

Industry-Science Relations (ISR): Developments in the Past Decade - Austria in international comparison

Wolfgang Polt (Joanneum Research / Austria)

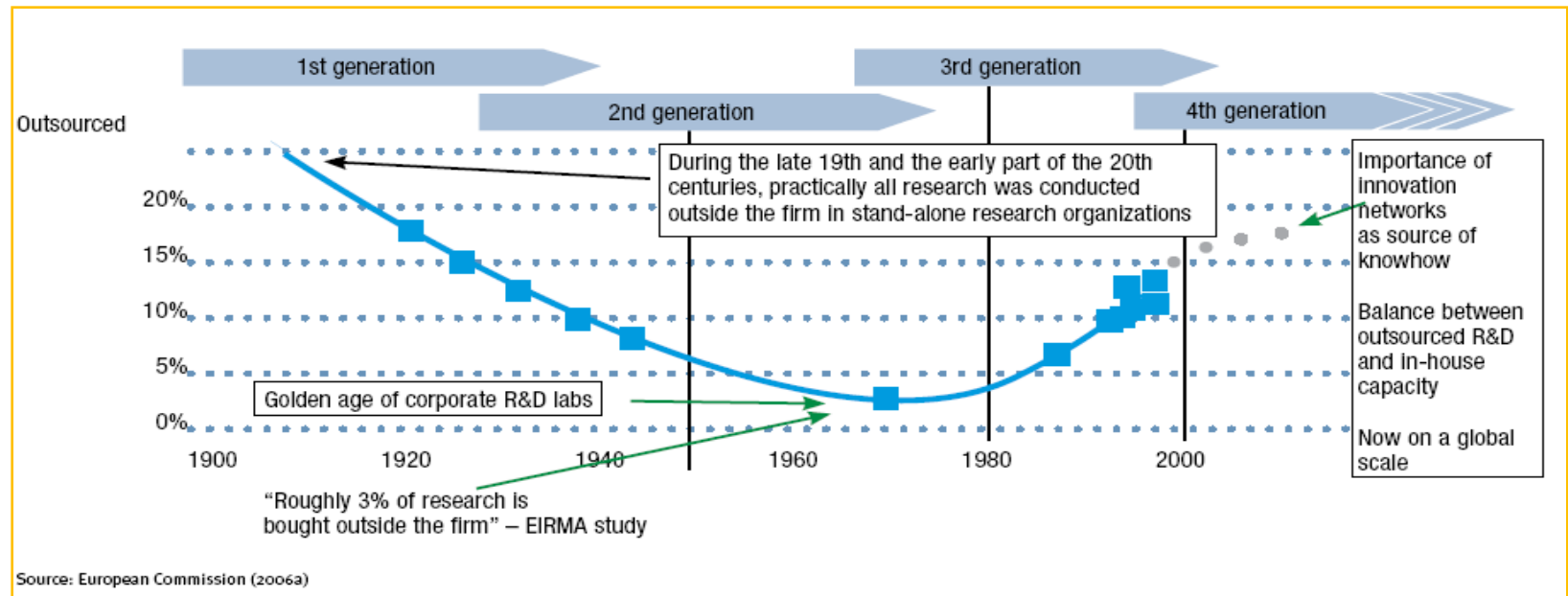
wolfgang.polt@joanneum.at

OECD Policy Roundtable

**Fostering the Cooperation between the Public and Private
Sector in R&D and Innovation“**

31 March 2010 / Prague

General Trends and ,European Paradoxes‘

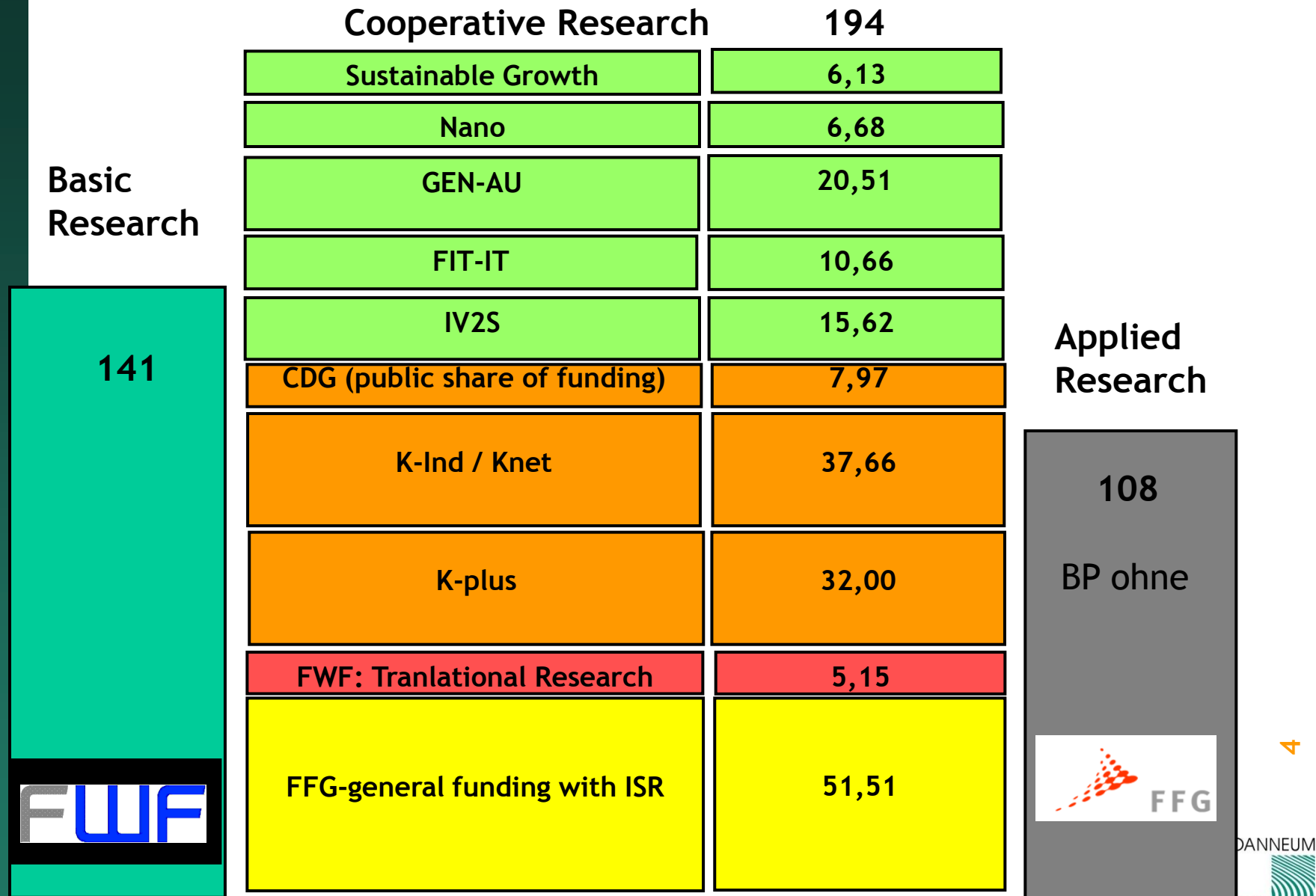


- Shrinking expenditures for basic/strategic R&D in the business sector
- Growing ,outsourcing‘ of R&D, increasingly on an international scale
- Trend towards ,Open Innovation‘, networking and collaboration
- ,European Paradox‘: excellent academic research with little link to application
- Relatively little importance of I-S collaboration for innovation

