Scientometric Indicators Datafiles

A BIBLIOMETRIC APPROACH TO SOCIAL SCIENCES. NATIONAL RESEARCH PERFORMANCES IN 6 SELECTED SOCIAL SCIENCE AREAS, 1990-1992

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The present paper attempts the application of bibliometric methods, which have originally been designed for the evaluation of national research performance in hard and life sciences, to the bibliometric analysis of selected social science areas. In earlier studies (e.g. Refs[1-5]) national indicators have been processed based on the *Science Citation Index* (SCI) of the Institute for Scientific Information (ISI) and have used some modification of the ISI subject categories. In order to extend methodology and former results to social sciences, this study uses the *Social Sciences Citation Index* (SSCI) of the ISI. Though the formal structures of the two databases are identical, i.e., SCI and SSCI use the same bibliographic fields with coincident components, there are in spite of the technical compatibility serious differences concerning the bibliographic data covered by the two databases which should in any case be heeded in bibliometric applications.

The first peculiarity of the SSCI database refers to the journal coverage. Whilst in the SCI *all* papers of given document types are recorded which have been published in any journal covered by the database, in the SSCI both, *fully* and *selectively* covered journals can be found. This seemingly unimportant difference has, however, some serious consequences on bibliometric macro-level analyses. The most obvious consequence concerns the subject classification. The assignment of papers to subject categories defined by journals is quite impossible if the papers in question have been published in selectively covered journals. A paper concerned, for example, with

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economics, with *information science* or with the *history of science* which has been published, say, in a chemistry journal can hardly be assigned to the correct (sub)field if a subject classification based on journals is used. On the other hand, an individual assignment of papers based on key-words, title and abstract is at least at the macro level not practicable. A second consequence of selective journal coverage relates to the reference standards for citation analyses. In former studies the *Mean Expected Citation Rate (MECR)* (see Refs[1-4]) or the *Normalized Mean Citation Rate (NMCR)*,[5,6] i.e., measures based on journal or subfield citation means, served as the reference standard for the assessment of citation impact. The SSCI database covers about 3000 journals per annual cumulation, but their majority is represented by at most a couple of papers each. Impact factors based on 1-3 papers are, however, both theoretically and practically inappropriate as a reference standard for individual assessment. If, on the other hand, SCI impact factors are used, the topic under study may not be reflected in an adequate manner. Lacking reference standards for the assessment of citation impact for selectively covered journals and the insufficient subject classification do not permit any global analysis based on the complete database. As a first consequence, the analysis has to be restricted to several selected fields which are defined based on fully covered journals.

Besides the above mentioned 'technical' difficulties, other substantial questions concerning the coverage may result in a controversial reception of bibliometric indicators calculated from SSCI data. These problems are above all the direct or indirect result of the peculiarities of science communication in social sciences. In contrast to the sciences, monographs and books are important means of scientific information in social sciences. Therefore, science communication is not reflected in an adequate manner by journal literature alone. Moreover, national biases in the journal coverage may have serious by-effects on citation impact data as an indirect communication-specific consequence.[7] This is in part due to the language barrier, which is, beyond all doubt, a more important factor in social sciences than, for example, in the hard sciences.

Because of the above mentioned peculiarities, the bibliometric indicators presented in the following should be interpreted cautiously. The reader should always keep in mind that because of the restriction to fully covered journals, the analysed subject fields can necessarily not represent *all* papers in these fields which have been recorded in the underlying volumes of the SSCI database.

Data sources and data processing

All results are based on rough bibliographic data extracted from the 1990-1992 annual cumulations of the *Social Sciences Citation Index* (SSCI) of the Institute for

Scientific Information (ISI) which have been cleaned up and processed to indicators. Both national citation counts and journal impact factors have been determined through paper-by-paper matching procedures.

Methodological rudiments

Only papers of the *article, letter, note* and *review* type recorded in the 1990–1992 volumes of the SSCI and published in *fully covered* journals have been taken into consideration. The papers have been assigned to countries based on the corporate address given by the authors. In the present study, *all* countries indicated in the address field have been taken into account. Publication counts can therefore not be summed up over countries. A percentage of a country x of p % in the world's publication output then means that p % of the all papers have at least one author with an address in country x. Since the GDR ceased to exist in 1990 due to the German reunification, East German publications occurred only in the first volume. Therefore the country name 'Germany' covers the two German states in 1990, then, from 1991 on, the Federal Republic of Germany. The following analysis is restricted to all countries that have produced at least 20 papers in the given social science field in 1990 to 1992.

Papers that have been published with the co-operation of at least two different countries will be called *international* papers. International collaboration depends on the country's 'size'. Thus the share of international collaboration in large countries is necessarily less than that of medium-sized or small countries. The 'world average' is to a high degree determined by the large countries and is therefore not an appropriate reference standard for international collaboration activity. The 'average' share of international papers has consequently not been calculated.

Citation counts have been determined for three-year periods starting from the publication year, thus, e.g., for the period 1992–1994 if a paper has been published in 1992. Because of the slow ageing of social science literature, a three-year citation windows would normally not provide a sufficient base for exhausting citation analyses (see Glänzel and Schoepflin[8]), but the choice of a longer observation period had necessarily resulted in an analysis of the social science literature of the 80s, which is in terms of research evaluation an in almost obsolete publication set. Thus the following study presents a compromise between methodological rigour and the evaluation of current research. As compared with the corresponding SCI data (cf. Refs[1,3,4]), mean citation rates are consequently small, and the share of uncited literature is considerable.

