

ONLINE APPENDIX FOR “STATISTICAL UNCERTAINTY IN THE RANKING OF JOURNALS AND UNIVERSITIES” BY M. MOGSTAD, J. ROMANO, A. SHAIKH, AND D. WILHELM

A1. One-Sided Confidence Sets

The main text describes how to construct two-sided marginal and simultaneous confidence sets for the ranks. One-sided confidence sets can be constructed in a similar fashion. For simplicity of exposition, we only show how to construct one-sided simultaneous confidence sets for the ranks with upper endpoints equal to p , i.e., they are simultaneous lower confidence bounds on the ranks.

To this end we consider the construction as in (4) except that the two-sided confidence sets for the differences, $C_{\text{symm},n,j,k}$, in the expressions for N_j^- and N_j^+ are replaced by the following one-sided confidence sets for the differences:

$$C_{\text{upper},n,j,k} \equiv \left(-\infty, \hat{\theta}_j - \hat{\theta}_k + \hat{s}e_{j,k} c_{\text{upper},n,j}^{1-\alpha} \right],$$

where $c_{\text{upper},n,j}^{1-\alpha}$ is the $(1 - \alpha)$ -quantile of

$$\max_{(j,k): k \neq j} \frac{\theta(P_j) - \theta(P_k) - (\hat{\theta}_j - \hat{\theta}_k)}{\hat{s}e_{j,k}}.$$

As in Section I.B the critical value can be approximated by the $(1 - \alpha)$ -quantile of the R draws of $\max_{(j,k): k \neq j} (Z_k - Z_j) / \hat{s}e_{j,k}$.

A2. Data

The figures in this section show the estimated impact factors and corresponding standard errors that form the inputs for the rankings considered in the empirical sections of the maintext.