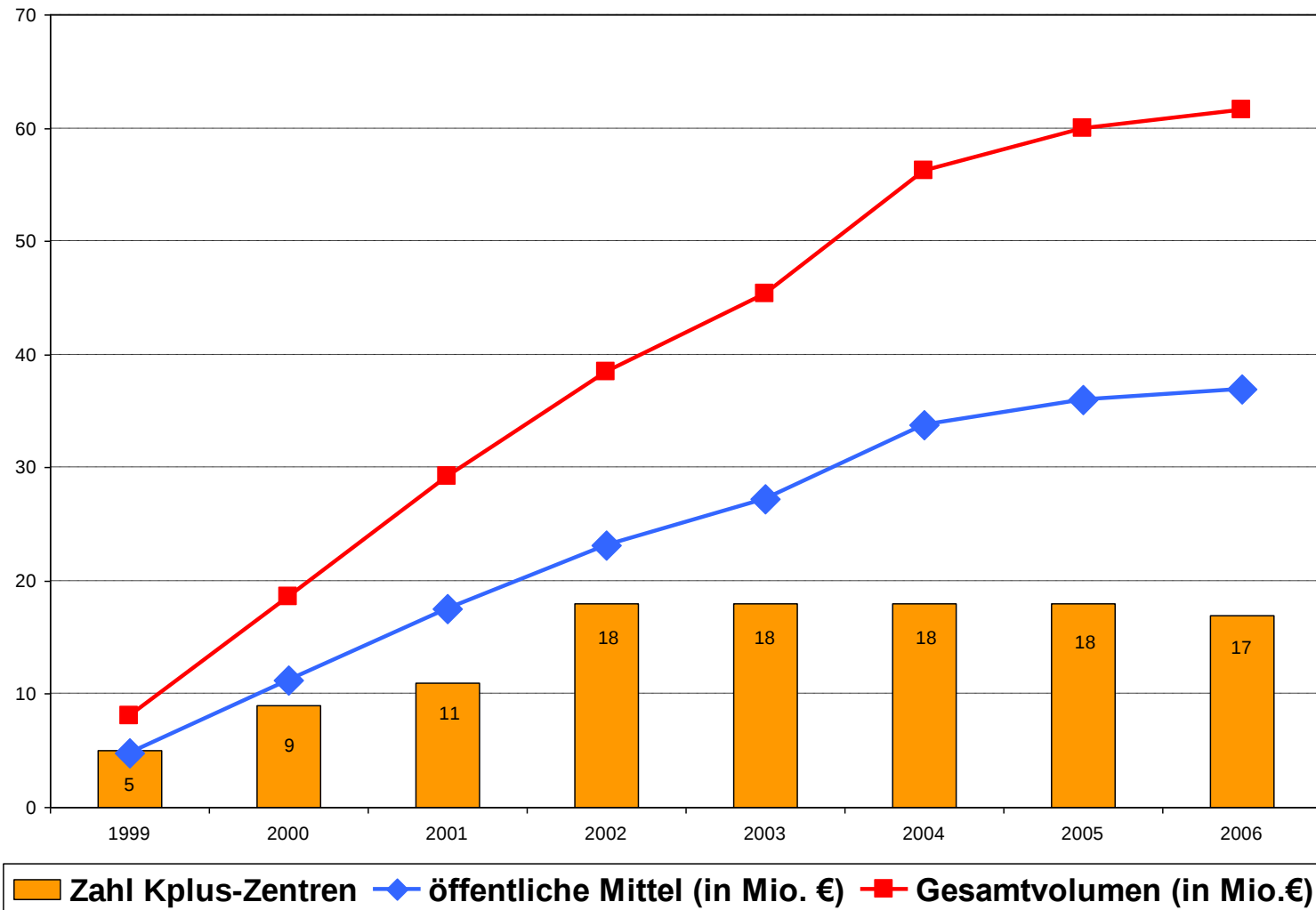
Point of Departure for Austrian Policy

- Industry-Science-Relations at the start of the 1990ies: „a major weakness of the Austrian Innovation System“ (Schibany/Jörg/Polt 1999)
 - Low share of HEI R&D financed by industry (industry R&D being dominated by MNCs)
 - Very high share of R&D at HEI, predominantly non-oriented funding (GUF)
 - Low share of cooperation between enterprises and the public research system (both universities as well as PROs)
- Since then: fostering ISR was a mayor thrust of STI policy in Austria:
 - Establishment of major programmes and institutions to foster cooperation (e.g. ‚competence (K-) centres‘, ‚Christian Doppler laboratories‘, ‚academia+business‘ (A+B) centres
 - Law on Universities (UG 2002) (Autonomy of Universities, IPR

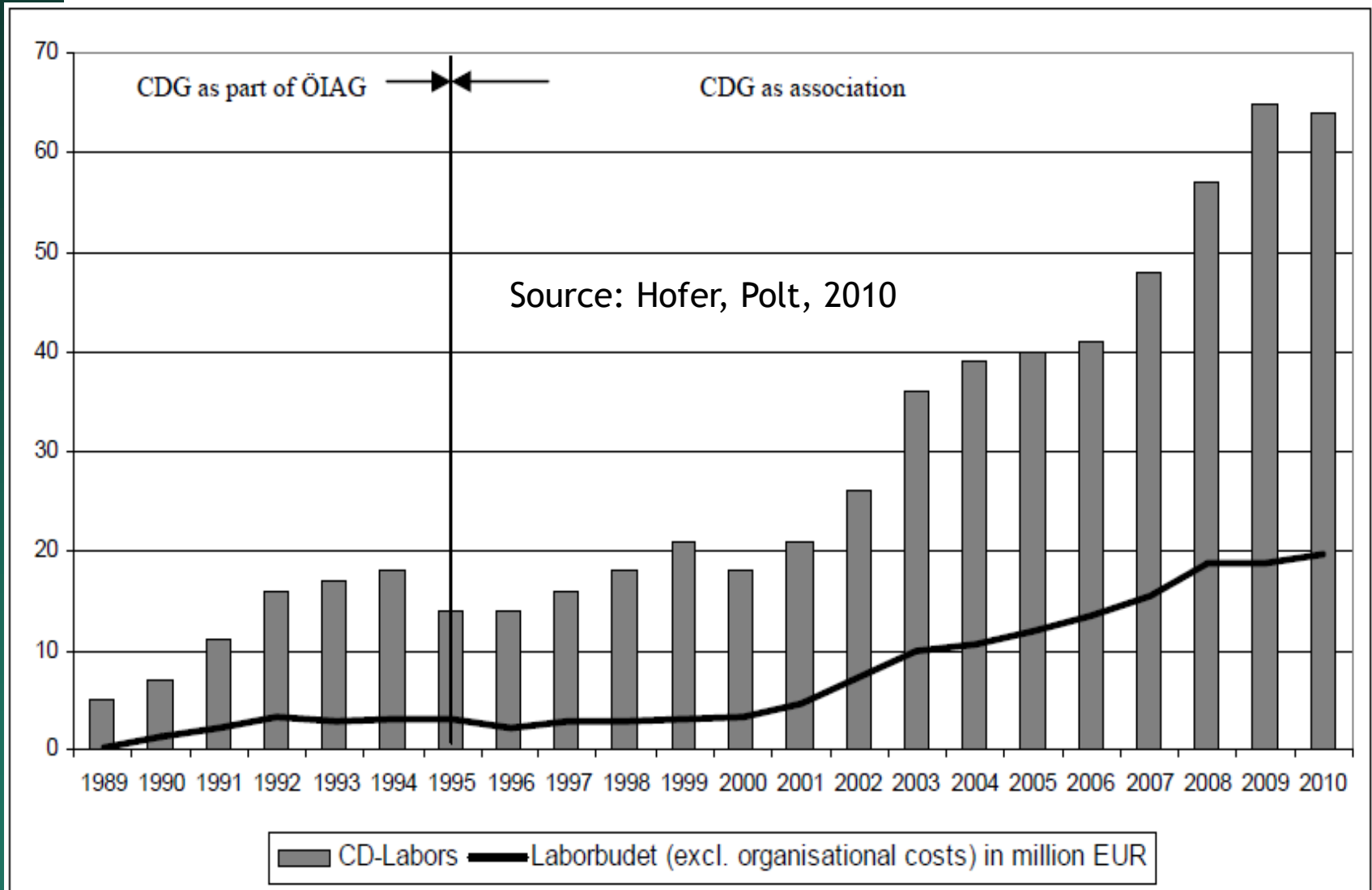
Programmes supporting R&D in Austria (2007)



