An Investigation of Editorial Favoritism in the *AER*

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SUMMARY

This paper adds to the literature on the credibility of academic research by examining the hypothesis that the selection procedures of academic journals in economics favor submissions that frequently cite editorial insiders. We use procedures, a sample size, and methods that offset some of the limitations that accompanied previous investigations. Using the expanded sample and controls we find that citations to insiders in articles in the *American Economic Review* increased the frequency of citations in non-*AER* journals. The evidence is robust; our findings contradict those in previous research. Given our metric, sample, and procedures, we find no significant support for the hypothesis of editorial favoritism.

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ABSTRACT

This paper contributes to a substantial literature assessing the credibility of academic research. We examine the hypothesis that selection procedures of journals favor submissions that cite journal insiders. Our tests use data from the *American Economic Review* and the number of citations to *AER* publications that appear in non-*AER* journals. We find that citations to *AER*-insiders in articles in the *AER* increased the frequency of citations in non-*AER* journals; these results are precisely opposite of what one would expect if submissions were judged on criteria other than intellectual merit. The evidence is robust across specifications. Given our metric, sample, and procedures, we do not find any significant support for the hypothesis of editorial favoritism.

An Investigation of Editorial Favoritism in the *AER*

This paper contributes to an emerging literature assessing the credibility of academic research. Journal ethics and research validity are being reviewed by government and philanthropic agencies that are investigating potential biases in publications.[1] Double-blind refereeing has declined, an alleged casualty of technological change; *The American Economic Review* dropped it in favor of single-blind refereeing (the referee is unknown to the article's authors) because of working papers are increasingly posted on the internet. Concerns over ethical issues in publication transcend national (and discipline) borders to encompass the entire world; this has led a serious examination of issues.[2] Questioning the value of academic research is not restricted to the social sciences.[3]

Research may be compromised in a variety of ways, this paper examines one aspect of it; editorial favoritism defined as a bias in academic journals in favor of submissions on criteria other than intellectual merit. Editorial favoritism or bias in economics journals has been the subject of numerous investigations; these studies have investigated different: 1) biases;[4] 2)

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[1] A recent Science article (2012) questioned the ethics of editors coercing citations in order to increase the impact factors. This article led to a joint response from a number of the leading journals in finance (http://www.jfqa.org/EditorsJointPolicy.html).

[2] *Management and Organization Review* has (2011) published a volume on research and publications ethics.

[3] John P. A. Ioannidis (2005) and subsequent researchers challenged the validity of peer-reviewed research in the physical sciences; this analysis applies to all statistically-based research. In a similar vein there is the "Reproducibility Project" to ensure that the results from four psychology journals are replicable. http://opensciencefframework.org/

[4] There are two articles in economics that explicitly examine editorial bias. Laband and Piette (1994a, p. 905) investigated the "blindness" of the review process; they found that: "papers with the characteristics of the single-blind reviewed papers in our sample would receive 5.6 percent more logged citations if reviewed double-blind, while papers with the characteristics of double-blind reviewed papers in our sample would receive nearly 18 percent fewer logged citations if reviewed single-blind." Smart and Waldfogel (1996) found that: a) citation rates were positively

methodologies;[5] 3) data sets; 4) control variables, and 5) time periods. The results of these studies yield ambiguous and/or tentative conclusions (in an egregious example one publication even contained competing conclusions[6]). In this paper we focus on a type of "favoritism" or bias discussed by David Laband, Robert Tollison, and Gokhan Karahan (2002); their study provides evidence that acceptance policies of the *American Economic Review* (*AER*) may favor papers that cite editorial insiders frequently.[7]

Laband *et al*. are very cautious concerning the hypothesis that there is editorial favoritism in the *AER*; their caution is consistent with their evidence. In their study they examine four volumes (years) of the *AER* (1985, 1990, 1995, and 2000); Table 1 (below) is the same as their

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related to "faculty insider" status by authors of publications in the *Journal of Political Economy* and the *Journal of Financial Economics* (*JFE*); and b) "Ph.D. Insider" status negatively impacted citation rates at the *JFE*.

[5] Most studies employ citations (in various ways) as the dependent variable in a regression as the measure of quality in testing for editorial biases. Oswald (2008) argues that some of these investigations might suffer from what he terms an "averaging fallacy." As an alternative he investigates the rates of citations to adjacent articles within particular journals. Using Chi-squared statistics he finds: 1) "no evidence for international bias against authors from English or European universities" (p. 14); and 2) "Chicago [the *JPE*] acts in a way that discriminates against its own."

