New Rankings of Economics Journals: Documenting and Explaining the Rise of the New Society Journals

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Abstract

We update citation-based rankings of academic journals in economics to study the relative ranking of new society journals. Using either a standard iterative eigenfactor methodology adjusted for reference intensity, or a top-5 citation alternative that we propose, we find that the American Economic Association journals (*AEJ-Applied*, *AEJ-Macro*, *AEJ-Micro* and *AEJ-Policy*) and the Econometric Society journals (*Quantitative Economics* and *Theoretical Economics*), are the top-ranked within their respective fields, and the *Journal of the European Economic Association* (*JEEA*) is similarly highly ranked. We explore different mechanisms to try to explain the rapid rise and consistently strong performance of these new society journals in economics.

Keywords: citations, rankings, impact factors

1 Introduction

Journal rankings can influence researchers' decisions on where to publish, as well as providing administrators, grant agencies and researchers who need to measure research per-

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formance to quantify the quality of research output, thereby influencing, among other things, hiring, promotion and the awarding of research grants. In economics, numerous studies have provided such rankings based on quality-adjusted impact factors, in which citations are adjusted for the quality of the citing journal (e.g. Liebowitz and Palmer, 1984, Laband and Piette, 1994, Kalaitzidakis et al. 2003 and 2011, Palacio-Huerta and Volij, 2004 and Kodrzycki and Yu 2006). However, these studies currently give an incomplete picture of the current standing of journals because there was dramatic increase in the supply of high quality journals in the last 20 years with the introduction of the new society journals produced by the *American Economic Association* (*AEA*), the *Econometric Society* (*ES*), and the *European Economic Association* (*EEA*).[1] The introduction of these journals had the potential to have a seismic effect on journal rankings, but there is essentially no research to date on their impact on the rankings.[2]

We make three main contributions. First, we provide updated journal rankings, based on impact factors, so as to include these new society journals. We find that the new society journals rank among the best journals in economics outside of the top-5[3], and that this rise to the "top" was achieved almost immediately after their launch. Second, using econometric analysis we investigate the extent to which controlling for journal characteristics can help explain the rise of the new society journals. Third, as described below, we contribute to the more general journal ranking literature in economics in terms of ranking methodologies and their implementation.

Our starting point to measure impact factors, and so rank journals, is the approach of Palacios-Huerta and Volij (2004), which takes the now quite standard iterative eigenfactor approach to measuring impact factors. Their approach allows one to work out impact per article after removing citations from the same journal, and adjusting it for reference intensity

[1]The *EEA* started publishing the *Journal of the European Economic Association* (*JEEA*) in 2003. The *ES* started *Theoretical Economics* (*TE*) and *Quantitative Economics* (*QE*) in 2006 and 2010 respectively. The *AEA* started the four *American Economic Journals* (*AEJs*) in 2009: *AEJ: Applied Economics* (*AEJ-Applied*), *AEJ: Macroeconomics* (*AEJ-Macro*), *AEJ: Microeconomics* (*AEJ-Micro*), and *AEJ: Economic Policy* (*AEJ-Policy*). The *AEA* started *AER: Insights* in 2018, but this is too late to usefully incorporate in our analysis.

[2]The one exception that we are aware of is the Kalaitzidakis et al. (2011) which included *JEEA* in its ranking.

[3]These are: *American Economic Review* (*AER*), *Econometrica* (*ECMA*), *Journal of Political Economy* (*JPE*), *Review of Economics Studies* (*RESTUD*) and *Quarterly Journal of Economics* (*QJE*).

of the citing journals to better account for the tendency of articles in some fields to have more references than others (*the invariant approach*). For our initial ranking exercise we purchased and used citation data from 2015-2019 from the *Journal Citation Report* (*JCR*) database, where each year for a particular journal captures citations from publications in that year to publications in other journals from the current and previous four years. Using this approach, we find the ranking of the so-called "top-5" economic journals is consistent with earlier studies in which these journals take the top five positions. However, we also find that the new society journals, namely, *AEJ-Applied*, *AEJ-Policy*, *AEJ-Macro*, *AEJ-Micro*, *QE* and *TE*, dominate their respective top field journals, and *JEEA* outperforms its comparable general-interest journals outside of the top-5. Furthermore, we find the new society journals perform consistently well across all of the alternative ranking methods we try, such as not adjusting for reference intensity, including non-standard economics journals, including non-economics journals, or using only citations from the top-5 economics journals. The introduction of the new journals caused the rankings of other excellent journals to fall. To put it loosely, the new journals can be viewed as taking the positions right after the top-5.

Motivated by the exceptional performance of these new society journals, we explore the factors that are correlated with their high rankings in the years after their launch. However, the purchased *JCR* data are not well-suited to doing this because of the rigid form of the data, and instead we develop other ranking methods based on publicly available data. Specifically, we calculate impact factors based solely on citations from the top-5, and find that these produce quite similar results in terms of ranking for the top-30 or so journals. We were able to construct such rankings in several different forms, allowing us to conduct our empirical analysis and perform a relatively large number of robustness checks.

Using the impact factors based on the top-5 citations, we compare each of the new journals to selected top field and general interest comparison journals, and find that: (i) all the new society journals manage to achieve statistically significantly higher impact factors right after their inception compared to their respective comparison journals; (ii) a number of factors are correlated with the performance of the new journals relative to their comparison journals, but that taken together these factors do not reduce the high rankings of the new journals; (iii) that *AEA* journals and *ES* journals appear to receive relatively more cita-

tions from their parent journals (*AER* and *ECMA*, respectively) than do their comparison journals, but correcting for this bias has little effect on the new journal, or the Association, estimated coefficients dummies in the regressions; (iv) on average, the new society journals published a smaller number of articles per year than their respective comparisons;[4] (vii) accounting for the fact that their associations held prestigious conferences open only to their respective members did not significantly affect their impact factors; and (viii) compared to their comparison journals, the new journals are led by editors who have affiliations at more highly ranked departments and who have more experience in editing highly ranked journals (which the prominent societies would be in a position to attract and appoint).

In addition to documenting and trying to explain the strong performance of the new society journals, we contribute to the more general journal ranking literature in economics by proposing (i) a way to classify which of the journals are economics journals and which are not, (ii) a much less data-intensive ranking method based on citations only in top-5 economics journals, showing that this is a good proxy for more comprehensive ranking methodologies when ranking the top 30 or so journals, and (iii) a forward impact factor measure previously unavailable in the literature that we use to measure how journals are performing in different publication years. An additional contribution from a journal ranking perspective is that we handle *AEA Papers and Proceedings* separately from the *AER,* rather than lumping them together which the existing literature has tended to do, and which leads to anomalous ranking results for the *AER*.

Some authors, such as Palacios-Huerta and Volij (2004, 2014), Koczy and Nichifor (2013), and Demange (2014) have proposed theoretical properties a ranking mechanism should satisfy and proposed approaches that satisfy these. Among these different approaches, we adopt the Palacios-Huerta and Volij (2004) invariant method as our benchmark approach because it has become the most used in the literature. This avoids weighting journals higher in certain fields where authors may tend to have denser citing patterns just because they publish articles that have longer lists of references. Avoiding this problem is agreed to be a desirable and important step, and helps explain why their approach has subsequently been adopted

[4]Previous research has suggested that impact factors and number of articles published in a year are negatively correlated, so this is one possible way the new journals managed to ensure high average quality in their first few years.

in several other studies.[5]

Our proposed alternative measure (the top-5 impact factor), which captures the average number of times articles in a journal are cited in the top-5, is inspired by the approach of Engemann and Wall (2009). They used a similar measure based on articles published in 2008 to rank 69 journals based on citations from the top-5, the *Review of Economics and Statistics,* and the *Economic Journal*. They argue that this set of journals provides a good coverage of high quality citations while covering all different fields of economics. Our focus on the top-5 exclusively attempts to keep the quality of the equally weighted citations more uniform and reduces the data required to be collected.

In the next section we describe our data and ranking methodology, with the new ranking results given in Section 3. In Section 4 we detail our empirical methodology, which we implement in Section 5. This includes exploring how different mechanisms are correlated with the impact factors of the new journals and their comparisons using regression analysis, and whether the new society journals (excluding *JEEA*) receive preferential treatment in citations from their parent journals. Section 6 concludes the paper.

2 Journal ranking exercise

In this section, we detail the data and methodology used to arrive at our benchmark rankings, our top-5 alternative rankings, and other alternative rankings, all of which we will use to conduct robustness checks.

2.1 Data utilization

Our data for the journal rankings come from two sources: purchased data from the *JCR* database, as well as data collected manually from the *Web of Science*. For our regression analysis in Section 5 we also make use of a range of publicly available data. As one might expect, our data collection and the creation of variables based on it were quite labor intensive. For most tasks, we used two research assistants working independently, cross checked their

[5]For example, Kodrzycki and Yu (2006), Ritzberger (2008), Bao et al. (2010), and Lo and Bao (2016) all apply this approach in their ranking studies.

results, and resolved any discrepancies ourselves. We detail the data collection process for the above variables in Section A of the Online Appendix.

We provide yearly journal rankings, and the corresponding geometric mean rankings, for the period 2015-2019 based on several ranking methodologies. For each of these, we make use of the same *JCR* data. For any particular year in this range, our citation data are obtained from citations in journals published in that year to journals published in the current and proceeding four years as recorded by the *JCR*. For example, in the case of *JCR* 2019 edition, the data we obtain is for citations from journals published in 2019 to journals published between 2015 and 2019 inclusive (i.e. for a 5-year window).[6] Typically, *JCR* releases citation data one year after the actual publication date of the journals, and so we included the latest *JCR* release (*JCR* 2019 edition), in order to get the most up-to-date data. The earliest edition of *JCR* we purchased is for 2015, which covers publications for the 2011-2015 window, by which point all the new society journals (hereafter "new journals") had been established for at least one year. Our *JCR* data is limited to journals classified as "economics" by the *JCR*.[7]

In the *JCR* data set, citations from and to the *AEA* Papers and Proceedings (i.e. the May issue of the *AER*) are not separated from the rest of the issues in the *AER* up until 2018.[8] Given these proceedings consists exclusively of short articles that do not go through a standard refereeing process, we have separately identified citations from and to the *AEA Papers and Proceedings*, essentially treating it as a separate journal for the purposes of ranking as well as our subsequent regression analyses. To do this, we rely on the *Web of Science* to retrieve the citation data and the number of articles for *AEA Papers and Proceedings* manually, and then remove these from the *AER* in the *JCR* data.

[6]This five year window is consistent with Kalaitzidakis et al. 2003, who focus on citations in 1998 of articles published between 1994 and 1998. Some previous studies (Kalaitzidakis et al., 2011) focused on citations to articles published in the preceeding 10 years. Since the new journals of interest were launched as late as 2010, using a 10-year window would mean restricting to citation data in one year only, which is 2020, the data from which was not even available at the time we conducted our study. For this reason we focus on a shorter window to do our ranking exercise.

[7]The total number of journals included in the *JCR* "economics" dataset is 346, 345, 354, 363 and 372 for the years 2015, 2016, 2017, 2018 and 2019, respectively.

[8]Since 2018, *AEA Papers and Proceedings* has no longer been published as the May issue of the *AER*. See `https://www.aeaweb.org/journals/pandp/about-pandp`

2.2 Our baseline journals

In this section, we provide details on how we further refine the *JCR* data to arrive at our set of baseline journals.

2.2.1 Classifying economics journals

Some authors (for example, Kodrzycki and Yu, 2006) have criticized the *JCR* "economics" classification, as their classification criteria is not transparent and tends to include many journals that are more closely associated with other disciplines. In practice it is difficult to draw a clear boundary between economics and some other disciplines such as finance, management and statistics. Academics have long disagreed over whether finance should be deemed a subfield of economics or a discipline that is largely built on its own system of concepts and methodologies (Pieters and Baumgartner, 2002, Kodrzycki and Yu, 2006). To provide a within-discipline ranking in which citations from all other journals in the same discipline are counted (but not those from outside the discipline), some dividing line is required when using an iterative procedure in which all journals included ultimately influence the quality weighting applied to each of the other journals. To proceed, we propose a two-stage mechanism for defining economics journals.

Here we summarize our two-stage mechanism, leaving the full details to Section A.1 of the Online Appendix. The first stage involves identifying a set of economics journals based on whether the majority of their editorial board have economics affiliations. To keep things manageable, we collect affiliation information of the first ten eligible editors (including associate editors and editorial board members) as listed on each journal's website and compute the proportion of these editors who have an economics affiliation. If this proportion is one half or more, we call it initially as an economics journal. Using this only as a starting point, we then determine which are economics journals by determining whether the fraction of citations a journal receives that are from the group of economics journals is greater than or equal to a half. We iterate this procedure until no more journals shift between the economics and non-economics group. The idea is to identify a journal as an economics journal if it is cited more by economics journals than by non-economics journals. We then repeat this exercise

in step two by determining whether the fraction of citations a journal makes to the group of economics journals is greater than or equal to one half. The idea with this alternative exercise is to identify a journal as an economics journal if it cites more economics journals than non-economics journals. Again we repeat the iterations until the categorization of journals become stable (i.e. there are no changes in categorization with a further iteration). Finally, we take the intersection of these two stable sets of economics journals as our set of economics journals. This results in 193, 197, 200, 190 and 197 journals in the group of economics journals in the 2015, 2016, 2017, 2018 and 2019 data respectively. The full list of journals classified as non-economics are identified with dark shading in Table A.4 in the Online Appendix.

2.2.2 Non-standard journals

Starting from the group of economics journals classified by our two-stage approach in Section 2.2.1, in order to create a baseline set of journals we further exclude journals that do not follow standard submission and refereeing processes. Specifically, after looking at the submission pages and instructions to authors, we identify fifteen journals as non-standard in that they do not have open submission policies (anyone can submit an article) and/or they do not have a standard policy of sending articles (which are not desk rejected) to independent referee(s).[9] The remaining standard economics journals will be referred to as our baseline journals in the rest of this paper, and the rankings that come from the invariant method based on these journals will be referred to as our benchmark ranking. Thus, to summarize, other than our baseline journals (standard economics journals), we have non-standard journals (which are economics journals that are non-standard) and non-economics journals.[10]

[9]The following journals are identified as non-standard: AEA Papers and Proceedings, Annals of Economics and Finance, Annual Review of Economics, Annual Review of Resource Economics, Asian Economic Papers, Brookings Papers on Economic Activity, Econ Journal Watch, Economic Policy, Economics-The Open Access Open-Assessment E-Journal, Federal Reserve Bank of St Louis Review, Journal of Economic Literature, Journal of Economic Perspectives, NBER Macroeconomics Annual, Review of Environmental Economics and Policy, and World Bank Research Observer.

[10]In the Online Appendix, Table A.3 contains the rankings obtained with the inclusion of non-standard journals. Non-standard journals are highlighted in lighter shading.

2.3 Methodology

Having defined a baseline set of economics journals, we apply two different approaches to calculate impact factors and so journal rankings.

2.3.1 Benchmark ranking methodology

Consistent with the existing literature, we first remove self-citations (defined as citations from the same journal to itself) and adjust for journal size (which following Kalaitzidakis et al, 2011, we take as the number of regular articles published in the journal in a year). We then adjust for reference intensity, i.e., a measure of how much a given journal cites other articles on average, following Palacios-Huerta and Volij (2004), by normalizing the citation counts by the number of citations from a given journal over the summation of citations over all journals.

Formally, for each year t, we denote the impact factor for journal j obtained in the i^{th} iteration from this methodology by a superscript I. Before the first iteration starts, i.e., $i = 0$, we have

$$I^I_{j,0,t} = \frac{1}{W_{j,t}} \sum_{k=1,k\neq j}^{N_t} \left(\frac{c_{j,k,t}}{\frac{1}{w_{k,t}} \sum_{m=1}^{N_t} c_{m,k,t}} \right) \left(\right. \tag{1}$$

From the first iteration onward, i.e., $i \geq 1$, we have

$$I^I_{j,i,t} = \frac{1}{W_{j,t}} \sum_{k=1,k\neq j}^{N_t} \left(\frac{c_{j,k,t} I^I_{k,i-1,t}}{\frac{1}{w_{k,t}} \sum_{m=1}^{N_t} c_{m,k,t}} \right) \left(\right. \tag{2}$$

where $c_{j,k,t}$, as defined earlier, represents the number of citations to articles published in journal j over the five-year window, i.e., year $t-4$ to year t, from articles published in journal k in year t, and N_t, $w_{k,t}$ and $W_{j,t}$ denote the total number of journals in year t, the number of articles published in journal k in year t, and the total number of articles published in journal j from year $t-4$ to year t respectively.

As is clear from (1), all journals are given identical impact factors in stage zero of the procedure, and therefore the citations received by each journal are used without any quality adjustment to update the impact factors in the first iteration. However, from the first iteration onward, the updated impact factors from the previous stage are used to adjust

the citations received by each journal in the updating process, as can be seen in (2). The summation expression over m in the denominator of (2) captures the adjustment for reference intensity of the citing journal. With this normalization, the resulting impact factors are invariant to the reference intensity in an average article in any citing journal. This iterative updating process continues until convergence is reached for a particular year in the sense that the relative ranks of journals in that year based on their impact factors no longer change. Henceforth, we will refer to the invariant method of ranking journals defined by (2) and the resulting ranking of impact factors as our benchmark ranking methodology.

