

Albers, Sönke

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Arbeitspapiere des Lehrstuhls für Innovation, Neue Medien und Marketing, Institut für Betriebswirtschaftslehre, Universität Kiel

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Discriminating Rankings of Research in Business

Sönke Albers

Christian-Albrechts-University at Kiel

Abstract. The attempts by Schulze, Warning, and Wiermann (2008) and Ritzberger (2008) to develop a joint ranking list of journals for economics and business research are critically evaluated. Their lists suggest that the quality of top business journals is substantially lower than that of many economics journals. If, however, the authors of these lists do not want to claim a general superiority of one discipline (economics) over another one (business), they should give a clear indication that these lists are only applicable for economists. This warning appears necessary because Fabel, Hein, and Hofmeister (2008) derive a ranking of universities and departments with respect to research productivity in business from the business research discriminating list RbR_IMP by Schulze et al. While Diamantopoulos and Wagner (2008) already show a lack of face-validity of these results, this article explains that the reason for this lies not only in the degrading and also biased weighting of the business journals across subfields, but even more importantly, in a remarkable incompleteness of the data base.

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Address of Author:

Sönke Albers
Professor of Innovation, New Media, and Marketing
Christian-Albrechts-University at Kiel
24098 Kiel, Germany
Tel. +49-431-880-1541
E-Mail: soenke.albers@t-online.de

1. INTRODUCTION

Recently, some researchers expressed interest in comparing research productivity across economics and business administration (Fabel, Hein, and Hofmeister, 2008; Ritzberger, 2008, p. 409; Schulze, Warning, and Wiermann, 2008, p. 287). Schulze et al. (2008, p. 287) formulate most frankly that the goal of such a comparison enables the schools (faculties) to allocate financial funds according to research productivity across departments like economics and business. In order to achieve this goal, research performance must be measured. All authors mentioned above assume that the measure should be based on publications in journals. Since quality of research is difficult to evaluate across hundreds of researchers, Fabel et al. (2008) chose the quantity of publications weighted with a quality index of the respective journals for their ranking of universities and departments. They base their ranking on a journal-weighting scheme by Schulze et al. (2008), which itself is derived with the help of imputation from the journal-ranking list by Ritzberger (2008). While Diamantopoulos and Wagner already show a lack of face-validity of the results published by Fabel et al. (2008), our article explains that the reason for this lies not only in a degrading and also biased weighting of business journals across subfields, but even more importantly, in a remarkable incompleteness of the data base.

2. JOINT RANKING OF ECONOMICS AND BUSINESS JOURNALS BY RITZBERGER

In order to “shed light on the relative importance of distinct fields” such as economics, business, finance, management, and statistics, Ritzberger (2008, p. 409) carried out a joint ranking of journals from these fields based on citation impact. Although Ritzberger himself (2008, p. 404-405) points out several shortcomings of citation impact as a measure of journal

quality, he states that there is a lack of an alternative and moves on. Ritzberger (2008, p. 409) justifies this measure as being objective when compared to a measure of journal quality as evaluated by members of an association which he assumes is subject to manipulation. Although this argument is not convincing because of the many ways through which citations can be manipulated (Frey and Rost 2008), let us accept it for the sake of the following discourse. Ritzberger (2008, p. 408) extended previous research within the field of economics with the purpose of including not only journals from economics but also journals from the categories “business”, “business finance”, and “industrial relations and labor” as provided by the Social Science Edition of the Journal Citation Reports. Based on the so-called invariant method, Ritzberger presents a classification list of journal quality that he believes would generate interesting information about the impact that these disciplines have on each other in terms of research. Counting the number of journals from economics and business in the respective quality categories we obtain the following Table 1.

Table 1: Number of Journals in the disciplines economics and business ranked according to the categories derived by Ritzberger (2008)

Category		Journals from Economics	Journals from Business	All Journals
A+	Top journals	9	1	10
A	Excellent journals	14	1	15
B+	Very good journals	10	10	20
B	Good journals	19	11	30
C+	Solid journals	28	12	40
C	Minor journals	39	21	60
Total		119	56	175

As a result, 2/3 of the journals considered to be valuable by Ritzberger come from economics while only 1/3 are from business. Even worse, taking the two top categories A+ and A, we find that 92% of the journals come from economics and only 8% from business. Thus, Ritzberger concludes that “in an overall view economics still appears to be the dominant discipline as far as citation flows in research papers are concerned” (Ritzberger, 2008, p. 419). If we accept the understanding that one discipline cannot be better than another one but only different, this ranking list appears to be questionable.