The obtained national publication sets proved too small for the analysis of annual changes. The publications years and citation windows have, therefore, been shifted, and the corresponding counts have been summed up. This procedure shall be illustrated by an example (country: Australia, field: Business). In 1990, Australian authors have

published 21 papers in this field. These papers have received 26 citations between 1990 and 1992. In the subsequent years, 1991 and 1992, the national publication output in this field amounted 28 and 32 papers, respectively. These papers have received 23 citations each in 1991-1993 and 1992-1994, respectively. Thus the following indicator values have been calculated for *Australia* in the field *Business*. Publication count: 21+28+32=81, Citations received: 26+23+23=72, Mean Observed Citation Rate: 72/81=0.89. All other indicators have been constructed in an analogous manner. In particular, the following publication and citation based indicators have been built.

- Absolute national publication output and its share in the world total.
- Absolute number of citations received by the countries' publications and their share in the world total.
- Absolute number of international papers, i.e., of internationally co-authored papers, and their share in the total national publication output.
- Mean Observed Citation Rate (MOCR), Mean Expected Citation Rate (MECR) and Relative Citation Rate (RCR).

The following table shows the assignment of the selected subfields to 6 social science areas. Note that only *fully covered* journals are assigned the ISI Subject Categories.

Table 1

Definition of six social science areas based on ISI's Subject Category assignment

Social Science Field	ISI Subject Category
1. Business	Business Management Management & Operation Research
2. Economics	Business, Finance Economics Planning & Development
3. Psychology & Psychiatry	Psychology Psychology, Applied Psychology, Developmental Psychology, Educational Psychology, Experimental Psychology, Social
4. Sociology	Ethnic Studies Sociology Women's Studies Demography Family Studies
5. Information & Library Science	Information Science & Library Science
6. History & Philosophy of Science and Social Sciences	History & Philosophy of Science History of Social Sciences

Data presentation

Each social science area appears on one table and two graphs each. First tables are presented which are then followed by pairs of graphs. The first graph shows the mean citation rates *MOCR* and *MECR* with respect to the world average on a relational chart (see Refs[3,4]). The countries are represented by triliteral codes according to the ISO standard (see *Appendix*). The second graph visualises the countries' share of international papers in the given science area.

Table 2

Countries ranked by their publication count in *Business* (1990–1992)

Country	Publication		International paper		Citation		MECR	MOCR	RCR
	count	share (%)	count	share (%)	count	share (%)			
USA	6075	60.5	487	8.0	7456	82.0	1.18	1.23	1.04
UKD	708	7.1	106	15.0	662	7.3	0.82	0.94	1.13
CAN	570	5.7	204	35.8	625	6.9	1.11	1.10	0.99
DEU	200	2.0	25	12.5	78	0.9	0.43	0.39	0.91
NLD	137	1.4	39	28.5	113	1.2	0.82	0.82	1.00
JPN	128	1.3	32	25.0	59	0.6	0.62	0.46	0.75
FRA	120	1.2	49	40.8	98	1.1	0.95	0.82	0.86
ISR	108	1.1	64	59.3	122	1.3	1.24	1.13	0.91
IND	82	0.8	27	32.9	37	0.4	0.65	0.45	0.69
AUS	81	0.8	21	25.9	72	0.8	1.23	0.89	0.72
BEL	65	0.6	35	53.8	59	0.6	1.02	0.91	0.89
ITA	49	0.5	16	32.7	24	0.3	0.64	0.49	0.76
FIN	46	0.5	13	28.3	40	0.4	0.73	0.87	1.20
NZL	44	0.4	15	34.1	20	0.2	0.71	0.45	0.64
KOR	40	0.4	20	50.0	30	0.3	1.21	0.75	0.62
CHE	40	0.4	20	50.0	42	0.5	1.00	1.05	1.05
TWN	36	0.4	15	41.7	26	0.3	0.74	0.72	0.98
SWE	35	0.3	5	14.3	30	0.3	1.00	0.86	0.85
GRC	32	0.3	4	12.5	17	0.2	0.75	0.53	0.71
POL	32	0.3	13	40.6	13	0.1	0.53	0.41	0.76
ESP	32	0.3	13	40.6	21	0.2	1.12	0.66	0.59
HKG	31	0.3	13	41.9	23	0.3	0.79	0.74	0.94
SGP	29	0.3	10	34.5	15	0.2	0.77	0.52	0.68
NOR	28	0.3	8	28.6	21	0.2	0.88	0.75	0.85
AUT	26	0.3	12	46.2	11	0.1	0.51	0.42	0.83
TUR	24	0.2	10	41.7	13	0.1	0.68	0.54	0.80
Total	10040	100.0	***	***	9098	100.0	0.91	0.91	1.00

Table 3

Countries ranked by their publication count in *Economics* (1990–1992)