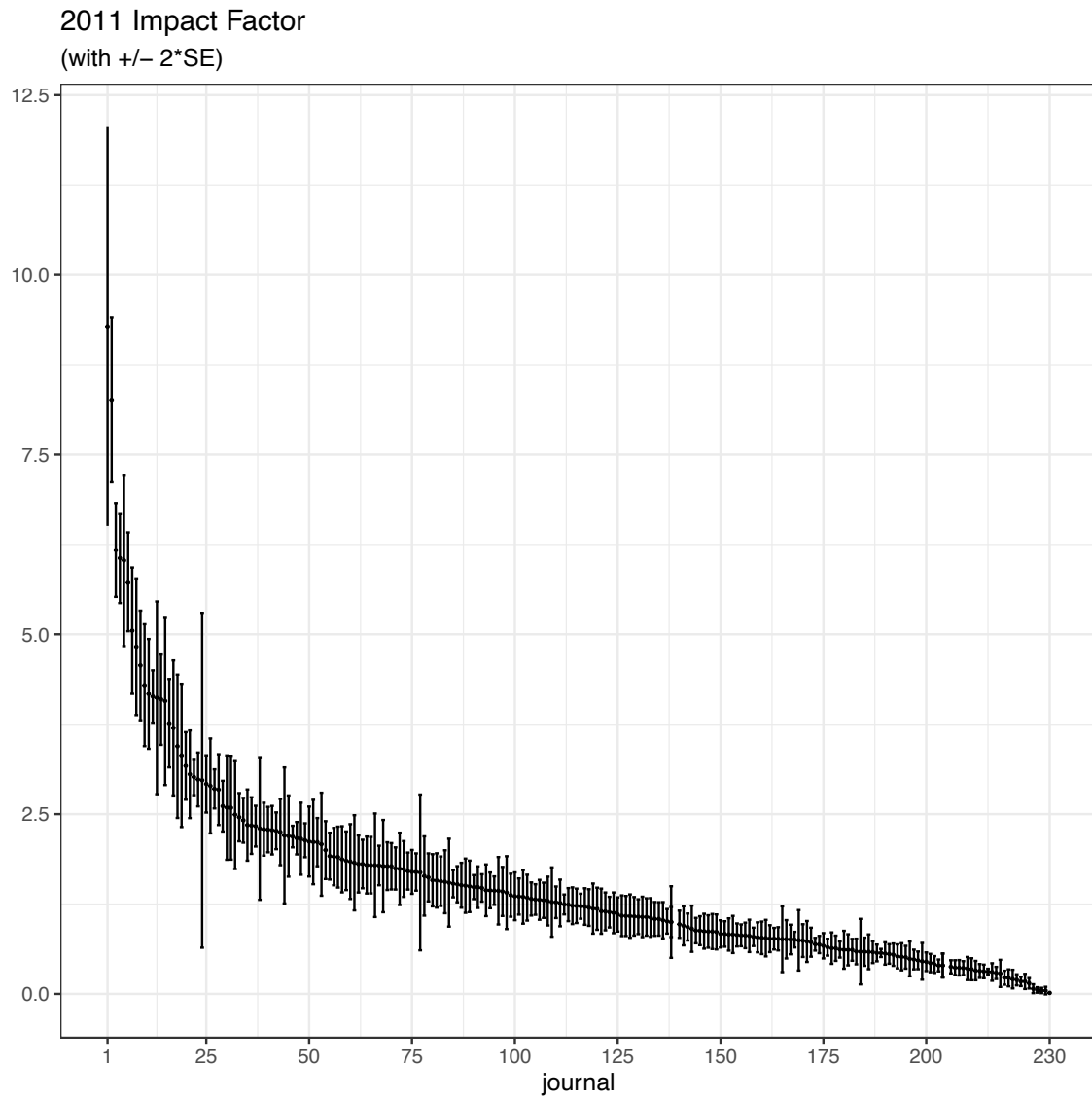


FIGURE A1. IMPACT FACTORS FOR ALL JOURNALS WITH ERRORBARS INDICATING PLUS/MINUS TWICE THE STANDARD ERROR.