2.3.2 Rankings Based on the Top-5

As an alternative to the invariant method, we propose the top-5 impact factor as

$$I_{j,t}^{\text{Top-5}} = \frac{1}{W_{j,t}} \sum_{k \in J, k \neq j} c_{j,k,t},$$

where $c_{j,k,t}$ is the citations to articles published in journal j over the years $t-4$ to year t from articles published in journal k in year t, and $W_{j,t}$ is number of articles in journal j over years $t-4$ to year t, and moreover, J is a set comprised of the top five general-interest journals, namely, *AER, ECMA, JPE, QJE,* and *RESTUD*. Similar to the practice for our benchmark rankings, we remove self-citations and also remove the *AEA Papers and Proceedings* from the articles and citations that we count from the *AER*. We then rank journals according to the resulting impact factor for a particular year.

One of the advantages of the top-5 method is it is much easier to construct rankings using it compared to constructing rankings based on the invariant method. At the same time, the top-5 method satisfies some other desirable features given the five journals cover all major fields of economics and have broadly similar perceived quality levels (after removing *AEA Papers and Proceedings* from *AER*).

3 Journal ranking results

In this section we present our overall journal ranking results, first using our benchmark invariant method on the baseline set of journals, then using our top-5 alternative, and finally using various alternatives to show the robustness of our results, and our ranking of the new journals in particular.

3.1 Benchmark journal rankings

[INSERT TABLE 1]

Table 1 presents our benchmark results, a yearly ranking of the baseline journals based on the invariant method, with the geometric mean across the yearly ranks given in the last column. In the interest of space, we only present the top 100 journals, with the ranking for the remaining journals given in Table A.1 in the Online Appendix. As can be seen, the usual top-5 journals (defined in the introduction) are also found to be ranked the top five journals by our ranking method in each year. In terms of the order of the top-5 journals, using the geometric means, the ranking takes the form of *QJE, AER, ECMA, RESTUD* and *JPE*.

Based on the geometric average of five years of ranking, the new journals we consider are ranked: *AEJ-Macro* (6th), *AEJ-Applied* (7th), *JEEA* (8th), *AEJ-Policy* (9th), *TE* (11th), *AEJ-Micro* (14th), and *QE* (16th). In Section 4, we will explore possible explanations for why these relatively new journals have performed so well in terms of quality-adjusted citations.

Well-established top field and general journals outside of the top-5 are also highly ranked, although most of them have been pushed down in their ranking by the entry of the new journals. Again using the geometric means of the rankings, *Journal of Labour Economics* is ranked 10th, *Review of Economics and Statistics* is ranked 12th, and the *Journal of Monetary Economics* is ranked 13th. Some well-established top field journals that were highly ranked in earlier ranking studies seem to have slipped, including *Journal of Economic Theory* at 24th, *Journal of Public Economics* at 25th, *Journal of Econometrics* at 26th, and *Games and Economic Behavior* at 33rd, all based on geometric means.

3.2 Top-5 ranking results

[INSERT TABLE 2]

Table 2 shows the comparable results using the top-5 method of ranking journals (Section **??**).[11] First, and not surprisingly, *AER, JPE, ECMA, QJE and RESTUD* are still ranked in the top-5 of journals in Table 2, but the ranking among them is somewhat different from that produced by our benchmark journal rankings. More importantly, the new journals again perform remarkably well, and indeed based on the geometric mean over the five years of rankings, even better than based on our benchmark journal rankings, with rankings: *AEJ-Applied* (6th), *AEJ-Macro* (7th), *TE* (8th), *JEEA* (9th), *AEJ-Policy* (10th), *AEJ-Micro* (12th), and *QE* (13th).

Other well-established journals mostly rank in a similar way to before. Based on comparing the geometric means of the two approaches, the largest discrepancies among the top-30 journals from switching from our benchmark method to the top-5 method are the *Journal of Human Resources* (falls from 15th to 22nd), *Journal of Business & Economics Statistics* (falls from 21st to 30th), *Experimental Economics* (falls from 27th to 42nd), *Econometric Theory* (falls from 28th to 37th), *Journal of Development Economics* (rises from 29th to 25th), and the *Journal of Applied Econometrics* (falls from 30th to 52nd). On the other hand, as a result of switching to the top-5 method, several journals move into the top-30, these being *IMF Economic Review* (rises from 31st to 26th), *Games and Economic Behavior* (rises from 33rd to 28th), and the *Journal of Law and Economics* (rises from 40th to 29th).

For a direct comparison of the two approaches, we present the ranking for the geometric means in the benchmark and the counterpart with the top-5 method in the first and the last columns of Table 3 (the remaining columns will be explained in Section 3.3). From there, we observe that none of the journals with impact factors of zero using the top-5 method enter the top-75 of journals in the benchmark ranking. This implies that being able to attract citations from top five journals is an important milestone to be ranked within the top 75 of all economics journals. Moreover, the ranking of journals that just receive a few citations from

[11] About one half of the baseline journals used for our benchmark rankings attract no citations from the top 5 journals over the years we study. As a result, their top-5 impact factors are equal to zero and all of them are assigned with the same ranks (and are omitted from Table 2).

the top five journals over any 5-year window is extremely noisy in the sense that this may be driven by just one or two publications. Therefore, the top-5 journal ranking is useful if we are looking at rankings of the leading group of journals, but is of less usefulness for lower ranked journals. For example, if we narrow down to the top 20 journals from our benchmark ranking (based on the geometric mean), we can see that all of them remain top 20 in the top-5 ranking except for the *Economic Journal* and the *Journal of Human Resources*, which are ranked by the top-5 method as 21st and 22nd respectively.

Our results suggest that given the top-5 method is a lot less data intensive, researchers may be able to rely on the top-5 method to more quickly do ranking studies for the set of top-30 or so economic journals.[12] Indeed, in Section 4, we will use the top-5 method to construct dynamic impact factors over a longer time period than our *JCR* data affords, so as to study the rise of the new journals.

3.3 Robustness of rankings

To supplement and cross-validate our benchmark rankings, we examine the robustness of our rankings based on the iterative method to three variations in our methodology.

1. **Removal of invariance to reference intensity:**

   Most of the earlier ranking studies followed the standard iterative eigenfactor approach, but did not control for the reference intensity in the citing journals. Without adjusting for reference intensity, the formula for the impact factor of journal j in the i^{th} iteration for year t simplifies to

$$I^W_{j,0,t} = \frac{1}{W_{j,t}} \sum_{k=1,k\neq j}^{N_t} c_{j,k,t} \text{ and } I^W_{j,i,t} = \frac{1}{W_{j,t}} \sum_{k=1,k\neq j}^{N_t} c_{j,k,t} I^W_{k,i-1,t},$$

   where $c_{j,k,t}$, N_t and $W_{j,t}$ follow the earlier definitions. We present ranking results without controlling for reference intensity in column (2) "Removal of Reference Intensity" of Table 3.

2. **Inclusion of Non-Standard Journals**:

[12] We will provide more evidence for this in the next section.

We add back non-standard economics journals to our baseline journals and replicate our benchmark ranking (based on the invariant procedure). We present the results in column (3) "Inclusion of Non-Standard Journals" of Table 3. For the ease of comparison with our existing results, after generating the yearly impact factors of the invariant method with the inclusion of non-standard journals, we remove the non-standard journals from the ranking results in Table 3. For readers interested in the full ranking of the non-standard journals, Table A.3 in the Online Appendix replicates Table 3 but includes the non-standard journals in the table, where non-standard journals are highlighted with light shading.

3. **Full set of *JCR* journals:**

   In Table 3, we also consider how much difference our two-stage endogenous mechanism in defining economics journals makes to our journal ranking results. As well as the inclusion of non-standard journals, we further add back the non-economics group of journals to our baseline journals. We reproduce the invariant approach on this new set of journals, which is the full set of *JCR* journals under the economics classification. Results are presented in column (4) "Full Set of *JCR* Journals" of Table 3. As above, we only show the rankings in Table 3 for our baseline journals, but the ranks of the non-economics journals are given in Table A.4 of the Online Appendix, where we replicate Table 3 using the full set of *JCR* journals as the baseline journals and the non-economics journals are highlighted in darker shading.

[INSERT TABLE 3]

In order to make it easy to compare the different approaches, Table 3 contains the ranking results for the three robustness approaches above together with the results from our benchmark ranking method (in column (1) and the top-5 method in (column (5)) based on the geometric mean of the rankings across the years 2015-2019. Note given space constraints, we only show the results for the top 100 journals, and have placed the remaining part of Table 3 for journals ranked below 100 in Table A.2 in the Online Appendix. Table 3 shows that the top-5 journals remain ranked within the top 5 under all of the different methods. Most relevant for our study, the group of seven new journals we focus on continue

to rank within the top 16 of the baseline journals, with only minor variations in their ranking across the different methodologies.

[INSERT TABLE 4]

In Table 4 we show the Spearman's rank correlation coefficients across different methods and years. In the upper panel of Table 4, we present the correlation between (1) yearly rankings and geometric-mean ranking based on our benchmark method (ranks shown in Table 1) and (2) yearly rankings and geometric-mean ranking based on the top-5 method (ranks shown in Table 2). These rank correlations show that geometric-mean rankings are highly correlated with yearly rankings, both for our benchmark method and the top-5 method. In the lower panel of Table 4, we present correlations between each of the four alternative rankings methods (i.e. the three methods identified above, and the top-5 method) and our benchmark ranking for different numbers of top journals according to the journal list in Table 1 (for the results using geometric means). From the lower panel of Table 4, we see that the various alternative rankings are highly correlated with our benchmark rankings. In particular, we highlight that our top-5 method gives ranking results that are highly correlated with those from our benchmark method, and moreover, the maximum among the correlations between our rankings based on our top-5 method and our benchmark method is obtained when we restrict ourselves to the top-32 journals. These results suggests that the top-5 method provides a good proxy for the benchmark method for the top-30 or so journals.[13]

4 Mechanisms

Here we propose regression approaches to see to what extent the high standing of the new journals remains once we control for various factors.

[13]We also applied the iterative eigenfactor approach with the adjustment for reference intensity to the top-5 journals, as we did for our baseline rankings. This gives an adjusted top-5 ranking. We provide more details about this adjusted top-5 approach in Section B.1 of the Online Appendix. There we show, in Table B.1, that the resulting ranking is almost identical to the ranking from the simple top-5 method, especially when we focus on the top 30 or so journals. We chose to go with the simpler ranking method given that the rankings produced by the two methods are so close.

4.1 Comparison journals

To start, we first pair each new journal with suitable comparison journals, i.e., the top-ranked journals (outside the top-5) closest in theme or subject matter to each of the new journals. Specifically, we use:

- For *AEJ-Applied*: *Review of Economics and Statistics (REStat)*, *Journal of Labour Economics (JOLE)*, *Journal of Development Economics (JDE)*;
- For *AEJ-Macro*: *Journal of Monetary Economics (JME)*, *Journal of Economic Growth (JEG)*, *Review of Economic Dynamics (RED);*
- For *AEJ-Micro*: *Journal of Economic Theory (JET)*, *RAND Journal of Economics (RAND)*, *Games and Economic Behavior (GEB);*
- For *AEJ-Policy*: *REStat*, *Journal of Public Economics (JPubE)*, *Journal of Human Resources (JHR);*
- For *JEEA*: *Economic Journal (EJ)*, *International Economic Review (IER);*
- For *QE*: *Journal of Econometrics (JOE)*, *Journal of Applied Econometrics (JAE)*, *Journal of Business & Economic Statistics (JBES);*
- For *TE*: *JET*, *GEB.*

In Table 5 we have extracted the information in Table 3 for the new and comparison journals. Column (1) indicates that all of the new and comparison journals are in the top 35 when we use the invariant method to obtain our baseline ranking. This also holds true when we consider modifications of the sample for the invariant model. Finally all the journals are in the top 35 when we use the top-5 method except for the *JAE*.

[INSERT TABLE 5]

4.2 Construction of the dependent variable

A natural candidate for the dependent variable to measure how well a journal is doing in particular years is its yearly impact factor that we used in our benchmark rankings in Table 1. However, a problem with doing so when we run regression is that the citation data from the *JCR* (that we purchased) is only given in five year windows, so that we have citations in 2015 of articles published in 2010-2015, citations in 2016 of articles published in 2011-2016, and likewise through to citations in 2019 of articles published in 2015-2019. This poses several problems including that: (i) it does not fully cover the periods in which the new journals first launched; (ii) it will create strong autocorrelation in the error terms of the regressions since there is so much overlap in the years each dependent variable (the impact factor) covers[14]; and (iii) it does not allow us to control for the yearly characteristics on annual citations (for example, the total number of articles a journal publishes in a year, which may affect the impact factors).

We will address these problems using the top-5 rankings, since doing so will allow us to: (i) collect earlier top-5 citation data for the new journals and the comparison journals, given that the data collection is feasible by hand; (ii) use shorter windows to reduce the autocorrelation problem and create more observations for the regressions; and (iii) switch to a forward impact factor measure, detailed below, that calculates how many times articles published in a particular journal in a particular year are cited in top-5 journals in the current and subsequent years.

To calculate the respective forward impact factors, we proceed as follows. First, we collect the citations contained in the Web of Science from the top-5 journals to each of the new and comparison journals in a given year.[15] The y-year forward impact factor for journal j in year

[14]For example, consider the impact factors for 2015 and 2016. Publications in 2012, 2013, 2014 and 2015 will contribute to both the 2015 and 2016 impact factors.

[15]We continue to start the new journals in respective starting years, and start the comparison journals six years prior to the initial year of their respective new journals. Specifically, we collected the annual number of citations from each of the top-5 journals to the articles published in each year during 2003-2019 for *JEEA*, 1997-2019 for *JEEA* comparisons, 2006-2019 for *TE*, 2000-2019 for the *TE* comparisons, 2009-2019 for *AEJ*s, 2003-2019 for *AEJ* comparison, 2010-2019 for *QE*, and 2004-2019 for the *QE* comparisons. The details for this data collection are given in Section A.2 of the Online Appendix.

t is

$$F_{j,t}(y) = \frac{1}{w_{j,t}} \sum_{k \in J} \left(\sum_{m=t}^{t+y-1} c_{j,k,t,m}, \right. \tag{3}$$

where $c_{j,k,t,m}$ is the number of citations to articles published in journal j in year t by articles published in journal k in year m, while $w_{j,t}$ is the number of articles published in journal j in year t. In our application, the set J consists of the top-5 journals we used previously.[16] For example, if we want to construct the forward impact factor for the 2009 volume of *AEJ-Macro* over the period $2009 - 2011$ ($y = 3$) we count the number of citations to the *AEJ-Macro* 2009 volume from the top-5 journals published in $2009 - 2011$. We then divide this number by the number of articles that were published in the 2009 volume of *AEJ-Macro*.

We can similarly define the y-year backward impact factor for journal j in year t with a y year window as

$$B_{j,t}(y) = \left[\left(\sum_{m=t-y+1}^{t} \left(w_{j,m} \right] \right.^{-1} \sum_{k \in J} \sum_{m=t-y+1}^{t} \left(c_{j,k,m,t}, \right. \right. \tag{4}$$

where $c_{j,k,t,m}$, $w_{j,x}$ and J are defined as above. Based on this definition, our top-5 rankings in column (5) of Table 2 are equivalent to 5-year backward impact factors (the current year plus the previous four years).

To better understand the difference between using the backward impact factors (defined in equation (4)) and our new forward impact factors (defined in equation (3)), consider the following example. Suppose we are interested in citations from articles published in top-5 journals to articles published in *JEEA*. Our y-year backward impact factor focuses on top-5 publications in a given year and looks at how many times they cited *JEEA* articles published in the current year and the $y - 1$ previous years. In contrast, the y-year forward impact factor focuses instead on *JEEA* publications in a given year and looks at how many times they are cited by articles published in the top-5 journals published in the current year and the $y - 1$ subsequent years. Thus, the forward impact factor focuses on the publication year of the journal being cited, allowing us to explore the impact of the *JEEA* (or any other journal) immediately following its launch.

As we are primarily interested in exploring how the new journals and their comparison

[16] Again we do not inclue citations from *AEA Papers and Proceedings* in this impact factor.

journals did in each year as well as overall, the forward impact factors are our preferred measure of journal performance in the regression analysis. We set $y = 3$ given that the choice of a three-year window balances our need for more observations, which requires a low value of y, while allowing us to aggregate over a sufficient number of years (three in this case) to make the impact factors more precise.[17] Since the three-year forward impact factors require data on the current and two future years, and our data ends in 2019, the last year in which we can measure the three-year impact factor is 2017.