| Country | Publication | | International paper | | Citation | | MECR | MOCR | RCR |
	count	share (%)	count	share (%)	count	share (%)			
USA	12934	57.0	1506	11.6	18765	76.6	1.35	1.45	1.07
UKD	2316	10.2	494	21.3	2616	10.7	1.02	1.13	1.10
CAN	1547	6.8	466	30.1	1588	6.5	1.05	1.03	0.98
DEU	647	2.9	122	18.9	350	1.4	0.63	0.54	0.86
AUS	645	2.8	195	30.2	520	2.1	0.91	0.81	0.89
NLD	543	2.4	115	21.2	461	1.9	0.92	0.85	0.93
FRA	462	2.0	154	33.3	415	1.7	1.04	0.90	0.86
JPN	382	1.7	112	29.3	313	1.3	0.96	0.82	0.85
CSK	369	1.6	5	1.4	21	0.1	0.09	0.06	0.67
ISR	367	1.6	215	58.6	509	2.1	1.48	1.39	0.94
IND	306	1.3	81	26.5	136	0.6	0.50	0.44	0.89
ITA	259	1.1	76	29.3	189	0.8	0.99	0.73	0.74
SWE	222	1.0	56	25.2	215	0.9	0.96	0.97	1.01
BEL	207	0.9	102	49.3	177	0.7	1.03	0.86	0.83
DNK	194	0.9	20	10.3	230	0.9	0.54	1.19	2.18
CHE	162	0.7	63	38.9	121	0.5	0.92	0.75	0.81
FIN	122	0.5	25	20.5	75	0.3	0.63	0.61	0.97
NZL	120	0.5	33	27.5	110	0.4	0.72	0.92	1.27
AUT	115	0.5	40	34.8	75	0.3	0.84	0.65	0.78
ESP	104	0.5	39	37.5	88	0.4	1.19	0.85	0.71
NOR	102	0.4	21	20.6	81	0.3	0.93	0.79	0.85
ZAF	82	0.4	18	22.0	40	0.2	0.40	0.49	1.22
GRC	71	0.3	20	28.2	39	0.2	0.87	0.55	0.63
HUN	69	0.3	13	18.8	48	0.2	0.57	0.70	1.22
PRC	68	0.3	21	30.9	42	0.2	0.62	0.62	1.00
TWN	67	0.3	27	40.3	31	0.1	0.95	0.46	0.49
IRL	61	0.3	8	13.1	21	0.1	0.55	0.34	0.63
SUN	61	0.3	9	14.8	18	0.1	0.57	0.30	0.52
KOR	59	0.3	34	57.6	40	0.2	1.11	0.68	0.61
POL	50	0.2	15	30.0	40	0.2	0.69	0.80	1.17
SGP	50	0.2	23	46.0	41	0.2	0.94	0.82	0.87
BRA	46	0.2	20	43.5	19	0.1	0.78	0.41	0.53
NGA	45	0.2	9	20.0	26	0.1	0.60	0.58	0.96
HKG	39	0.2	23	59.0	21	0.1	0.70	0.54	0.77
MEX	39	0.2	17	43.6	17	0.1	0.73	0.44	0.60
PHL	34	0.1	14	41.2	35	0.1	0.79	1.03	1.31
IDN	30	0.1	15	50.0	28	0.1	1.00	0.93	0.93
TUR	27	0.1	16	59.3	16	0.1	0.87	0.59	0.68
CHL	25	0.1	14	56.0	12	0.0	0.88	0.48	0.54
THA	22	0.1	9	40.9	28	0.1	0.53	1.27	2.39
Total	22682	100.0	***	***	24509	100.0	1.08	1.08	1.00

Table 4

Countries ranked by their publication count in *Psychology & Psychiatry* (1990-1992)

Country	Publication		International paper		Citation		MECR	MOCR	RCR
	count	share (%)	count	share (%)	count	share (%)			
USA	22121	63.4	1492	6.7	45196	72.3	2.00	2.04	1.02
CAN	2845	8.2	624	21.9	5589	8.9	1.98	1.96	0.99
UKD	2601	7.5	480	18.5	5496	8.8	1.91	2.11	1.10
DEU	1481	4.2	232	15.7	1892	3.0	1.24	1.28	1.03
AUS	1015	2.9	168	16.6	1673	2.7	1.73	1.65	0.95
NLD	726	2.1	184	25.3	1601	2.6	2.07	2.21	1.07
JPN	600	1.7	121	20.2	436	0.7	0.92	0.73	0.79
ISR	557	1.6	161	28.9	759	1.2	1.86	1.36	0.73
FRA	498	1.4	141	28.3	787	1.3	1.57	1.58	1.01
ITA	336	1.0	99	29.5	452	0.7	1.79	1.35	0.75
SWE	334	1.0	78	23.4	618	1.0	1.76	1.85	1.05
SUN	261	0.7	16	6.1	89	0.1	0.40	0.34	0.85
NZL	234	0.7	49	20.9	310	0.5	1.65	1.32	0.80
CHE	210	0.6	49	23.3	205	0.3	1.27	0.98	0.77
ESP	193	0.6	50	25.9	248	0.4	1.43	1.28	0.90
BEL	179	0.5	39	21.8	320	0.5	2.06	1.79	0.87
CSK	161	0.5	13	8.1	49	0.1	0.27	0.30	1.12
FIN	159	0.5	29	18.2	257	0.4	1.28	1.62	1.26
NOR	144	0.4	35	24.3	191	0.3	1.40	1.33	0.95
IRL	138	0.4	36	26.1	126	0.2	1.00	0.91	0.91
HKG	120	0.3	48	40.0	136	0.2	1.31	1.13	0.87
AUT	110	0.3	30	27.3	188	0.3	1.37	1.71	1.25
ZAF	108	0.3	19	17.6	83	0.1	0.91	0.77	0.85
IND	102	0.3	21	20.6	74	0.1	0.97	0.73	0.75
DNK	79	0.2	11	13.9	92	0.1	1.11	1.16	1.05
POL	56	0.2	15	26.8	53	0.1	1.41	0.95	0.67
HUN	45	0.1	13	28.9	25	0.0	1.43	0.56	0.39
GRC	40	0.1	16	40.0	36	0.1	1.22	0.90	0.74
MEX	37	0.1	11	29.7	21	0.0	0.82	0.57	0.69
PRC	36	0.1	24	66.7	33	0.1	1.78	0.92	0.52
SGP	32	0.1	11	34.4	26	0.0	1.38	0.81	0.59
BRA	30	0.1	10	33.3	15	0.0	1.45	0.50	0.34
TWN	29	0.1	19	65.5	20	0.0	1.93	0.69	0.36
YUG	29	0.1	11	37.9	36	0.1	1.42	1.24	0.87
ARG	27	0.1	12	44.4	30	0.0	1.11	1.11	1.00
ZWE	27	0.1	4	14.8	11	0.0	0.88	0.41	0.46
TUR	26	0.1	8	30.8	27	0.0	0.79	1.04	1.31
KOR	23	0.1	13	56.5	28	0.0	1.63	1.22	0.75
NGA	22	0.1	3	13.6	10	0.0	1.06	0.45	0.43
Total	34884	100.0	***	***	62514	100.0	1.79	1.79	1.00

