

wo important milestones in 2010

- UNESCO/ISSC ≈ World Social Science Report 2010: Knowledge Divides
- OECD ≈ The OECD Innovation Strategy Getting a head start on tomorrow

rocesses and publications in turbulent times

ace one another across an old divide

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"... Social science expertise is in high demand by policy makers, media and the public.... But with success and growth have come criticism. It has been pointed out that few economists foresaw the economic crisis that started in 2008 and that conflicting advice has been given on dealing with

(WSSR, 2010. Summary. World Social Science Report 2010. Knowledge Divides. Paris: UNESCO ISSC)

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The 2008-09 economic downturn has led to reduced potential output growth, rising unemployment and soaring public debt. To recover, countries need to find new and sustainable sources of growth Many countries have stagnating or declining populations and face diminishing returns from labour inputs and investment in physical capital. Future growth must therefore come from innovation-induced productivity growth.

(OECD2010. Fostering Innovation to Strengthen Growth and Address Global and Social Challenges. Executive Summary. Paris: OECD)

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.. what went wrong was innovation in financial services which resulted in the release of attractive new products to the market. They diffused rapidly and widely and then lost value. The rest is history, a painful history for those who lost homes, savings and businesses. As the first signs of recovery appear, the question being asked is whether this can happen again?'

(Gault, F 2010. Innovation Strategies for a Global Economy. Development, implementation, measurement and management Cheltenham: Edward Elgar)

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- ... "(One notes) the scarcity of data needed for the comparison of research capacities and for the assessment of strategies in different parts of the world, especially in the social sciences. There is an urgent need for data-gathering to support these comparisons and analyses." (WSSR, 2010)
- But measurement is theory laden R&D linked to economic growth; what is measured is deemed to have economic value; how do we ensure commensurability?

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Toward a science of science policy

- 'Relating R&D to innovation in any but a general way is a tall order, but not a hopeless one. We need econometric models that encompass enough variables in a sufficient satisfied by a few grants or workshops, but demands the attention of a specialist scholarly community. As more economists and social scientists turn to these issues, the effectiveness of science policy will grow, and of science advocacy too' (Marburger, 2005: 1087).
- Couzens: contested! It already exists

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World Social Science Report 1999

- Covered 29 OECD member states
- Sought to quantify scale of inputs; graduates; Frascati Manual R&D definition and collection guidelines
- SS R&D financials for 21 countries; personnel data for 19 excludes large systems: FR, US, UK, KR, and smaller -CZ, GR, IT, LX, NZ, SL.
- Commentary on the practice of SS; notes 'Data ... often not very accessible to researchers"; identifies blurring of SS/H boundary as problem

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World Social Science Report 2010

- OECD 30; EU-27 + other large performers of R&D
- Expenditure on R&D; development indicators
- Demographics of researchers
- Student enrolment and graduation
- Scientific output publications
- Statistics. RICYT (Latin America)
- Other: national statistical organizations; commercial databases

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What counts as R&D

- Frascati 6th edition : 'creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise now capitoctications'.
- Recognizes increasing role of Services sector
- Basic, applied research, experimental development
- Related scientific and technical activities (STA) excluded
- Much Social Science activity ... OUT

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Problems

- Business R&D difficult to trace → purposive survey
- SS often excluded from BERD: "designed out"

 - SS important in Services; > 60% GDP R&D in Services 40% BERD in AU; 25% UK
 - R&D tax incentives may exclude SS
- University and Gov R&D by census;
- NPO purposive boundaries porous
- FTE "must" be < 100%; estimation; diary studies
- Doctoral, postdocs, research assistants, masters FTE?

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ARTICLES		web of Science		300	-05	
	SCI-E	SSCI	A&HCI	SOCSCI	ARTS	
Bulgaria	1586	33	5	83	6	
Estonia	696		8	91	14	
Hungary	3686	172	43	309	70	
Latvia	229	16	0	12		
Lithuania	810	64	54	177	37	
Poland	10615	258	75	426	44	
Romania	2062	69	50	97	29	
Slovak Republic	1049		71	159		
Slovenia	1833	137	39	343	20	
Austria	7267	525	84	614	57	
Belgium	10484	1158	254	1263	130	
Canada	35763	5861	1074	5719	479	
Cyprus	289	68	13	114	4	
Czech Republic	5116		86	302		
Denmark	7975	833	78	783	59	
Finland	7076	894	87	963	69	
France	42563	2200	1018	2872	396	
Germany	59628	4678	924	4651	438	
Greece	7320	457	84	738	65	
Ireland	5045	754	146	592	48	
Italy	33355	1758	362	2214	181	
Luxembourg	176	21	1	33	1	
Malta	60	10	4	9	1	
Netherlands	18772	3573	316	3559	194	
Portugal	4938	289	33	463	26	
Spain	27338	2298	518	2519	193	
Sweden	14381	1860	131	1616	116	
United Kingdom	DAC 0 51844	12749	tre for Research	n 13732	1450	
"TOTAL"	361956	41192	7984	44453	4211	