Apparently, researchers in business publish in different journals than economists (except for finance to a certain degree) where a different culture and different citation habits dominate. It is therefore strange for business researchers that, for example, the Journal of Marketing and Management Science are only considered to be good journals and, even worse, that the Academy Management Review, Administrative Science Quarterly, Strategic Management Journal and Academy Management Journal are placed into the category “solid journals”, which is the second lowest category. Everyone in business research worldwide considers these top A+ journals. Ritzberger could have taken a look at the 24 A+ journal list by the University of Dallas (<http://somweb.utdallas.edu/top100Ranking/rankingMethod.php>) that is widely used in the US for tenure decisions, or the Top20 List of Business Week (http://www.businessweek.com/bschools/content/apr2006/bs20060420_4380.htm), or the Top40 List of the Financial Times (<http://www.journal-ranking.com/ranking/web/docs/pdf/-business%20top%2040.pdf>) (see also Table 3). He criticizes other rankings such as the ones from the Vienna University of Economics and Business Administration or the Kiel Institute for the World Economy because of “obscurities” (using Ritzberger’s own language, see p. 403), but he is apparently not aware that his own list is full of “obscurities” from the viewpoint of business researchers.

Ritzberger claims his method to be invariant. However, Serrano (2004) already points out that any ranking based on cross-citations must be subject to the set of journals especially when they are from rarely overlapping sub-disciplines. The lack of face-validity makes it obvious that the ranking list by Ritzberger is affected by the choice of journals. He selects 261 journals, for which he does not provide the distribution across economics and business. According to the SSCI the journal citation report includes 191 economics journals and 213 business journals in the categories business, business and finance, industrial relations & labor, and management. As 261 is much smaller than $191+213=414$, we cannot infer exactly how many economics and business journals he actually applied; if his list (see Table 1) is representative for his sample, then the ratio between economics and business journals is 2:1. The weights for the journals are derived according to the so-called invariant method from the cross-citations between journals. This implies that the weights are heavily determined by the underlying population of considered journals. If the number of business journals is much smaller than that of the economics journals, the number of considered citations is substantially smaller for business. This gets even worse knowing that the journals of the field logistics, operations research, and production are not well-represented in the SSCI but only in the SCIX (Dyckhoff and Schmitz, 2007) which has not even been considered by Ritzberger. In order to get the same selectivity for both disciplines, the proportion of journals considered must be equal to that of the professors in the two disciplines. If we assume that internationally, as well as in the German-speaking countries, at least twice as many business professors as economics professors are found, then the citation analysis has to work with twice as many journals for business than for economics. This is not the case in the Ritzberger study, and may explain the citation impact differences between economics and business research in his analysis. If one takes a look at the overall citations for economics and business journals (see Table 2), no difference can be seen that would support Ritzberger's joint ranking. In fact, the citation median impact factor and the citations per article are higher for business and management

than for economics. Furthermore, among the top 20 journals according to the median impact factor we find 12 business journals and only 6 from economics (2 journals are from both fields).

Table 2: Citation Impact from SSCI for 2007

Rank	Category	Total Cites	Median Impact Factor	Aggregate Impact Factor	# Journals	Articles	Citations per Article
1	BUSINESS	110.354	0.948	1.205	72	3218	34,29
2	BUSINESS, FINANCE	48.115	0.720	0.834	45	2526	19,05
3	ECONOMICS	207.952	0.653	0.911	191	9245	22,49
4	INDUSTRIAL RELATIONS & LABOR	8.539	0.618	0.758	15	361	23,65
5	MANAGEMENT	130.095	0.962	1.335	81	3772	34,49

Summarizing, Ritzberger's so-called invariant citation impact appears to be "objective" at the first glance, but after going into more detail we realize that the operationalization of citation impact by Ritzberger (2008) depends on a questionable set of selected journals with the result of degrading business research. Hopefully, Ritzberger did not intend this. In this case, I would have expected a strong warning for other researchers not to use this list for rankings of business research but only within the boundaries of economics.