[INSERT TABLE 6]

In Table 6(a) we show the ranks of the new and comparison journals based on the 3-year backward and 3-year forward impact factors using the top-5 method, as well as the 5-year (backward) impact factors using the invariant and top-5 methods. Note that in the case of the 5-year backward impact factors, we have reranked the journals in Table 5 in terms of their ranking within the set of our new journals and comparison journals. Table 6(a) illustrates that the rankings of this subset of journals is essentially independent of the ranking method, and in particular, the new journals are always ranked higher than any of their comparison journals.

Table 6(b) shows the Spearman's rank correlation coefficients across the four different ranking outcomes in Table 6(a). These correlation coefficients are very close to one, reinforcing the result that the within group ranks are independent of ranking method. In light of this result, going forward we focus our regression analysis based on the 3-year forward impact factors (as noted above, we will use the 3-year backward impact factors for robustness checks.) Given our focus on $y = 3$ throughout the rest of the paper, for expositional ease we replace $F_{j,t}(3)$ by $F_{j,t}$ and $B_{j,t}(3)$ by $B_{j,t}$ in what follows; we also refer to three-year impact factors simply as impact factors from now on (whenever doing so does not create confusion).

4.3 Did the new society journals do well immediately?

We first ask how long it took the new society journals to achieve their high rankings. To explore this, in Figure 1, we plot the time series of the forward impact factor for each of the

[17] A three-year window for the backward impact factor also reduces the autocorrelation problem relative to the five-year window used in our benchmark ranking.

new AEA journals and the average value of their respective comparison journals. We define the forward impact factors of the *average* of the comparison journals for a given new journal j

$$\bar{F}_{j,t} = \frac{1}{n_j^{\text{Com}}} \sum_{s \in S_j^{\text{Com}}} \Bigg(F_{s,t}, \tag{5}$$

where S_j^{Com} and n_j^{Com} denote the set of comparison journals and the number of these comparison journals, respectively, for a given new journal j. Note the x-axis in these figures represents calendar year of the journals.

From Figure 1, we see that all the *AEJ* journals achieved higher forward impact factors than the average of their respective comparison journals over the sample period. For the *ES* journals, Figure 2 indicates that both *QE* and *TE* are above the average of their respective comparison journal counterpart in all years, except for *TE* in 2007. In Figure 3, we present the analogous results for the *JEEA* versus the average of its comparison journals. Note that the *JEEA* took one year before exceeding the average of its comparison journals. To examine the robustness of the results in these figures, we replicate them using the backward impact factors. The results have been placed in Section C.2.1 of the Online Appendix, and have the same implications as those in Figures 1-3.

[INSERT FIGURE 1-3: 2-Year Forward Impact]

4.4 Regression Approaches to Analyzing Impact Factors

First we ask whether we can explain at least some of the differences in impact factors between the new journals and the control journals by conditioning on observable factors that differ across journals. Here we are essentially following the discrimination literature in labor economics where one investigates, e.g., how much the raw male-female wage differential changes when one controls for education, labor market experience etc. We will examine the change in the new journal coefficients when we control for the following for each journal: (i) the papers published per year; (ii) the editors' average professional qualifications when the respective new journal started; (iii) the editors' average editing experience when the respective new journal started ; and (iv) whether a journal is published by a society that

puts on a major conference. We explicitly describe our first approach in Section 4.4.1 below.

We then ask if the *AEA* journals received preferential treatments in terms of citations from *AER*, and if the *ES* journals received preferential treatment from *ECMA*. We cannot investigate this issue using our first regression approach. Instead, our second approach investigates : (i) whether such favorable treatment occurs; and (ii) how the new society coefficients change when we attempt to eliminate the effects of this potential bias on impact factors. We explain our approach for this in Section (4.4.2) below.

4.4.1 Controlling for Observable Factors When Estimating the Impact Factor Effects of the New Journals

The raw new journal effects are captured in the following simple regressons

$$F_{j,t} = \alpha_0 + \alpha_1 d_j^{New} + \alpha_2 \underline{d}^{Year} + \epsilon_{j,t}, \quad (6)$$

$$F_{j,t} = \beta_0 + \beta_{11} d_j^{AEA} + \beta_{12} d_j^{ES} + \beta_{13} d_j^{EEA} + \beta_2 \underline{d}^{Year} + e_{j,t}, \quad (7)$$

where $F_{j,t}$ is defined above. Further, d_j^{New} equals one if journal j is a new journal (*AEJ-Macro/Micro/Applied/Policy*, *JEEA*, *TE* and *QE*) but zero if journal j is a comparison journal, d_j^{AEA} equals one if journal j is affiliated with *AEA* and zero otherwise, d_j^{ES} equals one if journal j is affiliated with the *ES* and zero otherwise, and d_j^{EEA} equals one if the journal is the *JEEA* zero otherwise. Further, $\underline{d}^{Year}$ is a vector of year dummies that will capture. among other things, long term trends.

We then add a vector of observable characteristics $\underline{x}_j$ to (6) and (7) to obtain:

$$F_{j,t} = a_0 + a_1 d_j^{New} + a_2 \underline{d}^{Year} + a_3 \underline{x}_j + \mu_{j,t}, \quad (8)$$

$$F_{j,t} = b_0 + b_{11} d_j^{AEA} + b_{12} d_j^{ES} + b_{13} d_j^{EEA} + b_2 \underline{d}^{Year} + b_3 \underline{x}_j + u_{j,t}. \quad (9)$$

We will not describe the estimated coefficients $\hat{a}_3$ and $\hat{b}_3$ as necessarily representing causal effects because components of $\underline{x}_j$ may be correlated with $u_{j,t}$ and $\mu_{j,t}$. For example, a journal may institute changes because it has an editor who is more proactive and creative in coming

up with policies to improve the journal, and hence this component of $\underline{x}_j$ may simply be acting as a signal of this unobserved editor's characteristics. In spite of this, $\hat{a}_3$ and $\hat{b}_3$ may still be of interest to journals since (i) they show what journal characteristics are correlated with impact factors and (ii) they may want to treat some elements of $\hat{a}_3$ and $\hat{b}_3$ as representing causal effects.

The crucial issue is what variables to include in the vector $\underline{x}_j$. First, we include the number of articles the journal published in the given year, since a journal may restrict the number of articles published as a way to maintain a higher average quality of its articles. We also include in $\underline{x}_j$, for the new journals, the average observable characteristics of their initial editors, and for each set of comparison journals, their average observable editor characteristics at the time that the respective new journal started. We focus on the initial editors' values since the future editors' characteristics may be affected by its early success, in which case these future characteristics would be correlated with the error terms in (8)-(9).

Our first component of the editor characteristics is based on average measures of the editors' previous editing experience. Editors with previous editing experience may have a better idea of which articles are best for the journal, as well as starting with a substantial group of high-quality referees. We use four measures of editing experience. First, we note who have previously been editors, co-editors and managing editors; below we refer to these as 'key editors'.[18] We do this for both top-5 editing experience and for editing experience at a new journal and their comparisons. Another group of editors consists of those who have previously been associate editors or editorial board members, and below we refer to these as 'secondary editors'. Again, we construct measures based on such experience at top-5 journals and at our new and comparison journals. Specifically, we construct the following measures[19]:

(a) *Editing experience with top-5 journals in a key role:* We measure the average number of years of being an editor/co-editor of top-5 journals in the ten years before the respective new journal started.[20]

[18]In the case where the managing editor is part of the administrative staff, or any editor was shown on leave, we exclude her from our analysis.

[19]We also prepared a parallel set of variables to those that follow but using a five-year window for the editors' average characteristics.

[20]If someone is an editor of multiple (top-5) journals, we add together their total years of editing these

(b) *Editing experience with top-5 journal in a secondary roles:* We measure the average number of years of being an associate editor/editorial board member at top-5 journals in the ten years before the respective new journal started.

(c) *Editing experience with the new or comparison journals in a key role:* We measure the average number of years of being an editor/co-editor of the new journals and their comparison journals in the ten years before the respective new journal started.

(d) *Editing experience with the new or comparison journals in a secondary roles:* We measure the average number of years of being an associate editor/editorial board member of the new journals and their comparison journals in the ten years before the respective new journal started.

Our second set of editor characteristics consists of measures for each editor's standing, which we postulate depends on (when the new journal starts) the editors' seniority; their publication record over the previous ten years; and the ranking of the department they are affiliated with. We specifically construct the average values of these three variables at the time that the respective new journals started, as follows:

(a) *Seniority*: We compute the editor's seniority as the difference between the calendar year when the editor obtained her Ph.D., and the year when the relevant new journal started.

(b) *Publication performance over the previous 10 years*: We measure each editor's publication performance by averaging her publications in top-5 journals[21] in the ten years before the respective new journal started.[22] For editors with less than 10 years of seniority, we average their publications in top-5 journals over the relevant years.[23]

multiple journals to work out their average measure. We apply this same principle for the other three editing experience variables below.

[21]Here, we again excluded *AEA Paper and Proceedings*

[22]We also used Google Scholar and the Web of Science Author Search to collect the editors' publication records to guard against researchers not keeping updated CVs or websites.

[23]As editorial appointment decision could be made with more emphasis on recent publications in top 5 journals, say, publications during previous five years, we constructed an alternative publication performance measure by focusing on publications in the five years prior to editors' editorial appointment.

(c) *Affiliation rank*: We compare the average ranking of university affiliations ("schools") of the editors of the new journals to the ranking of the schools of the editors of the comparison journals at the time that the new journals started. To do this we use the Tilburg University Economics Ranking (https://econtop. uvt.nl/rankingsandbox.php) which allows flexibility over the choice of journals and publication years in creating department rankings; we chose department ranks based on the total number of publications in the top-5 journals[24] by department members over the ten years before the respective new journal started.[25] Note that better departments will have lower ranks.

Further, an advantage that the new association journals have is that membership in the *AEA*, *ES*, and *EEA* is a prerequisite of attending the (important) respective association meetings. To the extent that individuals join an association to be able to attend their meetings, this will potentially increase the exposure for all of the association journals, and hence could increase the impact factor for the journals. Fortunately, several comparison journals put on important meetings also: *EJ*; *GEB*; *JAE*, *JBES*; *JOLE*; and *RED*. Hence, we define a dummy variable coded one for the: *AEA* journals; the *ES* journals; *JEEA*; *EJ*; *GEB*; *JAE*, *JBES*; *JOLE*; and *RED*, and is zero otherwise. We then include this dummy variable as a component of $\underline{x}_j$ in sum specifications when we estimate (8) and (9).

4.4.2 Did the New Society Journals Receive 'Extra Citations' From Their Parent Journals?

We also consider the possibility that the new *AEA* (*ES*) journals received favorable treatment in terms of citations from *AER* (*ECMA*). One way that this could occur is if authors believe that the respective associations want their new journals to succeed, and may consciously or unconsciously include extra citations to the new *AEA* (*ES*) journals because they believe that this will appeal to the *AER* (*ECMA*) editors. We first investigate whether we can ascertain any evidence of this phenomenon in the data by proceeding as follows. If we find evidence of preferential treatment we will correct for it in our impact factor regressions.

[24]Note that the Tilburg ranking counts *AEA Papers and Proceedings* as part of *AER* publications.

[25]For a robustness check, we also used school ranks based on publications in the top-5 journals in the five years before the respective new journal started and this had essentially no effect on our coefficients and standard errors.

Define the forward impact factor of journal j in year t as measured by citations from a particular journal k as

$$F_{j,t}^{k} = \frac{1}{w_{j,t}} \sum_{m=t}^{t+2} c_{j,k,t,m}.$$

For the new journals and their respective comparison journals, define

$$\widehat{F}_{j,t} = \frac{1}{3} \sum_{k \in J} F_{j,t}^{k},$$

where the set $J = \{JPE, QJE, RESTUD\}$. In other words, we redefine the impact factors for the *AEA* and *ES* journals, as well as their control journals, as coming only from *Restud*, *QJE* and *JPE*, since this measure will be unaffected by citations from *AER* or *ECMA*.

Then we define

$$\Delta(F_{j,t}) = F_{j,t}^{AER} - \widehat{F}_{j,t}, \tag{10}$$

if j corresponds to an *AEA* journal and its respective comparison journals and

$$\Delta(F_{j,t}) = F_{j,t}^{ECMA} - \widehat{F}_{j,t}, \tag{11}$$

if j corresponds to an *ES* journal and its respective comparison journals. Note that these measures look at the difference in average citations from the parent journals to the new journals and their comparison journals from those they received on average from *JPE*, *QJE*, and *Restud*. One might argue that we would expect $\Delta(F_{j,t})$ to be positive for both the new society journals and their comparison journals, if the subject matter of the *AER* (*ECMA*) is somehow closer to the new *AEA* (*ES*) journals compared to the other top-5 journals. This is why we will compare $\Delta(F_{j,t})$ for the new journals with $\Delta(F_{j,t})$ for their comparison journals. Since *JEEA* does not have a parent journals, we cannot include it here.

We then run regressions of the form

$$\Delta(F_{j,t}) = \delta_0 + \delta_1 d_j^{New} + \delta_2 \underline{d}^{Year} + \upsilon_{j,t}, \tag{12}$$

$$\Delta(F_{j,t}) = \pi_0 + \pi_{11} d_j^{AEA} + \pi_{12} d_j^{ES} + \pi_2 \underline{d}^{Year} + \upsilon_{j,t}, \tag{13}$$

where $d_j^{New} = 1$ for the AEA and ES journals and zero otherwise. Note that we have assumed that the vector $\underline{x}_j$ differences out of (12) and (13). Significantly positive estimates of δ_1, and of π_{11}, and π_{12}, would suggest that the *AEA* and *ES* journals are receiving 'extra' citations from their respective parent journals.[26]

In case there is evidence of preferential treatment by the parent journals, we can investigate how this preferential treatment affects our new journals' coefficients by defining an adjusted new forward impact factor for journal j in year t:

$$\check{F}_{j,t} = \frac{1}{w_{j,t}} \sum_{k \in J} \sum_{m=t}^{t+2} c_{j,k,t,m}, \tag{14}$$

where $c_{j,k,t,m}$ and $w_{j,t}$ are defined above but now we use the set $J = \{JPE, QJE, RESTUD\}$. Since by construction, the $\check{F}_{j,t}$ variables will be smaller than the $F_{j,t}$ variables,[27] we create a normalizing factor τ which we multiply the $\check{F}_{j,t}$ variables by to obtain dependent variables whose regression coefficients will have the same interpretation as in our standard case. The corresponding normalizing factor is

$$\tau = \left[\sum_{l \in L} \sum_{t} \check{F}_{l,t}, \right]^{-1} \left[\sum_{l \in L} \sum_{t} F_{l,t}, \right]$$

where L denotes the set of new and comparison journals. We then construct our new dependent variables as $\tilde{F}_{j,t} = \tau \check{F}_{j,t}$.

With theses adjusted impact factors, we run the following regressions[28]

$$\tilde{F}_{j,t} = \phi_0 + \phi_1 d_j^{New} + \phi_2 \underline{d}^{Year} + \phi_3 \underline{x}_j + \upsilon_{j,t}, \tag{15}$$

$$\tilde{F}_{j,t} = \lambda_0 + \lambda_{11} d_j^{AEA} + \lambda_{12} d_j^{ES} + \lambda_{13} d_j^{EEA} + \lambda_2 \underline{d}^{Year} + \lambda_3 \underline{x}_j + \upsilon_{j,t}. \tag{16}$$

[26] As a robustness check, we consider an *alternative* version of this approach where we include the impact of *ECMA* citations on the *AEJ* journals and the impact of *AER* citations on the *ES* journals. We formalize this *alternative* approach in Section C.3 of the Online Appendix and present the relevant results in Tables C.5 and C.7 there. This *alternative* approach produces results that are very similar to those produced by the method discussed in the text.

[27] The $\check{F}_{j,t}$ variables are based on total citations from three journals while the $F_{j,t}$ variables are based on total citations from five journals.

[28] We also employ the *alternative* approach when we include the impact of *ECMA* citations on the *AEJ* journals and the impact of *AER* citations on the *ES* journals. The results are presented in Tables C.6 and C.8 in the Online Appendix, and again they are quite similar to those discussed in the text here.

We then compare the estimated coefficients on the new journals variable and the *AEA*, *ES* and *EEA* dummy variables, $\hat{\phi}_1$,, $\hat{\lambda}_{11}$, $\hat{\lambda}_{12}$ and $\hat{\lambda}_{13}$ to the estimates we obtain when we do not adjust for preferential treatment by the parent journals, $\hat{a}_1$, $\hat{b}_{11}$, $\hat{b}_{12}$, and $\hat{b}_{13}$. Unfortunately there is no straightforward way to calculate standard errors for the differences in the estimated coefficients since the two sets of estimates are correlated, so we will focus on the overlap in the confidence intervals for the individual coefficients.

5 Empirical Results

In this section we discuss our empirical results. In each case, we first look at the difference in the means for the new and comparison journals. We then apply the regression methods described above.

