



Bibliometric Research Performance Analyses

RAE2013

University of Oulu



Bibliometric Analyses

- For the panelists to evaluate:
 - Scientific quality
 - Scientific significance



Bibliometric Analyses

- Will be carried out by professionals in the Centre for Science and Technology Studies (CWTS), Leiden University, the Netherlands and in Oulu University Library
- The analyses done by CWTS are based on standard methods using indicators that have been widely tested and approved



Bibliometric Analyses

- The bibliometrics provided by CWTS/Leiden cover only the publications that have a Thomson Reuters Web of Science (WoS) identification number (UT) in SoleCris system of University of Oulu
- Oulu University Library will update the UTs of Research Communities in the SoleCRIS system



Bibliometric Analyses

- The publications of researchers will be evaluated only for the period when they have been affiliated with the University of Oulu
- The Research Community (RC) must update the publications in the SoleCRIS system by the deadline of 21 December 2012
- The publications of RC during 2007-2011 will be included in the evaluation



Publications

- The number of all publications is based on the SoleCris data where publications in categories A and C are classified as scientific publications (Classification of the Ministry of Education and Culture)
- A1 Refereed journal article
- A2 Review in scientific journal
- A3 Contribution to book/other compilations (refereed)
- A4 Article in conference publication (refereed)
- C1 Published scientific monograph
- C2 Edited book, compilation, conference proceeding or special issue of journal



Bibliometric Indicators/CWTS

- P Number of publications (in the international journals)
- C Total amount of citations received
- MCS Average number of citations received per paper without self-citations (citation impact)
- Pnc Percentage of non-cited papers in the given time period
- MNCS Average field-normalized citation impact
- TNCS Sum of the field-normalized citation score
- MNJS Average field-normalized impact of journals used
- PP_{top10} Contribution to top 10% most highly cited papers (actual compared to expected)
- PP_{int collab} The proportion of the publications of the RC that have been co-authored from more than 1 country
- Int_cov Internal coverage: average percentage of references covered by the Web of Science (WoS)



Description of Indicators

- Pnc The percentage of articles not cited by others during the period under review
- MNCS (Mean Normalized Citation Score)
- The actual number of citations divided by the expected number of citations. The expected number of citations is based on the world-wide average score of all similar papers belonging to the same field (journal subject category). World average=1.
- *Tieteenalanormalisoitu artikkelien vaikuttavuus*
- TNCS Sum of the field-normalized citation score for individual papers



Description of Indicators

- MNJS: Average normalized impact of journals used (Mean Normalized Journal Score)
- The average citation impact of the journals that are used by RC in comparison to the international average in the field (world average=1).
- Shows whether the RC publishes in top journals
- *Tieteenalanormalisoitu käytettyjen aikakauslehtien vaikuttavuus*



Description of Indicators

- PPtop10 % Contribution to top 10% most highly cited papers
- Field-normalized proportion of publications belonging to the top 10 percent in terms of citation impact. If the value of PPtop10 exceeds 1, then the unit of assessment has more papers among the top 10 percent than the world average in the same field.
- *Tieteenalanormalisoitu osuus siteeratuimmman 10% joukossa*
- Int_cov: Internal coverage: average percentage of references covered by WoS
- *Kattavuus WoS-tietokannassa*



Table 3. Biological, Agricultural and Veterinary Sciences: publications, citations and field-normalized figures in CWTS analysis (2005–2010)

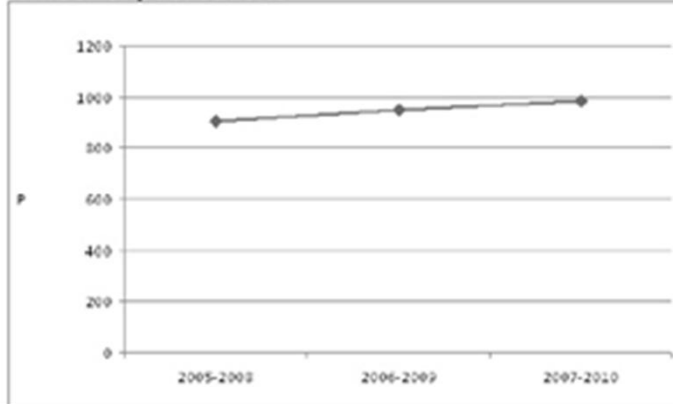
RCS	ALL	AC	p ^{WoS}	C	MCS	PNC	MNCS	MNJS	PPtop10	INT_COV
A1	328	102	80	578	7,29	32,5	1,38	1,47	1,67	0,7
A2	632	393	174	567	3,26	45,4	0,59	0,71	0,5	0,47
A3	183	176	164	2445	15	13,4	1,63	1,49	1,85	0,94
A4	604	439	279	734	2,67	38,4	0,95	1,21	0,84	0,76
A5	251	234	195	2851	14,7	19,5	3,09	1,56	1,78	0,85
A6	88	59	35	79	2,26	37,1	1,06	0,99	0,62	0,58
A7	199	147	111	1749	15,8	16,2	2,34	1,71	2,34	0,89
	Julk/Tuhat		Julk/WoS	Viitteet	Sit/julk	%Ei sit/art	Art.vaik.	Käytt.leht.vaikutt, osuus 10 %, WoS:ssa		
Total	9322	6493	4496							



