

MAJOR JOURNALS IN ECONOMICS:

A USER STUDY

by

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A User Study

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I.	Introduction	1
II.	The Literature on Scholarly Communication and the Economics Journals	3
III.	Research Method	4
	The Population	4
	The Sample	4
	The Questionnaire	5
	The Rate of Response	7
	Characteristics of the Respondents	8
IV.	The Respondents' Attitudes Toward the Journals	9
	Sources of Copies of Journals in the Survey	9
	Reasons for Not Examining Journals	11
	Personal Subscriptions to Journals in Economics	13
	Evaluations of Technical Levels	17
	Evaluations of Overall Quality	19
	Opinions and Suggestions Offered by the Respondents	23
V.	The Reading of Articles	30
	Number of Readers per Article	30
	Summary of Additional Findings	35
	Intensity of Use	35
	Concentration of Reading Among the Respondents	35
	The Purposes for Which Articles Are Read	36
	Evaluations of the Usefulness of Individual Articles	36
	Special Survey Questions Relating to the <u>AER</u>	37
	Special Survey Questions Relating to the <u>JEL</u>	37
	Mathematics and the Number of Readers	38
	The Supply and Demand for Articles by Field of Specialization	39
VI.	Conclusions and Policy Issues	40
	References	42

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I. INTRODUCTION

The vitality of the media of scholarly communication has become the focus of intense interest among scholars, publishers, librarians, and academic administrators. Much concern has centered on the ability of publishers, particularly of primary research journals, to continue to meet the needs of the rising number of scholars who require channels for disseminating the results of their research and the needs of the users of the output of these research efforts. As the relative cost of traditional publishing has risen, and as the acquisitions budgets of libraries have tightened, subscription prices of journals have increased rapidly, inducing or compelling librarians to become more selective in their buying. Moreover,

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personal subscriptions to many research publications have declined, further eroding the base of financial support for scholarly journals. If we are in fact in the midst of an "information explosion" while at the same time confronted by an "economic impasse" in some of the knowledge-dissemination enterprises,¹ a better understanding of the habits, attitudes, and needs of the end user of research results is essential. Only then can improvements in journal-publishing programs be made by professional societies, editors, and publishers and in subscription policies by the library community.

This study is an attempt to investigate how some of the major, nonspecialized journals in economics, together with a few of the journals that coincide with certain fields of specialization, are used by a sample of the members of the American Economic Association. An effort is also made to infer the degree to which economists are satisfied with their journals as tools of research, aids in teaching, and media of current awareness. No attempt is made to study the archival use of journals.

Section II provides a brief review of the literature on scholarly communication. Descriptions of the population under study, the samples chosen, and the survey instrument used in this study are given in Section III. Section IV presents findings on several aspects of the respondents' attitudes toward and evaluations of each of the journals under study. Section V presents findings on the respondents' use of articles appearing in selected issues of the journals. Conclusions and policy issues are discussed in Section VI.

¹ See Fritz Machlup, "Publishing Scholarly Books and Journals: Is It Economically Viable?" Journal of Political Economy, Vol. 85 (February 1977), pp. 217-225.

II. THE LITERATURE ON SCHOLARLY COMMUNICATION AND THE ECONOMICS JOURNALS

Over the past decade, economists have taken a careful look at the production and distribution of the professional literature, particularly that of the research journals. These largely introspective examinations coincide with the interest of those who have been investigating developments in science in general [de Solla Price, 1962], in chemistry [Kuney and Weisgerber, 1970], in physics [Operations Research Group, Case Institute of Technology, 1960] and in psychology [American Psychological Association, 1973]. Among the topics covered by studies on the economic literature are: manuscript-acceptance policies of economics journals [Coe and Weinstock, 1967 and Weber, 1972]; a history of the editorial policies of five major journals [Coats, 1971]; publication practices of the AEA compared with other professional societies [Berg, 1971]; journals publication and the reputation of academic departments [Siegfried, 1972, Niemi, 1975]; the potential uses of the computer in improving information services in economics [Ruggles and Ruggles, 1972]; a survey of economists to ascertain prestige-rankings of journals [Hawkins, Ritter and Walter, 1973]; the rate of growth of production of articles in economics [Lovell, 1973]; a quality index for journals [Bush, Hamelman, and Staaf, 1974]; the information flows in the network of economics journals [Eagly, 1975]; the influence of the emphasis on statistically significant results in empirical work on the quality of articles published in the journals [Feige, 1975]; publication records and the Nobel Prize [Quandt, 1976]; and the distribution of articles over subfields of economics and the degree to which empiricism dominates economists' research. [Perlman and Perlman, 1977].

