

Measuring the importance of Scientific Journals or is the assessment of scientific relevancy a sufficient criterion for canceling subscriptions?

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Situation

- stagnating or decreasing budgets at University libraries
 - e. g. in 2002 UBS = 500.000 Euro
 - in 2003 UBS = 450.000 Euro
- ⇒ ever rising prices for scientific journals



Consequences

- budget for monographs reduced to a minimum
- canceling subscriptions of journals
- ⇒ affects the efficiency of research and teaching directly

Desire

Steering Instruments to counteract the development



Consequences

- change strategy
 - ⇒ from stock-oriented acquisition
 - ⇒ to demand-oriented acquisition
 - ⇒ only possible in cooperation with institutes and 129 departmental libraries !

- ⇒ evaluation first step!



Planning and Preparation

- about 3000 titles involved
 - ⇒ Basis: records from the national journals database (ZDB)
- about 1000 titles revised
- Test poll
 - 20 most expensive journals and journal packages
 - Results: strong interdisciplinary demand
but no interest in cost-sharing for the future!



Planning and Preparation

- Online questionnaire
 - Main title
 - subtitle
 - publisher
 - ISSN
 - no price
 - no indicator for possessions (holdings)

⇒ interactive database



Planning and Preparation

- Algorithm designed by the Institute for Stochastics
 - votes possible from 1 (dispensable) to 5 (mandatory)
 - size of each institute (number of C3/C4 professors)
 - number of titles assessed
- ⇒ votes renormalized during the iteration



Planning and Preparation

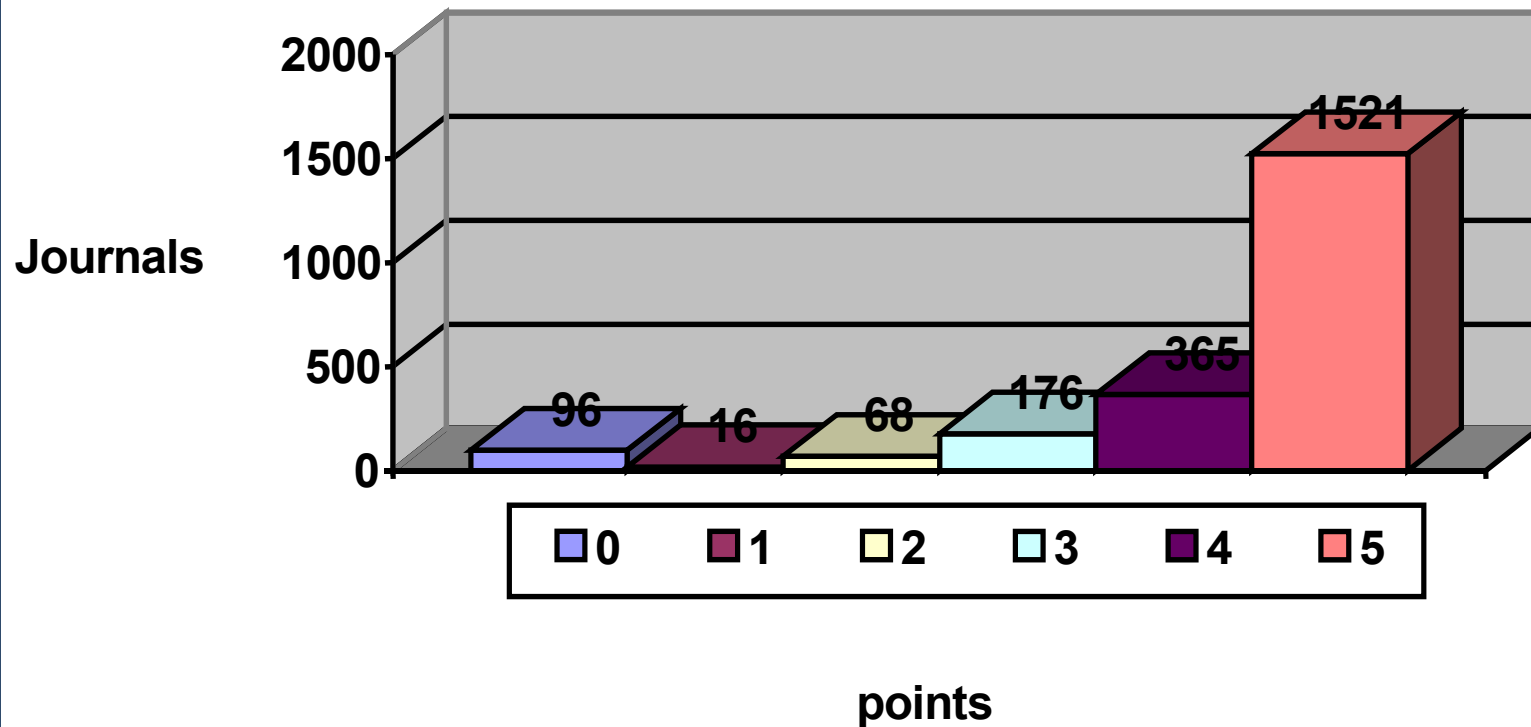
$$\frac{X_{i,j}}{\sum_{j=1}^N X_{i,j}} \times (AnzahlC3 / C4) \times 100, \text{ for all } j = 1 \dots N$$