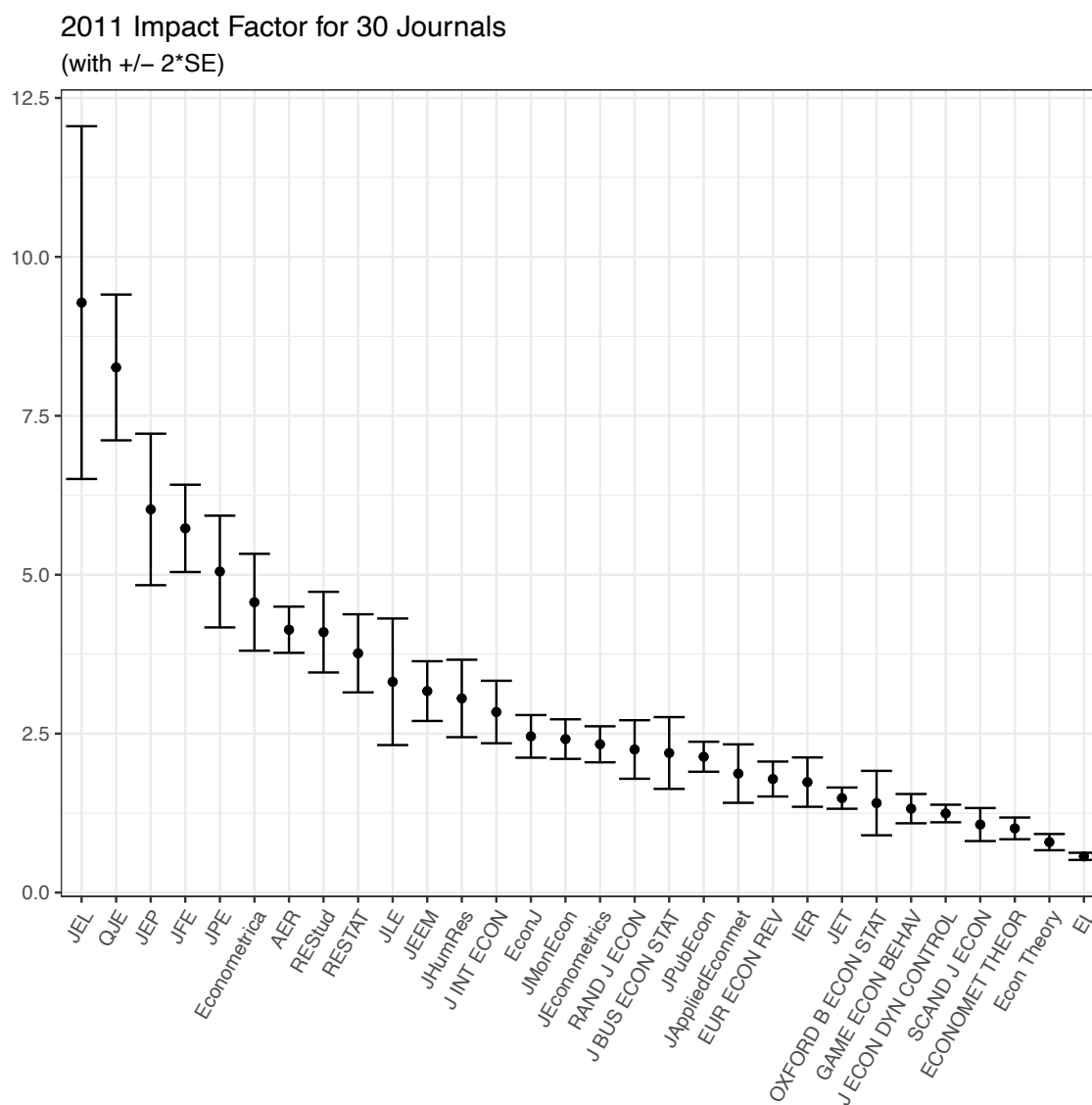


FIGURE A2. IMPACT FACTORS FOR THE TOP 30 JOURNALS OF KALAITZIDAKIS, MAMUNEAS AND STENGOS (2003) WITH ERRORBARS INDICATING PLUS/MINUS TWICE THE STANDARD ERROR.

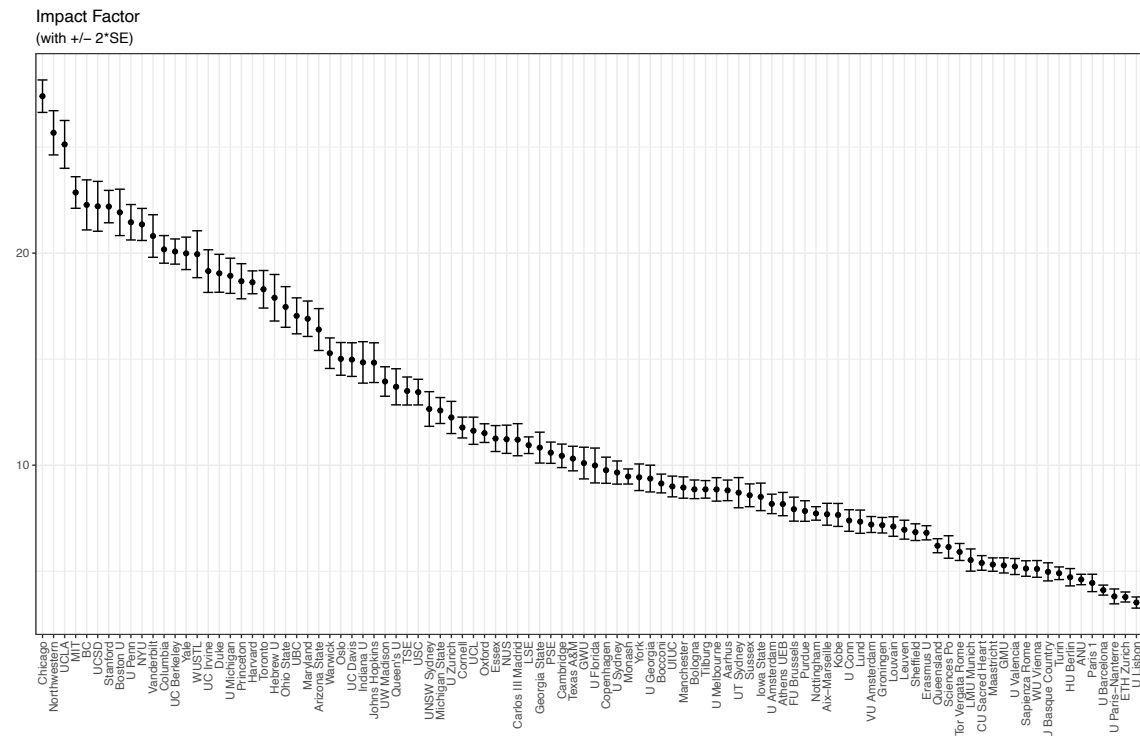


FIGURE A3. IMPACT FACTORS FOR THE TOP 100 UNIVERSITIES WITH ERRORBARS INDICATING PLUS/MINUS TWICE THE STANDARD ERROR.