The present study goes beyond previous efforts by investigating

the attitudes and needs of users of the economics journals, with particular regard to the quality and technical levels of selected specialized and nonspecialized journals and of the articles published in them.

III. RESEARCH METHOD

The data for this study were obtained by means of a mail questionnaire sent to a sample of members of the American Economic Association. A description of the population under study, the sample chosen, and characteristics of the group of respondents will provide a helpful foundation for the analyses that follow.

The Population

Individuals residing in the United States who are members of the American Economic Association comprise the population under study here. We focus on this group because it includes those who are likely to be familiar with research journals in economics and because it would have been too costly to try to identify and survey nonmember economists.² Furthermore, a pretest of the questionnaire indicated that few members living or working abroad were likely to respond.

The Sample

A questionnaire was sent to a random sample of 1,695 members of the American Economic Association. Approximately 1,100 of this group were

² The population under study contains a relatively large number of academic economists and relatively few business economists. According to the 1970 Census of the Population, the number of economists in the United States was an estimated 67,000. On the AEA mailing list obtained in the spring of 1976, there were 15,860 names of economists based in the United States. It seems safe to assume that a disproportionate number of the nonmembers are business economists and government economists.

selected from a mailing list, supplied by the Association, of individual members residing in the United States. Questionnaires pertaining to nine nonspecialized economics journals were sent to all members in the selected sample. From the most recent edition of the Directory of Members³ we chose 266 members who list their primary field of specialization as "Domestic Monetary and Fiscal Theory and Institutions" (AEA field classification code 300, excluding 320)⁴ and 296 members who list their primary field of specialization as "Manpower; Labor; Population" (AEA field classification code 800). For the former group we included questions on two journals in the field of monetary economics; for the latter group we included questions on three journals in the field of labor economics. The purpose in choosing supplementary samples of specialists was to obtain information on the variation in reading habits among members of different fields of specialization. We chose labor economics and monetary economics because these two fields are served by a variety of specialized journals. Throughout this paper we shall refer to these three groups as the General Group, the Monetary Group, and the Labor Group.

The Questionnaire

The questionnaire included three sections: (1) requesting personal information about the respondent; (2) inquiring about the respondent's familiarity with and evaluation of individual journals; and (3) requesting

³ The American Economic Review Directory of Members, Vol. 64, No. 5, October 1974.

⁴ The members listed as specializing in "Fiscal theory and policy; public finance" were excluded from this part of the survey.

data pertinent to the respondent's reading behavior with regard to individual articles that appeared in selected issues of each of the journals included in the study. Only a single copy of the section on personal data was in each package, whereas of the other two sections there had to be a separate form for each journal.

The following "high-prestige" journals⁵ were included on the questionnaire sent to all three groups of respondents:

<u>Journal of Economic Literature</u>	<u>JEL</u>
<u>American Economic Review</u>	<u>AER</u>
<u>American Economic Review - Papers and Proceedings</u>	<u>AER/P&P</u>
<u>Journal of Political Economy</u>	<u>JPE</u>
<u>Quarterly Journal of Economics</u>	<u>QJE</u>
<u>Econometrica</u>	<u>Ecm</u>
<u>Economic Journal</u>	<u>EJ</u>
<u>Review of Economics and Statistics</u>	<u>ReStat</u>
<u>Review of Economic Studies</u>	<u>ReStud</u>

In addition to these nine journals, sections pertaining to the following two specialized journals were included in the questionnaires sent to the Monetary Group:

<u>Journal of Money, Credit and Banking</u>	<u>JMCB</u>
<u>Journal of Finance</u>	<u>JF</u>

Sections covering the following three specialized journals were included in the questionnaire sent to the Labor Group:⁶

<u>Journal of Human Resources</u>	<u>JHR</u>
<u>Industrial Relations</u>	<u>IR</u>
<u>Monthly Labor Review</u>	<u>MLR</u>

⁵ Selection of the nonspecialized journals was based on their high prestige ranking in the survey by Hawkins, Ritter, and Walter [1973].

