Rankings

Rankings abound and receive increasing attention. The criteria used across rankings vary widely and the outcomes are sometimes rather sensitive to the selection and weighting of journals, the range of years etc. Care is therefore advised in interpreting these rankings.

Below we provide rankings of institutions and individuals by recent research output. These rankings are mainly based on the number of quality-adjusted publications in learned journals. Such rankings have only recently become available in some of the disciplines at our faculty and are a fairly new addition to evaluating research institutions in the German-speaking area in general. Such rankings are often consulted by internationally mobile faculty and students, which means we should also be aware of these rankings – even if we are critical about them. In any case, we think such rankings need to be interpreted with circumspection.

Publication Based Rankings

With all due caveats in mind, we are happy to note that our faculty performs very well according to a broad range of rankings. It is fair to say that we are among the top ten in all fields represented at our faculty, and that we are among the very best in several disciplines.

Business

According to an institutional ranking compiled by the ETH Zurich and commissioned by Handelsblatt 2014, our faculty scores an excellent rank 6 among universities

in the German-speaking area when considering publications in very good journals (A+ & A, see table 2). When considering all journal publications (see colum Points 2014), we score rank 5.

We are proud of shows the excellent performance of individual professors in the German-speaking area. For example, 10 of our professors rank among the top 100 in business and management in the German-speaking countries and 15 rank among the top 250. This corresponds to the top-5 percent (resp.12.5%) of all German-speaking business professors. According to the Handelsblatt ranking 2014, four professors are among the top 10 in the general ranking of lifetime achievement according to the criterion points 2014: Adamantios Diamantopoulos, Richard Hartl, Rudolf Vetschera, and Franz Wirl, who leads the ranking (see table 3)

Statistics, Econometrics, and OR

According to the QS World University Rankings (2014), our faculty has rank 5 among the Universities in the German-speaking area for Statistics and Operational Research (ex ae-quo with ETH Zurich, Humboldt University of Berlin, Technical University of Berlin). According to the same ranking, we rank 20 in continental Europe, and rank 51-100 worldwide, i.e., on equal footing with places like Yale (New Haven), NYU (New York) or LSE (London).

According to a ranking published in the journal *Econometric Theory* (Baltagi 2007), our Faculty is number two in the German-speaking area measured by publications in the very top journals in Econometrics (1989-2005).

Institutional Ranking Business (sorted by publication in all journals) - Table 2

| Rank | University | Points A+ & A | Points 2014 | # of professors | Points per professor | Professor with highest research output | his/her share |
|------|--|------------------|----------------|-----------------|-------------------------|--|------------------|
| 1 | University of Zurich | 56.8 | 117 | 35 | 2.7 | Felix Kübler | 6% |
| 2 | University of St. Gallen | 47.4 | 157 | 51 | 2.3 | Martin Eling | 6% |
| 3 | Technical University of Munich | 36.7 | 99 | 25 | 3.3 | Stefan Minner | 10% |
| 4 | Goethe University Frankfurt | 33.8 | 87 | 27 | 2.4 | Bernd Skiera | 13% |
| 5 | University of Cologne | 32.0 | 83 | 23 | 2.7 | Dirk Sliwka | 7% |
| *6 | University of Vienna | 29.2 | 94 | 17 | 4 | Franz Wirl | 10% |
| 7 | Vienna University of Economics and Business | 28.8 | 98 | 42 | 1.7 | Jan Mendling | 7% |
| 8 | ETH Zurich | 27.5 | 88 | 12 | 4.5 | Florian von Wangenheim | 7% |
| 9 | Frankfurt School of Finance and Management | 24.4 | 82 | 38 | 1.9 | Afschin Gandjour | 12% |
| 10 | University of Hamburg | 23.3 | 90 | 35 | 1.9 | Stefan Voß | 8% |