5.1 Mean Differences in the Dependent and Independent Variables

Columns (1)-(3) of Table 7 present the mean forward impact factors (and their standard errors) of the relevant variables for all journals, the new journals, and the comparison journals, respectively. Column (4) shows the difference in the means between the new and comparison journals (and the corresponding standard errors). The first row of Panel A of Table 7 indicates that the new journals' mean of the forward impact factor is 40.551 (after being multiplied here, and below, by 100, for ease of presentation), which is more than twice the size of the comparison journals' mean of 16.070, resulting in a statistically significant difference of 24.481 in the forward impact factors in column (4). To examine the robustness of the implications of this calculation, we present the means for the backward impact factors in Table C.2 in the Online Appendix. The two sets of means tell the same story.

In the second row of Panel A, we show the respective mean values for the number of articles published per year. Note that the mean value of 67.612 articles for the comparison journals is approximately twice as big as the mean value for the new journals of 35.887 articles, and the difference of 31.724 is statistically significant. This difference in mean

values is one possible explanation for the difference in the mean impact factors between the new and comparison journals, if publishing more articles in a year is interpreted as diluting a journal's average quality.

In Panel B of Table 7, we show analogous statistics for the mean of the average editors' research characteristics across the journals. The mean difference in the affiliations is significantly negative at the 10% level. Since better departments have lower values of the this variable, the editors at the new journals are, on average, affiliated with better departments. Further, editors at the new journals have significantly better publication records. Finally, the difference in average editors' seniority is a statistically insignificant 2.073 years.

Panel C of Table 7 focuses on the mean values of the editors' experience variables. In terms of statistically significant differences, initial editors at the new journals had considerably more experience in secondary roles at top-5 journals (i.e. as associate editors and/or editorial board members) and considerably less experience in key roles at other new and comparison journals (i.e. as managing editor or co-editor).

5.2 The Effect of Controlling for Observable Variables on the New Journal Impact Factors

Table 8 contains our regression results when we use the forward impact factor as the dependent variable (again, we multiply the dependent variable by 100 for ease of reading); we always cluster the standard errors at the journal level. In columns (1) and (2) we present the new journal and new association journal coefficients when we only control for year effects. The results suggest that the new society journals, taken together, have impact factors (after being multiplied by 100) that are 23.750 higher than the comparison journals (on a mean of 21.402 across all journals). In column (2), we show the results of decomposing the new journal dummy variable into separate dummy variables for: (i) the four *AEA* journals (*AEJ*); (ii) the two *ES* journals (*ESJ*); and (iii) the *JEEA*. All of these dummy variables have significant (positive) coefficients, with the estimated *AEA* and ES effects being fairly similar and both are larger than the estimated *JEEA* effect. In fact, a robust F-test for the equality of the effects across associations produces a p-value of 0.074 and hence we can reject the hypothesis

that the effects are the same across association journals only at the 10% level.

In columns (3) and (4) we add the number of articles per year in our regression to the specifications in columns (1) and (2) respectively. The results for the new journal dummy and the association dummies are very similar to those in columns (1) and (2). We find that a journal which publishes more articles in a year will be associated with a lower impact factor, other things equal. However, this effect is relatively small, in that publishing 10 more articles a year is estimated to lower a journal's impact factor (after multiplying it by 100) by just 0.58 from column (3) and 0.54 from column (4).

Columns (5) and (6) contain the results when we enter the average editor quality variables (seniority, publication performance, and affiliation rank) but not the editors' average experience variables to the specifications in columns (3) and (4). The mean editor affiliation has a significantly negative coefficient (at the 5% level) in both columns; since higher ranked departments have lower affiliation variables, the coefficient has the expected sign in both columns. To interpret this coefficient, we note that moving the average editor from a 15th ranked to a 5th ranked school increases the journals impact factor (after multiplying it by 100) by 1.60 from column (5) and 1.51 from column (6). The other editors' quality characteristics, seniority and publications, are neither individually nor jointly significant in columns (5) and (6). Thus, while the editor affiliation is strongly (partially) correlated with impact factors in the expected direction, its inclusion has little effect on the new journal coefficient and the association variables coefficients in (5) and (6).

Next, we investigate whether controlling for differences in editing experience can help explain the difference in the impact factors between the new journals and the comparison journals. For the specifications in (7) and (8) we do not include the average editor quality variables but instead add the following variables to columns (3) and (4) the: (a) mean of the years that each editor held a key role at one or more top-5 journals; (b) mean of the years that each editor held a secondary role at one or more top-5 journals; (c) mean of the years that each editor held a secondary role at any new or comparison journals; and (d) mean of the years that each editor held a secondary role at any new or comparison journals. The coefficients on the editing variables are neither individually nor jointly significant. The new journal and association estimated coefficients jump by quite a bit, but it is not obvious how

to interpret this change given the weak evidence on the significance of the editing variables. Certainly it is not straightforward to test if the new and association coefficients have changed significantly in moving from (3) and (4) to (7) and (8).

In (9) and (10) we add also add the editing experience variables to (7) and (8), i.e., we are now including both the average editing quality and editing characteristics. The major change with columns (7) and (8) is that the editing experience variables are now jointly significant (at approximately the 1% level) in both columns. Further, the top-5 editing experience variables, although not individually statistically significant, unexpectingly have quite large negative coefficients. We found these results puzzling and went back to the data. We found that *AEJ-Micro* had much higher average editing experience at top-5 journals than any of the other new journals, and had the lowest impact factor among the new journals. We therefore dropped *AEJ-Micro* and its comparison journals, placing the results in columns (11) and (12). The four editing experience variables are no longer jointly significant at any reasonable confidence level, so we do not pursue this issue further. However, the new journal and association journal coefficients are still quite significant when we add these average editor characteristics.

As a robustness check, we replicated all of Table 8 for the case where we use the backward impact factors as the dependent variables, and have placed the results in Table C.3 in the Online Appendix. We adjusted the backward impact factors so that the coefficients in Table C.3 are comparable to those in Table 8. Again we find our results are very robust to this change.

We also consider a number of further robustness checks as follows. In columns (1) and (2) of Table 9, we use editing characteristics measured over the 5-year period before the respective new journal started (as opposed to the 10-year period) for the case where all explanatory variables are included.[29] The qualitative results here are quite similar to those in our main Table 8 columns (9) and (10). Up to this point we have used data for the comparison journals six years before the respective new journals started. In columns (3) and (4) of Table 9, we repeat the analysis in columns (9) and (10) of Table 8 when we start

[29]Table C.1 in the Online Appendix repeats Table 7 for the editor characteristics over this new five year period.

the data on the comparison journals three years prior to the respective association journal starting, while in columns (5) and (6) of Table 9 we show the results for the case where the data on the comparison journals starts when the respective new journal starts. Again the results in columns (3)-(6) of Table 9 are quite close to those in columns (9) and (10) in Table 8.

Finally, one advantage that the new association journals have is that membership in *AEA*, *ES*, and *EEA* is a prerequisite of attending the respective association meetings. As discussed earlier, to investigate this issue, we define a dummy variable coded one for all journals with such a requirement, and zero otherwise. We have placed the results in columns (7) and (8) of Table 9, and from these results we see that the coefficients on this new variable are nowhere close to being statistically significant.

Similarly, we replicate Table 9 by using the backward impact factor as the dependent variable and summarize the results in Table C.4 in the Online Appendix. Again, the results are very consistent with those when we use the forward impact factors in Table 9.

We then investigate whether these estimated correlations will fall when we control for (i) the number of articles published per year, (ii) the editors' mean research characteristics, (iii) the editors' mean previous editing experience and (iv) whether an association puts on an important conference. However, none of these conditioning variables, either jointly or individually, reduces these estimated effects. Hence we cannot use these conditioning variables to 'explain' the relationship between being a new society journals and impact factors. Our results are quite robust to (i) replacing the forward impact factor with the backward impact factor as the dependent variable; (ii) moving from a 10-year window to a 5-year window for measuring the editors' variables; and (iii) adjusting when we start measuring the comparison journals.

Next we consider a possible explanation of the new journal estimated effect which we cannot explore by simply adding conditioning variables to our regression equation.

5.3 Do Parent Journals 'Over-Cite' their New Association Journals

Here we focus on the issue of 'over-citations' from the parent journals to the new journals. To investigate this issue, we first ask if there is any evidence of excess citations from the parent journal. Next, if we do indeed find evidence of this phenomenon, we ask whether it is having an important effect on our estimated new journal impacts.

To investigate whether the parent journals over-cite, for our new journals (except *JEEA*)[30] and comparison journals, we look at the *difference* in the impact factors from *AER* (*ECMA*) and the average impact factors from *JPE*, *QJE* and *RESTUD*; in what follows we refer to this measure as *differences in impact factors*. If a new journal has significantly higher values of this variable than its comparisons, we say it is being overcited by the parent journal.

In row (1) of Table 10 we first present the mean values of the differences in impact factors. From column (1), we see that the average of this variable across all journals is 6.569 (again after being multiplied by 100), which is highly statistically significant.[31] This makes sense if the *AEA* (*ES*) journals and their comparisons are closer in subject matter to the *AER* (*ECMA*) than to the *JPE*, *QJE* and *Restud*. Columns (2) and (3) show that the mean values are 14.608 and 4.455 for the new journals and the comparison journals respectively. Column (4) shows a mean difference of 10.153 between the new journals and the comparison journals, which also is highly statistically significant. We would note that these means are certainly consistent with overciting by parent journals. [32]

In Table 11, we present our regression results where the dependent variable is the difference in impact factors; since we are looking at the difference in citations, we do not control for any of the x_j variables described earlier. The results in column (1) are for case where we aggregate them together, while column (2) shows the case where we have broken up the new journals by association. The results in column (1) suggest that on average, the new journals receive 10.000 additional citations from their respective parent journal, while the column (2)

[30] We cannot include *JEEA* since it does not have a parent journal.

[31] As in Table 7, the impact factors have been multiplied by 100 for ease of reading.

[32] In Table C.5 in the Online Appendix Section C.3, we repeat the analysis for the alternative difference measures that make use of the four non-parent top-5 journals for each journal. We obtain very similar results to those in Table 10.

results suggest that the *AEA* over-citation effect is larger than the one for *ECMA*. However, the null hypothesis that difference in the association effects is zero cannot be rejected in column (2).[33] Thus, we conclude that the *AEA* journals appear to have an advantage in receiving citations from *AER*, and the *ES* journals appear to have an advantage in receiving citations from *ECMA*.

Next, we want to investigate how over-citing by parent journals affected the results in Tables 8 and 9. To address this issue, we calculate, for every journal, their impact factor based on citations from *JPE*, *QJE* and *RESTUD*, and then use these as our dependent variables.[34] The new means are given in Table 12; note that here we can include *JEEA* since this analysis does not depend on having a parent journal. Compared to the means in Table 7, we see that the difference in impact factors between the new and comparison journals (after being multiplied by 100) has fallen from 24.483 to 20.934, a fall of 15%. We then reran the preferred regressions in columns (9) and (10) of Table 8 for the case where this new variable of interest is the dependent variable. The results are given in columns (1) and (2) in Table 13, and are somewhat different from those in columns (9) and (10) of Table 8, but the differences across the association journals are not all in the same direction.[35]

As a robustness check, we also conducted the above analysis using backward impact factors and the results were essentially unchanged. See Tables C.9-C.12 in the Online Appendix for the relevant details.[36]

Thus, we conclude that the while the *AEA* journals appear to have an advantage in receiving citations from *AER* relative to their respective comparison journals , and the *ES* journals appear to have an advantage in receiving citations from *ECMA* relative to their respective comparison journals. However, correcting for this potential advantage does not substantially affect our regression results.

[33] In Table C.7 in the Online Appendix, we show the regression results when we use the alternative difference measures. The results are very similar to those in Table 11.

[34] We adjusted these impact factors for the fact that the impact factors here are based on three journals.

[35] We repeat this analysis using the alternative construction of the dependent variable based on the four non-parent top-5 journals as described earlier; the results on their means and regressions are very similar to those in Table 12 and 13. We have placed these results in Tables C.6 and C.8 in the Online Appendix.

[36] We also conducted robustness checks based on the differences in backward impact factors and adjusted backward impact factors that are developed using the *alternative* approach based on the four non-parent Top-5 journals. The results are again very similar. See Tables C.13-C.16 in the Online Appendix.

5.4 Factors we could not properly control for

There are several factors that proved difficult to properly control for. One factor is whether a journal has an open access policy. This may improve a journal's impact factor if it makes it easier for readers to access the journal, especially researchers in institutions with limited journal subscriptions. Unfortunately, for our purposes being open access is perfectly collinear with being an *ES* journal, given that *QE* and *TE* are the only two open access journals in our set of new and comparison journals. Thus we cannot identify an open access effect separately from the *ES* effect.

A second factor we cannot effectively control for is whether the journal allows the transfer of referee reports from other journals. The impact factors for the new *AEA* and *ES* journals could be affected by the fact that the *AEJ* journals allow authors to transfer referee reports from the *AER*, and that the *ES* journals allow authors to transfer referee reports from *ECMA*. Thus, these new journals have an advantage in attracting articles that were rejected from the *AER* or *ECMA*, but which may be close to the standard of those journals. A few of our comparison journals also had a transfer policy. Starting in 2015, the *JOLE* allowed authors to transfer referee reports from any top-5 journal. Starting somewhere between 2010 and 2012, the Economic Journal started allowing the transfer of referee reports from any other journal. Finally, the *JHR* started a similar approach to the *EJ* sometime after 2015.[37] Given the uncertainty of the exact dates of implementation for the *EJ* and the *JHR*, and that the reports transferred at these journals were not restricted to come from top 5 journals, we are left with only the data from the *JOLE* that we can combine with the new journals. We did not think it appropriate to try to evaluate how allowing for report transfers affects the new journal and association coefficients when only one comparison journal had such a policy.

The effect of bundled pricing is a third factor we considered. Bundled pricing arises because institutions (such as university libraries) get discounted prices for buying a group of journals together from the same publisher. As Bergstrom et al. (2014) document, the practice is widespread across all the major for-profit publishers (e.g. Elsevier, Springer

[37] We ascertained these journals' policies by writing to the journals as we could not find any official policy announcement of their respective changes.

and Wiley), but involves privately negotiated discounts. To the extent new journals are more likely to be purchased by libraries because they are bundled together with established journals, their readership and impacts are likely to be enhanced. As it happens, the *AEA* offers bundled pricing, as does *Oxford University Press* (which publishes the *JEEA*). *ES* publishes *QE* and *TE* via an arrangement with *Wiley*, but since *QE* and *TE* are open access (free) journals anyway, bundled pricing is not a relevant factor for *QE* and *TE*. One could try to proxy for bundled pricing by introducing a publisher dummy, but the problem with this is the only overlap between publishers of new journals and comparison journals is *Oxford University Press* which publishes both *JEEA* and the *EJ*.

A final, and arguably the most important, missing factor that we cannot control for is the association effect that arises when large and prestigious associations publish new journals. Not only can the associations promote these new journals to their large pool of existing members, more importantly, they can leverage the reputation of the association to help make sure the journal is a success. This reflects the inherent multiplicity of equilibria in journal quality. If everyone believes a journal X is the journal that will be the most cited journal in a particular field, and so submits their best papers there to benefit from the prestige their papers will enjoy from being published in journal X, it will be much easier for journal X to indeed become the most cited journal in that field. The scholars' beliefs become self-fulfilling. Of course, if some little known publisher launches the new journal X and makes statements that it will be the number one journal in its field, this is unlikely to work on its own. We suspect that the most prestigious scholarly associations in economics (the *AEA*, the *EEA* and the *ES*) do indeed have the required reputation to get scholars to coordinate on the desired equilibrium.[38]

6 Conclusions

Journal rankings play an important part in various decisions made by scholars, universities and funding agencies. As a result, in economics, there has been a substantial literature providing such rankings based on quality-adjusted impact factors. However, there is an ob-

[38]Note that we attempted to control for this effect partially by controlling for editor characteristics.

vious gap in currently available rankings, reflecting the introduction of several high quality society journals in the last couple of decades and which have not yet been properly incorporated in journal rankings.

In this paper, we provide updated journal rankings to include these new society journals. The rankings we provide are based on impact factors calculated using a standard iterative approach (one which is invariant to reference intensity). One novel feature of our approach is that we also applied an iterative approach to the selection of the set of economics journals included. We find the new society journals perform consistently well, lying just outside the top-5, and ranked ahead of obvious comparison journals. And we show the robustness of these findings to different approaches to the selection of journals, to the adjustment for reference intensity, and to an alternative approach we introduce, which is to only include the citations coming from the traditional top-5 economics journals.

After establishing the remarkable performance of the new society journals, we investigated how their performance was affected by controlling for observable journal characteristics. We find that while the performance measures are often correlated with observable journal characteristics, controlling for them jointly has little effect on the performance measures. We also found that the new journals benefit from 'extra' citations from their parent journals, but controlling for this variable does not affect the relative performance of new journals vs natural comparison journals.

In terms of future work, an important line of research would be to determine whether one can estimate casual relationships between the performance measures and the observable variables; in this paper we use these factors as control variables and only aim to estimate correlations between the observable variables and the forward impact factors.