Result:

ranking figure for each title

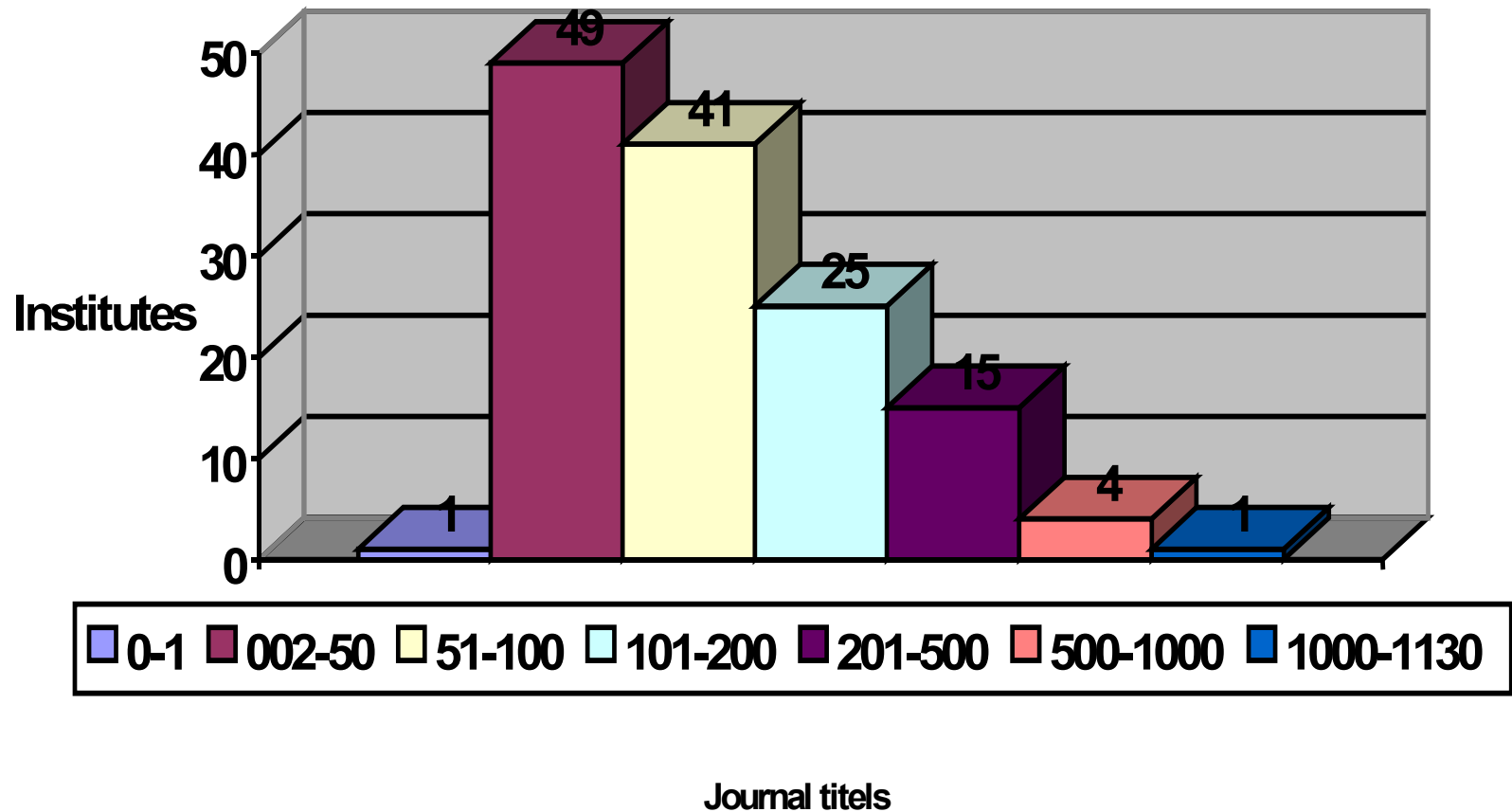


Maximum number of votes per title





Number of titles assessed by an institute





Result Lists

- Ranking List

- ⇒ instrument to compare subject specific relevancy of journal titles

- Final List

- ⇒ relevancy against subscription price

- ⇒ normalized votes divided by the price

- Average of relevancy/price quotient = 2,922495

- Compared e. g. for all Elsevier titles = 0,46737



Five titles with the highest relevancy/ price quotient

Title	Subject	Price	Votes	Quotient
Deutsche Bauzeitung	28	19,17 €	5732	299,00887
Aero-revue : internationale Fachzeitschrift für alle Zweige der Luftfahrt	20	49,93 €	10746	215,22131
Wksb : Zeitschrift für Wärmeschutz, Kälteschutz, Schallschutz, Brandschutz	19	12,78 €	2566	200,78247
Arch + : Zeitschrift für Architektur und Städtebau	28	42,44 €	6414	151,13101
Mitteilungen der Deutschen Mathematiker-Vereinigung	12	8,95 €	820	91,62011



Five titles with the lowest relevancy/ price quotient

Title	Subject	Price	Votes	Quotient
Measurement techniques: the Soviet journal Izmeritel'naya tekhnika in Engl. transl / Instrument Society of America	19	2.931,74 €	70	0,02388
Fontane-Blätter: Halbjahreschrift / im Auftr. d. Theodor-Fontane-Archivs u. d. Theodor-Fontane-Gesellschaft e.V. hrsg.	33	1.748,00 €	37	0,02117
Aquatic sciences: a multidisciplinary journal for theoretical and applied limnology, fisheries science and water technology	16	355,88 €	7	0,01967
Nuovo cimento della Società Italiana di Fisica : rivista internazionale di fisica	14	361,06 €	7	0,01939
Erzmetall: Rohstoffgewinnung, Verarbeitung, Umwelttechnik Recycling,	22	263,06 €	5	0,01901

