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 scientific 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 the Handelsblatt, which was updated lastly in 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 column Points 2014), we score rank 5, and when considering all journal publications per professor (see column "Points per Professor), we score rank 4. Moreover, we are proud of showing 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 % (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 2016, our Faculty has rank 2 among the universities in the German-speaking area for Statistics and Operational Research (ex ae-quo with HU Berlin, TU Berlin, and LMU Munich). According to same ranking, we rank 51-100 world-wide, where only 10 European universities and just 3 universities from continental Europe obtain ranks better than 50.

Our excellent performance in statistics is also indicated by a ranking published in the journal Econometric Theory (Baltagi 2007), where 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 %

(Handelsblatt 2014)

Individual Ranking "Business" by all points for lifetime achievement — table 3

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

(Handelsblatt 2014)

Economics and Related Fields

We report three rankings below. Table 4 shows the institutional ranking of the Handelsblatt 2015 for the German-speaking area (last available update of this ranking). 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 %

(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, as of January 2017. We use this data to rank the research output at Universities in the German-speaking area. IDEAS draws on 25,476 registered authors to rank a total of 3,404 institutions (the ranking also lists national banks, think tanks, etc., as of January 2017). 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 the European Central Bank.

Institutional Ranking "Economics" in GER/CH/AT — table 5

Rank GER/CH/AT	Rank in Europe	University
1	10	University of Zurich
2	45	LMU Munich
3	59	Goethe University Frankfurt
4	64	University of Vienna
5	67	University of Bonn
6	68	University of Mannheim
7	72	ETH Zurich
8	74	University of St. Gallen
9	79	WU Vienna
10	83	University of Konstanz

(RePEc, https://ideas.repec.org/top/top.europe.html)

Table 6 shows that our Faculty, in particular the Vienna Center for Experimental Econimics (VCEE) ranks favorably in the IDEAS ranking (same source as table 5). In the category Experimental Economics, our Faculty ranks in the top 2 % worldwide (is placed on rank 29 out of 1,769 institutions). This translates into rank 4 in Germany, Austria and Switzerland.

Institutional Ranking "Experimental Economics" in GER/CH/AT — table 6

Rank GER/CH/AT	Rank worldwide	Institution
1	4	University of Zurich, Switzerland
2	18	University of Constance, Germany
3	22	LMU Munich, Germany
4	29	University of Vienna, Austria
5	33	University of Cologne, Germany
6	44	Unviersity of Heidelberg, Germany
7	45	University of Innsbruck, Austria
8	48	University of Lausanne, Switzerland
9	56	WZB Berlin, Germany
10	62	University of Bonn, Germany

(RePEc, https://ideas.repec.org/top/top.europe.html)

Citation-Based Ranking

Table 7 provides a citation analysis for our tenured faculty (n = 47)[3] based on Thompson Reuters Web of Science (WoS). This database was used in the research report of 2015 (and therefore eases comparisons) and is also used by the quality assurance of the university. 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 emerging from 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. Therefore, before discussing the results of the analysis, the following general comments should be made:

1. There is to our best knowledge no citation database which covers all relevant journals in the field of business, economics and statistics. This is true for Web of Science (WoS), but also for its competitor Scopus (released by Elsevier). One main advantage of using WoS is that the data extraction can be delegated to the university's office for evaluation while (currently) such a service is not be offered for Scopus. No matter which database is used, such a citation analysis will therefore never be completely free of possible selection biases and measurement errors.

2. Depending on the choice of the underlying database, the coverage of journals in specific fields in business, economics and statistics, and particularly in fields which are on the interface to other disciplines, might be different. Therefore, the citation impact of some researchers might be better represented when using one database rather than another.

3. 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. In other disciplines, people cite more sparsely. This could be handled by using citation indexes which take the specific (average) citation pattern within a given field specifically into account. To limit the burden we, however, refrain from conducting such an analysis here and only focus on raw citation numbers. Any comparison across disciplines, though, should be done with care.

4. 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 naturally have higher citation counts than more junior researchers.

5. Databases as WoS or Scopus account only for citations of published work in published work. Accordingly, citations of working papers or preprints are not taken into account.