A3. Ranking of All Journals

Ranking of All Journals by 2011 Impact Factor
(with 95% marginal confidence sets)

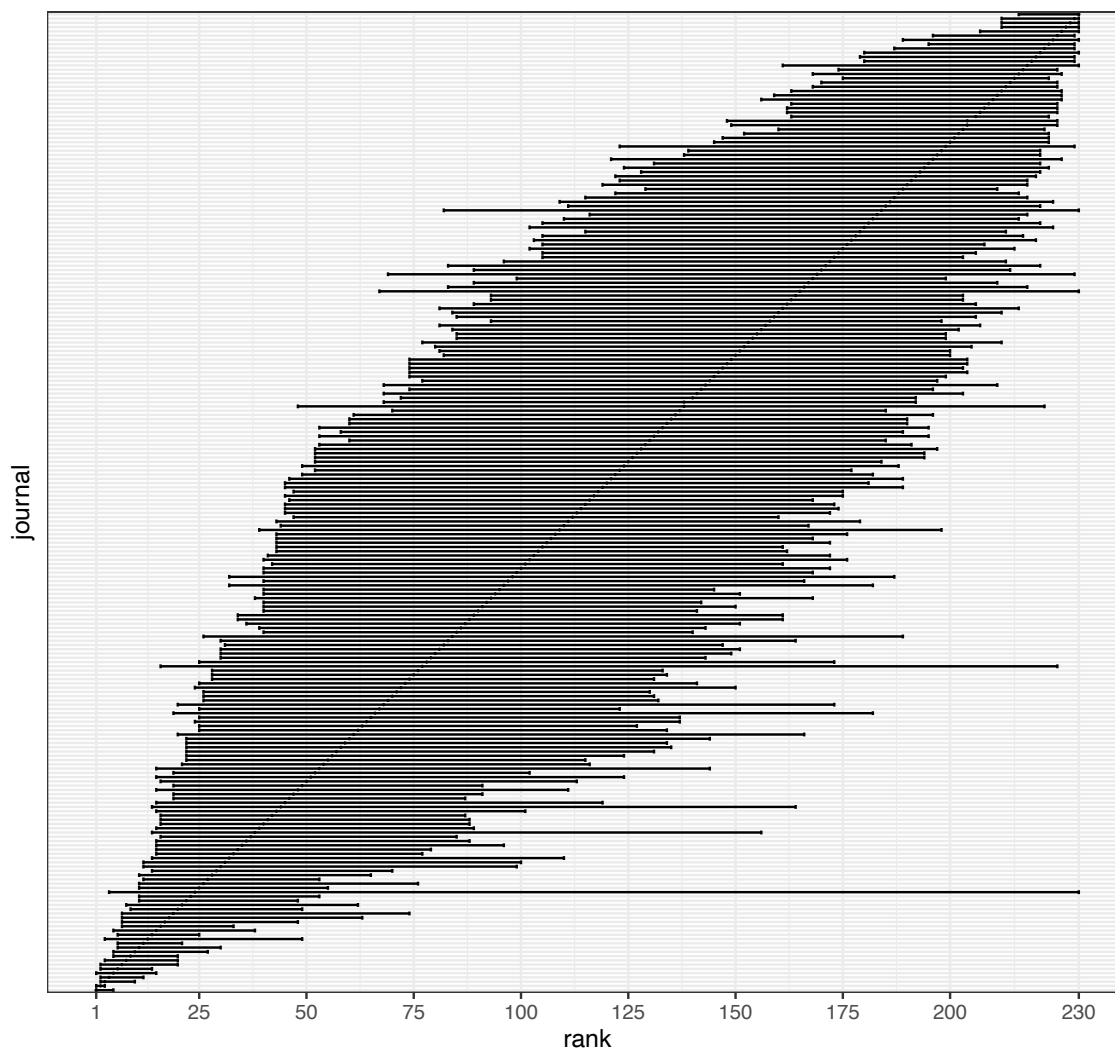


FIGURE A4. RANKING OF ALL JOURNALS BY IMPACT FACTORS. EACH HORIZONTAL LINE REPRESENTS THE 95% MARGINAL CONFIDENCE SET FOR THE RANK OF A JOURNAL, WHERE JOURNALS ARE ORDERED BY THEIR IMPACT FACTOR, THOSE WITH THE HIGHEST IMPACT FACTOR APPEARING AT THE BOTTOM (SMALL RANKS) AND THOSE WITH THE SMALLEST APPEARING AT THE TOP (LARGE RANKS). THE DOTS SHOW THE ESTIMATED RANKS OF EACH JOURNAL.