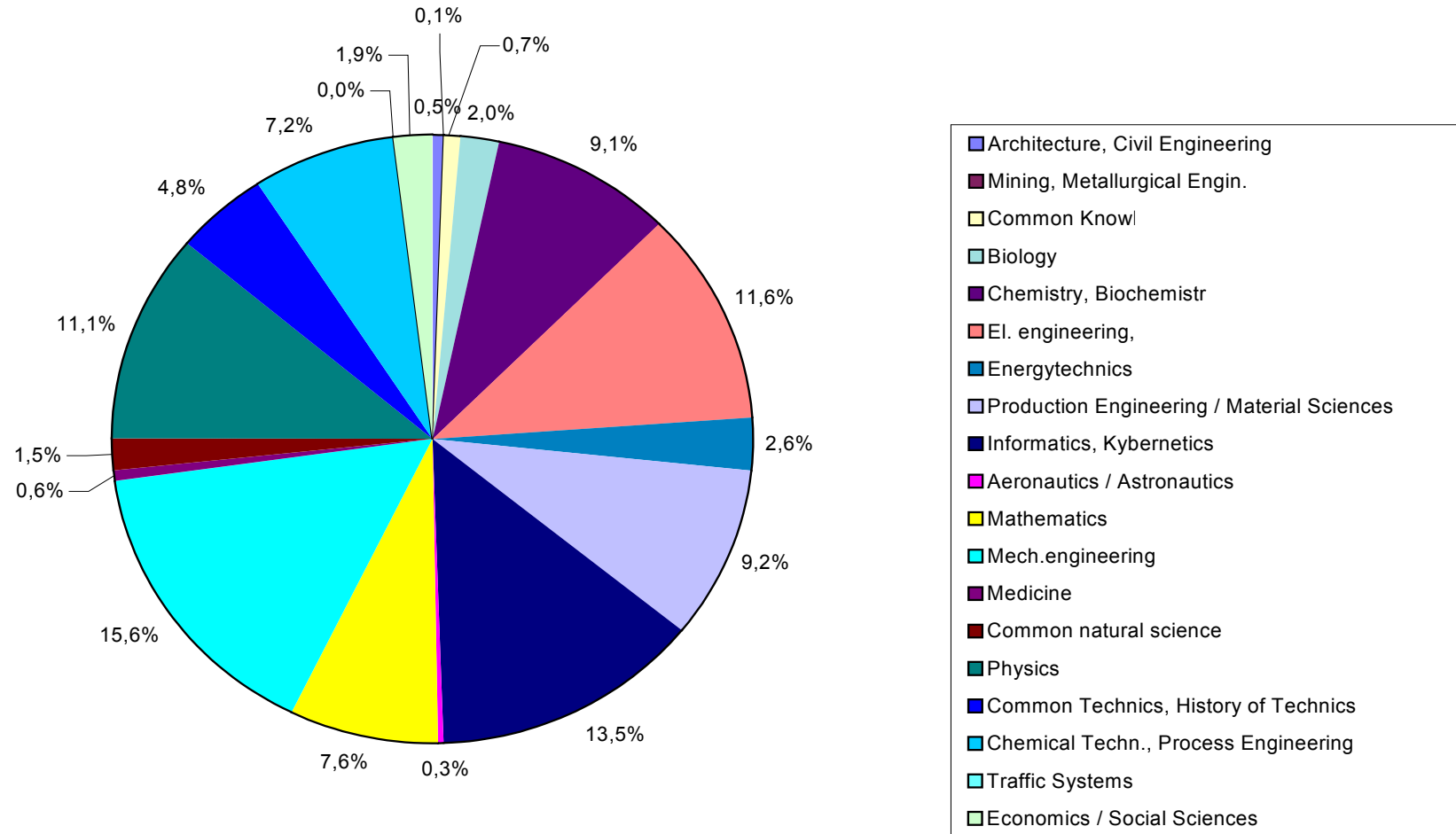


- Possibility to group titles by subject areas
 - ⇒ comparison of institute assessing and titles being assessed
 - indicator:
 - How interdisciplinary is research in a certain faculty?
 - How interdisciplinary is the usage of titles from a certain subject area/ faculty at Stuttgart University?



Faculty Mechanical Engineering

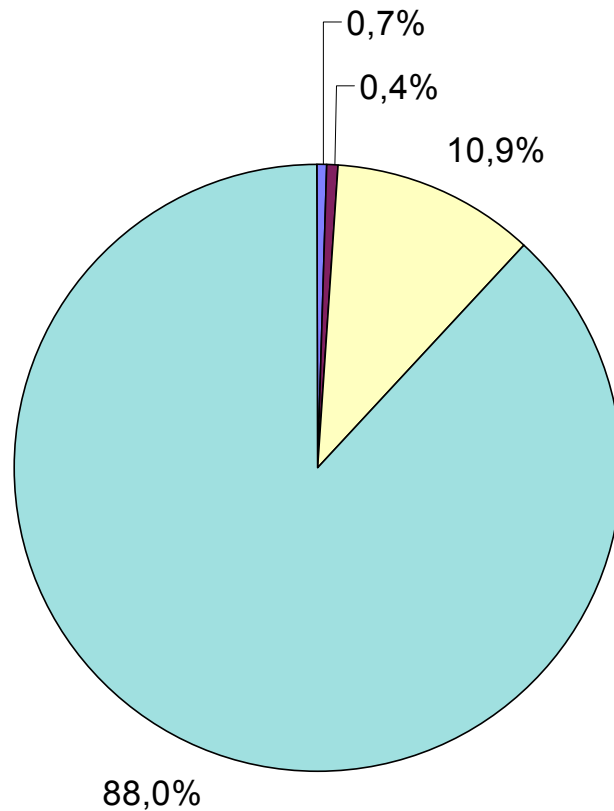
Faculty Mechan. Engineering





Mechanical Engineering

Mechanical Engineering



- Faculty Chemistry
- Faculty Computer Science, El. Engineering
- Faculty Aeronautics
- Faculty Mech. Engineering



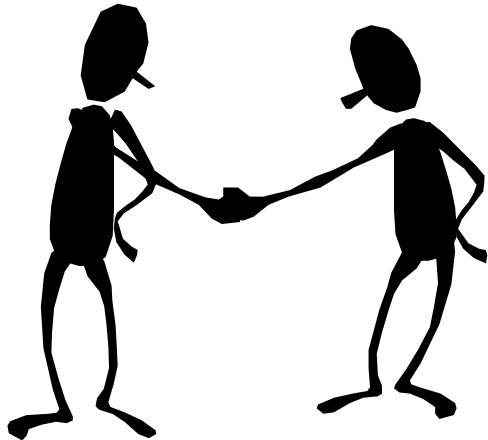
Conclusions I

- Evaluation \Rightarrow assessment of scientific relevancy of journal titles
- Quotient relevancy/ price \Rightarrow feasible measure for economical supply with information
- Evaluation \Rightarrow one instrument for acquisition strategy (stock-oriented towards demand-oriented)
- Evaluation \Rightarrow gives arguments to change budget allocation (subject specific budgets)
- Convince Your University management to have one single budget for journal acquisition under the responsibility of the library



Conclusions II

- Subscription prices will remain high (at least in STM)
 - (because the relevancy of those titles for research and teaching is high, as shown in the evaluation)
- Convince scientist that it is in their hand to oppose this development
- foster self-archiving, open preprint initiatives or institutional repositories (like OPUS)
- focus on non-for-profit publishing (PLOS or BioMedCentral)



**THANKS FOR YOUR
ATTENTION !**

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