6. As any metric for research output, also citation-based measures, are far from being perfect and at best an indication for research performance. It is impossible to express individual's research performance in terms of a single metric. We therefore refrain from showing complete rankings of individual researchers but restrict ourselves to report the names of the top ten researchers in each category. Accounting for all the pitfalls of such a citation-based analysis mentioned above, this information should be interpreted with great caution. Any conclusions on individual's research performance relative to others, particularly to those who are not among the top ten, might be strongly misleading.

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[3] The discussion here does not consider the professors in law Lechner and Weilinger because publications in legal science follow a different logic and patterns.

Citations-based measures of research impact — table 7

	Total number of citations		Citations normalized by age		Hirsch Index *h*		*h*-index normalised by age	
	Number of citations	Percentage of Faculty members	Citations normalised by age above 30		*h*-index	Percentage of Faculty members	*h*-index normalised by age above 30	
Distribution of citations	0-50	17%	0-2	17%	0-2	13%	< 0.2	32%
	51-100	19%	2-5	23%	3-5	30%	0.2-0.3	23%
	101-300	21%	5-10	17%	6-10	30%	0.3-0.4	13%
	301-500	11%	10-20	13%	11-15	15%	0.4-0.6	11%
	501-1000	21%	20-30	15%	16-20	6%	0.6-0.8	17%
	> 1000	11%	> 30	15%	> 20	6%	> 0.8	4%
Ranking of individuals	Diamantopolous, A.		Diamantopolous, A.		Diamantopolous, A.		Dörner, K.	
	Hartl, R.		Hartl, R.		Hartl, R.		Diamantopolous, A.	
	Gutjahr, W.		Dörner, K.		Gutjahr, W.		Tyran, J.-R.	
	Bomze, I.		Gutjahr, W.		Dörner, K.		Hartl, R.	
	Dörner, K.		Bomze, I.		Bomze, I.		Reitzig, M.	
	Pflug, G.		Tyran, J.-R.		Pötscher, B.		Müller, W.	
	Pötscher, B.		Reitzig, M.		Tyran, J.-R.		Bomze, I.	
	Tyran, J.-R.		Janssen, M.		Janssen, M.		Hautsch, N.	
	Janssen, M.		Müller, W.		Müller, W.		Gutjahr, W.	
	Wirl, F.		Pötscher, B.		Sorger, G.		Janssen, M.	

Table 7: The upper panel of the table shows the total number of citations and Hirsch indexes as well as their cross-sectional distributions across the Faculty (*n* = 47) according to **Web of Science** as of March 2017. We also report normalised measures by dividing the number of citations and Hirsch indexes, respectively, by the number of years above age 30. The lower panel of the table gives the names of the Faculty members who rank first according these metrics. In case of Faculty members achieving the same scores, we rank those with lower age higher.

The first column in Table 7 shows the distribution of the total number of citations. For example, approximately 36 % of our Faculty members have accumulated up to 100 citations over their lifetime. Accordingly, approximately 32 % of our Faculty has accumulated more than 500 citations over their lifetimes according to this database. As expected, the distribution is rather skewed because few papers get a lot of attention while most papers get only few cites. The average number of total citations per author was 467, the median was 184. The average Faculty member has published 36 papers, the median number of published papers is 24. Computing the number of citations per paper (per individual), we obtain an average of about 11 citations per paper.

The second column 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). As reflected by the ranking of individuals in the lower panel of the table, younger colleagues like Karl Dörner (born 1970) and Markus Reitzig (born 1972) are ranked more favourably when this correction is applied.

The third column gives the distribution of the Hirsch index *h*. A scholar with an index of *h* has published *h* papers each of which has been cited in other papers at least *h* times. Accordingly, the Hirsch index brings together research output. The average *h*-index in our Faculty is 8.6; the median is 7. About two thirds of our Faculty have *h* < 10, about 13 % have *h* > 15. The individuals' ranking based on the Hirsch index is very similar to those based on the total number of citations. Hence, citation quantity is highly correlated with research.

Since older colleagues naturally have a higher *h*-index, we moreover normalise by academic age (number of years above 30, see last column). The changes in the individuals' ranking is more severe than in case of the total number of citations. The first rank now goes to Karl Dörner and the below-average age colleagues Tyran, Müller as well as Reitzig and Hautsch (born 1972) get better ranks.

