A STUDY OF THE PUBLICATION OF
SCHOLARLY OUTPUT IN ECONOMICS JOURNALS

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INTRODUCTION

Editors of economics journals face several interesting and complex decisions, including but not necessarily limited to (1) the choice of appropriate referees, (2) the evaluation of subsequent reviews, (3) the acceptance and rejection alternatives, and (4) given acceptance, the determination of the amount of space (number of journal pages) allocated to a manuscript in light of the quantity and quality of competitive submissions. The amount of space allocated to authors by journal editors captures two aspects of editorial decision-making. First, it reflects the acceptance decision relative to a specific manuscript. Second, it allows for an evaluation of the relative length of published articles from authors of varying backgrounds and affiliations. In these respects, article length has a distinct advantage over merely counting the number of articles published in a specific journal in evaluating choices made by journal editors.

Part of the difficulty in formally evaluating the space allocation aspect of editorial decision-making, however, is that there is no well-articulated theory of the editorial process. It may be reasonably argued that authors of submitted manuscripts believe that editors should attempt to maximize the expected impact that articles they publish will have on subsequent scientific thought. This suggests that a manuscript should be evaluated solely on the basis of its expected (marginal) contribution to scientific knowledge, not on the basis of subjective criteria [Vandermeulen, 1972]. On the other hand, evaluation of manuscripts by editors may include discretion towards former and current graduate students, colleagues, or faculty of the "top" schools or economics departments. Discussions of various kinds of editorial discretion of this type have been raised in the economics literature with increasing frequency [Ferber, 1980; Laband, 1985; McDowell and Amacher, 1986; Blank, 1991] , noting both the positive and the negative aspects of the process.[1]

The lack of a well-specified and widely-accepted theory of editorial behavior limits our ability to evaluate space allocation across the journals in our sample. For purposes of this present study we will assume that editors represent respective groups of scholars and that these same scholars empower editors to function as "gatekeepers of knowledge" [Crane, 1967] in part by expecting editors to utilize their wide network of contacts and knowledge of authors, departments and institutions. This assumption allows us to evaluate the observed differences in space allocation among authors with different professional and personal characteristics.

Editorial decision-making, of course, may vary across journals, depending upon the individual editor's goal and objectives. Some editors may wish to maximize their personal influence in the profession, others to further a political agenda, and still others to perhaps act as information broker, using the journal as a vehicle toward each of these goals. Thus, an editor may have incentives to allocate scarce space disproportionately to those authors with whom the editor has one of various possible affiliations. Affiliation and perhaps reputation serves as an information and quality filter mechanism, raising the efficiency of the decision-making process, at least from the editors' point of view.

For example, the decision to allocate space to a manuscript in monetary economics submitted by a University of Chicago graduate who has previously published in top journals, is likely to result in the publication of higher quality manuscripts than the acceptance of a competing manuscript from a lesser known author, independent of reviewers' comments and recommendations. This latter consideration is consistent with both the goal of maximizing the personal influence of the editor as well as that of devoting journal space to manuscripts that the editor perceives will advance the literature and the profession in general. In this sense, the editors may either substitute their judgment of the value of an author's average contribution from previous papers published by that author (or their department or school) for the estimate of the marginal contribution of the manuscript under consideration, thus allocating it more journal space[2] or use the personal affiliation in conjunction with reviewers' evaluation of marginal contributions to the profession, perhaps as a weighting or an adjustment factor.

The purpose of this paper is to test the hypothesis that the allocation of space (number of pages) in economics journals is affected by affiliations between author(s) and the editors and co-editors of the journals to which a manuscript is submitted. We find evidence suggesting that the average article length is affected by previously established and currently existing affiliations. Furthermore, our analysis suggests that gender plays almost no role in the review process used by specific journals.

This paper is organized in the following manner. The next section describes the data bases employed in this analysis. This is followed by a discussion of the model construction and the empirical results. Concluding observations constitute the final section of the paper.

DATA

We reviewed each article (defined here to include notes) published in 29 economics journals[3] during 1984, 1985, and 1986, excluding comments and replies. For each article, we obtained, by journal and issue, the author's name and employer,[4] the length,[5] the number of citations subsequently received[6] and the field[7] classification. More detailed information on each author, including the school of highest degree, was obtained from the "Biographical Listing of Members" (the Listing) found in the December 1985 issue of the *American Economic Review* (AER). We also assembled data on the school of degree and current employer of each journal editor and co-editor of each of the 29 journals analyzed.