A4. Simultaneous Confidence Sets

Ranking of All Journals by 2011 Impact Factor
(with 95% simultaneous confidence sets)

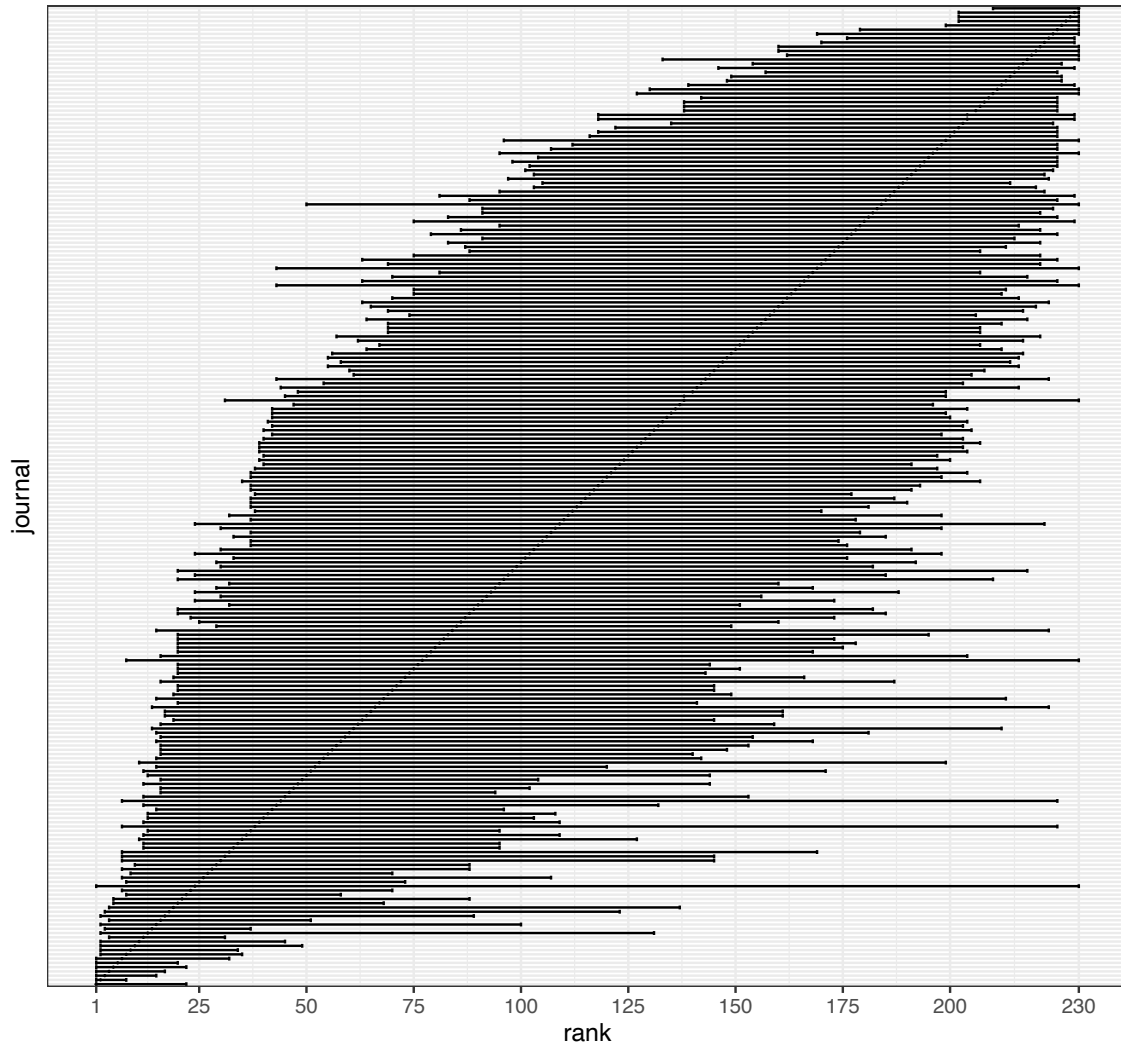


FIGURE A5. RANKING OF ALL JOURNALS BY IMPACT FACTORS. EACH HORIZONTAL LINE REPRESENTS THE 95% SIMULTANEOUS CONFIDENCE SET FOR THE RANK OF A JOURNAL, WHERE JOURNALS ARE ORDERED BY THEIR IMPACT FACTOR, THOSE WITH THE HIGHEST IMPACT FACTOR APPEARING AT THE BOTTOM (SMALL