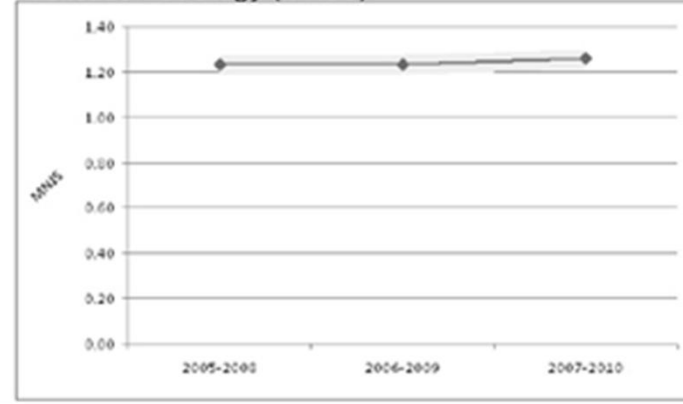
Trend Analyses

Trend analyses

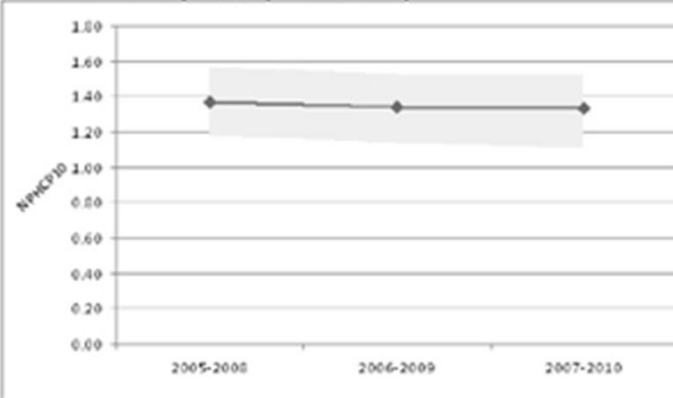
Number of publications



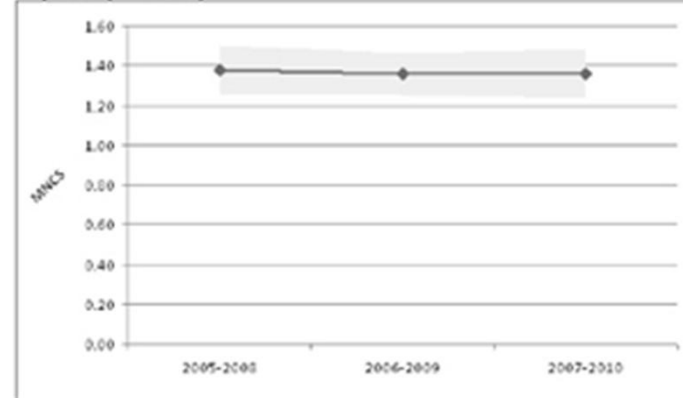
Publication Strategy (MNJS)



Contribution top10% (NPHCP10)



Impact (MNCS)



MNJS in Relation to MNCS of Publications of RCs

- Relationship of Paper's Mean Normalized Citation Score to Mean Normalized Journal Score
- *Ryhmän tieteenalanormalisoitujen käytettyjen aikakauslehtien vaikuttavuuden suhde ryhmän tieteenalanormalisoitu artikkelien vaikuttavuuteen*
- The MNJS indicator refers to the field-normalised average journal impact and describes the impact of the journals in which the RC published their papers. This describes the researchers' level of ambition when choosing the journal in which to publish.
- Comparing to world field-normalised average (1,0);
Verrataan maailman tieteenalanormalisoituun keskiarvoon (1,0)
- Mitä arvostetumpi lehti, sen enemmän yleensä viitteitä