Secondly, one could apply our approach outside of Economics. Publishers of *Science*, *Nature* and the *Journal of the American Medical Association* have introduced specialized journals. One could do a similar study to ours on how such journals compared to others in their respective fields. An interesting difference with Economics here is that the new journals associated with *Nature* are put out by a for-profit publisher, while professional associations are behind the other two sets of new journals. Similarly, using journals from a wider range of disciplines, it would be interesting to try to determine the extent to which a new journal

can leverage the reputation of its parent journal as opposed to the reputation of its publisher (society or otherwise).

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Table 1: **Economics Journal Rankings Based on Invariant Method**

Journal	2015	2016	2017	2018	2019	Ranking based on geometric means
QUARTERLY JOURNAL OF ECONOMICS	1	1	1	1	1	1
AMERICAN ECONOMIC REVIEW	2	2	2	2	2	2
ECONOMETRICA	3	5	3	3	5	3
REVIEW OF ECONOMIC STUDIES	4	3	4	4	4	4
JOURNAL OF POLITICAL ECONOMY	5	4	5	5	3	5
AMERICAN ECONOMIC JOURNAL-MACROECONOMICS	8	6	6	6	7	6
AMERICAN ECONOMIC JOURNAL-APPLIED ECONOMICS	6	7	7	8	6	7
JOURNAL OF THE EUROPEAN ECONOMIC ASSOCIATION	7	9	10	10	11	8
AMERICAN ECONOMIC JOURNAL-ECONOMIC POLICY	11	8	9	11	8	9
JOURNAL OF LABOR ECONOMICS	12	13	11	7	10	10
THEORETICAL ECONOMICS	9	11	8	14	13	11
REVIEW OF ECONOMICS AND STATISTICS	14	12	12	12	12	12
JOURNAL OF MONETARY ECONOMICS	16	10	15	13	15	13
AMERICAN ECONOMIC JOURNAL-MICROECONOMICS	15	14	13	16	14	14
JOURNAL OF HUMAN RESOURCES	28	21	16	9	9	15
QUANTITATIVE ECONOMICS	10	15	18	15	21	16
JOURNAL OF ECONOMIC GROWTH	17	17	14	18	16	17
ECONOMIC JOURNAL	23	18	20	19	17	18
RAND JOURNAL OF ECONOMICS	20	16	17	21	24	19
REVIEW OF ECONOMIC DYNAMICS	18	22	22	17	19	20
JOURNAL OF BUSINESS & ECONOMIC STATISTICS	13	25	19	26	18	21
JOURNAL OF INTERNATIONAL ECONOMICS	19	19	27	25	22	22
INTERNATIONAL ECONOMIC REVIEW	27	20	23	20	23	23
JOURNAL OF ECONOMIC THEORY	22	24	21	22	25	24
JOURNAL OF PUBLIC ECONOMICS	35	26	26	23	20	25
JOURNAL OF ECONOMETRICS	25	27	25	27	30	26
EXPERIMENTAL ECONOMICS	29	32	32	24	26	27
ECONOMETRIC THEORY	21	29	28	28	41	28
JOURNAL OF DEVELOPMENT ECONOMICS	34	23	30	31	27	29
JOURNAL OF APPLIED ECONOMETRICS	33	30	24	29	34	30
IMF ECONOMIC REVIEW	26	33	31	47	28	31
JOURNAL OF THE ASSOCIATION OF ENVIRONMENTAL AND RESOURCE ECONOMISTS	N.A.	N.A.	N.A.	N.A.	33	32
GAMES AND ECONOMIC BEHAVIOR	32	28	33	36	39	33
EUROPEAN ECONOMIC REVIEW	37	36	38	33	32	34
ECONOMETRICS JOURNAL	24	50	29	44	38	35

Table 1: **Economics Journal Rankings Based on Invariant Method (Continued)**

Journal	2015	2016	2017	2018	2019	Ranking based on geometric means
ECONOMIC THEORY	30	34	34	40	44	36
JOURNAL OF MONEY CREDIT AND BANKING	40	38	39	38	40	37
JOURNAL OF INDUSTRIAL ECONOMICS	38	31	48	41	42	38
JOURNAL OF URBAN ECONOMICS	44	41	40	32	45	39
JOURNAL OF LAW & ECONOMICS	39	37	35	35	63	40
JOURNAL OF RISK AND UNCERTAINTY	36	39	50	30	53	41
JOURNAL OF HEALTH ECONOMICS	50	35	43	42	36	42
ECONOMIC DEVELOPMENT AND CULTURAL CHANGE	41	53	44	43	29	43
SCANDINAVIAN JOURNAL OF ECONOMICS	45	45	36	34	54	44
ECONOMICA	67	49	37	37	35	45
JOURNAL OF FINANCIAL ECONOMETRICS	42	46	42	56	N.B.	46
JOURNAL OF POLICY ANALYSIS AND MANAGEMENT	52	54	46	55	31	47
JOURNAL OF ECONOMIC HISTORY	46	57	64	39	37	48
JOURNAL OF ENVIRONMENTAL ECONOMICS AND MANAGEMENT	49	40	47	N.B.	56	49
ECONOMETRIC REVIEWS	31	44	45	65	70	50
WORLD BANK ECONOMIC REVIEW	58	43	61	48	48	51
INTERNATIONAL JOURNAL OF INDUSTRIAL ORGANIZATION	43	42	56	58	64	52
JOURNAL OF ECONOMIC BEHAVIOR & ORGANIZATION	53	51	57	50	51	53
JOURNAL OF LAW ECONOMICS & ORGANIZATION	69	55	41	49	61	54
LABOUR ECONOMICS	66	61	52	46	50	55
JOURNAL OF POPULATION ECONOMICS	68	48	60	53	52	56
QME-QUANTITATIVE MARKETING AND ECONOMICS	N.B.	59	54	51	60	57
ECONOMIC INQUIRY	51	52	59	63	58	58
JOURNAL OF ECONOMIC DYNAMICS & CONTROL	65	60	49	52	59	59
EDUCATION FINANCE AND POLICY	N.A.	N.A.	73	57	46	60
CANADIAN JOURNAL OF ECONOMICS-REVUE CANADIENNE D ECONOMIQUE	72	56	68	54	43	61
EXPLORATIONS IN ECONOMIC HISTORY	60	64	71	61	49	62
OXFORD BULLETIN OF ECONOMICS AND STATISTICS	63	63	53	64	68	63
JOURNAL OF ECONOMICS & MANAGEMENT STRATEGY	59	58	58	70	67	64
JOURNAL OF ECONOMIC SURVEYS	70	62	51	71	62	65
JOURNAL OF MATHEMATICAL ECONOMICS	57	66	65	59	69	66
AMERICAN LAW AND ECONOMICS REVIEW	55	68	55	73	73	67
INTERNATIONAL JOURNAL OF GAME THEORY	48	70	66	62	82	68
ECONOMICS OF EDUCATION REVIEW	82	69	69	67	47	69
NATIONAL TAX JOURNAL	N.A.	47	86	78	N.A.	70

Table 1: **Economics Journal Rankings Based on Invariant Method (Continued)**

Journal	2015	2016	2017	2018	2019	Ranking based on geometric means
SOCIAL CHOICE AND WELFARE	62	74	63	76	72	71
REGIONAL SCIENCE AND URBAN ECONOMICS	64	73	67	69	77	72
THEORY AND DECISION	56	86	78	66	71	73
JOURNAL OF HUMAN CAPITAL	94	84	95	45	55	74
MACROECONOMIC DYNAMICS	61	72	70	81	79	75
REVIEW OF ECONOMIC DESIGN	54	71	102	85	65	76
GENEVA RISK AND INSURANCE REVIEW	N.B.	N.B.	N.B.	74	N.B.	77
JOURNAL OF DEMOGRAPHIC ECONOMICS	N.B.	N.B.	N.B.	60	99	78
INTERNATIONAL TAX AND PUBLIC FINANCE	71	65	83	94	76	79
OXFORD ECONOMIC PAPERS-NEW SERIES	76	80	77	72	90	80
JOURNAL OF ECONOMIC INEQUALITY	88	85	62	90	75	81
REVIEW OF INCOME AND WEALTH	85	75	75	82	88	82
AMERICAN JOURNAL OF HEALTH ECONOMICS	N.A.	156	72	68	57	83
JOURNAL OF ECONOMIC PSYCHOLOGY	84	89	79	79	81	84
ECONOMIC HISTORY REVIEW	89	77	87	77	85	85
JOURNAL OF REGIONAL SCIENCE	80	67	94	96	N.B.	86
ECONOMICS LETTERS	81	87	76	87	92	87
HEALTH ECONOMICS	91	83	88	84	78	88
JOURNAL OF PUBLIC ECONOMIC THEORY	74	96	81	86	91	89
EUROPEAN REVIEW OF ECONOMIC HISTORY	93	82	89	103	66	90
MATHEMATICAL SOCIAL SCIENCES	78	112	74	91	89	91
PUBLIC CHOICE	77	88	93	98	N.B.	92
ECONOMICS AND PHILOSOPHY	73	108	N.B.	N.B.	N.B.	93
JOURNAL OF COMPARATIVE ECONOMICS	87	105	85	93	83	94
SOUTHERN ECONOMIC JOURNAL	90	100	104	83	80	95
REVIEW OF WORLD ECONOMICS	79	78	90	108	109	96
B E JOURNAL OF ECONOMIC ANALYSIS & POLICY	83	76	105	97	102	97
REVIEW OF NETWORK ECONOMICS	N.B.	79	108	N.B.	N.B.	98
ECONOMICS & POLITICS	86	98	107	95	86	99
FISCAL STUDIES	95	93	106	109	74	100

Notes: To construct the last column, we compute the geometric mean using all available years 2015-2019 for each journal. The order of the journals is based on the geometric means in the last column. If a journal is not captured in the *JCR* data or not selected into the set of baseline journals for a given year, this is denoted by N.A. and N.B., respectively.

Table 2: **Economics Journal Rankings Based on Citations from Top-5 Journals**

Journal	2015	2016	2017	2018	2019	Ranking based on geometric means
QUARTERLY JOURNAL OF ECONOMICS	1	1	1	1	1	1
JOURNAL OF POLITICAL ECONOMY	2	2	5	2	2	2
ECONOMETRICA	4	4	2	4	5	3
AMERICAN ECONOMIC REVIEW	6	5	3	3	3	4
REVIEW OF ECONOMIC STUDIES	5	3	4	5	4	5
AMERICAN ECONOMIC JOURNAL-APPLIED ECONOMICS	3	7	8	14	6	6
AMERICAN ECONOMIC JOURNAL-MACROECONOMICS	10	6	6	6	7	7
THEORETICAL ECONOMICS	8	9	7	11	8	8
JOURNAL OF THE EUROPEAN ECONOMIC ASSOCIATION	7	11	13	7	11	9
AMERICAN ECONOMIC JOURNAL-ECONOMIC POLICY	9	8	14	9	10	10
JOURNAL OF LABOR ECONOMICS	17	17	9	8	9	11
AMERICAN ECONOMIC JOURNAL-MICROECONOMICS	13	10	10	15	13	12
QUANTITATIVE ECONOMICS	11	13	15	10	16	13
JOURNAL OF MONETARY ECONOMICS	19	12	11	13	15	14
REVIEW OF ECONOMICS AND STATISTICS	16	15	16	12	12	15
RAND JOURNAL OF ECONOMICS	12	14	12	16	25	16
REVIEW OF ECONOMIC DYNAMICS	18	19	17	18	19	17
JOURNAL OF ECONOMIC GROWTH	15	19	22	19	17	18
JOURNAL OF INTERNATIONAL ECONOMICS	20	16	20	23	21	19
JOURNAL OF ECONOMIC THEORY	21	23	19	20	20	20
ECONOMIC JOURNAL	26	25	18	22	18	21
JOURNAL OF HUMAN RESOURCES	36	21	26	17	14	22
INTERNATIONAL ECONOMIC REVIEW	23	22	21	21	22	23
JOURNAL OF PUBLIC ECONOMICS	32	24	24	24	26	24
JOURNAL OF DEVELOPMENT ECONOMICS	31	18	28	34	28	25
IMF ECONOMIC REVIEW	14	45	23	37	43	26
JOURNAL OF ECONOMETRICS	35	29	27	27	32	27
GAMES AND ECONOMIC BEHAVIOR	34	27	31	36	31	28
JOURNAL OF LAW & ECONOMICS	28	31	25	31	50	29
JOURNAL OF BUSINESS & ECONOMIC STATISTICS	22	40	30	56	23	30
AMERICAN LAW AND ECONOMICS REVIEW	28	33	36	N.C.	N.C.	31
JOURNAL OF ECONOMIC HISTORY	30	42	N.C.	30	29	32
QME-QUANTITATIVE MARKETING AND ECONOMICS	N.B.	N.C.	32	47	27	33
JOURNAL OF INDUSTRIAL ECONOMICS	37	28	40	38	35	34
JOURNAL OF RISK AND UNCERTAINTY	24	43	N.C.	25	63	35
ECONOMIC DEVELOPMENT AND CULTURAL CHANGE	33	34	47	49	24	36
ECONOMETRIC THEORY	40	41	39	32	38	37
ECONOMICA	69	50	33	26	30	38
AMERICAN JOURNAL OF HEALTH ECONOMICS	N.A.	N.C.	N.C.	39	N.C.	39
EUROPEAN ECONOMIC REVIEW	N.A.	39	44	43	34	40

Table 2: **Economics Journal Rankings Based on Citations from Top-5 Journals (Continued)**

Journal	2015	2016	2017	2018	2019	Ranking based on geometric means
JOURNAL OF POLICY ANALYSIS AND MANAGEMENT	N.A.	37	37	N.C.	41	41
EXPERIMENTAL ECONOMICS	N.A.	48	66	28	42	42
ECONOMIC THEORY	25	36	59	53	40	43
WORLD BANK ECONOMIC REVIEW	N.C.	30	65	35	44	44
B E JOURNAL OF THEORETICAL ECONOMICS	42	N.C.	N.C.	N.C.	N.C.	45
NATIONAL TAX JOURNAL	N.A.	26	N.C.	70	N.A.	46
ECONOMETRICS JOURNAL	60	N.C.	41	41	33	47
JOURNAL OF URBAN ECONOMICS	61	45	42	29	44	48
JOURNAL OF ECONOMIC INEQUALITY	N.C.	51	38	N.C.	N.C.	49
JOURNAL OF MONEY CREDIT AND BANKING	51	44	35	55	39	50
EXPLORATIONS IN ECONOMIC HISTORY	39	52	N.C.	52	37	51
JOURNAL OF APPLIED ECONOMETRICS	41	54	29	46	59	52
JOURNAL OF LAW ECONOMICS & ORGANIZATION	43	32	45	50	66	53
JOURNAL OF HEALTH ECONOMICS	62	38	43	44	51	54
JOURNAL OF REGIONAL SCIENCE	N.C.	47	N.C.	N.C.	N.B.	55
INTERNATIONAL JOURNAL OF INDUSTRIAL ORGANIZATION	44	49	49	42	54	56
CANADIAN JOURNAL OF ECONOMICS-REVUE CANADIENNE D ECONOMIQUE	N.C.	77	62	33	36	57
LABOUR ECONOMICS	N.C.	55	48	40	55	58
EDUCATION FINANCE AND POLICY	N.A.	N.A.	53	N.C.	47	59
JOURNAL OF ECONOMIC EDUCATION	N.C.	N.C.	50	N.C.	N.C.	60
OXFORD REVIEW OF ECONOMIC POLICY	N.C.	N.C.	N.C.	45	58	61
JOURNAL OF THE ASSOCIATION OF ENVIRONMENTAL AND RESOURCE ECONOMISTS	N.A.	N.A.	N.A.	N.A.	52	62
REVIEW OF ECONOMIC DESIGN	N.C.	56	N.C.	N.C.	49	63
JOURNAL OF ENVIRONMENTAL ECONOMICS AND MANAGEMENT	50	35	72	N.B.	60	64
SCANDINAVIAN JOURNAL OF ECONOMICS	63	62	34	54	64	65
ECONOMICS AND PHILOSOPHY	54	N.C.	N.B.	N.B.	N.B.	66
JOURNAL OF ECONOMIC BEHAVIOR & ORGANIZATION	46	57	64	61	48	67
SERIES-JOURNAL OF THE SPANISH ECONOMIC ASSOCIATION	N.C.	N.C.	N.C.	N.C.	55	68
INFORMATION ECONOMICS AND POLICY	N.C.	N.C.	60	51	N.C.	69
JOURNAL OF FINANCIAL ECONOMETRICS	N.C.	N.C.	57	N.C.	N.B.	70
ECONOMICS & POLITICS	57	N.C.	N.C.	N.C.	57	70
JOURNAL OF MATHEMATICAL ECONOMICS	49	67	55	58	62	72
ECONOMIC INQUIRY	48	58	56	81	53	73
JOURNAL OF HUMAN CAPITAL	N.C.	N.C.	N.C.	59	N.C.	74
THEORY AND DECISION	52	80	N.C.	69	46	75
JOURNAL OF ECONOMIC DYNAMICS & CONTROL	73	70	46	48	71	76
REVIEW OF INDUSTRIAL ORGANIZATION	56	60	67	N.C.	N.C.	77
COMPUTATIONAL ECONOMICS	N.C.	N.C.	61	N.C.	N.C.	78
ECONOMIC HISTORY REVIEW	N.C.	63	54	57	78	79
REVIEW OF WORLD ECONOMICS	N.C.	N.C.	63	N.C.	N.C.	80