[6] Laband and Piette (1994b) studied "1,051 full articles published in 28 top economics journals in 1984." (p. 197) Their study excluded self-citations and ". . . defined an author/editor connections to exist whenever any of the authors of an article received his or her Ph.D. from the same university that the editor, coeditor, or any associate editor of the journal that published the paper was affiliated with in 1984 or received his or her Ph. D. from. . . ." The Laband and Petite (1994b) study has mixed results. They found that the mean number of citations of articles whose author(s) have editorial "connections" is "more than twice as great as citations of articles without such connections" (p. 197). On the other hand, they found that: "Over two-thirds of the papers with residual citations at least one standard deviation below their predicted values were published by editors with our version of connection to the authors."(p. 201)

[7] An anonymous referee suggested that ". . . the *AER* is less suspect in this regard [of favoritism] than the *JPE* and the *QJE*. The *JPE* is often seen as the University of Chicago house journal, and the *QJE* is the house journal of the Cambridge camp (Harvard, MIT and NBER)." This may be an avenue for future research.

Table 3 and is the basis for their (tentative) belief that editorial policies are changing in favor of submissions that give numerous citations to the editors and other journal insiders.[8]

Table 1: Laband *et al*.'s Table 3 (p. 326)

	1985	1990	1995	2000
AER references to *AER* editors and editorial board members, per article	0.396	0.727	1.444	3.022
JPE/*QJE* references to *AER* editors and editorial board members, per article	0.420	0.522	0.826	0.761

Table 1 shows that: 1) in the 1985 volume the rate that *AER* articles cited *AER* editorial insiders was essentially the same as the rates that the JPE and *QJE* articles cited *AER* editorial insiders; and 2) in the 2000 volume the articles in the *AER* cited editorial insiders at a rate at that was four times higher than the rate at which *JPE* and *QJE* publications cited *AER* insiders. This, together with their back of the envelope guesses about the monetary value of the citations, led Laband *et al*. (p. 327) to conclude that ". . . rent seeking motives seem to play a relatively small role in the quality control process in economics." This is the evidence that Laband *et al.* provide to support the hypothesis of editorial favoritism.

The results in Table 1 were from a data set restricted to "articles" - a subset of all AER publications (articles *plus* critical commentary works such as comments replies and rejoinders). Coelho and McClure (2006) constructed a table similar to Table 1, but solely for "critical commentary" pieces that were <u>*excluded*</u> by Laband *et al*.; the critical commentary articles had

[8] Both we and Laband et al. assume citations are a valid metric; however, recent investigations into citing practices suggest that the citation metric may be corrupted/flawed/biased. Journal editors have been known to indulge in the practice known as "coercive citation" to increase their journal's impact factor (Wilhite and Fong, 2012a). If this practice were widespread in economics, it would undermine our usage of citations as a valid metric. Fortunately Wilhite and Fong (2012b; Table S12, pp.40-43) find almost no evidence of coercive citation practices at the *AER*.

virtually no citations to *AER* editorial insiders. Juxtaposing this with Laband *et al.*'s findings in Table 1 led Coelho and McClure to speculate that editorial favoritism might be more important than suggested by Leband *et al*.[9]

In addition, there are a number of deficiencies in the Laband *et al*. study; two major ones are: 1) the sample is for very few years; and 2) there are no controls for other variables such as article length (number of pages), the extent of the bibliography, lead article status, and self-citations. These limitations reduce the confidence that can be ascribed to their analysis and conclusions; they recognize this and describe their results as "tentative" (p. 315). In this study we use a different metric to measure editorial bias and we correct for the limitations inherent in the Laband *et a*l. study.

