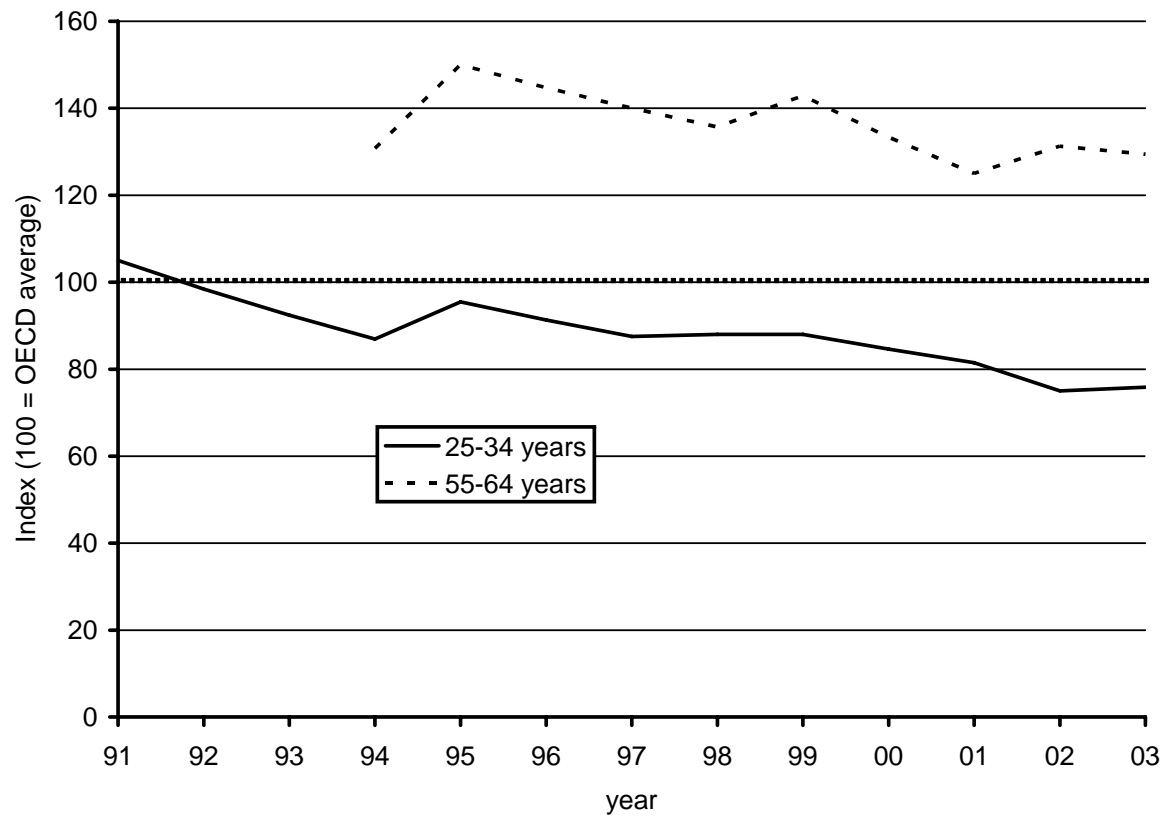
Number of students and professors, 1999

- ✦ Universities: 1,305,000 students, 29,500 professors
Staff/prof.: 3.4 Students/prof.: 44.1
- ✦ Polytechnics: 410,000 students, 14,500 professors
Staff/prof.: 1.1 Students/prof.: 28.0

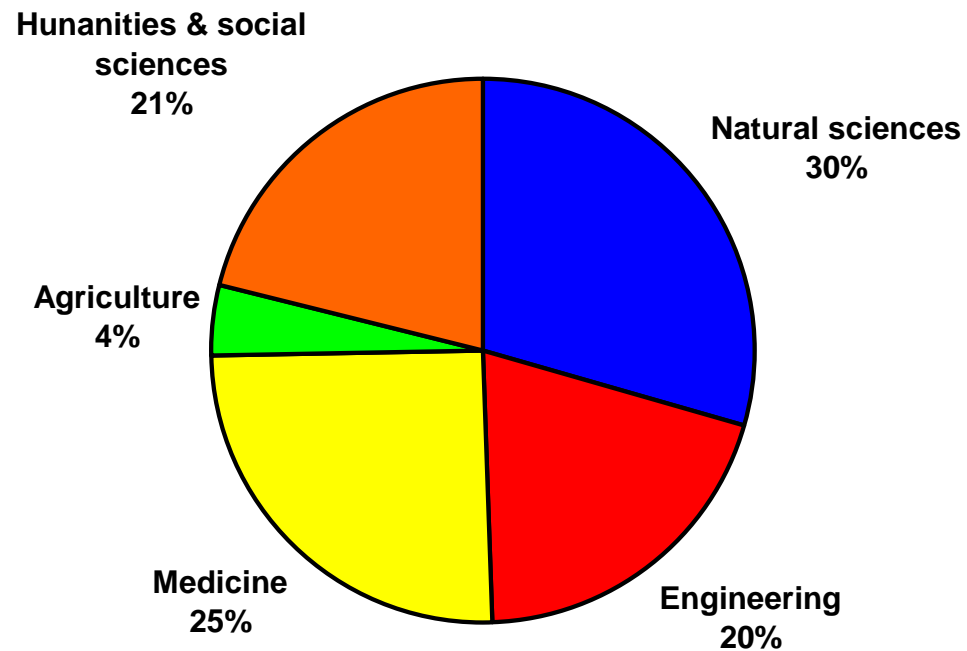
Universities: Better equipment with staff => better structures for research