Table 2: **Economics Journal Rankings Based on Citations from Top-5 Journals (Continued)**

Journal	2015	2016	2017	2018	2019	Ranking based on geometric means
INTERNATIONAL JOURNAL OF GAME THEORY	53	64	70	66	72	81
ECONOMICS OF EDUCATION REVIEW	80	53	52	84	61	82
GERMAN ECONOMIC REVIEW	N.C.	65	N.C.	N.C.	N.C.	83
INTERNATIONAL TAX AND PUBLIC FINANCE	58	N.C.	N.C.	74	N.C.	84
MACROECONOMIC DYNAMICS	47	59	75	67	89	85
ECONOMETRIC REVIEWS	65	N.C.	58	76	N.C.	86
JOURNAL OF ECONOMICS & MANAGEMENT STRATEGY	70	72	51	63	77	87
SOUTHERN ECONOMIC JOURNAL	N.C.	N.C.	N.C.	60	73	88
JOURNAL OF PUBLIC ECONOMIC THEORY	58	N.C.	N.C.	65	79	89
FISCAL STUDIES	64	N.C.	N.C.	N.C.	70	90
JOURNAL OF COMPARATIVE ECONOMICS	55	N.C.	N.C.	82	N.C.	91
JOURNAL OF AFRICAN ECONOMIES	66	69	N.B.	N.C.	N.C.	92
B E JOURNAL OF MACROECONOMICS	67	68	N.C.	N.C.	N.C.	93
CESIFO ECONOMIC STUDIES	N.C.	N.C.	N.C.	68	N.C.	94
REVIEW OF ECONOMICS OF THE HOUSEHOLD	N.C.	N.C.	N.C.	72	65	95
REVIEW OF INCOME AND WEALTH	N.C.	61	N.C.	78	69	96
JOURNAL OF POPULATION ECONOMICS	74	76	68	64	N.C.	97
REGIONAL SCIENCE AND URBAN ECONOMICS	78	N.C.	N.C.	61	75	98
OXFORD BULLETIN OF ECONOMICS AND STATISTICS	N.C.	73	N.C.	75	68	99
HEALTH ECONOMICS	75	71	73	73	N.C.	100
PUBLIC CHOICE	68	82	N.C.	N.C.	N.B.	101
SOCIAL CHOICE AND WELFARE	71	74	78	85	67	102
MATHEMATICAL SOCIAL SCIENCES	76	N.C.	N.C.	N.C.	74	103
ECONOMICS LETTERS	77	79	74	71	76	104
B E JOURNAL OF ECONOMIC ANALYSIS & POLICY	N.C.	66	N.C.	80	83	105
JOURNAL OF MACROECONOMICS	N.C.	N.C.	76	N.C.	N.C.	106
WORLD ECONOMY	N.C.	N.C.	69	N.C.	85	107
OXFORD ECONOMIC PAPERS-NEW SERIES	72	75	N.C.	79	81	108
REVIEW OF INTERNATIONAL ECONOMICS	N.C.	78	71	N.C.	82	109
JOURNAL OF ECONOMIC SURVEYS	N.C.	N.C.	N.C.	76	80	110
ENVIRONMENTAL & RESOURCE ECONOMICS	79	N.C.	N.C.	N.B.	84	111
AMERICAN JOURNAL OF AGRICULTURAL ECONOMICS	N.C.	N.C.	77	N.B.	88	112
APPLIED ECONOMICS	81	N.C.	N.C.	86	N.C.	113
JOURNAL OF ECONOMIC PSYCHOLOGY	N.C.	81	N.C.	83	87	114
EUROPEAN JOURNAL OF POLITICAL ECONOMY	N.C.	N.C.	N.C.	N.C.	86	115

Note: See notes to Table 1. If a journal is not cited by any Top-5 journal, this is denoted by N.C..

Table 3: **Journal Rankings Using Geometric Means Compared Across Alternative Methods**

Journal	Invariant Method	Removal of Reference Intensity	Inclusion of Non-standard Journals	Full Set of JCR Journals	Top-5 Method
QUARTERLY JOURNAL OF ECONOMICS	1	1	1	1	1
AMERICAN ECONOMIC REVIEW	2	2	2	2	4
ECONOMETRICA	3	5	3	3	3
REVIEW OF ECONOMIC STUDIES	4	4	4	5	5
JOURNAL OF POLITICAL ECONOMY	5	3	5	4	2
AMERICAN ECONOMIC JOURNAL-MACROECONOMICS	6	6	7	6	7
AMERICAN ECONOMIC JOURNAL-APPLIED ECONOMICS	7	7	6	7	6
JOURNAL OF THE EUROPEAN ECONOMIC ASSOCIATION	8	8	9	9	9
AMERICAN ECONOMIC JOURNAL-ECONOMIC POLICY	9	9	8	8	10
JOURNAL OF LABOR ECONOMICS	10	10	10	10	11
THEORETICAL ECONOMICS	11	12	11	12	8
REVIEW OF ECONOMICS AND STATISTICS	12	13	12	11	15
JOURNAL OF MONETARY ECONOMICS	13	11	13	13	14
AMERICAN ECONOMIC JOURNAL-MICROECONOMICS	14	14	14	15	12
JOURNAL OF HUMAN RESOURCES	15	15	15	14	22
QUANTITATIVE ECONOMICS	16	16	16	16	13
JOURNAL OF ECONOMIC GROWTH	17	17	17	17	18
ECONOMIC JOURNAL	18	19	18	19	21
RAND JOURNAL OF ECONOMICS	19	20	19	18	16
REVIEW OF ECONOMIC DYNAMICS	20	18	20	21	17
JOURNAL OF BUSINESS & ECONOMIC STATISTICS	21	25	21	20	30
JOURNAL OF INTERNATIONAL ECONOMICS	22	21	22	22	19
INTERNATIONAL ECONOMIC REVIEW	23	22	23	23	23
JOURNAL OF ECONOMIC THEORY	24	23	24	24	20
JOURNAL OF PUBLIC ECONOMICS	25	24	25	25	24
JOURNAL OF ECONOMETRICS	26	29	26	26	27
EXPERIMENTAL ECONOMICS	27	28	28	29	42
ECONOMETRIC THEORY	28	39	29	32	37
JOURNAL OF DEVELOPMENT ECONOMICS	29	26	27	28	25
JOURNAL OF APPLIED ECONOMETRICS	30	33	32	30	52
IMF ECONOMIC REVIEW	31	27	30	27	26
JOURNAL OF THE ASSOCIATION OF ENVIRONMENTAL AND RESOURCE ECONOMISTS	32	31	31	31	62
GAMES AND ECONOMIC BEHAVIOR	33	32	33	35	28
EUROPEAN ECONOMIC REVIEW	34	30	35	38	40
ECONOMETRICS JOURNAL	35	49	34	37	47

Table 3: **Journal Rankings Using Geometric Means Compared Across Alternative Methods (Continued)**

Journal	Invariant Method	Removal of Reference Intensity	Inclusion of Non-standard Journals	Full Set of JCR Journals	Top-5 Method
ECONOMIC THEORY	36	43	36	39	43
JOURNAL OF MONEY CREDIT AND BANKING	37	35	38	33	50
JOURNAL OF INDUSTRIAL ECONOMICS	38	38	40	41	34
JOURNAL OF URBAN ECONOMICS	39	37	37	36	48
JOURNAL OF LAW & ECONOMICS	40	34	39	34	29
JOURNAL OF RISK AND UNCERTAINTY	41	45	44	43	35
JOURNAL OF HEALTH ECONOMICS	42	40	41	42	54
ECONOMIC DEVELOPMENT AND CULTURAL CHANGE	43	36	42	40	36
SCANDINAVIAN JOURNAL OF ECONOMICS	44	42	46	47	65
ECONOMICA	45	41	45	46	38
JOURNAL OF FINANCIAL ECONOMETRICS	46	64	50	45	70
JOURNAL OF POLICY ANALYSIS AND MANAGEMENT	47	44	43	44	41
JOURNAL OF ECONOMIC HISTORY	48	47	47	48	32
JOURNAL OF ENVIRONMENTAL ECONOMICS AND MANAGEMENT	49	48	48	49	64
ECONOMETRIC REVIEWS	50	65	51	52	86
WORLD BANK ECONOMIC REVIEW	51	46	49	50	44
INTERNATIONAL JOURNAL OF INDUSTRIAL ORGANIZATION	52	55	52	53	56
JOURNAL OF ECONOMIC BEHAVIOR & ORGANIZATION	53	53	54	54	67
JOURNAL OF LAW ECONOMICS & ORGANIZATION	54	50	53	51	53
LABOUR ECONOMICS	55	51	56	57	58
JOURNAL OF POPULATION ECONOMICS	56	60	57	55	97
QME-QUANTITATIVE MARKETING AND ECONOMICS	57	57	59	62	33
ECONOMIC INQUIRY	58	58	58	58	73
JOURNAL OF ECONOMIC DYNAMICS & CONTROL	59	59	62	61	76
EDUCATION FINANCE AND POLICY	60	52	61	63	59
CANADIAN JOURNAL OF ECONOMICS-REVUE CANADIENNE D ECONOMIQUE	61	56	60	59	57
EXPLORATIONS IN ECONOMIC HISTORY	62	61	55	56	51
OXFORD BULLETIN OF ECONOMICS AND STATISTICS	63	70	65	65	99
JOURNAL OF ECONOMICS & MANAGEMENT STRATEGY	64	66	64	64	87
JOURNAL OF ECONOMIC SURVEYS	65	67	63	60	110
JOURNAL OF MATHEMATICAL ECONOMICS	66	68	67	68	72
AMERICAN LAW AND ECONOMICS REVIEW	67	54	68	67	31
INTERNATIONAL JOURNAL OF GAME THEORY	68	73	69	71	81
ECONOMICS OF EDUCATION REVIEW	69	63	66	66	82
NATIONAL TAX JOURNAL	70	62	70	69	46

Table 3: **Journal Rankings Using Geometric Means Compared Across Alternative Methods (Continued)**

Journal	Invariant Method	Removal of Reference Intensity	Inclusion of Non-standard Journals	Full Set of JCR Journals	Top-5 Method
SOCIAL CHOICE AND WELFARE	71	78	73	73	102
REGIONAL SCIENCE AND URBAN ECONOMICS	72	71	71	70	98
THEORY AND DECISION	73	74	75	75	75
JOURNAL OF HUMAN CAPITAL	74	69	72	72	74
MACROECONOMIC DYNAMICS	75	72	74	77	85
REVIEW OF ECONOMIC DESIGN	76	86	77	84	63
GENEVA RISK AND INSURANCE REVIEW	77	82	82	79	N.D.
JOURNAL OF DEMOGRAPHIC ECONOMICS	78	83	80	80	N.D.
INTERNATIONAL TAX AND PUBLIC FINANCE	79	75	79	78	84
OXFORD ECONOMIC PAPERS-NEW SERIES	80	80	78	76	108
JOURNAL OF ECONOMIC INEQUALITY	81	76	83	83	49
REVIEW OF INCOME AND WEALTH	82	81	76	74	96
AMERICAN JOURNAL OF HEALTH ECONOMICS	83	77	84	86	39
JOURNAL OF ECONOMIC PSYCHOLOGY	84	88	88	89	114
ECONOMIC HISTORY REVIEW	85	79	81	82	79
JOURNAL OF REGIONAL SCIENCE	86	85	87	81	55
ECONOMICS LETTERS	87	90	91	91	104
HEALTH ECONOMICS	88	84	89	90	100
JOURNAL OF PUBLIC ECONOMIC THEORY	89	95	93	97	89
EUROPEAN REVIEW OF ECONOMIC HISTORY	90	100	86	87	N.D.
MATHEMATICAL SOCIAL SCIENCES	91	113	96	103	103
PUBLIC CHOICE	92	98	94	98	101
ECONOMICS AND PHILOSOPHY	93	97	85	85	66
JOURNAL OF COMPARATIVE ECONOMICS	94	89	95	94	91
SOUTHERN ECONOMIC JOURNAL	95	92	90	93	88
REVIEW OF WORLD ECONOMICS	96	87	99	100	80
B E JOURNAL OF ECONOMIC ANALYSIS & POLICY	97	93	98	101	105
REVIEW OF NETWORK ECONOMICS	98	91	100	108	N.D.
ECONOMICS & POLITICS	99	99	101	107	70
FISCAL STUDIES	100	96	104	109	90

Note: The order of the journals is based on the geometric means in the first column. Here, N.D. means that the journal is not cited by any top-5 journal in any year of 2015-2019.

Table 4: **Spearman's Rank Correlation Coefficients**

(a) **Estimated Correlation Coefficients for Yearly Rankings**

	Invariant Method						Top-5 Method					
All Standard Economics Journals	**2015**	**2016**	**2017**	**2018**	**2019**	**Geometric Mean**	**2015**	**2016**	**2017**	**2018**	**2019**	**Geometric Mean**
2015	1.000						1.000					
	(180)						(81)					
2016	0.968	1.000					0.903	1.000				
	(173)	(185)					(68)	(82)				
2017	0.946	0.946	1.000				0.863	0.887	1.000			
	(170)	(175)	(186)				(62)	(66)	(78)			
2018	0.955	0.956	0.961	1.000			0.870	0.879	0.890	1.000		
	(160)	(163)	(165)	(177)			(68)	(70)	(64)	(86)		
2019	0.945	0.940	0.941	0.961	1.000		0.873	0.899	0.892	0.889	1.000	
	(166)	(166)	(168)	(163)	(185)		(68)	(71)	(66)	(75)	(89)	
Geometric Mean	0.982	0.978	0.979	0.985	0.976	1.000	0.943	0.953	0.938	0.941	0.958	1.000
	(180)	(185)	(186)	(177)	(185)	(213)	(81)	(82)	(78)	(86)	(89)	(115)

Note: The number of observations used for each estimated correlation are in parentheses.

(b) **Estimated Correlation Coefficients of the Geometric-mean Rankings of Alternative Methods with the Geometric-mean Ranking of the Invariant Method**

	Removal of Reference Intensity	**Inclusion of Non-standard Journals**	**Full Set of JCR Journals**	**Top-5 Method**
Top 100	0.985	0.997	0.996	0.879
Top 75	0.975	0.997	0.995	0.900
Top 50	0.971	0.997	0.991	0.914
Top 40	0.973	0.997	0.986	0.935
Top 30	0.987	0.998	0.995	0.953
Top 20	0.985	0.997	0.993	0.928

Note: The groupings are based on the invariant method rankings in column 1, Table 3. Given a group, each row presents the correlation coefficients between the geometric-mean ranking based on the invariant method and the geometric mean ranking of each of the four alternative ranking methods.

Table 5: **Rankings of the New Society Journals and their Comparison Journals Extracted from Table 3**

Journal	Invariant Method	Removal of Reference Intensity	Inclusion of Non-standard Journals	Full Set of JCR Journals	Top-5 Method
AMERICAN ECONOMIC JOURNAL-MACROECONOMICS	6	6	7	6	7
Journal of Monetary Economics	13	11	13	13	14
Journal of Economic Growth	17	17	17	17	18
Review of Economic Dynamics	20	18	20	21	17
AMERICAN ECONOMIC JOURNAL-APPLIED ECONOMICS	7	7	6	7	6
Review of Economics and Statistics	12	13	12	11	15
Journal of Labor Economics	10	10	10	10	11
Journal of Development Economics	29	26	27	28	25
AMERICAN ECONOMIC JOURNAL-ECONOMIC POLICY	9	9	8	8	10
Review of Economics and Statistics	12	13	12	11	15
Journal of Public Economics	25	24	25	25	24
Journal of Human Resources	15	15	15	14	22
AMERICAN ECONOMIC JOURNAL-MICROECONOMICS	14	14	14	15	12
Journal of Economic Theory	24	23	24	24	20
RAND Journal of Economics	19	20	19	18	16
Games and Economic Behavior	33	32	33	35	28
THEORETICAL ECONOMICS	11	12	11	12	8
Journal of Economic Theory	24	23	24	24	20
Games and Economic Behavior	33	32	33	35	28
QUANTITATIVE ECONOMICS	16	16	16	16	13
Journal of Econometrics	26	29	26	26	27
Journal of Applied Econometrics	30	33	32	30	52
Journal of Business & Economic Statistics	21	25	21	20	30
JOURNAL OF THE EUROPEAN ECONOMIC ASSOCIATION	8	8	9	9	9
Economic Journal	18	19	18	19	21
International Economic Review	23	22	23	23	23

Table 6: **Comparing Rankings among Only the New and their Comparison Journals**

(a) **Summary of Rankings**

Journal	Ranking Based on 2-Year Forward Impact Factors	Ranking Based on 2-Year Backward Impact Factors	Modified Rankings (5-Year Backward)	
			Based on Invariant Method (from Column "Invariant Method" in Table 3)	Based on Top-5 Method (from Column "Top-5 Method" in Table 3)
	(1)	(2)	(3)	(4)
AMERICAN ECONOMIC JOURNAL-MACROECONOMICS	1	1	1	2
Journal of Monetary Economics	9	11	8	9
Journal of Economic Growth	12	12	12	13
Review of Economic Dynamics	13	14	15	12
AMERICAN ECONOMIC JOURNAL-APPLIED ECONOMICS	3	3	2	1
Review of Economics and Statistics	10	10	7	10
Journal of Labor Economics	6	5	5	6
Journal of Development Economics	21	20	21	19
AMERICAN ECONOMIC JOURNAL-ECONOMIC POLICY	5	6	4	5
Review of Economics and Statistics	10	10	7	10
Journal of Public Economics	19	18	19	18
Journal of Human Resources	17	15	10	16
AMERICAN ECONOMIC JOURNAL-MICROECONOMICS	8	7	9	7
Journal of Economic Theory	14	13	18	14
RAND Journal of Economics	11	9	14	11
Games and Economic Behavior	20	21	23	21
THEORETICAL ECONOMICS	2	2	6	3
Journal of Economic Theory	14	13	18	14
Games and Economic Behavior	20	21	23	21
QUANTITATIVE ECONOMICS	7	8	11	8
Journal of Econometrics	18	19	20	20
Journal of Applied Econometrics	23	23	22	23
Journal of Business & Economic Statistics	22	22	16	22
JOURNAL OF THE EUROPEAN ECONOMIC ASSOCIATION	4	4	3	4
Economic Journal	16	16	13	15
International Economic Review	15	17	17	17

Note: All columns are based on the ranking results for the six new society journals and their comparison journals (23 different journals in total).