I. METHODS AND RATIONALE

There are various ways editorial bias can be manifested; here we examine the Laband *et al.* hypothesis that editors favor articles that cite journal insiders. If this form of editorial favoritism exists it may be discovered in a particular journal (*Journal X*) by counting the number of citations to editorial insiders in articles published in *Journal X*. If there is favoritism in *Journal X*, then we expect to find articles in other journals (not *Journal X*) to have differing citation rates for two classes of articles published in *Journal X*. Presumably articles whose acceptance for publication was impacted by their frequent citations to editorial insiders were qualitatively inferior to those published articles with fewer citations to insiders. If this is correct, then those articles published in *Journal X* with few citations to insiders would get more citations in other journals than those *Journal X* articles with many citations to insiders in *Journal X*. Using this

[9] "[W]e suspect that a larger factor was editors' interest in increasing the citations to themselves and their editorial colleagues." (Coelho and McClure, p. 288) Our results contradict their intuition.

rationale we test for favoritism by editorial "insiders" of the *AER* by assessing the effect of citation frequency to *AER*-insiders upon citations in non-*AER* journals.

II. DATA

In April and May of 2008 we used the online databases *JSTOR* and *ISI Web of Knowledge* to collect 3 data sets: *Data Set 1* consists of a listing by author name(s) of all articles, comments and notes published in regular issues of the *American Economic Review* from 1993 to 2000 (there were 652 source articles in *Data Set* 1).[10] We also placed in *Data Set 1* various characteristics of each of the publications; for each *AER* source article we collected the data for: 1) the number of bibliographic references; 2) the number of bibliographic references that were self-references; 3) the number of pages; 4) whether it was a full article, shorter article, or comment; 5) whether it was a lead article;[11] and 6) whether an author was an *AER* insider (the editor, or co-editor, or any member of the board of editors). The data consist of information about the citations to the source articles, the total number of citations to the source articles as well as the number that were from the *AER*, and, finally, a list of the names of *AER* editorial insiders. The names of editorial insiders were taken from the list appearing in the Volume Information portion of each December *AER* issue; editorial insiders were distinguished by whether they were the editor, a co-editor, or a member of the Board of Editors

We used a three-year lag to identify *AER* insiders, which is consistent with Yohe's (1980) procedures; he estimated a total lag for the *AER* of just over two years between article submission and publication. The listing of editorial insiders includes all who appeared as editors

[10] From data set 1 we excluded the: 1) Presidential addresses and Distinguished Fellow articles; 2) the entire "Papers and Proceedings" issues; and 3) the "Nobel Lectures and Survey of Members" issues. We eliminated one observation from our data because of a missing value. Our data set and documents defining and describing the data are available at available at http://www.bsu.edu/economics/workingpapers.

[11] If a Presidential Address or Distinguished Fellow Article is excluded, then the next article afterwards was counted as the "lead article".

in the three years prior to the year of publication; to illustrate an article published in 1994 would be combined with the *AER* insiders for the years 1991-1993. All data were entered onto *Excel* spreadsheets and subsequently put into *Eviews* software.

III. ESTIMATION AND RESULTS

We estimate an equation of the form shown in equation (1):

$$Y = C + \sum \alpha_i X_i + \varepsilon, \qquad (1)$$

where: a) the dependent variable (Y) is the number of citations per year found in non-*AER* journals to the *AER* source articles; b) C is a constant; c) X_1 is the number of pages in the *AER* source article; d) X_2 is the number of self-references to the author(s) found in the bibliography of the source article; e) X_3 is a dummy variable for lead article status: f) X_4 is the number of references in the source article to people who were on the *AER's* Board of Editors; g) X_5 is the number of total references in the source article's bibliography; and h) X_6 is the number of references in the source article to *AER* editor and coeditors; and finally i) ε is an error term.[12]

Table 2 provides the summary statistics for the data employed in the regressions:

TABLE 2: Summary Statistics for variables used in Regression Equation (1)

	Y	**X_1**	**X_2**	**X_3**	**X_4**	**X_5**	**X_6**
Mean	3.50	15.81	2.02	0.49	0.68	25.88	0.301
Median	2.07	16.00	2.00	0.00	0.00	25	0.00
Maximum	36.56	53.00	18.00	1.00	5.00	112.00	7.00
Minimum	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Std. Dev.	4.43	7.17	2.13	0.216	1.12	14.61	0.85
Observations	651	651	651	651	651	651	651

The summary data in Table 2 reveal that the dependent variable (Non AER Cites Per Year) has a problem with outliers; the mean is approximately 3.5 while the maximum is approximately 36.6

[12] All these data are available from the authors on request. The managing editor was excluded from consideration. The lists of insider names were entered in Excel spreadsheets that listed last name, first name and middle initial, and then combined to form the listing of editors for a three year window designed to capture lags.