MNJS in Relation to MNCS of Publications of RCs

MNJS in relation to MNCS of publications of RCs

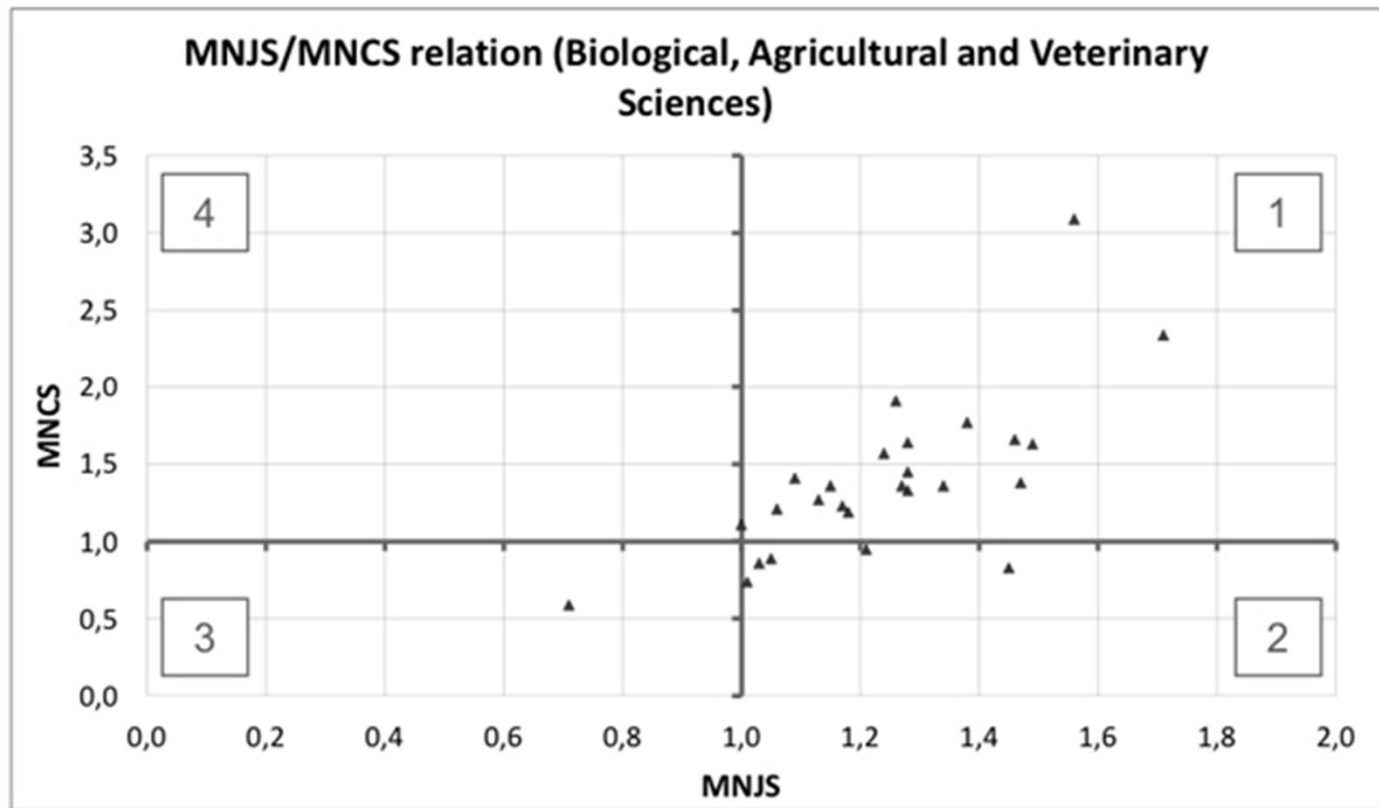


Figure 5. MNJS in relation to MNCS

Impact and robustness of Publications of RCs

- *Ryhmän korkea MNCS eli Tieteenalanormalisoitu artikkelien vaikuttavuus ja korkea THCP10 kertovat hyvästä ja vahvasta julkaisukäytännöstä*
- The RCs with high MNCS and THCP10 that exceed the international average can be interpreted as having good and robust publication practices
- The axes indicate the world field-normalised average (1,0) (*Verrataan maailman tieteenalanormalisoituun keskiarvoon (1,0)*)