Since gender data are not contained in the printed version of the Listing, we used a computer readable tape of the Listing to discern gender. Employment affiliations served as a cross-check for accurate identification. Since a surprisingly large proportion of women economists do not belong to the American Economic Association (AEA), however,

we used an additional Committee on the Status of Women in the Economics Profession (CSWEP) — the largest organization of women economists in the country — data base of its 4,200 member. The gender for about 15 percent of the authors is obtained from the CSWEP data base.

The procedure outlined above generated observations on 3,396 authors of 2,426 articles published in the leading 29 economics journals published in 1984, 1985, and 1986 and edited by 156 editors and co-editors. The resultant data set is unique, containing a level of detail heretofore unavailable for this type of economic analysis.

MODELS OF ARTICLE LENGTH

The amount of journal space allocated to specific authors is dependent upon at least three factors: (1) the editor's perceived quality of the article, (2) overall space considerations, and (3) common affiliations of editors (co-editors) with authors.

We use counts of citations (*CITS*) in the period following publication (1986-88) as a proxy for article quality. Presumably, articles perceived by an editor or co-editor to be relatively high quality are given larger space allocations. Subsequent citations can be regarded as an *ex post facto* verification of the editor's quality judgments.[8]

Journal size is adjusted by *JLSIZ*, a variable that assigns a number to articles based upon the average size of the source journal, an approach stemming from a procedure used by Laband [1985]. Specifically, a scale variable from zero to one is constructed as follows. Average article length is calculated per journal in *AER*-equivalent size pages. Each journal specific mean is divided by the highest mean, which assigns a value of one to the journal with the longest average article length and declining values to journals as their average article length falls.

To test for differences in the allocation of space to authors by journal editors and co-editors, we constructed a dummy variable, *AFFIL*, equal to one if there is a previously established or current affiliation between the author(s) of an article and the editors or co-editors. Four types of common affiliations are analyzed: (1) the author's Ph.D. is from the same school as that of either the journal editor or co-editor, (2) the school of the author's Ph.D. is the same as the school publishing the journal, (3) the author's current employer is the same as that of the editor or co-editor, and (4) the author is in the economics department publishing the journal.

To complete the first model, equation (1), a dummy variable *BLIND* is added equaling one whenever a journal maintains a non-blind review process.[9] The sign and magnitude of the estimated coefficient on the review process variable are uncertain.

$$(1) \quad ADJPAG = \beta_0 + \beta_1 CITS + \beta_2 JLSIZ + \beta_3 AFFIL + \beta_4 BLIND + \epsilon.$$

To test the hypothesis that the gender of authors affects space allocation, we include the dummy variable *GENDER* in equation (2). *GENDER* is equal to one whenever a woman is identified as an author of an article. A negative sign on the estimated coefficient would suggest a negative impact upon women in space allocation by editors or co-editors.

$$(2) \quad ADJPAG = \beta_0 + \beta_1 CITS + \beta_2 JLSIZ + \beta_3 AFFIL + \beta_5 GENDER + \epsilon.$$

TABLE 1
Definition of Variables

Variable	Definition
ADJPAG	Length of journal article in *AER* page equivalents.
CITS	Number of citations, excluding self-citations.
JLSIZ	Adjustment for journal size.
AFFIL	Professional relationships between authors and editor and co-editor.
BLIND	1 if article was reviewed under a blind review process. 0 if article was reviewed under non-blind review process.
GENDER	1 if article has at least one woman author. 0 if article is not authored by a woman.
INTERACT	BLIND x GENDER.

Finally in equation (3), we construct the interaction term (*INTERACT*), to test the hypothesis that non-blind review processes will specifically affect the average article length of woman-authored manuscripts [Ferber and Teiman, 1980].

$$(3) \quad ADJPAG = \beta_0 + \beta_1 CITS + \beta_2 JLSIZ + \beta_3 AFFIL + \beta_4 BLIND + \beta_5 GENDER + \beta_6 INTERACT + \epsilon.$$

Table 1 contains a list and a definition of the variables employed in our analysis. Results of the empirical estimation are detailed in the following section.