RANKS) AND THOSE WITH THE SMALLEST APPEARING AT THE TOP (LARGE RANKS). THE DOTS SHOW THE ESTIMATED RANKS OF EACH JOURNAL.

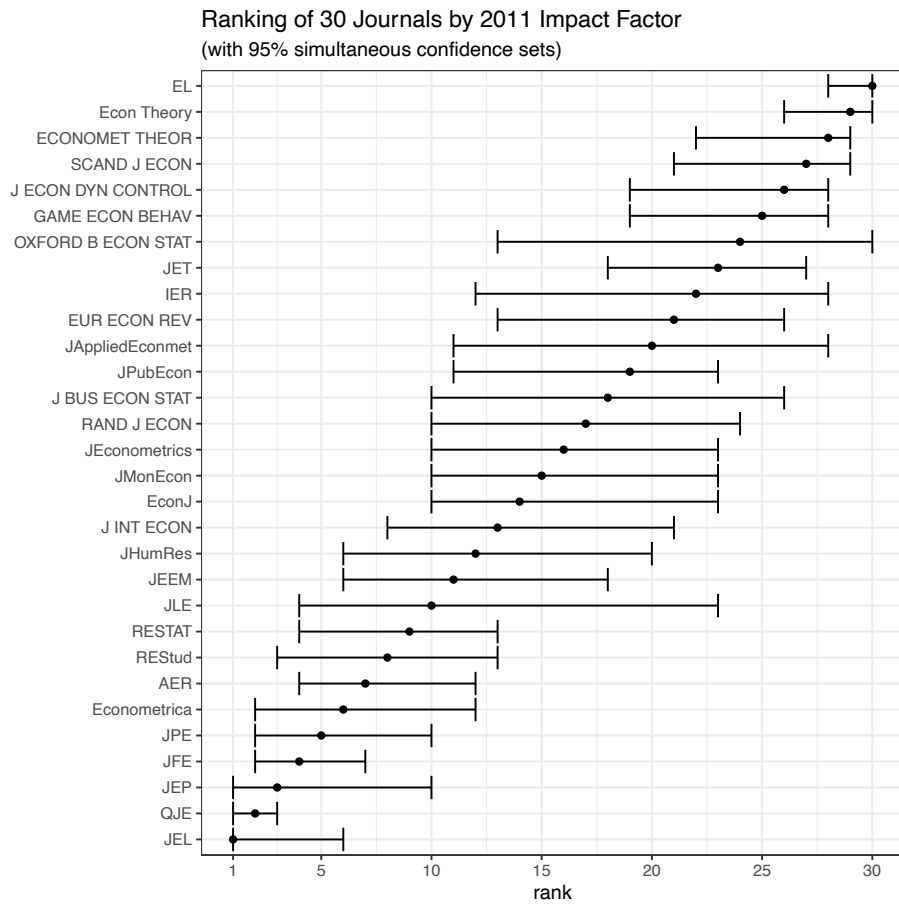


FIGURE A6. RANKING OF THE TOP 30 JOURNALS OF KALAITZIDAKIS, MAMUNEAS AND STENGOS (2003). THE DOTS SHOW THE ESTIMATED RANKS AND THE HORIZONTAL LINES REPRESENT THE 95% SIMULTANEOUS CONFIDENCE SETS FOR THE RANKS OF EACH JOURNAL. NAMES OF JOURNALS AS IN STERN (2013).