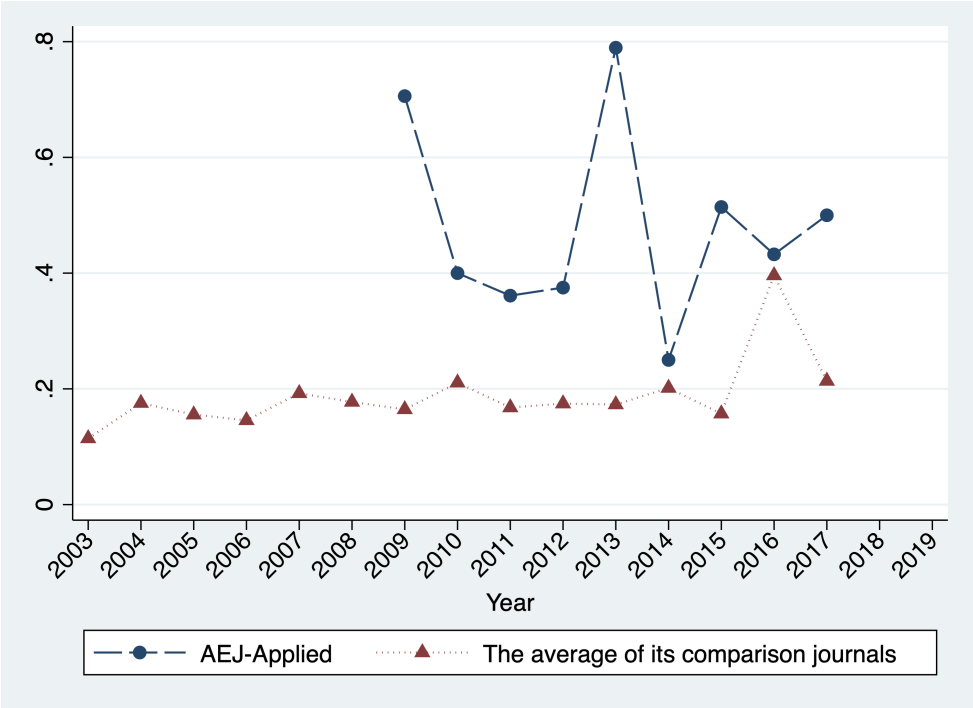
(b) **Spearman's Rank Correlation Coefficients between Geometric-mean Rankings in Table 6(a)**

	2-Year Forward Impact Factors	2-Year Backward Impact Factors	Invariant Method	Top-5 Method
2-Year Forward Impact Factors	1.000			
2-Year Backward Impact Factors	0.987	1.000		
Invariant Method	0.907	0.910	1.000	
Top-5 Method	0.987	0.987	0.922	1.000

Note: All Spearman's rank correlation coefficients are computed for the 23 journals listed in panel (a) above.

Figure 1: **Forward Impact Factors for the AEA New Journals and the Average of Their Respective Comparison Journals**

AEJ-Applied and the Average of Its Comparison Journals



AEJ-Macro and the Average of Its Comparison Journals

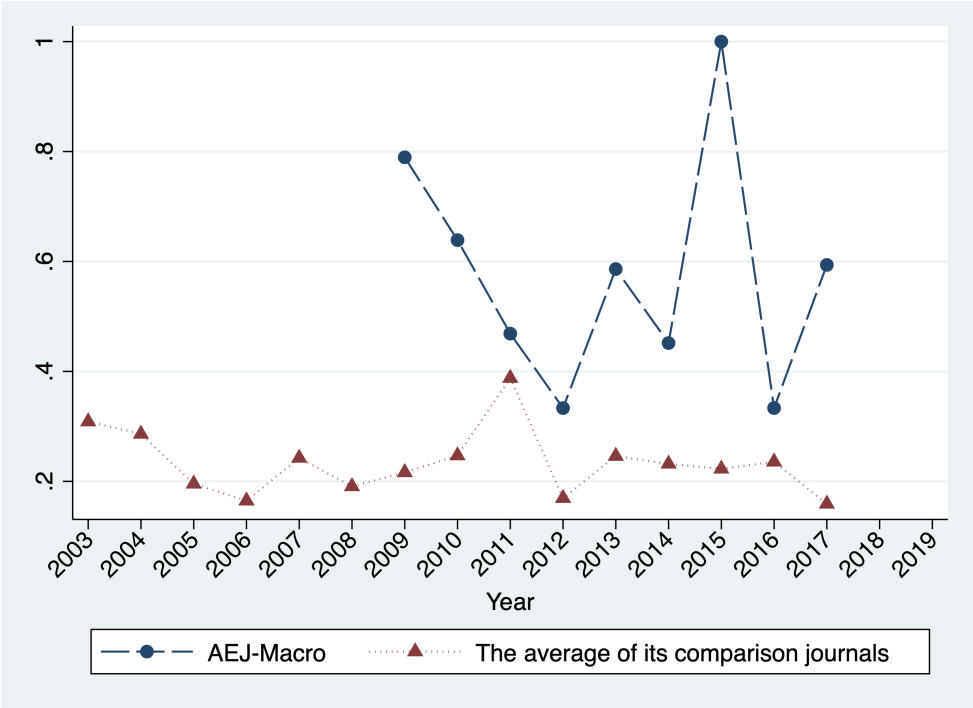
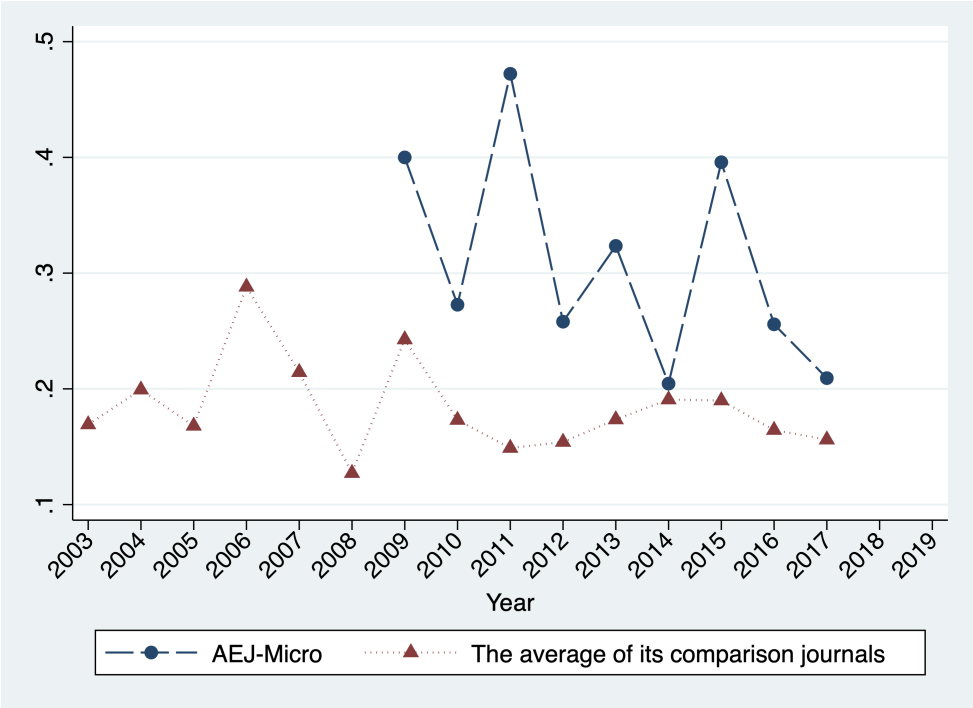


Figure 1: **Forward Impact Factors for the AEA New Journals and the Average of Their Respective Comparison Journals (Continued)**

AEJ-Micro and the Average of Its Comparison Journals



AEJ-Policy and the Average of Its Comparison Journals

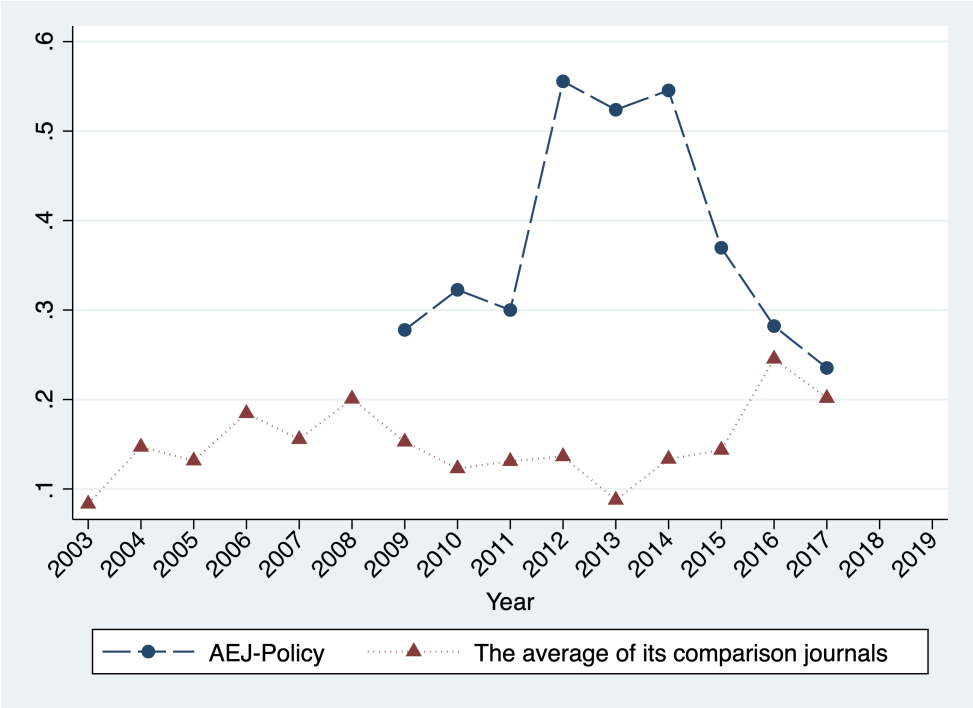
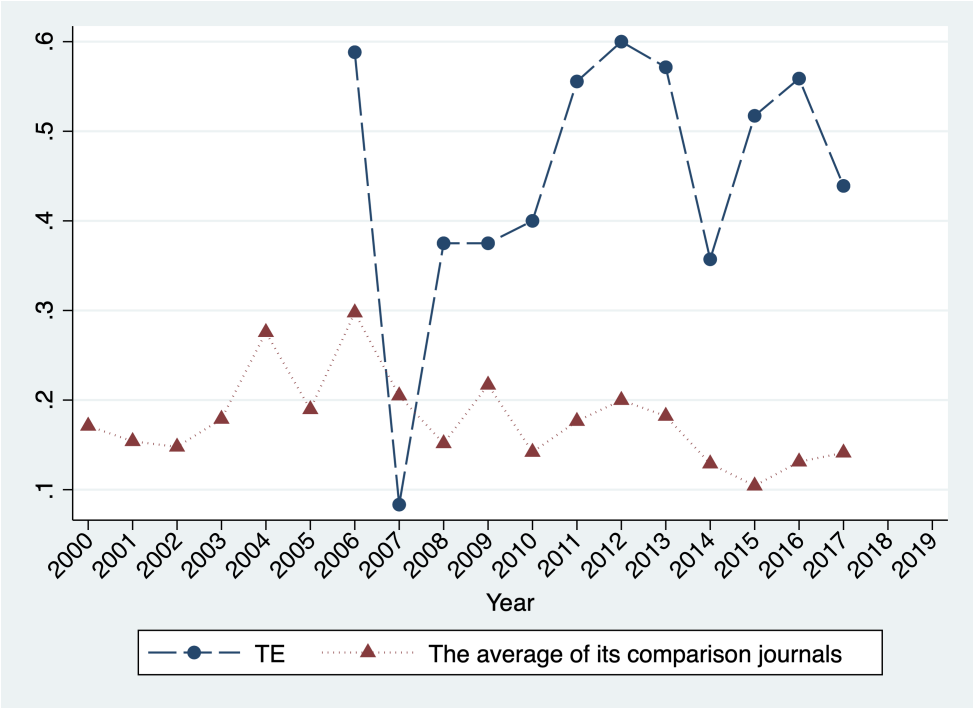


Figure 2: **Forward Impact Factors for the ES New Journals and the Average of Their Respective Comparison Journals**

TE and the Average of Its Comparison Journals



QE and the Average of Its Comparison Journals

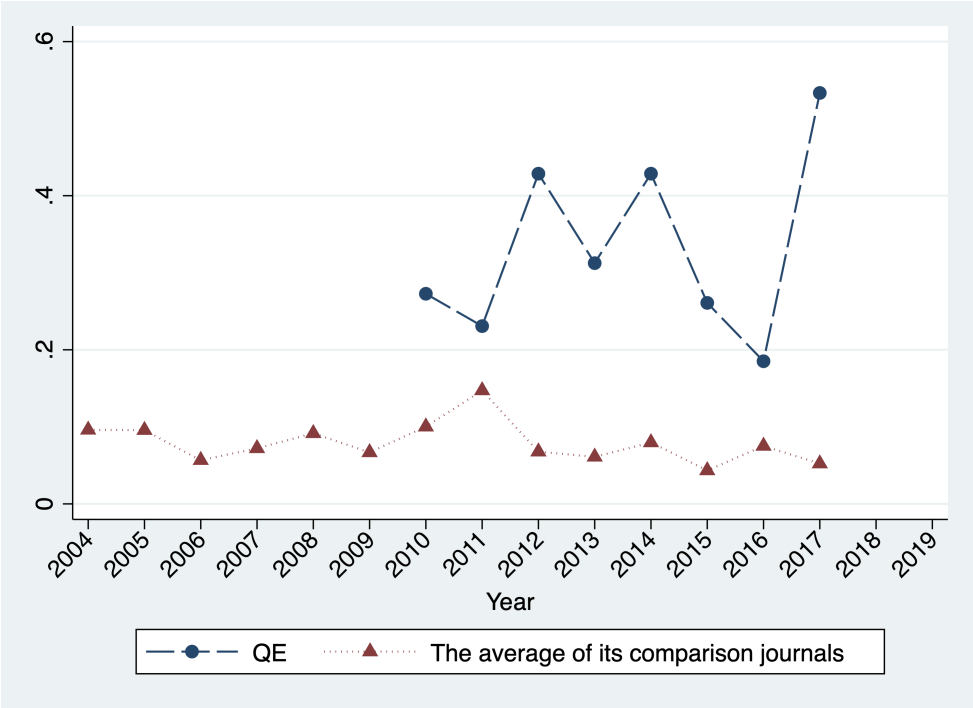


Figure 3: **Forward Impact Factors for JEEA and the Average of Its Comparison Journals**