Table 5

Countries ranked by their publication count in *Sociology* (1990–1992)

Country	Publication		International paper		Citation		MECR	MOCR	RCR
	count	share (%)	count	share (%)	count	share (%)			
USA	5819	56.9	352	6.0	8839	76.0	1.42	1.52	1.07
UKD	775	7.6	87	11.2	881	7.6	1.00	1.14	1.14
CAN	599	5.9	85	14.2	679	5.8	1.12	1.13	1.01
SUN	398	3.9	10	2.5	62	0.5	0.13	0.16	1.20
FRA	299	2.9	28	9.4	98	0.8	0.35	0.33	0.94
DEU	273	2.7	35	12.8	238	2.0	0.83	0.87	1.06
AUS	257	2.5	46	17.9	288	2.5	1.07	1.12	1.04
ISR	125	1.2	34	27.2	115	1.0	1.24	0.92	0.74
IND	119	1.2	7	5.9	25	0.2	0.33	0.21	0.64
NLD	116	1.1	14	12.1	86	0.7	0.77	0.74	0.96
SWE	109	1.1	18	16.5	85	0.7	0.85	0.78	0.92
CSK	69	0.7	0	0.0	20	0.2	0.34	0.29	0.84
ITA	55	0.5	18	32.7	57	0.5	1.09	1.04	0.95
IRL	50	0.5	3	6.0	20	0.2	0.45	0.40	0.89
JPN	47	0.5	21	44.7	31	0.3	0.97	0.66	0.68
NOR	43	0.4	6	14.0	53	0.5	1.39	1.23	0.89
NZL	41	0.4	4	9.8	50	0.4	0.93	1.22	1.31
CHE	39	0.4	8	20.5	33	0.3	0.76	0.85	1.12
BEL	38	0.4	7	18.4	15	0.1	0.59	0.39	0.67
NGA	36	0.4	14	38.9	39	0.3	0.84	1.08	1.28
POL	34	0.3	9	26.5	33	0.3	0.96	0.97	1.02
FIN	31	0.3	6	19.4	11	0.1	0.79	0.35	0.45
BGD	26	0.3	12	46.2	26	0.2	1.16	1.00	0.86
PRC	25	0.2	11	44.0	25	0.2	0.88	1.00	1.14
ZAF	24	0.2	6	25.0	14	0.1	0.83	0.58	0.71
AUT	21	0.2	7	33.3	22	0.2	0.85	1.05	1.23
DNK	20	0.2	4	20.0	11	0.1	0.76	0.55	0.73
Total	10234	100.0	***	***	11624	100.0	1.14	1.14	1.00

Table 6

Countries ranked by their publication count in *Information & Library Science* (1990-1992)

Country	Publication		International paper		Citation		MECR	MOCR	RCR
	count	share (%)	count	share (%)	count	share (%)			
USA	3545	55.9	76	2.1	2830	64.3	0.76	0.80	1.05
UKD	519	8.2	43	8.3	459	10.4	0.79	0.88	1.12
SUN	386	6.1	5	1.3	154	3.5	0.60	0.40	0.67
DEU	197	3.1	22	11.2	81	1.8	0.51	0.41	0.81
CAN	185	2.9	29	15.7	183	4.2	0.93	0.99	1.06
NLD	67	1.1	13	19.4	80	1.8	0.81	1.19	1.48
FRA	62	1.0	9	14.5	41	0.9	0.84	0.66	0.78
AUS	61	1.0	4	6.6	32	0.7	0.73	0.52	0.72
BEL	41	0.6	5	12.2	64	1.5	1.04	1.56	1.51
IND	40	0.6	8	20.0	40	0.9	0.76	1.00	1.32
NGA	36	0.6	4	11.1	16	0.4	0.59	0.44	0.75
ISR	30	0.5	7	23.3	26	0.6	0.82	0.87	1.06
ZAF	29	0.5	1	3.4	14	0.3	0.64	0.48	0.75
HUN	28	0.4	7	25.0	32	0.7	0.86	1.14	1.33
ITA	24	0.4	5	20.8	17	0.4	0.95	0.71	0.75
ESP	24	0.4	5	20.8	16	0.4	0.85	0.67	0.79
PRC	22	0.3	10	45.5	9	0.2	0.95	0.41	0.43
Total	6342	100.0	***	***	4400	100.0	0.69	0.69	1.00

Table 7

Countries ranked by their publication count in *History & Philosophy of Science and Social Sciences* (1990-1992)