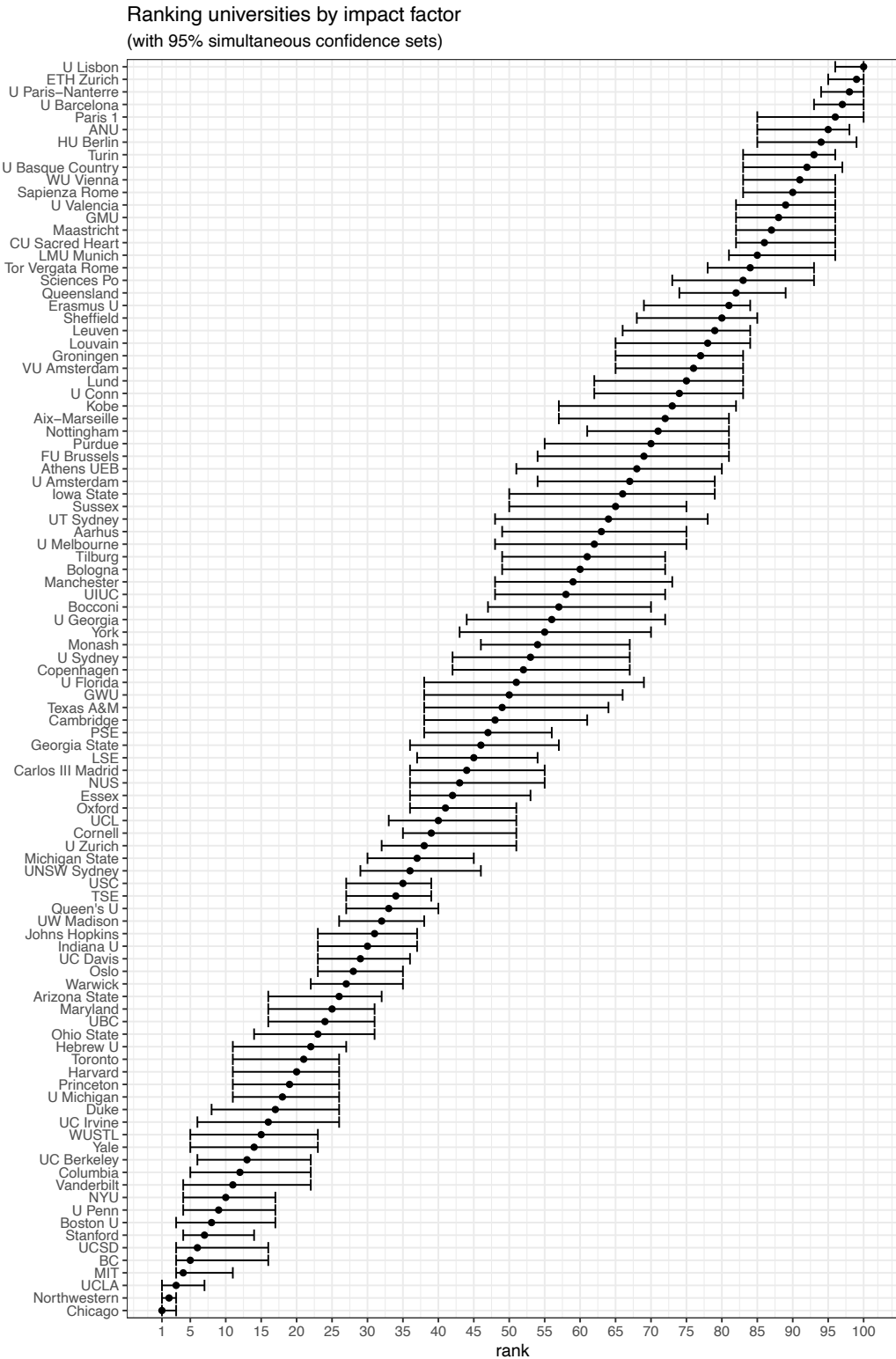


FIGURE A7. RANKING OF ALL UNIVERSITIES BY IMPACT FACTORS. EACH HORIZONTAL LINE REPRESENTS THE 95% SIMULTANEOUS CONFIDENCE SET FOR THE RANK OF A UNIVERSITY, WHERE UNIVERSITIES ARE ORDERED BY THEIR IMPACT FACTOR, THOSE WITH THE HIGHEST IMPACT FACTOR APPEARING AT THE BOTTOM (SMALL RANKS) AND THOSE WITH THE SMALLEST APPEARING AT THE TOP (LARGE RANKS). THE DOTS SHOW THE ESTIMATED RANKS OF EACH UNIVERSITY.