EMPIRICAL RESULTS

Table 2 presents the results of ordinary least squares (OLS) regressions on the three hypothesized equations outlined above. These were performed for the total data set. As postulated, article quality (proxied by total number of subsequent citations) and the average length of articles published (in the specific journal) are significant, positive determinants of *AER*-equivalent page length. Coefficients on both *CITS* and *JLSIZ* are significant at the .01 level. Interestingly, the estimated coefficient on the author-(co)editor affiliations suggests evidence of larger space allocation to either those authors with "Alumni" or current employer affiliations. These results hold over all specified equations and support the work of Laband [1985].

The non-significance of dummy variables *BLIND* and *GENDER* reveals the lack of influence that the review process and gender of the authors have on average article length. The conclusion differs sharply with preconceived expectations and with the findings of Sawhill [1987]. Furthermore, the inclusion of the interaction term in the final regression suggests that even when the gender of the author is known, this information appears to play no role in space allocation decisions. Laband [1987] reports no difference beween articles authored by men and women in terms of the quality of material published.

TABLE 2
Determinants of Page Allocation Across 29 Economics Journals

Variable	EQUATION 1	2	3
CONSTANT	-0.92 (-2.41)	-0.94 (-2.51)	-0.93 (-2.48)
CITS	0.26 (7.19)	0.26 (7.19)	0.26 (7.19)
JLSIZ	0.39 (35.1)	0.39 (35.5)	0.39 (35.4)
AFFIL	0.96 (3.38)	0.96 (3.38)	0.96 (3.39)
BLIND	-0.04 (-0.15)		
GENDER		0.06 (0.15)	-0.31 (-0.50)
INTERACT			0.65 (0.81)
R^2	.350	.350	.350
$\bar{R}^2$	.349	.349	.348
N	2624	2624	2624

t statistics are in parentheses.

Table 3 reports comparisons of *AER*-equivalent size page length of articles published by affiliated and non-affiliated authors by economic fields. Estimated regression coefficients on *AFFIL* (β_2), *BLIND* (β_4) and *GENDER* (β_5) are also reported. Seven out of the ten *JEL* classified economic fields reveal statistically significant differences in space allocation based upon previously established author-(co)editor affiliations (*AFFIL*), all in the expected directions. These differences range from as little as 0.85 (approximately five percent of average article length) of a page in the field of monetary economics to as much as 2.82 (approximately ten percent of average article length) pages in labor economics.[10] Additionally, all ten economic fields showed differences in direction consistent with affiliated authors in terms of Mean Article Length.

The estimated coefficients on *GENDER* reveal a curious phenomenon. In the field of quantitative methods, women-authored articles receive significantly fewer pages, (-2.7), than articles authored by men. On the other hand, women authored articles within the field of industrial organization received statistically significant larger page allocations. One possible explanation for these findings is that there are proportionally more women working within the field of industrial organization than quantitative methods. Among the ten specialties used by the *JEL* in classifying economics articles, quantitative methods has the smallest proportion of women indicating this field as one of their fields of specialization while industrial organization has the largest. Women are present in almost equal proportions across the remaining eight specialties.

TABLE 3
Comparisons, By Field, Of Affiliated and Non-Affiliated Authors

JEL classification	Mean Article Length Affil.	Mean Article Length Non-Affil.	Regression Coefficients Affil(β_2)	Regression Coefficients Blind(β_4)	Regression Coefficients Gender(β_5)
General Economics	14.1	12.4	1.45[b]	0.41	0.78
Economic Growth & Development	16.9	11.6	2.25[b]	-1.15	0.20
Quantitative Methods	16.4	12.6	1.63[c]	0.66	-2.70[c]
Monetary & Fiscal Theory	13.9	11.3	0.85[c]	-0.33	0.47
International Economics	14.1	11.7	0.41	-0.56	-0.48
Business Finance, Marketing & Accounting	18.1	11.4	2.10	0.18	2.30
Industrial Organization	15.2	11.5	1.16[b]	-0.29	1.51[c]
Agriculture & Natural Resources	12.7	9.2	-0.85	-0.01	-0.05
Manpower & Labor	15.9	11.0	2.82[a]	-0.39	-1.11
Welfare Economics	15.0	12.2	1.57[b]	0.43	0.28

[a] indicates significance at the 1 percent level.
[b] indicates significance at the 5 percent level.
[c] indicates significance at the 10 percent level.