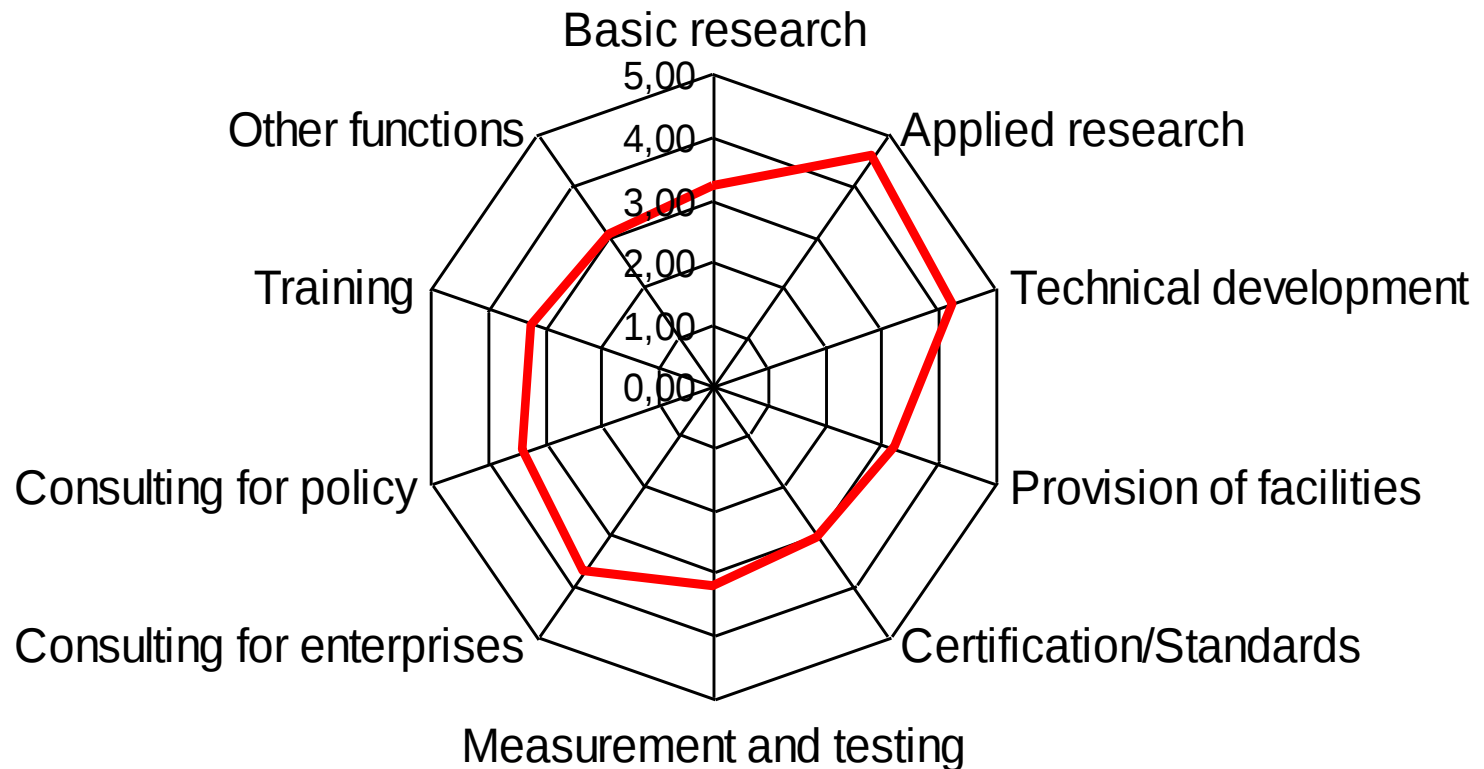
Competence-Centres (K-plus) Programme (1st phase) - Centres and Funding