One major disadvantage of the WoS database is that it only covers citations of and in published work. Hence, all citations referring to working papers are not counted. Moreover, conference proceedings or similar type of publications are not taken into account either. To account for this deficiency and to complement the WoS database,

most Faculty members supported the idea to exploit the Google Scholar database as an additional source. The coverage of Google Scholar is naturally much broader since any citation of any work (independent of type and no matter whether published or not) is taken into account. This broader coverage, however, comes at the cost of lacking precision and a higher risk of inadequate allocations of research output to the corresponding authors. In WoS, a unique assignment of work to an author is ensured by the ORCID number, an identification number which uniquely maps research to researchers without facing the risk of wrong allocations in case of common names. Such an assignment does not exist in Google Scholar, where it can easily happen that the work of authors with common names is wrongly allocated. Even though all Faculty members have been asked to verify their Google Scholar accounts, corresponding errors cannot entirely be ruled out.

Citations-based measures of research impact (Goolge Scholar) — table 8

	Total number of citations		Citations normalized by age		Hirsch Index *h*		*h*-index normalised by age	
	Number of citations	Percentage of Faculty members	Citations normalised by age abo-ve 30		*h-index*	*Percentage of Faculty members*	*h*-index nor-malised by age above 30	
Distribution of citations	0-500	12 %	0-30	21 %	0-10	15 %	0-0.5	23 %
	501-1000	18 %	30-50	21 %	11-15	23 %	0.5-0.8	26 %
	1001-2,000	26 %	50-100	24 %	16-20	18 %	0.8-1.0	18 %
	2,001-3,000	21 %	100-150	12 %	21-25	18 %	1.0-1.2	9 %
	3,001-6,000	15 %	150-200	14 %	26-35	18 %	1.2-1.5	15 %
	> 6,000	9 %	> 200	9 %	> 35	9 %	> 1.5	9 %
Ranking of individuals	Diamantopoulos, A.		Diamantopoulos, A.		Diamantopoulos, A.		Dörner, K.	
	Hartl, R.		Dörner, K.		Dörner, K.		Diamantopoulos, A.	
	Pflug, G.		Hartl, R.		Hartl, R.		Hautsch, N.	
	Dörner, K.		Reitzig, M.		Gutjahr, W.		Reitzig, M.	
	Strauß, C.		Pflug, G.		Pflug, G.		Tyran., J.-R.	
	Gutjahr, W.		Tyran, J.-R.		Wirl, F.		Müller, W.	
	Tyran, J.-R.		Kittel, B.		Sorger, G.		Hartl, R.	
	Kittel, B.		Strauß, C.		Tyran, J.-R.		Kittel, B.	
	Wirl, F.		Hautsch, N.		Hautsch, N.		Sorger, G.	
	Reitzig, M.		Gutjahr, W.		Müller, W.		Pfeiffer, T.	

Table 8: The upper panel of the table shows the total number of **Google Scholar** citations and Hirsch indexes as well as their cross-sectional distributions across those Faculty members who registered in Google Scholar (*n* = 34) as of March 2017. We also report normalised measures by dividing the number of citations and Hirsch indexes by the number of years above age 30. The lower panel of the table gives the names of the Faculty members who rank first according these metrics. In case of Faculty members achieving the same scores, we rank those with lower age higher.

Table 8 reports the same metrics as reported in table 7 but is based on Google Scholar profiles. As not all Faculty members have registered for Google Scholar, the analysis is based on n=34 individual accounts. Not surprisingly, the overall number of citations according to Google Scholar is much higher than in WoS. On average, each Faculty member has around 2,726 citations, where, however, the median is around 1,500. As in table 8, the distribution is strongly skewed. The by far most cited researcher is Adamantios Diamantopolous who has more than 23,000 citations, which is around three times as high as the number of citations of the second most cited researcher. Comparing individual rankings between Google Scholar and WoS, we observe a relatively high correlation. Researchers who are most cited according to WoS tend to be also most cited in Google Scholar. A few differences, however, are visible. Bernhard Kittel and Christine Strauß are examples of Faculty members, whose citation impact is obviously not sufficiently represented by WoS but are more visible in Google Scholar.

Due to the higher coverage of Google Scholar, the reported *h*-index is higher than on the basis of WoS. The average *h*-index across all Faculty members with Google Scholar account is around 21 with a median of 18. Again, the ranking of individuals closely resembles that based on WoS.