CONCLUSION

The purpose of this analysis is to investigate the space allocation decision of published academic research in 29 leading economic journals using a three-year period of 1984, 1985, and 1986 as our sample. Particular interest is focused on the possible effects of previously held affiliations between the author(s) and the (co)editor(s) in these decisions. Hypothesized equations are constructed to test the effect journal review processes and gender have upon space allocation. Additionally, differences in space allocation between affiliated and non-affiliated authors are compared by ten *JEL* fields.

Our results suggest that the review process (blind vs non-blind) and gender (with the exception of two *JEL* fields) have no impact on space allocation or average article length. These findings parallel Blank's [1991] conclusions that referee manuscript ratings or acceptance rates are unaffected by gender. However, in all economic fields, mutual affiliations between authors and journal editors and co-editors do play a role. The networks established in graduate school or through current employment appear to be a significant factor which affect editorial decisions regarding space allocation among competing manuscripts.

NOTES

1. Similar discussions exist in areas outside of economics. In sociology, for example, a now classic article by Crane [1967] reports the suggestion of a "halo" effect resulting from author's academic affiliation which often impedes objective evaluation by editors. In natural science, Ceci and Peters [1990] concluded that the double-blind review process may be one way to prevent reviewers from being influenced by institutional affiliations. Finally, the psychology literature [Mahoney, 1977; Moore, 1978] emphasizes that referee evaluations may be affected by knowledge of gender or by ideological and methodological commonalities.

2. Several major journals (such as the *Southern Economic Journal*) are well known for their policy of declining to publish papers despite positive referee reviews. In these cases, the editor often cites space constraints as the overriding criterion.

3. The journals used in this study are *American Economic Review*, *American Journal of Agricultural Economics*, *Brookings Papers on Economic Activity*, *Canadian Journal of Economics*, *Econometrica*, *Economic Journal*, *Economic Inquiry*, *Economica*, *International Economic Review*, *Journal of Law and Economics*, *Journal of Economic Literature*, *Journal of Human Resources*, *Journal of Mathematical Economics*, *Journal of Money, Credit and Banking*, *Journal of International Economics*, *Journal of Political Economy*, *Journal of Economic Theory*, *Journal of Monetary Economics*, *Journal of Finance*, *Journal of Econometrics*, *Journal of Public Economics*, *Journal of Financial Economics*, *National Tax Journal*, *Quarterly Journal of Economics*, *Rand Journal*, *Review of Economic Studies*, *Review of Economics and Statistics*, *Scandinavian Journal of Economics*, and *Southern Economic Journal*. See Column 3 of Table 1, in Liebowitz and Palmer [1984] for a ranking. These researchers rank journals by the number of citations of articles published between 1975 and 1979.

4. The author's name and employer are generally contained on the title page of each article. When there is doubt as to employer or school of degree, university catalogs are consulted. Visiting professors (at a government agency, for example) are counted with their home school.

5. As is common practice, the length of an article is adjusted to *American Economic Review* page equivalents.

6. Citation counts were obtained using the *Social Science Citation Index* for 1986, 1987, and 1988. The number of citations are adjusted to exclude self-citations. Since this index attributes citations only to the first authors, the index is searched for the particular citation associated with the multiple authored work.

7. Each article is classified within the fields identified in the *Journal of Economic Literature* (*JEL*) "Classification System for Articles and Abstracts."

8. There are, of course, disagreements over the use of citations as a proxy for quality. See, in particular, Stigler and Friedland [1975], Liebowitz and Palmer [1984], Ferber [1986], and Laband [1990].

9. A list of the reviewing practices of economics journals is found in the *CSWEP Newsletter* [October 1989].

10. An examination of regressions by journal on the AFFIL variable reveals that three journals, *Econometrica*, *International Economic Review*, and *Journal of International Economics*, contain significant coefficients on the affiliation of authors to editors and co-editors. Several other journals had t-values near the 10 percent level of significance.

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