Source: Handelsblatt 2014

* The University of Vienna was ranked 5 in the 2014 Research Report based on the total number of Points 2014. The 2015 Research Report depicts the University of Vienna on rank 6 in the same table to represent the business and economics departments equally. This rank was achieved based on publications in A+ and A journals.

| Rank | Name | University | Points 2014 | Field |
|------|---------------------------|-----------------------------|----------------|--|
| 1 | Franz Wirl | University of Vienna | 33.8 | Environmental, Resource & Innovation Economics |
| 2 | Christian Homburg | University of Mannheim | 25.7 | Marketing |
| 3 | Martin Weber | University of Mannheim | 22.95 | Banking Management & Financing |
| 4 | Adamantios Diamantopoulos | University of Vienna | 19.2 | Marketing |
| 5 | Jean-Charles Rochet | University of Zurich | 19.19 | Insurance Industry, Banking & Finance |
| 6 | Richard F. Hartl | University of Vienna | 16.25 | Production Economics, Logistics |
| 7 | Michael Frese | University of Lüneburg | 16.12 | Entrepreneurship |
| 8 | Rudolf Vetschera | University of Vienna | 15.8 | Organization |
| 9 | Bernd Skiera | Goethe University Frankfurt | 14.67 | Electronic Commerce |
| 10 | Matthias Kräkel | University of Bonn | 14.51 | Human Resources & Organization |

Individual Ranking "Business" by all points for lifetime achievement - Table 3

Source: Handelsblatt 2014

Economics and Related Fields

We report two rankings in this section. The table below shows the institutional ranking of the Handelsblatt 2015. When ranking universities by publications in very good journals (A+ & A), we score a highly respectable rank. 9 and rank 8 when adjusting for size (i.e. by points per professor). When considering all journals (column Points 2015), we rank worse overall (rank 13), and rank 9 when adjusted for size. This difference in rankings reflects the faculty's tendency to publish in high-quality journals.

Overall, 5 professors belong to the top-125 researchers in economics, which represents about 10% of all professors in economics in the German-speaking area.

Institutional Ranking "Economics" (sorted by publication in A+ & A journals) - Table 4

| Rank | University | Points A+ & A | Points 2015 | # of professors | Points per professor | Professor with highest research output | his/her share |
|------|--|------------------|----------------|--------------------|-------------------------|---|---------------|
| 1 | University of Zurich | 52.77 | 74 | 17 | 3.27 | Ernst Fehr | 15% |
| 2 | University of Bonn | 49.85 | 77 | 27 | 2.45 | Armin Falk | 10% |
| 3 | University of Mannheim | 44.52 | 69 | 27 | 2.15 | Klaus Adam | 9% |
| 4 | University of Cologne | 37.61 | 71 | 23 | 2.73 | Matthias Sutter | 15% |
| 5 | Ludwig Maximilian University of Munich | 36.34 | 80 | 29 | 2.51 | Kai A. Konrad | 9% |
| 6 | Humboldt University of Berlin | 29.88 | 59 | 14 | 3.49 | Marcel Fratzscher | 14% |
| 7 | Goethe University Frankfurt | 27.58 | 53 | 18 | 2.54 | Roman Inderst | 27% |
| 8 | University of Lausanne | 24.23 | 40 | 15 | 2.08 | Rafael Lalive | 10% |
| 9 | University of Vienna | 22.43 | 38 | 13 | 2.34 | Jean-Robert Tyran | 13% |
| 10 | ETH Zurich | 20.8 | 67 | 11 | 3.57 | Peter Egger | 22% |

Source: Handelsblatt 2015

Table 5 shows that we score an excellent rank 4 in the German-speaking area. This ranking is based on Europe-wide data provided by IDEAS at the Research Division of the Federal Reserve Bank of St. Louis using RePEc data. We use this data to rank the research output at Universities in the German-speaking area. IDEAS draws on 1.7 mio. items of research to rank a total of 3200 institutions (the ranking also lists National banks, think tanks, etc., extracted January 2016).