Christian-Doppler (CD)-Laboratories

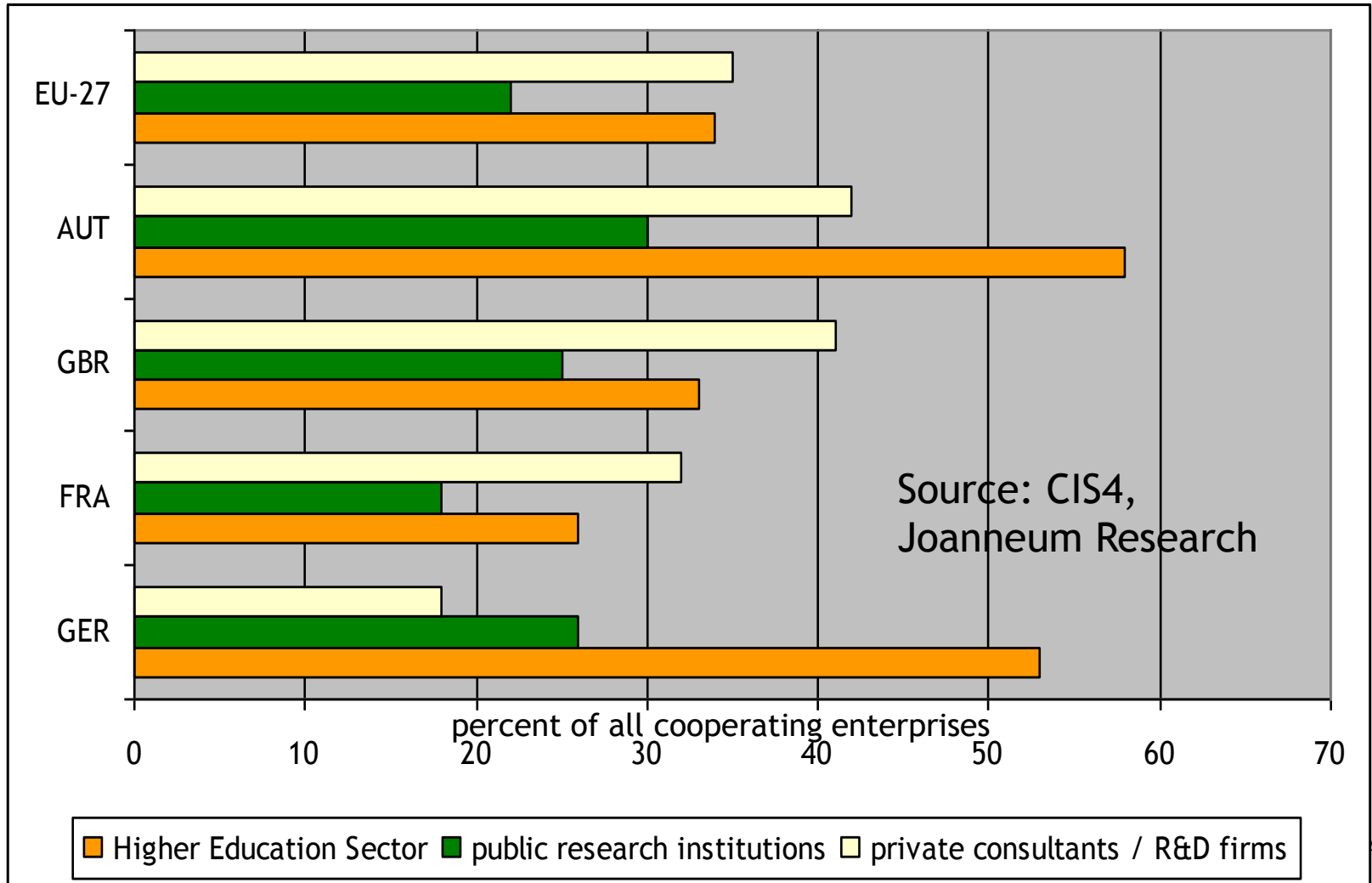


Portfolio of Activities of selected Public Research Institutes (PRI) in Europe

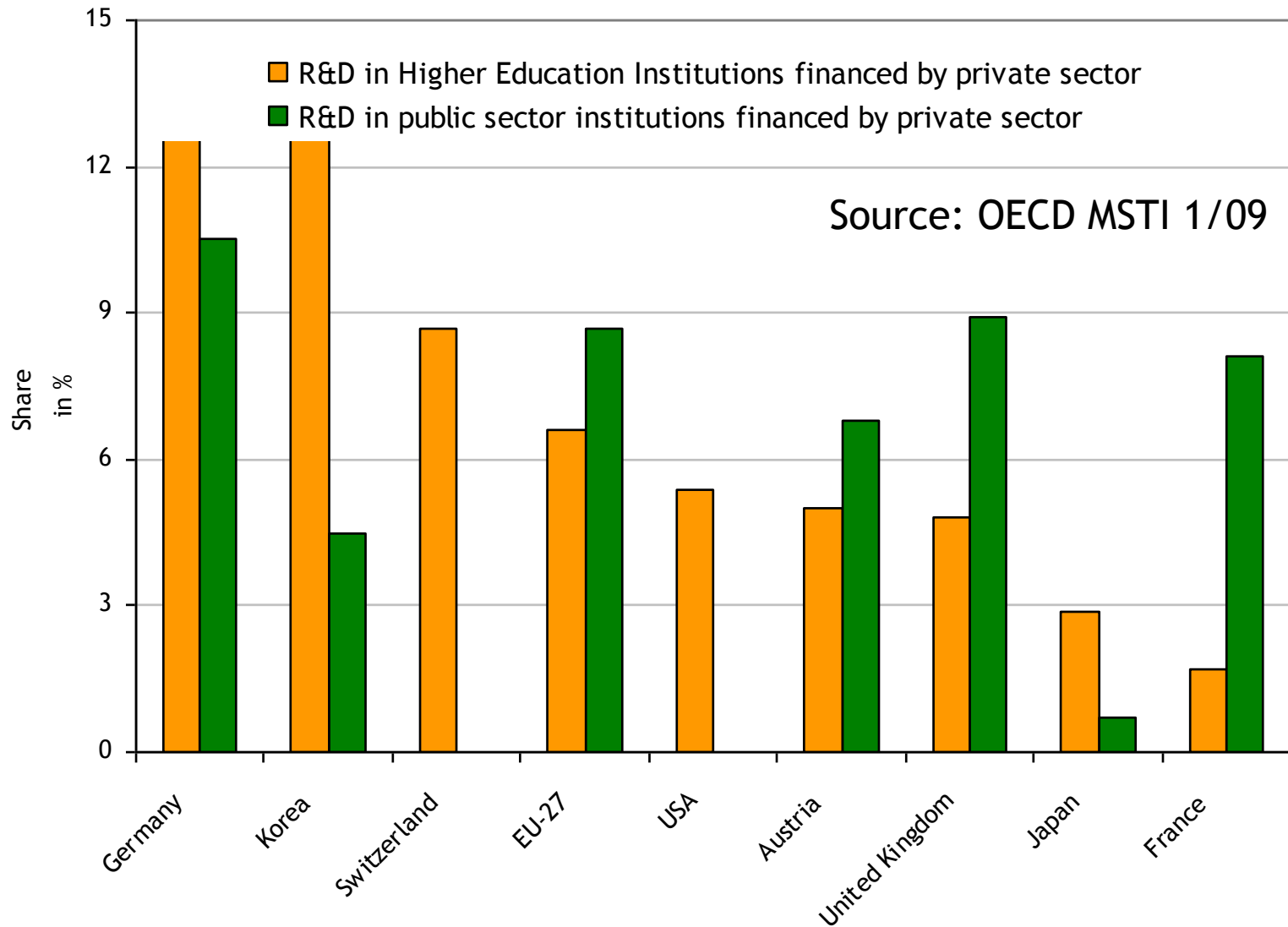


Source: Hofer, Polt et al. (2007)

Industry-Science Cooperations in Innovation (2004)



Share of R&D financed by Industry (2006)



Selected Channels of Industry-Science-Relations

		GER	FRA	GBR	AUT	SUI	JAP	KOR	USA
Contract R&D	R&D in the higher education sector financed by private business sector (in % of HERD, 2006)	14,2	1,7	4,8	5,0	8,7	2,9	13,7	5,4
	R&D in public research institutions financed by private business sector (in % of public research sector R&D)	10,5	8,1	9,0	6,8	n.a. .	0,7	4,5	2,7*
Patents	Patent applications by higher education sector (pro million population aged 15-65)	6,5	4,1	6,6	7,4	n.a. .	4,1	3,1	8,1