3. IMPUTATION-BASED RANKING OF ECONOMICS AND BUSINESS JOURNALS BY SCHULZE, WIERMANN AND WARNING

Since no ranking list covers all journals in economics and business so far, Schulze et al. (2008) applied imputation analysis for arriving at complete ranking lists for economics and business journals. For their so-called meta-ranking, they take 4 different ranking lists as base list and impute all other journals mentioned in other rankings into this list. Their analysis is

based on two economics-oriented lists (including the Ritzberger list) and two business-oriented lists. This should enable the faculties to choose the list which they prefer most. This looks acceptable at the first glance. But, unfortunately, they include the discriminating list by Ritzberger as a base list, and impute approximately 2000 missing journals from information of other journal ranking lists. This list called RbR_IMP (http://www.vwl.uni-freiburg.de/iwipol/journal_rankings/Journal_ranking.pdf) is even more biased than the one by Ritzberger. While they exculpate themselves by leaving the decision for a list to others, it would have been appropriate to point out that the four lists are not equally suitable for economics and business and that, in particular, RbR_IMP is only applicable within economics. That this warning would have been necessary becomes clear when we later see that Fabel et al. (2008) chose exactly this list as a basis for their ranking of universities and departments with respect to business research productivity. According to their data base the journal ranking list RbR_IMP is characterized by the following distribution across quality weight classes (see Table 3):

Table 3: Distribution of business journals and articles across weighting categories according to the ranking list by Schulze, Wiermann, and Warning (2008)

Quality weight	% of journals	Actual number of journals	% of articles	Weighted % of articles
6	0,50	15	0,39	2,10
5	0,74	19	0,38	1,71
4	1,17	33	0,99	3,56
3	2,09	58	0,79	2,13
2	4,39	122	3,17	5,70
1	91,12	2574	94,28	84,79
2825	100,01	2822	100,00	100,00

Quality weight 6 is the highest and 1 the lowest category

As this categorization is based on the one by Ritzberger (2008), it also has the economics journals in the higher ranks while most of the business journals are lower ranked. Let us therefore investigate this categorization of journals in more detail. I take the previously

mentioned list of 24 A+ journals from the University of Texas at Dallas that many international top schools use for their tenure decisions. For this list of top journals, I show alternative rankings by ERIM (Erasmus University), Business Week, Financial Times, and VHB (German Academic Association of Business Research) in Table 4, which makes clear that an overwhelming agreement of what the top journals in business are exists. However, comparing this with the list RbR_IMP by Schulze et al. (2008), one realizes that top business journals are classified in the latter to be inferior. Again, this makes clear that we have a ranking list that clearly discriminates business research journals.

Table 4: Comparison of the journal ranking by Schulze et al. (2008) with Jourqual2 and worldwide well-accepted ranking lists

Name	Schulze et al. 2008	ERI M*	Business Week	Financial Times	JOUR-QUAL 1**	JOUR-QUAL 2**
The Accounting Review	5	Star	Top20	Top40	A	A
Journal of Accounting and Economics	5	Star		Top40	A	A
Journal of Accounting Research	5	Star	Top20	Top40	A+	A
Journal of Finance	6	Star	Top20	Top40	A+	A+
Journal of Financial Economics	6	Star	Top20	Top40	A+	A+
The Review of Financial Studies	6	Star	Top20	Top40	A+	A+
Information Systems Research	4	Star	Top20	Top40	A	A+
Journal on Computing	2				A+	A
MIS Quarterly	4	Star		Top40	A	A
Journal of Consumer Research	4	Star	Top20	Top40	A+	A+
Journal of Marketing	4	Star	Top20	Top40	A+	A+
Journal of Marketing Research	4	Star	Top20	Top40	A+	A+
Marketing Science	5	Star	Top20		A+	A+
Management Science	3	Star	Top20	Top40	A+	A+
Operations Research	2	Star	Top20	Top40	A	A+
Journal of Operations Management	2	Star		Top40	A	B
Manufacturing and Service Operations Management	2	P A			A	B
Production and Operations Management	1	P	Top20		B	A
Academy of Management Journal	2	Star	Top20	Top40	A+	A+
Academy of Management Review	3	Star	Top20	Top40	A	A+