The first 5 ranks in the all-European ranking go to London School of Economics (LSE), Oxford University, Paris School of Economics, Toulouse School of Economics (TSE), and University College London (UCL).

Institutional Ranking "Economics" in GER/CH/AT - Table 5

| Rank GER/CH/AT | Rank in Europe | University | | | |
|-------------------|----------------|--|--|--|--|
| 1 | 10 | University of Zurich | | | |
| 2 | 52 | Ludwig Maximilian University of Munich | | | |
| 3 | 54 | Goethe University Frankfurt | | | |
| 4 | 57 | University of Vienna | | | |
| 5 | 60 | University of Mannheim | | | |
| 6 | 62 | University of Bonn | | | |
| 7 | 74 | University of St. Gallen | | | |
| 8 | 75 | ETH Zurich | | | |
| 9 | 90 | University of Konstanz | | | |
| 10 | 104 | University of Cologne | | | |

Source: RePEc

Citation Based Ranking

Below, we provide a citation analysis for our tenured faculty (n = 48).* Such an analysis provides an indication of research impact (on the research community) and it therefore complements the measurement of research output in terms of publications. While we think the broad picture proceeding in the citation analysis below is interesting, we would like to caution the reader that citation statistics can be presented in many ways, and the results can vary substantially, depending on the data source and on how citations are counted. In last year's research report, we used the database Scopus to compile the survey on citations. This year, we use Thompson Reuters Web of Science. We have switched databases at the suggestion of the faculty research committee. One of the advantages of doing so is that data extraction can be delegated to the university's office for evaluation (date of extraction Feb., 2016). The results vary somewhat compared to last year's analysis and one should therefore not infer too much from any single account.**

Compiling a report on research impact using citations faces various difficulties. For example, comparing citation scores across the broad spectrum of disciplines represented at our faculty is tricky as citation patterns differ widely across fields. In some fields, the norm is to cite many papers per publication and papers published in such a field tend to get many citations in turn. While we had been be able to address this issue by using Scopus, we have not been able to do so using Web of Science. Care is also advised when comparing citation counts across individuals in a given field because citations accumulate first slowly and then more quickly over the professional life of an academic. More senior researchers therefore tend to have higher citation counts than more junior ones. We discuss below how this problem can be addressed.

| | (1) | | (2) | | (3) | | (4) | |
|--------------------|---------------------------|-------|--------------------------------|------|--------------------|------|-----------------------------------|------|
| suo | Total number of citations | | Citations normalized by age | | Hirsch Index h | | <i>h</i> -index normalized by age | |
| | 0-50 | 0.25 | 0-2 | 0.21 | 0-2 | 0.15 | <0.2 | 0.38 |
| itati | 51-100 | 0.15 | 2-5 | 0.21 | 3-5 | 0.33 | 0.2-0.3 | .013 |
| t of c | 101-300 | 0.27 | 5-10 | 0.15 | 6-10 | 0.29 | 0.3-0.4 | 0.21 |
| ution | 301-500 | 0.10 | 10-20 | 0.15 | 11-15 | 0.13 | 0.4-0.6 | 0.13 |
| tribı | 501-1000 | 0.17 | 20-30 | 0.17 | 16-20 | 0.10 | 0.6-0.8 | 0.15 |
| Dis | >1000 | 0.008 | >30 | 0.15 | >20 | 0.02 | >0.8 | 0.04 |
| | Diamantopoulos, A. | | Diamantopoulos, A. | | Diamantopoulos, A. | | Dörner, K. | |
| | Hartl, R. | | Hartl, R. | | Hartl, R. | | Diamantopoulos, A. | |
| | Gutjahr, W. | | Dörner, K. | | Bomze, I. | | Tyran, JR. | |
| | Bomze, I. | | Bomze, I. | | Gutjahr, W. | | Bomze, I. | |
| ls | Pflug, G. | | Gutjahr, W. | | Dörner, K. | | Reitzig, M. | |
| ıking of individua | Dörner, K. | | Tyran, JR. | | Pötscher, B. | | Hartl, R. | |
| | Pötscher, B. | | Reitzig, M. | | Tyran, JR. | | Müller, W. | |
| | Tyran, JR. | | Janssen, M. | | Janssen, M. | | Ljubic, I. | |
| | Janssen, M. | | Müller, W. | | Pflug, G. | | Janssen, M. | |
| Rar | Wirl, F. | | Leeb, H. | | Sorger, G. | | Gutjahr, W. | |