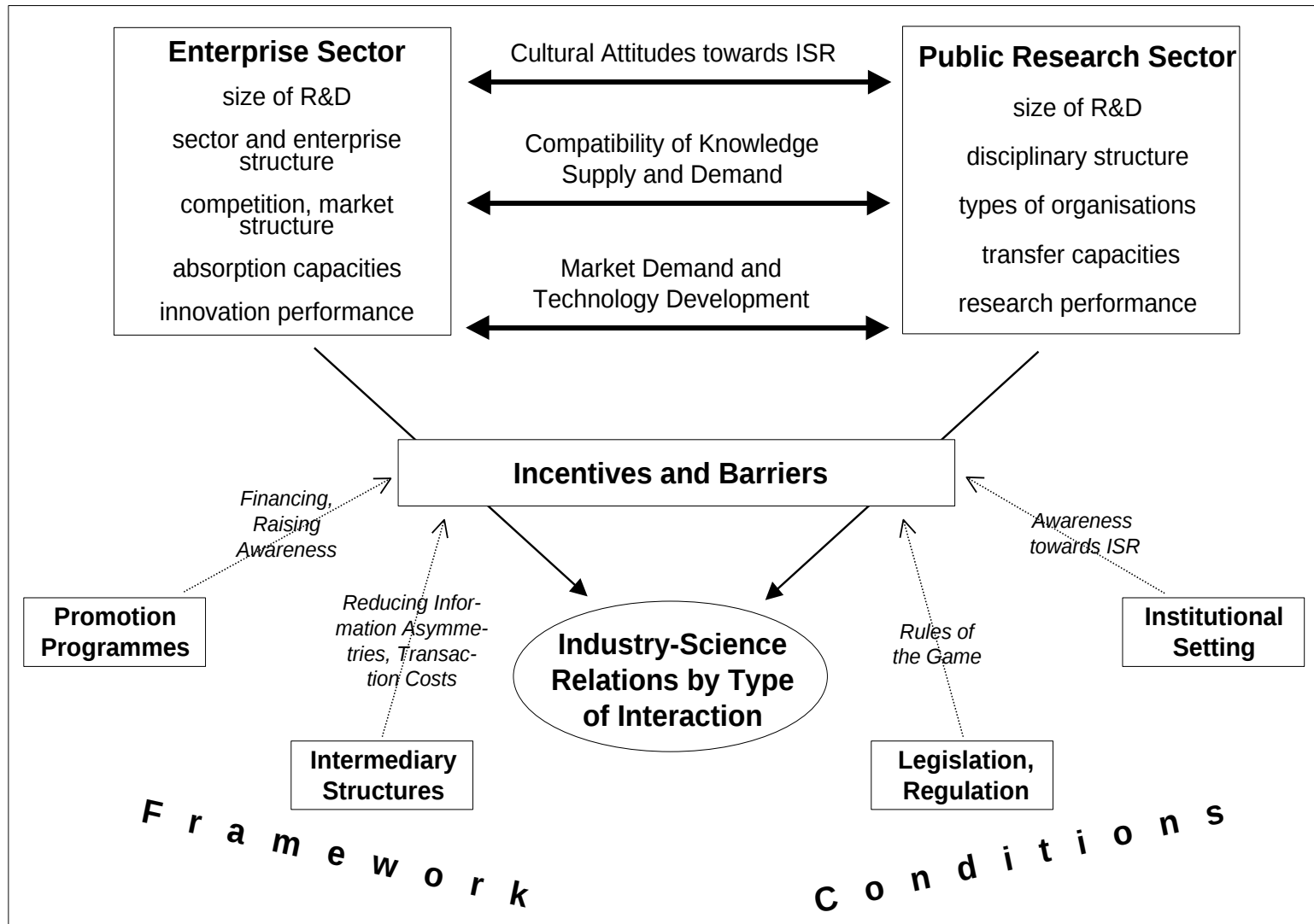
No.10

Source: CIS4, Joanneum Research