The limits of EU law

- Decision № 1608/2003/EC of the European Parliament and of the Council for statistics on S&T.
- Legal implementation measure 753/2004

FOS	Sectors	GERD	R&D PERSONNEL	RESEARCHERS		
	GOV HES	Optional (R&D Regulation)	HC: Obligatory (R&D Regulation) by sex; four yearly			
1- DIGIT FOS	001,1120	Biennially	FTE: Optional (R&D Regulation) by sex, biennially			
	TOTAL, BES, PNP	Voluntary	HC and FTE: Voluntary; by sex			
2- DIGITS FOS	TOTAL, BES, GOV, HES, PNP	Voluntary	-	HC: Voluntary; by sex		
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What we know & what we know we don't know

- 25: Czech Republic, Hungary, Poland, Romania, Russian Federation, the Slovak Republic, Slovenia, Turkey, Mexico, Chinese Taipei, Japan, Singapore, Austria, Belgium, Canada, Denmark, Germany, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, and Sweden
- 17 EU; 20 OECD
- Of top five R&D performing nations, only DE and JP have official data

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The need for estimates

- Large performers missing: FR, UK, also FI.
- Newcomers more compliant? Why?

		BUS		HE		Gov			
		SET	Tot	SET	SSH	Tot	SET	SSH	
France	HC	107401	100849	70998	29851	31936	27146	4790	
(2003)	FTE	100646	59047	43695	15352	31936	27146	4790	
UK*	HC		241127	139099	102028	9893	8962	932	
(2006)	FTE	95592	67719	39059	28660	9311	8563	748	
USA	HC			297000	275 000				
(2006)	FTE			120 000	111 000				
China	HC				-				
(2005)	FTE			166 400	55508				
Russia	HC	221445	30111	26130	3981	139378	126413	13235	
(2005)	FTE	237959	70494	61595	8899	154827	140425	14402	

South Africa

- Small system of innovation with new developmental goals
- Many data sets; design-specific; gaps; uncoordinated Higher Education Management Information System (HEMIS):
 - CESM system of classificationResearch output database
- National R&D Survey (OECD compliant)
- SA Knowledgebase (private)
- NRF individual, not group rating
- State lab KPIs under-utilized

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- Future HEPMS under discussion
- Resistance to measurement; overloaded; information demands; data for compliance rather than change management purposes
- Ranking: absolute or relative?.
 How to account for community engagement?
- SATN performance indicators db being populatedSkills to operate MIS?

- Data generated on public funds should be in the public domain c.f. OECD Principles

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Brazil

- Brazil as a world power --military regime early 1970s;
- "Modernizing" agenda: federal, state and private HEIs.
 Central planning : National Postgraduate Programmes
 (PNPG) from 1974
- Agencies
- CNPq (S&T research)
- CAPES (HR for research)
 University and department rating system
- Own classification system:

Social Sciences: administration, architecture and urban studies, urban planning, information sciences, communications, law, demography, economics, social services and tourism
Humanities: anthropology, archaeology, political science, education, philosophy, geography, history, psychology, sociology and theology. Languages, literature, arts excluded

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- M and PhD programmes (2008) now 2,568
- M and PhD graduation up threefold
- Research groups increase 5 x 1993 to 2008.
- 2000 and 2008, SS research groups 2,600 to nearly 7,000
- 66% Ph.Ds graduates in 2008 employed HEIs; 18% in public administration, national defence or social security; only 1.2% in manufacturing industries.
- Excellent information how?

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We are not alone

- Numerous examples of MIS that capture data on HEIs, student population, university achievement
- Bibliographic databases (Scholarly book series; electronic distribution) – much WIP e.g ERIH; ESF-SCH bibliometric database
- Institutional profiles e.g. UniBasel emerging
- Country profiles e.g. Portal of Science Journals of Croatia
- It's competitive: THES and QS have parted company ...
- Many projects on University ranking EUMEDA; U-RANK
- Input side national systems; output side private

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Comments on the data

- Balance between centralization/decentralization' and standing of science in government and in national development
- What is underlying purpose of the data collection?
- Access to data is pivotal: what is possible in Brazil or France or South Africa may be impossible elsewhere

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- FTE of Researchers is patchy; costly; estimates
- Student data more robust
- What counts as a publication?
- Propensity to publish varies by discipline
- Mobility data is weak

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Toward the Future

- What must we know on research capacity in SSH?
- Who wishes to know?
- What is available and who holds the data? Privacy issues.
- What must be collected rather than what is 'nice to have?'
- What constitutes a minimum data set for international benchmarking? Feasibility?
- What effort needed to obtain more complete input data? What are the restrictions on data access?
- Prospects for more complete bibliometric data?
- Roles for ISSC, ESF, OECD, UNESCO, Eurostat especially in relation to WSSR?
- Role for CODATA?

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