Impact and robustness of Publications of RCs

Impact and robustness of publications of RCs

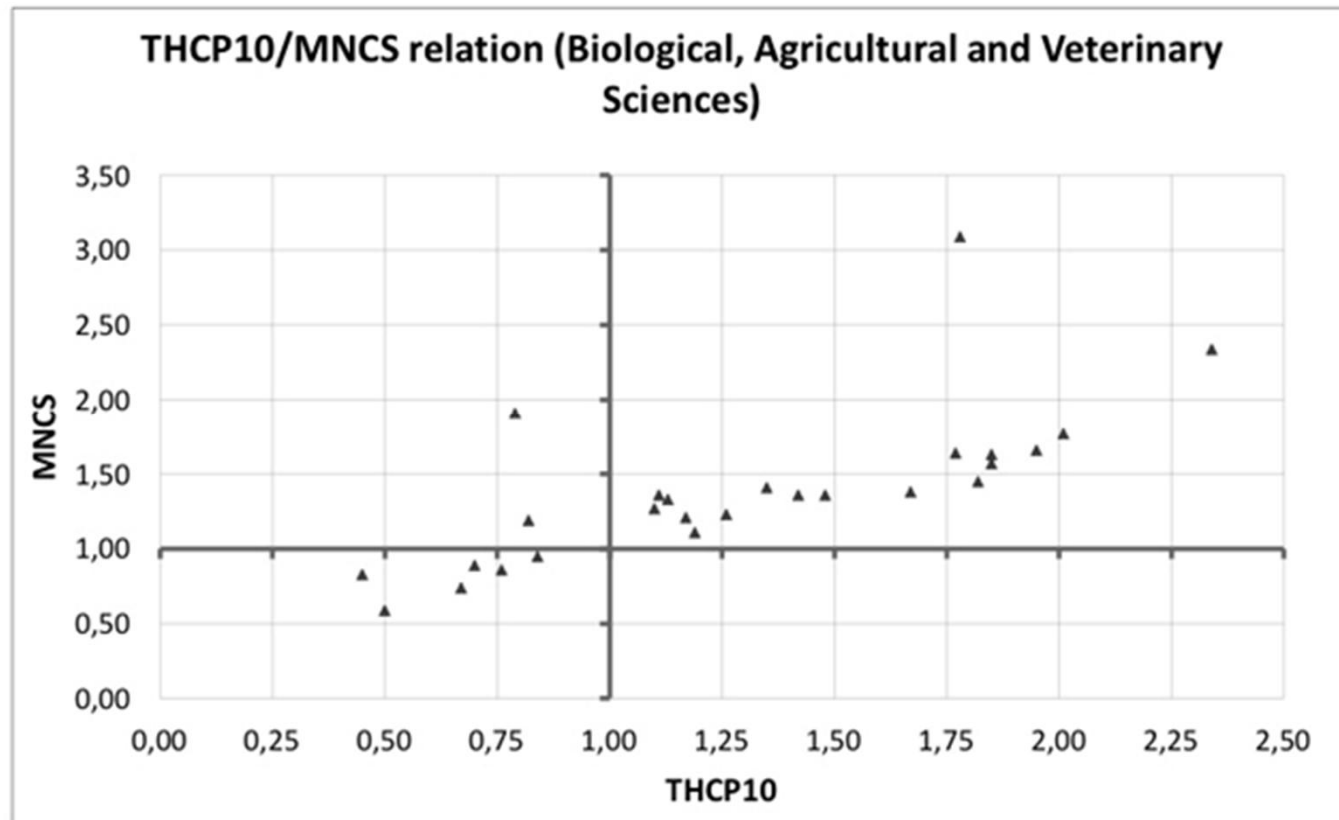


Figure 6. THCP10 in relation to MNCS



Alternative Analyses

- In some fields WoS-based bibliometric analyses are not relevant: humanities and social sciences
- Alternative analyses if RC's number of publications is less than 50 or the internal coverage is less than 40 % in CWTS analyses
- Carried out by the information specialists of Oulu University Library



Alternative Analyses

- Indicators (under discussion):
- Book citations (price?)
- Quality of journals used by RC: JUF0-classification
- Quality of RC's book/book article: publishers' JUF0-classification
- Cooperation: authors or affiliations per book/article
- International impact: papers' languages



More information

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