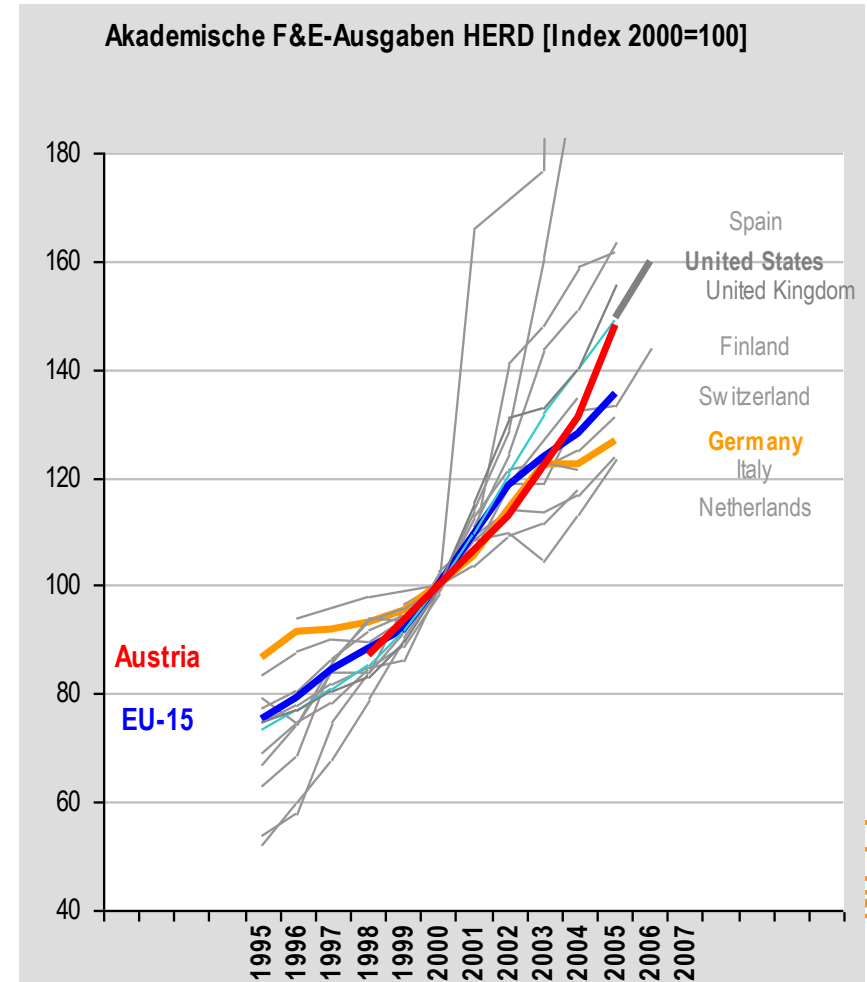
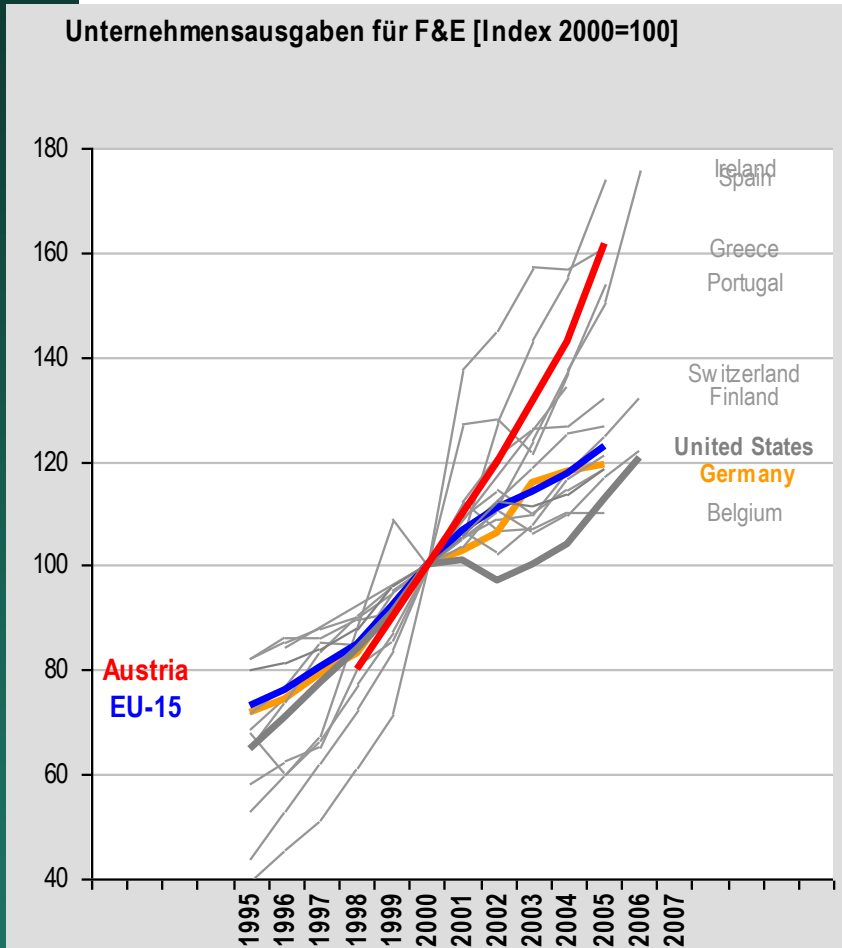
ISR in Austria: a success of policy ?