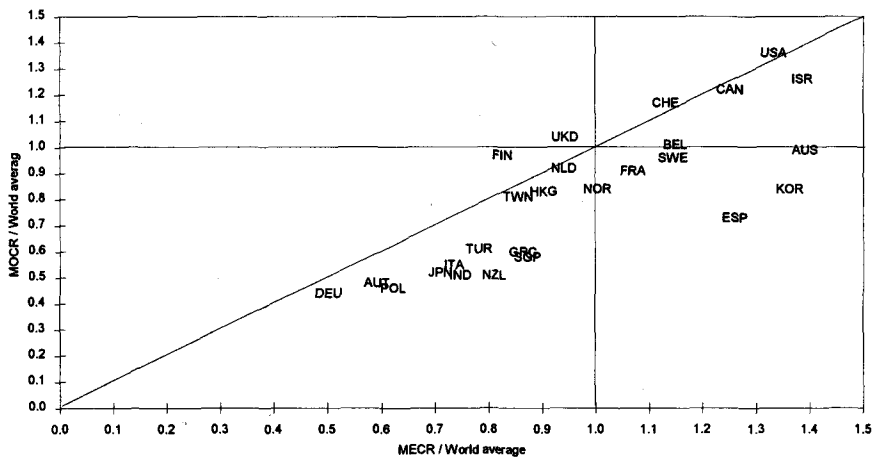| Country	Publication		International paper		Citation		MECR	MOCR	RCR
	count	share (%)	count	share (%)	count	share (%)			
USA	1154	54.5	54	4.7	689	53.4	0.57	0.60	1.05
UKD	381	18.0	35	9.2	347	26.9	0.84	0.91	1.09
CAN	138	6.5	14	10.1	70	5.4	0.64	0.51	0.79
AUS	75	3.5	18	24.0	73	5.7	0.72	0.97	1.36
DEU	44	2.1	4	9.1	18	1.4	0.56	0.41	0.73
NLD	43	2.0	4	9.3	30	2.3	0.52	0.70	1.33
ISR	36	1.7	10	27.8	15	1.2	0.54	0.42	0.77
FRA	23	1.1	3	13.0	21	1.6	0.75	0.91	1.22
Total	2119	100.0	***	***	1291	100.0	0.61	0.61	1.00

Business

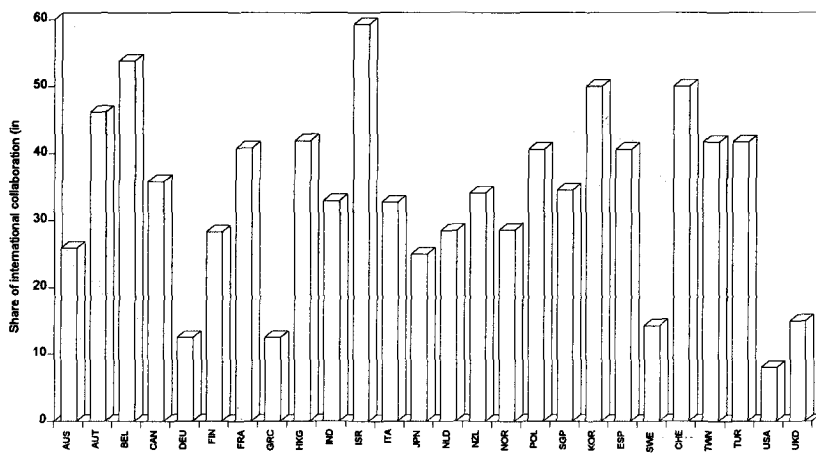Fig. 1. Relational chart of observed *vs.* expected citation rates

Fig. 2. Share of international papers in all publications
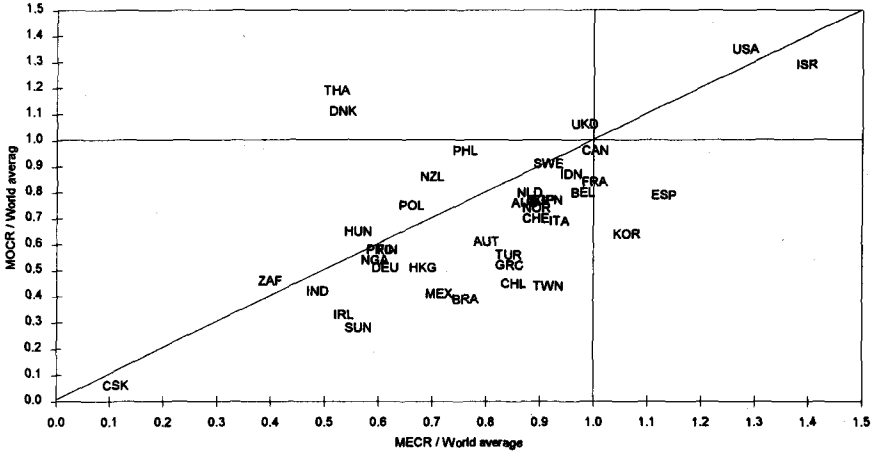
Economics

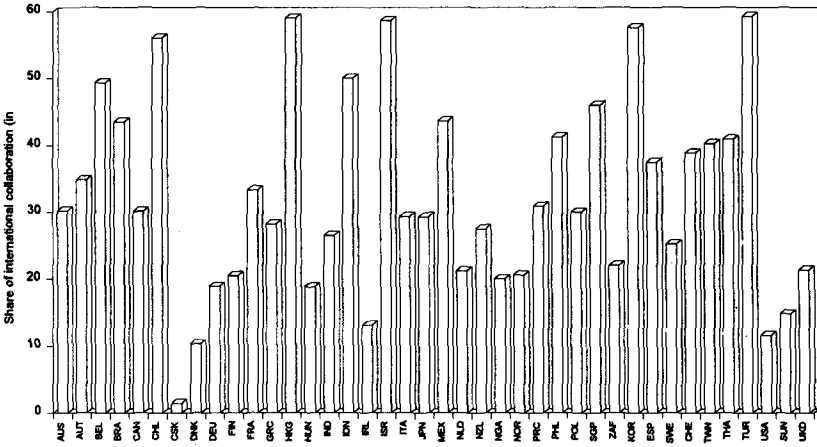Fig. 3. Relational chart of observed *vs*. expected citation rates