⁶ Owing to the need to thold the questionnaire down to a manageable size, it was not possible to include more of the specialized journals in the monetary and labor fields.

The abbreviations shown here will be used to refer to the journals throughout the paper.

The issues of the journals chosen for Section 3 of the questionnaire were published during the fall of 1975. The questionnaires were sent out in July 1976, thereby providing sufficient time for most respondents to have read the journals.

The Rate of Response

The approximate size of the three populations, the size of the sample chosen from each and the number of responses obtained are given in Table 1. Considering the size and complexity of the questionnaire

TABLE 1 *Population Size, Sample Size and Number of Responses*

	<i>Estimated population</i>	<i>Size of sample</i>	<i>Number of responses</i>	<i>Response rate</i>	<i>Responses as a percentage of population</i>
<i>General Group (AEA mailing list)</i>	15,860	1,133	317	28%	2%
<i>Monetary Group (Directory)</i>	1,060	266	58	22%	5%
<i>Labor Group (Directory)</i>	1,181	296	80	27%	7%
<i>All groups</i>	15,860 ^a	1,695	455	27%	3%

^a The population of labor economists and monetary economists, chosen from the Directory is also included in the mailing list. These specialists are not added to the population of the General Group in order to avoid double counting.

used in the survey, the response rates shown here cannot be considered disappointing.

Some of the analyses that follow will be based on the combined sample of 455 respondents of all three groups. However, where it is likely that the specialization of the respondents may affect the outcome of a particular analysis, separate results will be presented for the General Group of 317 respondents, the Monetary Group of 58 respondents, and the Labor Group of 80 respondents.

Characteristics of the Respondents

The distribution of respondents among chief field of specialization is quite similar to the distribution for the larger group of members whose specializations are listed in the Directory of Members. With regard to job affiliation, the majority of the respondents, 65 per cent of the three groups combined, are affiliated with academic institutions. The greatest portion of these, 44 per cent, are faculty at an academic institution having a graduate program in economics; 14 per cent are faculty at an academic institution without graduate programs; 7 per cent are students. Those working for governments account for 14 per cent of the total while business economists account for 10 per cent. The remaining 11 per cent are with independent research organizations or with any remaining possibilities. Both groups of specialists contain a higher proportion of academic economists than does the General Group. The relative proportions of business economists and government economists are reversed for the two specialized groups. The Monetary Group is composed of 18 per cent business economists and 3 per cent government economists while the corresponding figures for the Labor Group are 1 per cent and 17 per cent.⁷

⁷ Additional information about characteristics of the respondents can be obtained from the authors.

IV. THE RESPONDENTS' ATTITUDES TOWARD THE JOURNALS

In this section we shall report on the results of the survey that derived primarily from the second section of the questionnaire. Here we asked the respondents whether they had examined the particular journals, what kind of access they had to them, and what they thought of the overall quality and technical levels of each.

Sources of Copies of Journals in the Survey

For each journal included in the survey, we asked: "Did you examine this journal in 1975?" Those respondents who answered in the affirmative were asked to specify how copies of the journal had been obtained. The choices were: personal subscription, employer's subscription, academic library, public library, business or special library, and other. Table 2 presents the distribution of responses to these questions.

We have organized the responses into three categories: those who did not answer the questions, those who answered that they had not examined the journal, and those who said that they did examine the journal, either frequently or occasionally, in 1975. A large proportion of the respondents, 97 and 96 per cent respectively, examined the AER and JEL and 90 per cent examined the AER/P&P. These results are not surprising, since the sample consisted of members of the Association who receive all three publications as a benefit of membership. Among the other nonspecialized journals in our sample, the JPE was examined by the largest number of respondents (62 per cent), followed by ReStat (46 per cent), QJE (44 per cent), EJ (37 per cent), Ecm (33 per cent) and ReStud (22 per cent).