Citations-based measures of research impact - Table 6

Source: Web of Science 2015

^{*}The discussion here does not consider the professors in law Lechner and Weilinger because publications in legal science follow a different logic and patterns.

^{**} While the results are overall fairly consistent across the databases Scopus and web of science, there seem to be substantial discrepancies in citation counts for particular authors. The discrepancies seem to be large for authors with common names, for authors who tend to publish in large groups of co-authors (we do not correct citation counts for the number of co-authors), and for authors whose names can be written in various ways. A further disclaimer is that the analysis presented here does not account for working papers and conference proceedings.

Column 1 in table 6 shows the distribution of the total number of citations. For example, 25 percent of our faculty members have accumulated between 0 and 50 citations over their lifetime. As expected, the distribution is rather skewed because few papers get a lot of attention while most papers get only few cites. For example, the single most cited paper by Prof. Diamantopoulos has only slightly fewer citations (1103) than all publications by the bottom half of authors jointly (1445). The average number of total citations per author was 386, the median was 164. The average faculty member has published 33 papers, the median number of published papers is 22. That is, the average paper got about 12 citations and the median paper got 8 citations. A quarter of our faculty has accumulated less than 50 citations, and a quarter of our faculty has accumulated more than 500 citations over their lifetimes according to this database. The bottom half of column 1 shows the ranking of individuals among the top ten of our faculty by the total number of citations.

Column 2 provides a simple adjustment for the fact that citation counts tend to favor more senior researchers. The column shows the total number of citations divided by the academic age of the researcher, proxied by the number of years above age 30 (a typical age at which researchers start publishing). To illustrate, consider researcher A who is aged 40 with 300 citations and researcher B aged 60 with 600. The score of A is then 30 (= 300 /10) and that of B is 20 (= 600 /30). Therefore, B would be ranked above A in column 1 but be ranked below A in column 2. In our sample, those with above-average age have about a quarter more citations as those below the average (438 vs. 349), the average age of our tenured faculty is 54 years. The bottom part of column 2 shows the ranking of the top-ten authors at the faculty by total citations when correcting for age. As can be seen, younger colleagues like Profs. Dörner (born 1970) and Reitzig (born 1972) are ranked more favorably when this correction is applied.

Column 3 shows the distribution of the Hirsch index h which is a well-known way to correct for the skewness in citations described above. The index h shows the number of papers a researcher has published that have each attracted at least h citations. For example, someone with an index of 2 has written few papers that are likely to have attracted little attention while someone with h = 20 has written many influential papers.

An advantage of this measure is that outliers do not affect the index. For example, compare hypothetical author C who has published 3 papers with 2, 3, and 4 citations to author D who has published 3 papers with 2, 3 and 3000 citations. Both get the same index value of h = 2.

The average *h*-index in our faculty is 8, the median is 6. About three quarters of our faculty have h < 10, about

10% have h > 15, and two individuals have $h \ge 20$. The bottom part of column 3 shows the ranking by *h*-index for the top ten.

Column 4 shows the *h*-index normalized by age (number of years above 30). As is the case with total citation counts, normalization of the *h*-index by age benefits younger colleagues. But the effect is somewhat more dramatic now. The first rank now goes to Prof. Dörner and the below-average age colleagues Tyran, Reitzig, Müller and Ljubic (born 1973) get better ranks and the converse holds for above-average age colleagues Hartl and Gutjahr.