Fig. 4. Share of international papers in all publications
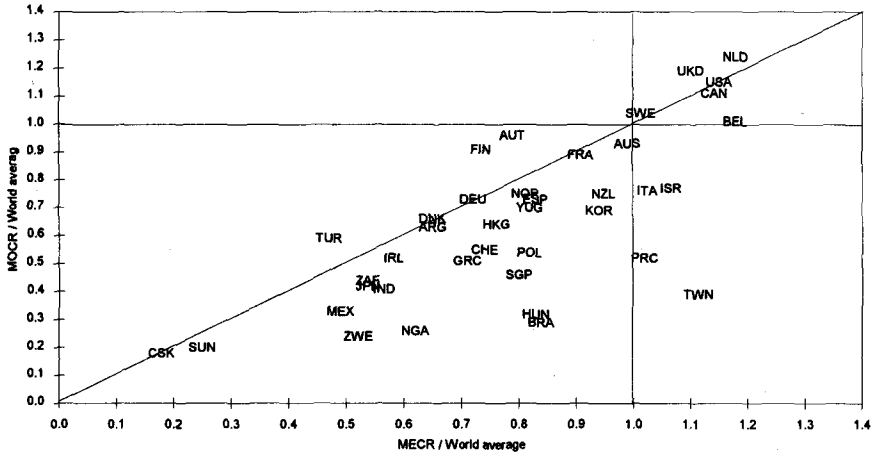
Psychology & Psychiatry

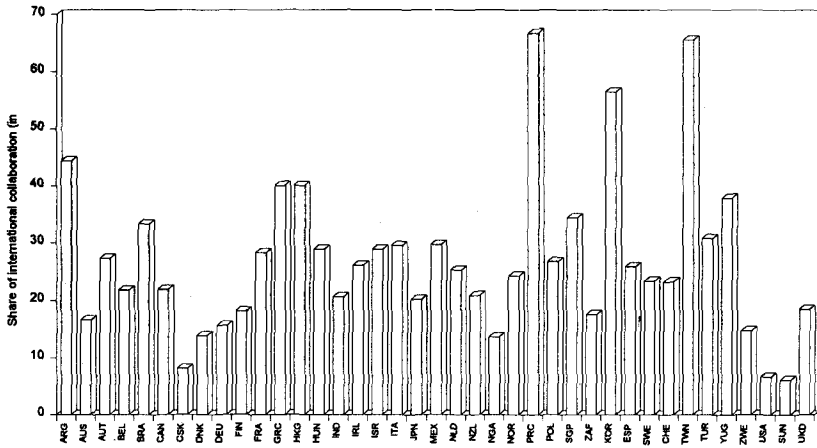Fig. 5. Relational chart of observed *vs.* expected citation rates

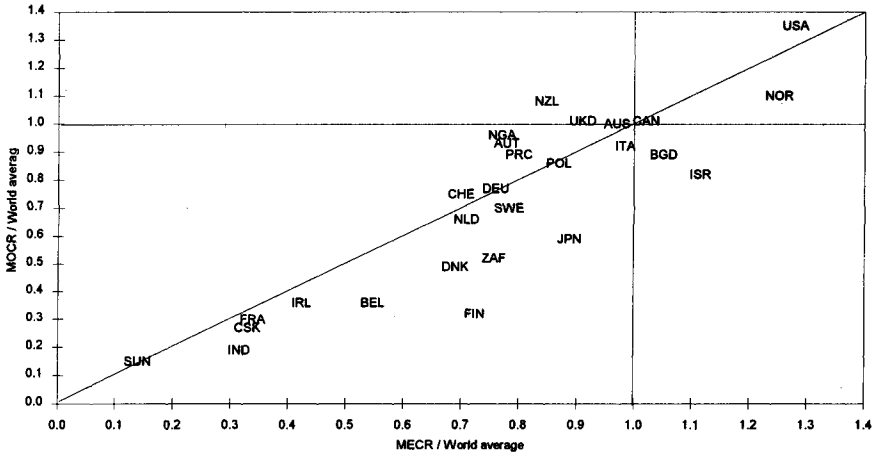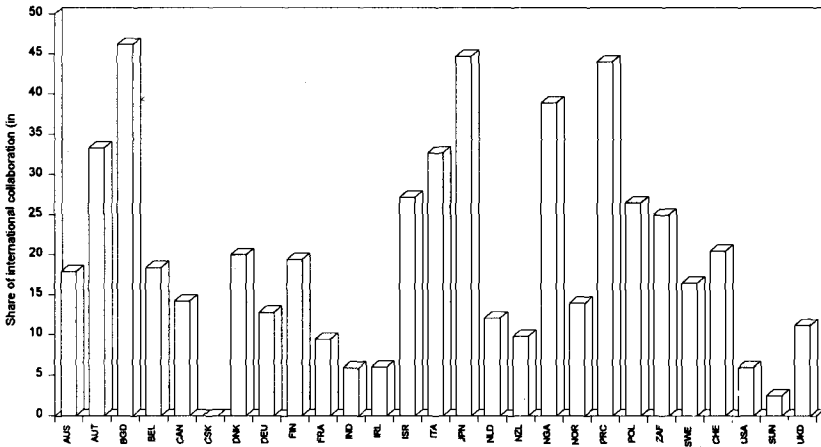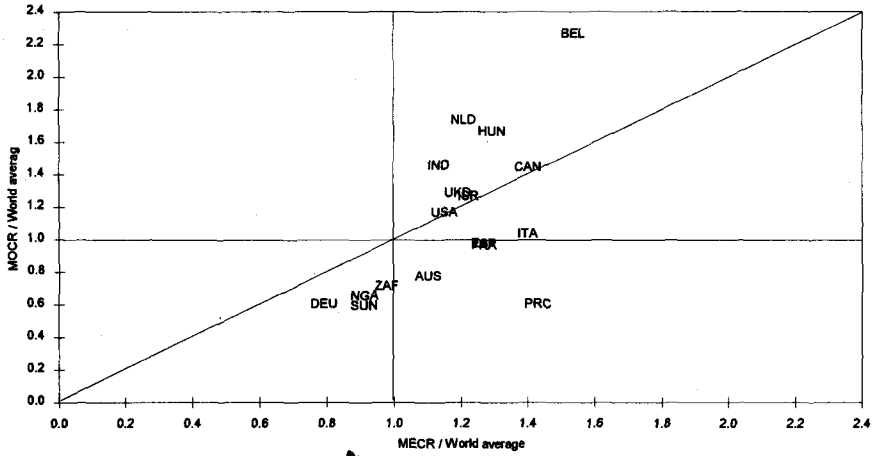Fig. 6. Share of international papers in all publications