- Programmes have been manifold and well funded
- Evaluations have shown positive effects
- But main reason was probably the structural change in Austrian business sector....

Determinants of ISR: Policy just one factor



R&D spending: BERD and HERD

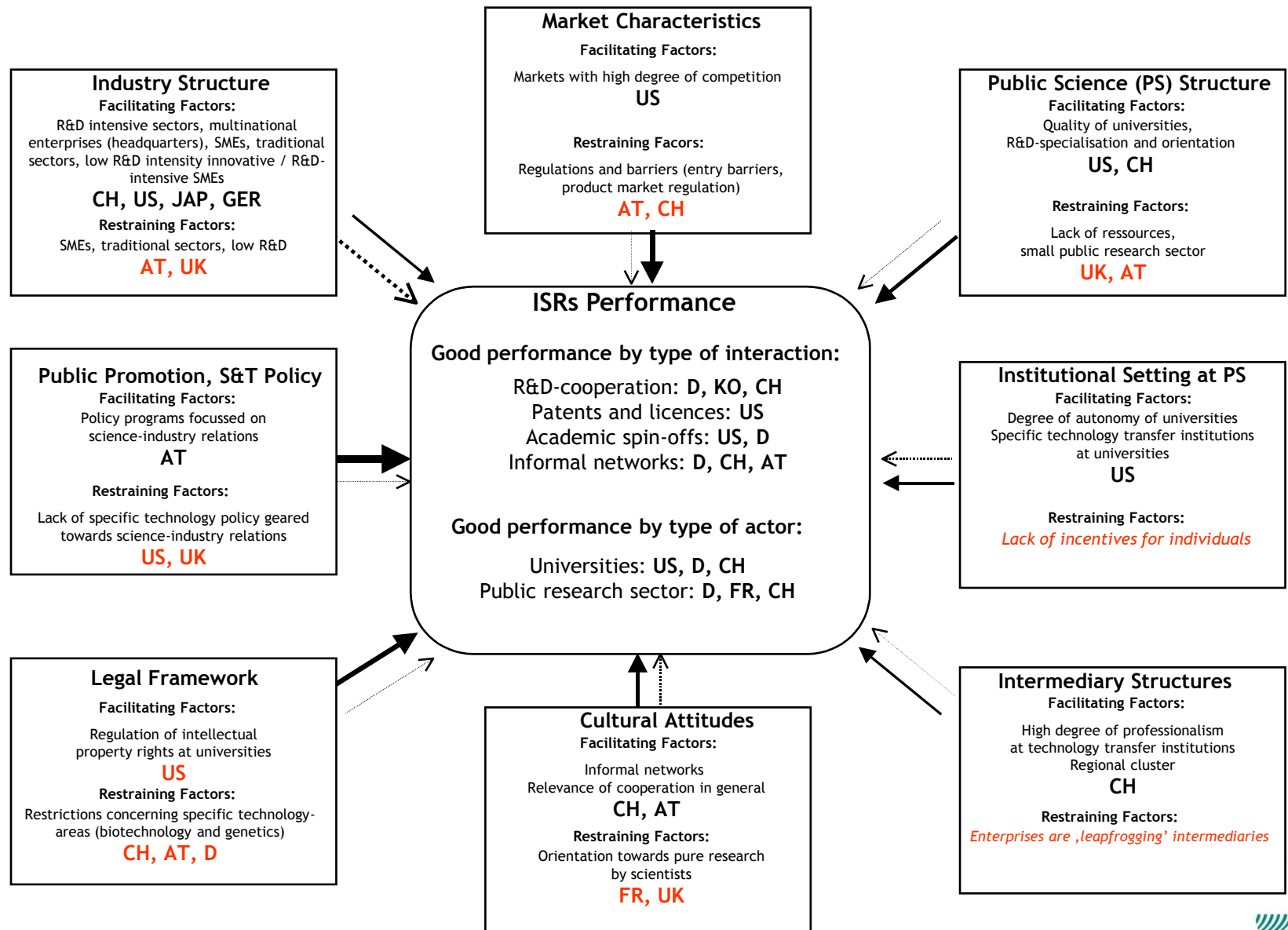


Source: OECD MSTI; Joanneum Research calculations

wolfgang.polt@joanneum.at

09.04.2010

Country Specificities in addressing ISR



ISR in Austria: Too much of a good thing ?

- Is lack of industry-science collaboration the (still) a main barrier ?
- Do we need more/different policies to support ISR?
- Shall we re-orient policies towards basic/strategic research ?

Points of Departure for (Sensible) Policy

- Know your system well before designing policies
 - Recognize the specificities of your research and innovation system and don't just copy from abroad
 - Don't let all institutions rush in the same direction
- and most of all:

■ **Don't panic !**

Thanks for your attention !