Polytechnics: Better relation of students to professors => orientation on teaching

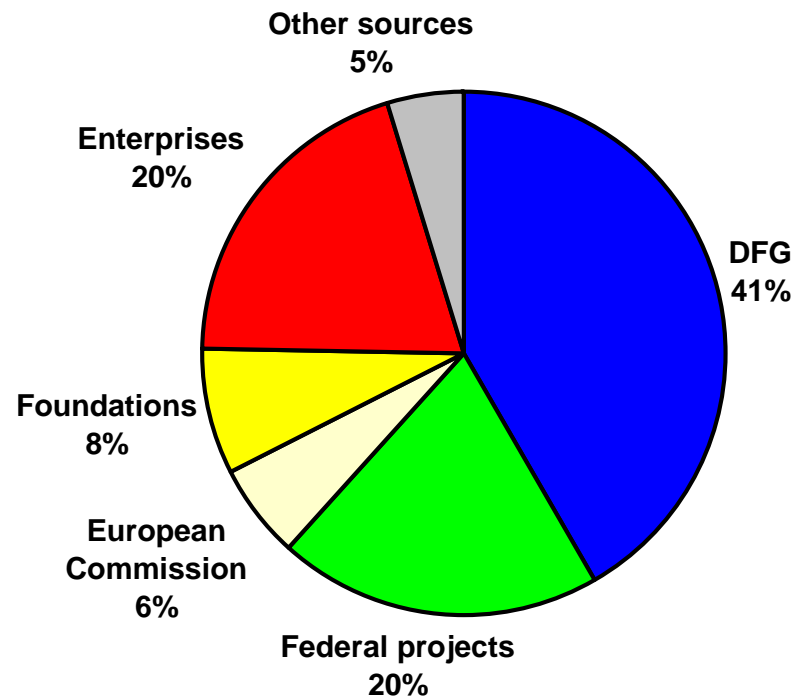
Share of German population with tertiary education



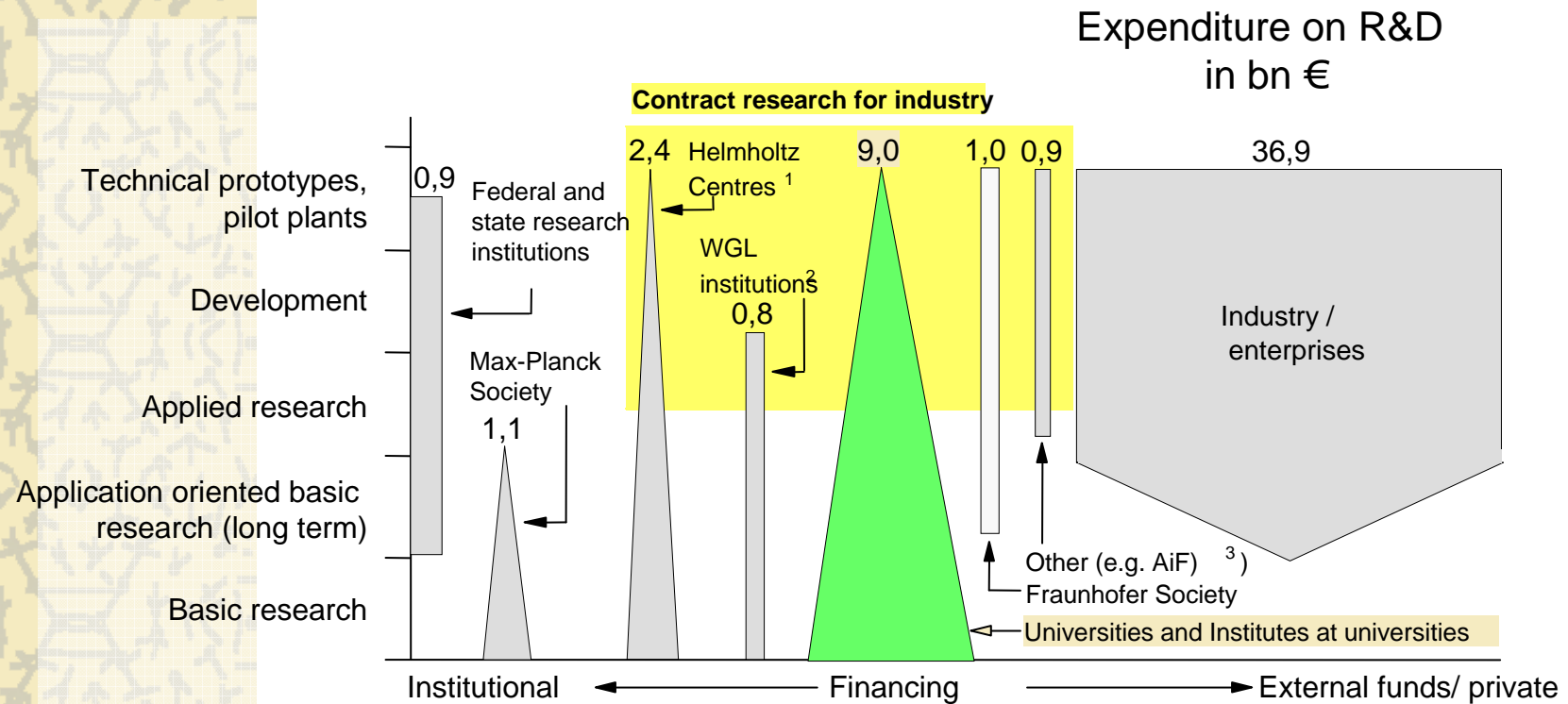
Research expenditure by discipline, 2001