(the ten-fold difference between the mean and maximum is clear evidence). To correct for outliers we truncated the data set excluding all observations with 16 or more citations per year. This reduced the number of observations to 632, and the mean of the dependent variable fell to approximately 3 with a maximum value of 15.2.[13] In estimating equation (1), we used the truncated sample of 632 observations (available at http://www.bsu.edu/economics/workingpapers; there we report results using the full sample).

In the regression equation we test for biases on the part of two groups of editorial insiders: 1) the editor and co-editor(s); and 2) all other members of the Board of Editors. If there were favoritism that reduced the rate of citation in non-AER journals, then the estimated coefficient on either one or both variables would be negative (i.e., making $\alpha_4 < 0$ and $\alpha_6 < 0$). The other variables are ones that have been significant in previous studies. The expected coefficient signs are: α_1 (the number of pages in the *AER* source article) *positive*; α_3 (the dummy variable for lead article status) *positive*; and α_5 (the number of total references in the source article's bibliography) *positive*. We expect the sign of α_2 (the number of self-references to the author(s)) to be *negative* following the usual academic prejudice against self-citations and author narcissism. Repeating ourselves, the test for editorial bias lies in the coefficients for X_4 and X_6; if these coefficients are positive and significant, then the hypothesis of editorial bias in favor of citations to *AER* insiders has been contradicted.

[13] We are indebted to a reviewer of this journal who suggested that we provide summary statistics and conduct tests for robustness. A table complementing Table 2 for the truncated sample is found at available at http://www.bsu.edu/economics/workingpapers.

Table 3:
Regression Results for Equation (1)

Dependent Variable: Non-AER cites per year (Y)
Method: Least Squares
Sample (adjusted): 1 632
Included observations: 632 after adjustments
Newey West HAC Standard Errors & Covariance (lag truncation = 6)

Independent Variables (aspects of A*ER* source articles)	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob**.
$\mathbf{X_1}$: Number of pages	0.110	0.020	5.579	0.000
$\mathbf{X_2}$: Number of self-references	0.156	0.061	2.551	0.011
$\mathbf{X_3}$: Lead article (1=yes, 0=no)	1.343	0.538	2.498	0.013
$\mathbf{X_4}$: Number of references to *AER* board-of-editor members	0.001	0.113	0.012	0.990
$\mathbf{X_5}$: Total number of references in bibliography	0.021	0.013	1.692	0.091
$\mathbf{X_6}$: Number of references to the *AER* editor and co-editors	0.103	0.117	0.878	0.380
C: Constant	0.249	0.222	1.122	0.262

R-squared	0.192	Mean dependent variable	2.921
Adj. R- squared	0.184	S.D. dependent variable	2.838
Std. Error	2.564	Akaike info criterion	4.732
Sum of squared residuals	4108.546	Schwarz criterion	4.781
Log likelihood	-1488.301	Hannan-Quinn criter.	4.751
F-statistic	24.701	Durbin-Watson stat	1.869
Prob. (F-statistic)	0.000		

Table 3 presents our statistical analysis. The regression coefficients for editorial bias are unambiguous; the coefficient estimates for X_6 (the number of references to the *AER* editor and co-editors) and X_4 (the number of references to *AER* board-of-editor members) are positive and insignificant rather than negative and significant. Source articles that cite insiders at greater rates do not garner fewer citations in independent journals than source articles that cite insiders less

frequently; in other words, there is no evidence of favoritism attributable to *AER* editorial insiders.[14]

As seen in Table 3, the estimated values for α_1, α_3, and α_5, are all of the expected signs and significant (at the 2% level for the first two and at the 10% level for the latter). Contrary to our priors, the sign of the coefficient (α_2) for self-citations is positive and highly significant. Upon reflection this result makes sense: suppose there is an academic bias against self-citation, then any article with many citations to its authors will have a harder time being accepted, *ceteris paribus*, than an article with fewer self-citations. In published articles with many self-citations, the editorial/refereeing process will have winnowed the number of gratuitous self-cites; the ones left are likely to be pertinent and important. Given a prejudice against self-citations, this rationale suggests that articles with many self-citations are likely to be qualitatively superior to pass editorial/referee processes. The sign and significance of the coefficient is consistent with this *ad hoc* reasoning.