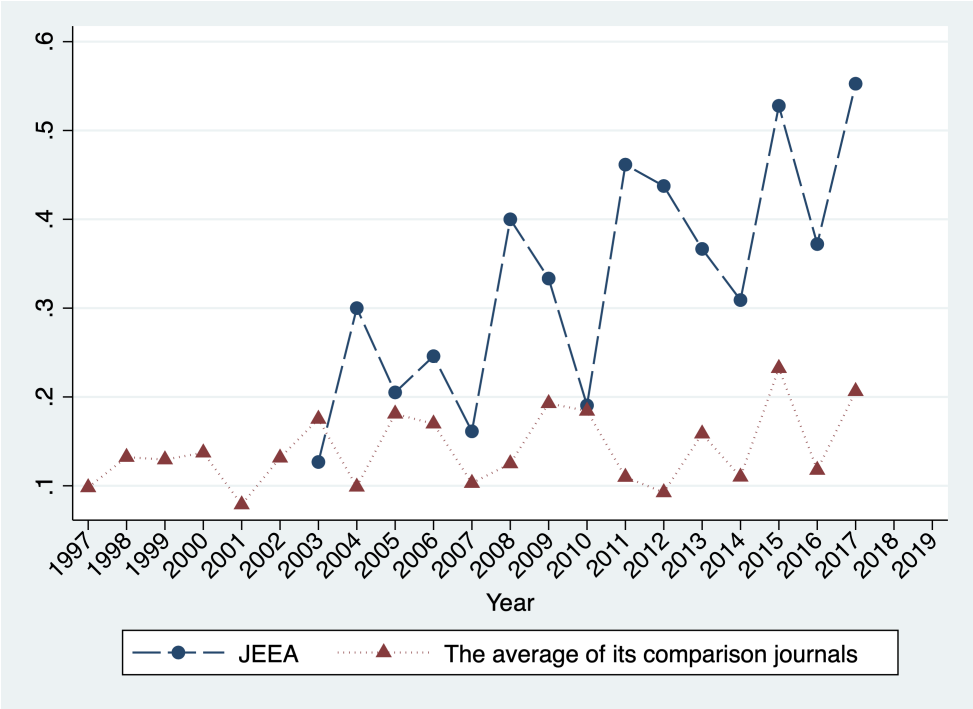


Table 7: **Mean Values**

	Mean	New	Comparison	Difference
	(1)	(2)	(3)	(4)
Panel A: Impact Factors and Number of Papers Published Per Year (*observations = 326*)				
Forward impact factors (multipled by 100)	21.402	40.551	16.070	24.481
	(2.438)	(3.565)	(1.674)	(3.766)
	[0.000]	[0.000]	[0.000]	[0.000]
Articles published per year	60.702	35.887	67.612	-31.724
	(7.057)	(5.689)	(8.385)	(9.910)
	[0.000]	[0.001]	[0.000]	[0.004]
Panel B: Average Editor's Research Characteristics (*observations =23*)				
Seniority	22.609	21.167	23.240	-2.073
	(1.319)	(1.880)	(1.722)	(2.522)
	[0.000]	[0.000]	[0.000]	[0.420]
Affiliation rank	23.789	16.417	27.014	-10.598
	(3.818)	(3.538)	(5.125)	(6.222)
	[0.000]	[0.004]	[0.000]	[0.103]
Publication performance	0.352	0.452	0.308	0.144
	(0.034)	(0.075)	(0.032)	(0.079)
	[0.000]	[0.001]	[0.000]	[0.083]
Panel C: Average Editor's Years of Editing Experience (*observations =23*)				
Key role, Top 5 journals	0.043	0.110	0.013	0.096
	(0.022)	(0.065)	(0.009)	(0.064)
	[0.065]	[0.144]	[0.156]	[0.147]
Secondary role, Top 5 journals	0.116	0.241	0.061	0.179
	(0.029)	(0.067)	(0.017)	(0.067)
	[0.001]	[0.011]	[0.003]	[0.014]
Key role, new and comparison journals	0.430	0.147	0.554	-0.407
	(0.067)	(0.080)	(0.070)	(0.105)
	[0.000]	[0.115]	[0.000]	[0.001]
Secondary role, new and comparison journals	0.432	0.541	0.384	0.158
	(0.065)	(0.149)	(0.068)	(0.160)
	[0.000]	[0.011]	[0.000]	[0.335]

Note: Observations are clustered at the journal level in Panel A. However, for Panels B and C, we cannot cluster by journal as there is only one observation for each journal. Here, ( ) denotes standard error, and [ ] denotes p-value.

Table 8: **The Effect of Being a New Association Journal on Forward Impact Factors**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
											AEJ-Micro	Excluded
New	23.750		21.860		21.703		28.816		27.743		26.731	
	(3.984)		(4.141)		(3.507)		(5.620)		(6.117)		(5.967)	
	[0.000]		[0.000]		[0.000]		[0.000]		[0.000]		[0.000]	
Association Effects												
(1) AEA		26.849		25.059		23.129		31.595		30.783		30.345
		(5.727)		(5.839)		(5.210)		(5.332)		(5.602)		(5.052)
		[0.000]		[0.000]		[0.000]		[0.000]		[0.000]		[0.000]
(2) EEA		16.977		16.364		19.424		30.888		30.965		25.761
		(1.797)		(1.872)		(5.085)		(10.630)		(11.074)		(15.704)
		[0.000]		[0.000]		[0.001]		[0.008]		[0.011]		[0.117]
(3) ES		23.870		21.282		20.396		24.797		24.078		22.249
		(4.728)		(5.272)		(4.991)		(6.424)		(6.239)		(6.879)
		[0.000]		[0.001]		[0.000]		[0.001]		[0.001]		[0.004]
P-value for the null hypothesis that AEA=EEA=ES:		[0.074]		[0.190]		[0.866]		[0.491]		[0.328]		[0.365]
Articles published per year			-0.058	-0.054	-0.063	-0.060	-0.056	-0.059	-0.044	-0.046	-0.050	-0.050
			(0.032)	(0.032)	(0.033)	(0.035)	(0.029)	(0.030)	(0.037)	(0.039)	(0.036)	(0.040)
			[0.087]	[0.111]	[0.069]	[0.098]	[0.071]	[0.060]	[0.242]	[0.249]	[0.180]	[0.227]
Average Editor's Research Characteristics												
Affiliation rank					-0.160	-0.151			-0.190	-0.194	-0.147	-0.142
					(0.071)	(0.072)			(0.082)	(0.080)	(0.070)	(0.062)
					[0.034]	[0.047]			[0.031]	[0.023]	[0.048]	[0.033]
Seniority					0.034	0.021			-0.143	-0.174	0.068	0.051
					(0.275)	(0.269)			(0.449)	(0.467)	(0.343)	(0.335)
					[0.903]	[0.939]			[0.753]	[0.713]	[0.844]	[0.880]
Publication performance					-8.016	-5.981			-2.857	-4.745	6.711	6.536
					(8.214)	(11.626)			(11.987)	(12.294)	(8.902)	(9.464)
					[0.340]	[0.612]			[0.814]	[0.703]	[0.460]	[0.498]
Average Editor's Years of Editing Experience												
Key role, Top-5 journals							-12.914	-12.344	-16.930	-14.762	-31.951	-11.719
							(13.250)	(17.428)	(13.277)	(18.057)	(47.449)	(45.086)
							[0.340]	[0.486]	[0.216]	[0.422]	[0.508]	[0.798]
Secondary role, Top-5 journals							-21.875	-26.730	-24.713	-30.542	-24.474	-28.849
							(16.169)	(23.108)	(14.834)	(20.967)	(15.522)	(22.461)
							[0.190]	[0.260]	[0.110]	[0.159]	[0.131]	[0.214]
Key role, New and comparison journals							3.043	2.700	0.245	0.390	-3.344	-3.687
							(5.941)	(6.117)	(7.073)	(6.440)	(5.990)	(5.330)
							[0.614]	[0.663]	[0.973]	[0.952]	[0.583]	[0.497]
Secondary role, New and comparison journals							0.693	0.488	-3.851	-4.068	-0.870	-1.689
							(4.069)	(5.773)	(6.817)	(8.728)	(5.531)	(7.800)
							[0.866]	[0.933]	[0.578]	[0.646]	[0.877]	[0.831]
P-value for the null hypothesis that the coefficients for editors' editing experiences jointly equal zero							[0.101]	[0.163]	[0.016]	[0.013]	[0.280]	[0.254]
Observations	326	326	326	326	326	326	326	326	326	326	302	302

Note: See notes to Table 7. Regressions in Columns (1)-(10) based on observations for: 2003-2017 for the *JEEA*; 1997-2017 for the *JEEA* comparisons; 2006-2017 for the *TE*; 2000-2017 for the *TE* comparisons; 2009-2017 for the *AEJ*s; 2003-2017 for the *AEJ* comparisons; 2010-2017 for the *QE*; and 2004-2017 for the *QE* comparisons. Regressions in Columns (11) and (12) replicate Columns (9) and (10) after excluding *AEJ-Micro* and its comparison journals. The forward impact factor is multiplied by 100.

Table 9: **Estimation Results for Various Robustness Specifications Based on Forward Impact Factors**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
New	32.323		27.744		27.416		27.586	
	(6.560)		(6.296)		(6.635)		(6.120)	
	[0.000]		[0.000]		[0.000]		[0.000]	
Association Effects								
(1) AEA		34.543		31.004		30.879		30.615
		(5.361)		(5.728)		(5.953)		(5.632)
		[0.000]		[0.000]		[0.000]		[0.000]
(2) EEA		33.507		33.555		36.533		30.742
		(6.241)		(10.358)		(10.487)		(11.179)
		[0.000]		[0.004]		[0.002]		[0.012]
(3) ES		28.731		24.084		23.736		23.967
		(8.113)		(6.316)		(6.910)		(6.327)
		[0.002]		[0.001]		[0.002]		[0.001]
P-value for the null hypothesis that AEA=EEA=ES:		[0.697]		[0.296]		[0.271]		[0.343]
Conference							1.279	1.158
							(3.273)	(3.201)
							[0.700]	[0.721]
Articles published per year	-0.045	-0.049	-0.036	-0.040	-0.043	-0.050	-0.040	-0.042
	(0.024)	(0.028)	(0.037)	(0.039)	(0.041)	(0.042)	(0.036)	(0.038)
	[0.069]	[0.098]	[0.336]	[0.314]	[0.310]	[0.250]	[0.284]	[0.281]
Average Editor's Characteristics								
Seniority	-0.208	-0.216	-0.166	-0.195	-0.180	-0.204	-0.189	-0.215
	(0.224)	(0.244)	(0.448)	(0.474)	(0.514)	(0.549)	(0.443)	(0.458)
	[0.365]	[0.386]	[0.715]	[0.684]	[0.730]	[0.714]	[0.674]	[0.643]
Over 10-Year Duration								
Affiliation Rank			-0.194	-0.201	-0.192	-0.202	-0.205	-0.208
			(0.085)	(0.081)	(0.088)	(0.084)	(0.082)	(0.082)
			[0.032]	[0.021]	[0.040]	[0.025]	[0.021]	[0.019]
Publication Performance			-5.226	-8.883	-4.661	-10.645	-3.107	-4.923
			(11.740)	(11.932)	(13.403)	(13.816)	(11.639)	(12.160)
			[0.661]	[0.464]	[0.731]	[0.449]	[0.792]	[0.690]
Key role, Top-5 journals			-14.982	-10.200	-18.587	-9.976	-17.102	-14.986
			(13.769)	(17.826)	(13.951)	(18.257)	(13.429)	(18.236)
			[0.288]	[0.573]	[0.196]	[0.590]	[0.216]	[0.420]
Secondary role, Top-5 journals			-25.513	-34.434	-24.095	-37.240	-25.419	-31.078
			(15.545)	(20.074)	(15.650)	(19.742)	(14.909)	(21.046)
			[0.115]	[0.100]	[0.138]	[0.073]	[0.102]	[0.154]
Key role, New and comparison journals			-0.803	-0.306	-1.007	-0.041	1.455	1.477
			(7.382)	(6.601)	(8.084)	(7.296)	(6.982)	(6.194)
			[0.914]	[0.963]	[0.902]	[0.996]	[0.837]	[0.814]
Secondary role, New and comparison journals			-3.748	-3.385	-3.547	-2.264	-4.301	-4.488
			(6.593)	(8.500)	(7.291)	(9.250)	(6.551)	(8.514)
			[0.575]	[0.694]	[0.631]	[0.809]	[0.518]	[0.603]
Over 5-Year Duration								
Affiliation Rank	-0.282	-0.283						
	(0.055)	(0.056)						
	[0.000]	[0.000]						
Publication Performance	-0.261	-0.660						
	(4.531)	(4.990)						
	[0.955]	[0.896]						
Key role, Top-5 journals	6.683	3.395						
	(24.256)	(26.593)						
	[0.786]	[0.900]						
Secondary role, Top-5 journals	-40.867	-42.229						
	(9.878)	(8.415)						
	[0.000]	[0.000]						
Key role, New and comparison journals	4.714	4.709						
	(6.612)	(5.927)						
	[0.483]	[0.435]						
Secondary role, New and comparison journals	0.322	0.220						
	(2.773)	(2.904)						
	[0.909]	[0.940]						
P-value for the null hypothesis that the coefficients for editors' editing experiences jointly equal zero	[0.002]	[0.000]	[0.031]	[0.020]	[0.008]	[0.003]	[0.014]	[0.012]
Observations	326	326	278	278	230	230	326	326

Note: See notes to Tables 7 and 8. In columns (1) and (2), we use editors' characteristics measured over five-year duration. In columns (3) and (4), we allow three-year more observations for comparison journals than their respective new journals, i.e. we start these journals three years before their respective new journals start. In columns (5) and (6), we start the comparison journals at the same time their respective new journals start. In columns (7) and (8), we include a dummy variable equalling one if a journal is part of a society/association that puts on a major conference and zero otherwise.

Table 10: **Mean Values for Differences in Forward Impact Factors**

	Mean	New	Comparison	Difference
	(1)	(2)	(3)	(4)
(*observations = 269*)				
Differences based on citations from the parent journal minus average citations from *JPE*, *QJE* and *Restud* (multiplied by 100)	6.569	14.608	4.455	10.153
	(0.986)	(1.735)	(0.497)	(1.701)
	[0.000]	[0.000]	[0.000]	[0.000]

Note: See notes to Tables 7 and 8. There is no parent journal for JEEA, and hence we cannot use it or its comparison journals here; after dropping these journals we have 20 journals and 269 observations. Again, we multiply the differences by 100.

Table 12: **Mean Values for Adjusted Forward Impact Factors**

	Mean	New	Comparison	Difference
	(1)	(2)	(3)	(4)
(observations = 326)				
Orignal forward impact factors based on citations from all Top-5 journals	21.403	40.554	16.071	24.483
	(2.438)	(3.563)	(1.674)	(3.763)
	[0.000]	[0.000]	[0.000]	[0.000]
Adjusted forward impact factors based on citations from *JPE*, *QJE* and *Restud*	21.403	37.777	16.844	20.934
	(2.522)	(3.868)	(2.197)	(4.266)
	[0.000]	[0.000]	[0.000]	[0.000]

Note: See notes to Tables 7 and 8. We are able to include *JEEA* and its comparison journals here, and have 23 journals and 326 observations. We adjust the citations from *JPE*, *QJE* and *Restud* to make them comparable to the standard impact factors. Again, we multiply the adjusted forward impact factors by 100 for ease of exposition.

Table 11: **The Effect of Having A Parent Top-5 Journal on Difference in Forward Impact Factors**

	Differences based on itations from the parent journal minus average citations from *JPE*, *QJE* and *Restud* (multiplied by 100)	
	(1)	**(2)**
New	10.000	
	(1.789)	
	[0.000]	
Association Effects		
AEA		10.741
		(2.616)
		[0.001]
ES		8.724
		(0.922)
		[0.000]
P-value for the null hypothesis that AEA=ES:		[0.460]

Note: See notes to Tables 7, 8, and 10. The $\underline{x}$ variables are assumed to difference out.

Table 13: **The Effect of Having A Parent Top-5 Journal on Adjusted Forward Impact Factors**

	Adjusted forward impact factors based on citations from *JPE*, *QJE* and *Restud*	
	(1)	**(2)**
New	25.601	
	(9.122)	
	[0.010]	
Association Effects		
(1) AEA		33.958
		(6.490)
		[0.000]
(2) EEA		45.036
		(14.311)
		[0.005]
(3) ES		15.515
		(8.415)
		[0.079]
P-value for the null hypothesis that AEA=EEA=ES:		
		[0.014]
Articles published per year	-0.046	-0.061
	(0.043)	(0.045)
	[0.302]	[0.194]
Average Editor's Research Characteristics		
Affiliation rank	-0.159	-0.183
	(0.106)	(0.096)
	[0.148]	[0.070]
Seniority	-0.648	-0.690
	(0.497)	(0.512)
	[0.206]	[0.191]
Publication performance	4.092	-7.496
	(12.681)	(13.629)
	[0.750]	[0.588]
Average Editor's Years of Editing Experience		
Key role, Top-5 journals	-7.586	8.200
	(21.126)	(22.659)
	[0.723]	[0.721]
Secondary role, Top-5 journals	-22.210	-49.024
	(22.258)	(26.081)
	[0.329]	[0.073]
Key role, New and comparison journals	11.279	13.024
	(9.867)	(7.611)
	[0.265]	[0.101]
Secondary role, New and comparison journals	-2.801	-0.540
	(9.350)	(11.289)
	[0.767]	[0.962]
P-value for the null hypothesis that the coefficients for editors' editing experiences jointly equal zero	[0.185]	[0.011]
Observations	326	326

Note: See notes to Tables 7 and 8.