Administrative Science Quarterly	3	Star	Top20	Top40	A+	A+
Organization Science	2	Star		Top40	A	A+
Journal of International Business Studies	2	Star		Top40	A	A+
Strategic Management Journal	3	Star	Top20	Top40	A	A

* ERIM is the list by the Erasmus Research Institute in Management

(<http://www.irim.eur.nl/ERIM/About/EJL>)

** Jourqual1 and Jourqual2 are ranking lists by the German Academic Association of Business research (VHB) (http://pbwi2www.uni-paderborn.de/WWW/VHB/VHB-Online.nsf/id/EN_VHB-JOURQUAL_2)

In addition, the classification in Table 4 shows a clear bias across sub-disciplines. The subfield of finance journals is ranked highest with “6” because of its proximity to economics. The journals from accounting are ranked second with “5” followed by Marketing with “4” and the other fields of organization, management, strategy (“2”-“3”) as well as production, operations research, logistics, information management (“1”-“2”). Such a discrimination of subfields does not make sense. A researcher in production cannot publish in finance or accounting journals. Is he or she therefore a less productive and/or a less outstanding researcher? If Schulze et al. (2008) do not want to suggest the impression that they want to discriminate business research with their list RbR_IMP they should post a warning in the web that this list is only relevant for economics and not suitable for business research.

4. RANKING OF UNIVERSITIES AND DEPARTMENTS BY FABEL, HEIN, AND HOFMEISTER

Now that the business research discriminating ranking list RbR_IMP by Schulze et al. (2008) was available, Fabel et al. (2008) immediately used the implied weights for their ranking of universities and department according to business research productivity. They call it “business economics” although it encompasses business, finance, accounting, marketing, organization, personnel, and strategy. Actually, this represents all fields of business except for production, logistics, and operations and information systems. Although Fabel et al. (2008, p. 507) admit

that “due to differences in publication and citation cultures, blending across disciplines causes comparability problems,” they were not alerted that the weights are non-applicable due to their inherent bias across sub-disciplines in business, not to mention its bias in favor of economics.

In addition to the failure of Fabel et al. not having achieved their own objective “that the evaluation strategy needs to be balanced across economics and business” (also on page 507), their measure of productivity shows two weaknesses (which of course are not as serious as the bias of the journal ranking list) and the very disturbing fact that their data base was grossly incomplete.

4.1 RANKING BASED ON JOURNAL ARTICLE LENGTH OFFERS PSEUDO ACCURACY

Diamantopoulos and Wagner (2008) already discuss several problems with the weighting of the journal articles by Fabel et al. (2008), and I want to add two further problems. First, weighting articles with the number of pages seems to be questionable. Diamantopoulos and Wagner (2008) point out that it is the review process through which researchers have to successfully go that is relevant. In addition, I would like to make clear that journals have different page layouts and thus page numbers are not comparable. Take, for example, Marketing Science which has approximately 870 words per page. In comparison, the German Economic Review is less densely printed so that the article by Fabel et al. (2008) only has approximately 330 words per page. In addition, journals exist that require short articles whereas others accept longer ones. To be fair, these differences have also been taken into account. Given these discrepancies, page counts can only be used if authors control for different layouts of journals and typical lengths of articles in specific journals, something which was not done by Fabel et al.

4.2 RANKING IS MOSTLY BASED ON NUMBER OF WRITTEN PAGES AND NOT QUALITY

Second, the measure for department productivity chosen by Fabel et al. (2008) is the average annual number of standardized pages of articles in journals per department member multiplied by the weight of the respective journals. Given the extreme distribution of 94.28% of the articles falling into the lowest category “1”, this implies that weighting plays a rather unimportant role. Multiplying the percentages of journal articles with their quality weight and normalizing this to 100%, Table 3 shows in the last column that 85% of the total score comes from the worst category. This implies that productivity is more or less measured as number of pages in *any* outlet. Thus, Fabel et al. (2008) can identify mass-producing departments but not so much the quality-producing ones.