Sociology

Fig. 7. Relational chart of observed *vs.* expected citation rates

Fig. 8. Share of international papers in all publications

Information & Library Science

Fig. 9. Relational chart of observed *vs.* expected citation rates
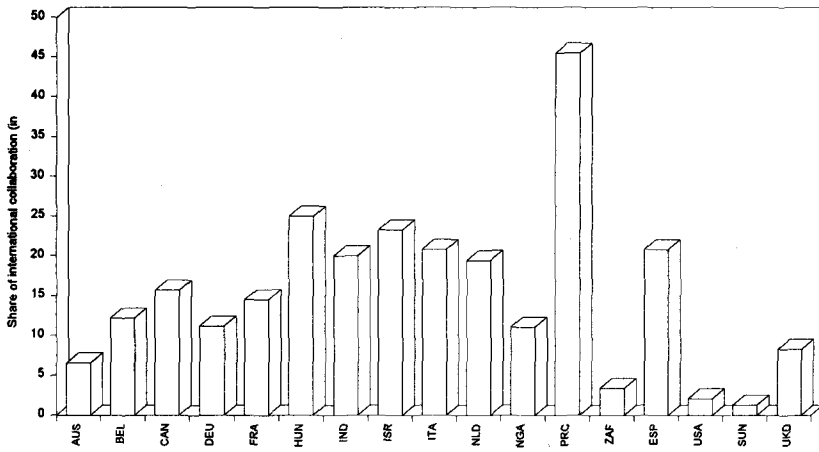

Fig. 10. Share of international papers in all publications

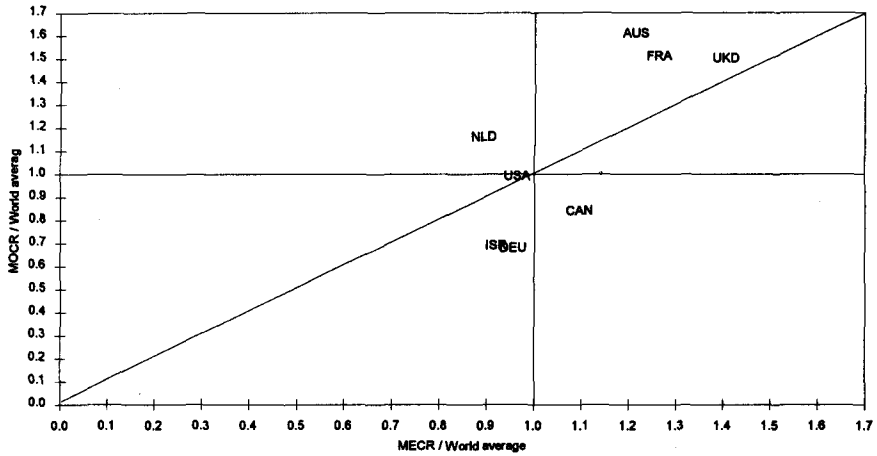## History & Philosophy of Science and Social Sciences

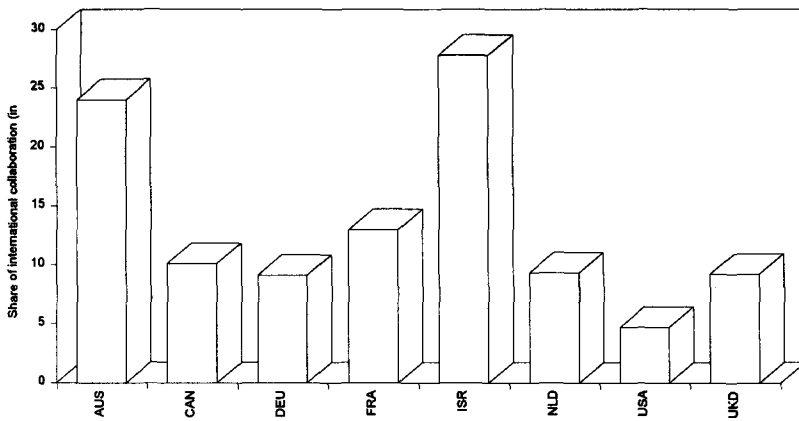Fig. 11. Relational chart of observed *vs.* expected citation rates