Similar thinking about the editorial/refereeing process may explain the sign and robustness for the coefficient for editorial insiders. If we take as a given that editorial insiders on the masthead of the *AER* are expert in their specialties, then we would expect the refereeing process to assign them a disproportionate number of submitted papers that deal with their sub-discipline. Out of the submitted papers, the editorial insiders are best able to judge the quality of papers in their sub-discipline, and they are most confident about the quality of papers they assess when those papers deal with subjects they know well. Insiders who are cited voluminously in an article are likely to be particularly knowledgeable about the subject matter of that paper. This

[14] At http://www.bsu.edu/economics/workingpapers there is the regression for the full sample without eliminating outliers for the dependent variable. The full sample run, like the restricted sample run, evinced no favoritism (the coefficients on the insider variables were not negative **and** significant).

implies that submitted papers that cite insiders frequently are not chosen because of their citations, but because insiders are confident in their ability to assess their quality. The increased number of citations to the insider may reflect superior knowledge. Conversely, we expect knowledgeable referees would also summarily reject papers in their sub-discipline that they deem qualitatively inferior. We do not know the characteristics of papers that were submitted to and *rejected* by the *Review,* but if we are correct (expert insiders recognize quality most easily in their specialty) then we would expect the outright rejection rate (as distinct from a revise and resubmit or a half-hearted response) for submitted papers who cite insiders frequently to be greater than for those submissions that do not cite insiders frequently.

We ran regression models with a variety of alternative specifications (different explanatory and/or alternative dependent variables); the alternative specifications are a way of assessing the robustness of the model.[15]. These are not reported upon in their entirety here (they are all available at http://www.bsu.edu/economics/workingpapers along with all the data), but some alternative specifications are worth discussing: First, replacing the dependent variable (non-*AER* cites) with either all citations in all journals, or to just citations that appeared in *AER*, left the results substantially unchanged. (As expected in the latter case the size of the coefficients changed because the number of citations in all journals dwarfed the number in the *AER* specification). In the mirror regression of equation (1) that replaces non-*AER* cites per year with *AER* cites per year, the coefficient on references to board of editor insiders is positive and consistent with the results of Laband *et al*. that we reproduced in the first row of Table 1 of this paper. Secondly, the results in Table 3 were essentially unchanged when a regression included a dummy variable distinguishing comments from regular articles (the dummy was one for articles,

[15] This is consistent with Leamer's (1983, 1985) recommendations to investigate alternative econometric specifications.

and zero for comments, replies, or rejoinders); the coefficient for the dummy was positive and significant indicating that articles were cited more frequently than other communications.[16] Thirdly, to address the possibility raised by an anonymous referee of a "threshold effect", the website provides results for a regression where independent variables X_4 and X_6 (numbers of references to board of editor members and to editor and coeditor) are replaced with an any-insider-references dummy variable (equal to one if there are references to insiders and zero otherwise); the results do not suggest the existence of threshold effects.

IV. CONCLUSIONS AND COMMENTS

Editorial bias may manifest itself in a variety of ways; this paper examines the hypothesis that selection procedures favor submissions that cite journal insiders frequently. The paper also introduces a new methodological tool for testing journal bias.[17] To test this hypothesis we used data from the *AER* and the number of citations to *AER* publications that appear in non-*AER* journals. Whether citations in non-*AER* journals is the appropriate metric to measure editorial bias can be debated; in our defense we are not aware of any alternative measures of bias available at a reasonable cost. However, our ignorance of alternatives does not mean that other measures do not exist. So a weakness of our study may be the choice of dependent variable that measures editorial bias. We have attempted to use a sample size, procedures, and methods to correct for the omissions and limitations that bedeviled other studies of this hypothesis. Using our expanded sample and controls, we found that citations to insiders in articles in the *AER*

[16] Robert Whaples (2006) argued that the increased number of citations to regular article was a reason for the decline in critical commentary in journals in economics; the data reported here are consistent with his reasoning.

[17] Our methodology of using metrics from differing sources can be used to test whether specific authors/topics/categories are cited at different rates. For example a time series of the citations to Nobel Laureates may separate economics journals into those printed in English versus non-English. A comparison of the citations in these two groups, before and after awards, would be interesting.

increased the frequency of citations in non-*AER* journals. The evidence is robust; our findings are precisely opposite of what one would expect if submissions were judged on criteria other than intellectual merit. Given our metric, sample, and procedures, we do not find any significant support for the hypothesis of editorial favoritism.

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