It is shocking to see that the worst category “1” encompasses well-respected journals like Harvard Business Review, IEEE Transactions on Engineering Management, Interfaces, Journal of Retailing, Long Range Planning, Management International Review, Zeitschrift für Betriebswirtschaft, Zeitschrift für betriebswirtschaftliche Forschung, *as well as* transfer journals such as FM Fremdenverkehr, Innovative Verwaltung, Gablers Magazin, Müll und Abfall, Tagungswirtschaft und Versicherungsrundschau. Harvard Business Review, Long Range Planning and Management International Review are listed in the Top40 Journal List of Financial Times (<http://www.journal-ranking.com/ranking/web/docs/pdf/-business%20top%2040.pdf>) which, by the way, encompasses all of the UT Dallas list journals except for the “Journal of Computing” and “Manufacturing and Service Operations Management.” The variety of quality levels across the journals in this lowest class is so immense that it makes clear that Schulze et al. (2008), as providers of this list, have

performed a procedure that appears to be sophisticated at first glance, but lacks any face-validity upon more scrutiny. Working with such an undifferentiated journal list has a similar effect as earlier quality rankings by the CHE where everything was counted, a practice which has been correctly criticized by Ursprung (2003).

4.3 RANKING IS BASED ON REMARKABLY INCOMPLETE DATA

I do not know whether Fabel et al. (2008) are aware that rankings of individuals, departments and universities are even more dangerous and consequential than journal rankings. Rankings of individuals or departments are read by university officials and may have an impact on negotiations of researchers with their university with respect to salary and funds. Fabel et al. (2008) do not perform a ranking of individuals; however, their department ranking is very close to a ranking of individuals because smaller universities often employ only one professor per department (e.g., finance, accounting, or marketing). University rankings may affect the allocation of research funds across universities. Insofar, one would expect a *very careful* collection of publication data for each researcher because otherwise the evaluation will be wrong and the decisions based on them could have adverse effects on individuals and institutions.

Unfortunately, such a careful collection is not given here. Rather, the data base of Fabel et al. (2008) is grossly incomplete. They base their evaluations on a data base of publications compiled by the Portal Forschungsmonitoring at the University of Konstanz which was derived from the data bases EconLit for English articles and WiSo for German articles. The latter also includes ECONIS which is the data base of German National Library of Economics (ZBW: Zentralbibliothek für Wirtschaftswissenschaften) in Kiel and provides articles in both English and German. Unfortunately, at the time when the Portal Forschungsmonitoring

provided the data to Fabel et al., none of these data bases sufficiently included articles in internationally published business journals¹. As a consequence, the data base was definitely not complete at the time when Fabel et al. (2008) submitted their article in May 2008. Probably because of this caveat, in October 2008 the Portal Forschungsmonitoring invited all business researchers to complete their data for an intended ranking by the Handelsblatt. The portal explicitly acknowledged that the data base is incomplete. And indeed, the incompleteness is quite embarrassing. In my own case, about 30% of my articles are missing. In addition, if I take the weighted sum of points according to the Schulze et al. list, the incompleteness is even higher: 38%. A number of colleagues reported similar findings (sometimes even higher, up to 66%) to me. The problem is that the data base is especially incomplete for internationally published business journals because they are neither included in EconLit, nor in ECONIS. Thus, the data base has not only a quantity but also a severe quality problem. And even if this only holds for a few individuals (and thus for their departments) it is not acceptable because the institutions employing them are adversely affected in any ranking. It is surprising that Fabel et al. (2008) provide their ranking on such an incomplete data base although one author (Fabel) was fully aware of the incompleteness as he is a member of the advisory board of the “Portal Forschungsmonitoring.” Taking into account the adverse consequences for salary and funds allocated to individual researchers, the question remains why Fabel et al. wanted to be so quick in publishing a ranking despite its known incompleteness of data?

5. CAN RANKINGS BE OBJECTIVE?

¹ This may change in future because with the merger of ZBW with HHWA, ECONIS is gradually completing their references with respect to business journals which will hopefully make the data of the portal Forschungsmonitoring no longer monopolistic. The data by the portal are collected with financial support from Handelsblatt and Verein für Socialpolitik but are proprietary in a sense that they cannot be used for alternative rankings other than the one that will be published by Handelsblatt in a few months.