Fig. 12. Share of international papers in all publications

References

1. A. SCHUBERT, W. GLÄNZEL, T. BRAUN, Scientometric Datafiles. A Comprehensive Set of Indicators on 2649 Journals and 96 Countries in All Major Fields and Subfields 1981–1985. *Scientometrics,* 16 (1989) 3–478.
2. T. BRAUN, W. GLÄNZEL, A. SCHUBERT, Scientometric Indicator Datafiles. A Multidimensional Machine Readable Database for Evaluative Purposes, *Scientometrics,* 28 (1993) 137–150.
3. T. BRAUN, W. GLÄNZEL, H. GRUPP, The Scientometric Weight of 50 Nations in 27 Science Areas, 1989–1993. Part I. All Fields Combined, Mathematics, Engineering, Chemistry And Physics, *Scientometrics,* (in press).
4. T. BRAUN, W. GLÄNZEL, H. GRUPP, The Scientometric Weight of 50 Nations in 27 Science Areas, 1989–1993. Part II. Life Sciences, *Scientometrics,* (in press).
5. T. BRAUN, W. GLÄNZEL, United Germany: The New Scientific Superpower? *Scientometrics,* 19 (1990) 513–521.
6. W. GLÄNZEL, Publication Dynamics and Citation Impact: A Multi-Dimensional Approach to Scientometric Research Evaluation. In: P. WEINGART, R. SEHRINGER, M. WINTERHAGER (Eds), *Presentations of Science and Technology*, DSWO Press, Leiden, 1992, 209–224. Proceedings of the *International Conference on Science and Technology Indicators*, held in Bielefeld (Germany), on 10–12 June, 1990.
7. MONTADA, J. H. BECKER, U. SCHOEPFLIN, P. B. BALTES, Die internationale Rezeption der deutschprachigen Psychologie, *Psychologische Rundschau,* 46 (1995) 186–199.
8. GLÄNZEL, U. SCHOEPFLIN, A Bibliometric Study on Ageing and Reception Processes of Scientific Literature in the Social Sciences, *Journal of Information Sciences,* 21 (1995) 37–53.

Appendix

Country codes of 180 countries according to the ISO standard

AFG	Afghanistan		GLP	Guadeloupe		PAK	Pakistan
AFI	Afars & Iss		GRC	Greece		PAN	Panama
AGO	Angola		GRL	Greenland		PER	Peru
ALB	Albania		GTM	Guatemala		PHL	Philippines
ANT	Neth Antillas		GUF	French Guyana		PNG	Papua New Guinea
ARE	United Arab Emir		GUY	Guyana		POL	Poland
ARG	Argentina		HKG	Hong Kong		PRC	PR China
ASM	American Samoa		HND	Honduras		PRK	North Korea
ATA	Antarctica		HTI	Haiti		PRT	Portugal
AUS	Australia		HUN	Hungary		PRY	Paraguay
AUT	Austria		HVO	Upper Volta		PYF	French Polynesia
BDI	Burundi		IDN	Indonesia		QAT	Qatar
BEL	Belgium		IND	India		REU	Reunion
BEN	Benin		IRL	Ireland		ROM	Romania
BEU	Belau		IRN	Iran		RWA	Rwanda
BGD	Bangladesh		IRQ	Iraq		SAU	Saudi Arabia
BGR	Bulgaria		ISL	Iceland		SDN	Sudan
BHR	Bahrain		ISR	Israel		SGA	Senegambia
BHS	Bahamas		ITA	Italy		SGP	Singapore
BHU	Bhutan		JAM	Jamaica		SIK	Sikkim
BIG	Bissau Guinea		JOR	Jordan		SLB	Solomon Isl
BLZ	Belize		JPN	Japan		SLE	Sierra Leone
BMU	Bermuda		KEN	Kenya		SLV	El Salvador
BOL	Bolivia		KIR	Kiribati		SMR	San Marino
BPW	Bophuthatswana		KOR	South Korea		SOM	Somalia
BRA	Brazil		KWT	Kuwait		SSA	Spanish Sahara
BRB	Barbados		LAO	Laos		SUN	USSR
BRN	Brunei		LBN	Lebanon		SUR	Surinam
BUR	Burma		LBR	Liberia		SWE	Sweden
BWA	Botswana		LBY	Libya		SWZ	Swaziland
CAF	Central Africa		LIE	Liechtenstein		SYC	Seychelles
CAN	Canada		LKA	Sri Lanka		SYR	Syria
CHE	Switzerland		LSO	Lesotho		TCD	Chad
CHL	Chile		LUX	Luxembourg		TGO	Togo
CIK	Ciskei		MAR	Morocco		THA	Thailand
CIV	Ivory Coast		MAU	Mauritania		TON	Tonga
CMR	Cameroon		MCO	Monaco		TRK	Transkei
COG	Congo PR		MDG	Malagasy Rep		TTO	Trinidad&Tobago
COK	Cook Island		MEX	Mexico		TUN	Tunisia
COL	Colombia		MIC	Micronesia		TUR	Turkey
CRI	Costa Rica		MIL	Marshall Islands		TWN	Taiwan
CSK	Czechoslovakia		MLI	Mali		TZA	Tanzania
CUB	Cuba		MLT	Malta		UGA	Uganda
CYP	Cyprus		MNG	Mongol PR		UKD	UK
DEU	Germany FR		MOZ	Mozambique		URY	Uruguay
DNA	Dominican Rep		MTQ	Martinique		USA	USA
DNK	Denmark		MUS	Mauritius		VAT	Vatican
DZA	Algeria		MWI	Malawi		VEN	Venezuela
ECU	Ecuador		MYS	Malaysia		VND	Venda
EGY	Egypt		NAM	Namibia		VNM	Vietnam
EQG	Equat Guinea		NCL	New Caledonia		VUT	Vanuatu
ESP	Spain		NER	Niger		WIA	W Indian Assoc
ETH	Ethiopia		NGA	Nigeria		WSM	Western Samoa
FIN	Finland		NIC	Nicaragua		YEM	Yemen Arab Rep
FJI	Fiji		NIU	Niue		YMD	Yemen PDR
FRA	France		NLD	Netherlands		YUG	Yugoslavia
GAB	Gabon		NOR	Norway		ZAF	South African R
GHA	Ghana		NPL	Nepal		ZAR	Zaire
GIB	Gibralter		NZL	New Zealand		ZMB	Zambia
GIN	Guinea		OMN	Oman		ZWE	Zimbabwe