External funds at universities, 1997

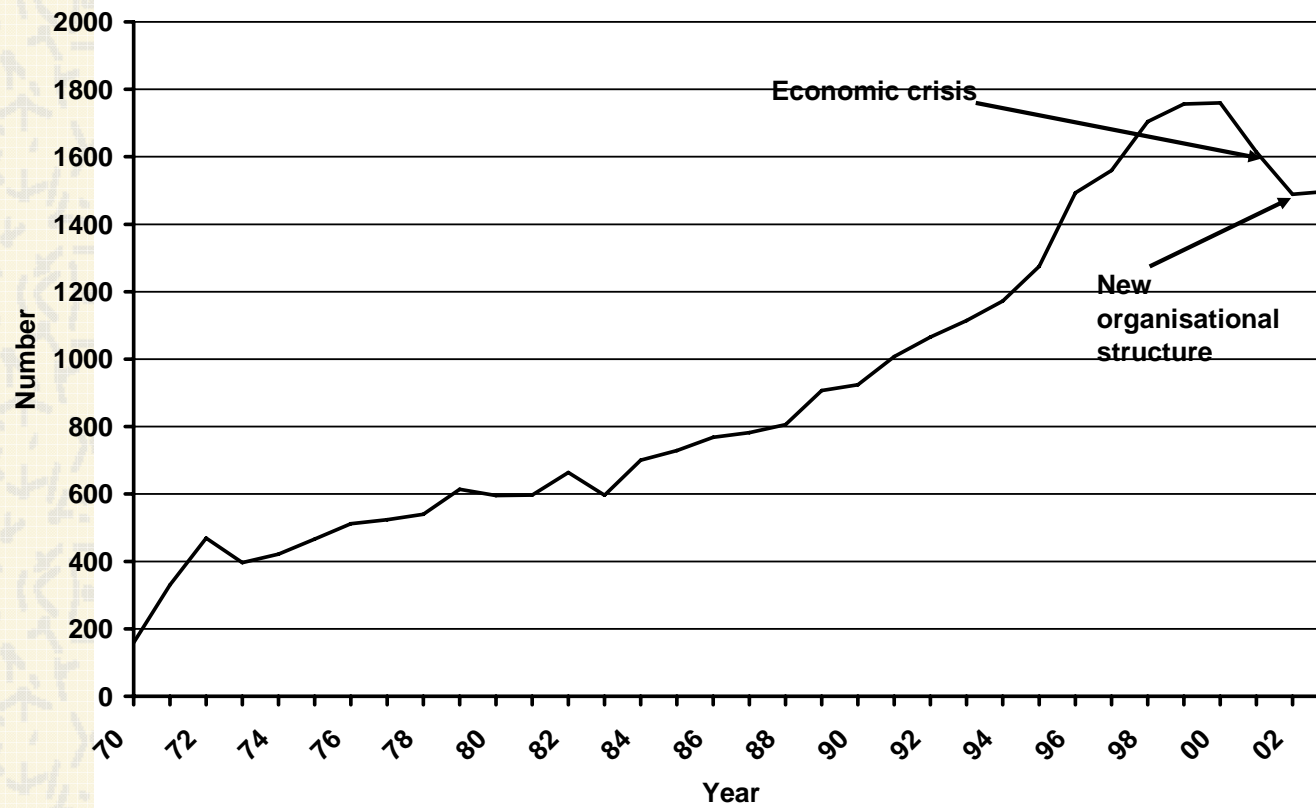


Institutional landscape in German research, 2002



- 1 Hermann von Helmholtz Association (HGF)
- 2 Science Association Gottfried Wilhelm Leibniz (WGL)
- 3 Federation of Industrial Research Associations 'Otto von Guericke' e.V.

Increase of university patents





Problems linked to KTT

- ✖ Increasing political expectations in KTT
- ✖ Expectations in short term results
- ✖ Neglect of long-term research
- ✖ Insufficient understanding of university focus on complex areas
- ✖ Insufficient differentiation of user needs
- ✖ Too one-sided assessment of universities by their success in technology transfer