It is revealing that the economist in first place in "Handelsblatt Ökonomen-Ranking VWL 2008: Top-200 Lebenswerk", Bruno Frey, does not agree on the objectivity of any quantitative measure (Frey and Rost, 2008). Indeed, Frey and Rost (2008) question such pseudo-objective rankings as follows: "It turns out that especially the ranking of individual scholars is far from objective. The results differ markedly, depending on whether research quantity or research quality is considered. Even quantity rankings are not objective; two citation rankings, based on different samples, produce entirely different results. It follows that any career decisions based on rankings are dominated by chance and do not reflect research quality." (quoted from the abstract).

The duties of business professors are manifold. They must not only write articles but also disseminate their knowledge via books and seminars. They must teach and work with companies. All these aspects are difficult to measure. Therefore, we should be aware that any ranking can only provide a small piece of the overall picture of performance. This is why the Wissenschaftsrat (2004) recommends evaluating performance separately along all relevant dimensions (which should not be aggregated) and is very skeptical about the usefulness of publishing rankings of individuals in public. Not following these recommendations would lead to wrong incentives and destroy intrinsic motivation (Frey, 2007). Adler and Harzing (2009) give a comprehensive review of the many problems of academic rankings and, as a consequence, plead for a temporary moratorium even at the level of departments and universities.

6. SUMMARY

While the ranking by Fabel et al. (2008) lacks face-validity (as pointed out in the reply by Diamantopoulos and Wagner 2008), we discuss reasons for this lack of face-validity. We have

seen that citation impact appears objective at the first glance, but is also subjective because researchers have different definitions in mind of what impact means. While the most-often-cited impact factor of SSCI shows more or less the same levels for economics and business journals, the list by Ritzberger (2008) is biased by the chosen population of journals. It is based on a much smaller number of business journals than economics journals. However, in order to provide for the same selectivity the number of journals should reflect the proportions between the much higher number of business professors and the number of economics professors. Of course, if this list leads to a discrimination of business research journals, any imputation such as done by Schulze et al. (2008) will also lead to a discriminating list. It is then surprising that Fabel et al. (2008) did not realize that the journal weights recommended by Schulze et al. do not value business research although they wanted to rank universities and departments with respect to the field of business. Even more disturbing is the fact that the data-base of journal articles per researcher upon which Fabel et al. base their ranking is remarkably incomplete. Taking into account the adverse consequences for salary and funds allocated to individual researchers, the question remains: Why did Fabel et al. want to be so quick in publishing their ranking despite its known incompleteness of data?

REFERENCES

Adler, N. and A.-W. Harzing (2009), 'When Knowledge Wins: Transcending the Sense and Nonsense of Academic Rankings', *Academy of Management Learning and Education*, to appear.

Diamantopoulos, A. and U. Wagner (2008), 'Research Productivity in Business Economics: The Case of Marketing', *German Economic Review*, forthcoming.

Dyckhoff, Harald and Christian Schmitz (2007), 'Forschungsleistungsmessung mittels SSCI oder SCI-X?', *Die Betriebswirtschaft*, 67 (6), 638-662.

Fabel, O., M. Hein and R. Hofmeister (2008), 'Research Productivity in Business Economics: An Investigation of Austrian, German and Swiss Universities', *German Economic Review*, 9 (4), 506-531.

Frey, B.S. (2007), 'Evaluierungen, Evaluierungen ... Evaluitis', *Perspektiven der Wirtschaftspolitik*, 8 (3), 207-220.

Frey, B. S. and K. Rost (2008), 'Do Rankings Reflect Research Quality?', Working Paper No. 390, Institute for Empirical Research in Economics, University of Zurich

Ritzberger, K. (2008), 'A Ranking of Journals in Economics and Related Fields', *German Economic Review*, 9 (4), 402-430.

Schulze, G. G., S. Warning and C. Wiermann (2008), 'Zeitschriftenrankings für die Wirtschaftswissenschaften – Konstruktion eines umfassenden Metaindexes', *Perspektiven der Wirtschaftspolitik*, 9 (3), 286-305.

Serrano, R. (2004), 'The Measurement of Intellectual Influence: the Views of a Sceptic', Working Paper No. 2004-02, Brown University.

Ursprung, H. W. (2003), 'Schneewittchen im Land der Klapperschlangen: Evaluation eines Evaluators', *Perspektiven der Wirtschaftspolitik*, 4 (2).

Wissenschaftsrat (2004), *Empfehlungen zu Rankings im Wissenschaftssystem*, Drs. 6285-04, Hamburg.