TABLE 2 *Distribution of Responses Concerning the Examination
of Journals and Sources of Copies*

	<u>JEL</u>	<u>AER</u>	<u>AER/P&P</u>	<u>JPE</u>	<u>QJE</u>	<u>ECM</u>	<u>EJ</u>	<u>ReStat</u>	<u>ReStud</u>	<u>JMCB</u>	<u>JF</u>	<u>JHR</u>	<u>IR</u>	<u>MLR</u>
<i>Number who did not answer</i>	1	6	13	18	29	29	29	32	40	0	0	2	3	3
<i>Number who did not examine</i>	12	14	34	157	224	276	256	274	375	14	18	27	42	20
<i>Number who did examine</i>	442	435	408	280	202	150	170	209	100	44	40	57	35	57
<i>Per cent who did examine</i>	97%	96%	90%	62%	44%	33%	37%	46%	22%	76%	69%	71%	44%	71%
<i>Source of copies for those who did examine:</i>														
<i>Number</i>	442	435	408	280	202	150	170	209	100	44	40	57	35	57
<i>Personal subscription</i>	97%	96%	98%	38%	24%	33%	22%	19%	11%	67%	52%	32%	31%	33%
<i>Employer subscription</i>	2%	2%	1%	12%	12%	7%	12%	12%	16%	9%	10%	12%	9%	27%
<i>Academic library</i>	*	*	*	40%	56%	52%	56%	57%	67%	25%	25%	40%	46%	42%
<i>Public library</i>	*	*	*	2%	2%	*	3%	3%	2%	2%	5%	2%	3%	2%
<i>Business or special library</i>	*	*	*	6%	5%	7%	6%	8%	3%	2%	7%	11%	9%	2%
<i>Other</i>	*	*	*	2%	1%	*	1%	1%	1%	1%	1%	3%	2%	*
<i>Total</i>	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

*Note: value is less than one per cent.

Of those who examined the three AEA publications, at least 96 per cent credited personal subscription as the source of copies, which again is explained by the nature of the sample. Among all the remaining nonspecialized journals, the academic library was the most important source of copies, which reflects the fact that a large proportion of our respondents are affiliated with academic institutions. It should be noted, however, that a significant proportion cited personal subscriptions as the source of obtaining the JPE (38 per cent) and Ecm (33 per cent). The third-ranked access to non-Association journals was subscriptions by employers. Business libraries provided between 3 and 8 per cent of the copies of nonspecialized journals examined by our respondents, while public libraries and other sources were less often cited.

Regarding the specialized journals, the two groups of specialists gave a different pattern of responses for the journals in their own primary fields of interest. IR was examined by no more than 44 per cent of the labor economists, while the statistic for the other four specialized journals ranged from 69 per cent for JF to 76 per cent for JMCB. This relatively high level of interest undoubtedly reflects the high degree of relevance of these journals to the specialist. Moreover, relevance may account for the large percentages of respondents, ranging from 31 for IR to 61 for JMCB, who obtain the journals through personal subscription. Of the non-AEA nonspecialized journals, only two, JPE (38 per cent) and Ecm (33 per cent) have similar rates of personal subscription.

Reasons for Not Examining Journals

Each respondent was asked to give the reason for not examining any issue of each journal in 1975. The responses are summarized in Table 3.

TABLE 3 Reasons Given for Not Examining Any Issues
of A Journal in 1975

	<u>JEL</u>	<u>AER</u>	<u>AER/P&P</u>	<u>JPE</u>	<u>QJE</u>	<u>ECM</u>	<u>EJ</u>	<u>RESTAT</u>	<u>RESTUD</u>	<u>JMCB</u>	<u>JF</u>	<u>JHR</u>	<u>IR</u>	<u>MLR</u>
<i>Actual number of responses</i>	12	14	28	124	183	221	185	164	224	13	12	10	23	11
<i>Per cent distribution of reasons for not examining</i>														
<i>No relation to my interest</i>	33%	29%	25%	44%	46%	49%	50%	50%	52%	31%	50%	40%	43%	27%
<i>High price of subscription</i>	8%			10%	8%	4%	8%	5%	4%		25%		9%	19%
<i>Unsatisfactory quality</i>	8%		7%	3%	2%		3%	1%				20%	9%	27%
<i>Too technical</i>	17%	43%	18%	6%	8%	36%	3%	14%	8%					
<i>Not rigorous enough</i>													9%	9%
<i>Lack of time</i>	25%	14%	18%	21%	24%	5%	24%	21%	19%	62%	17%		14%	9%
<i>No occasion to use journal</i>				6%	7%	2%	4%	2%	5%				4%	9%
<i>No access to copies</i>				2%	3%	2%	6%	4%	6%				4%	
<i>Not familiar with journal</i>			4%	2%	1%		1%	2%	2%			30%	4%	
<i>Other</i>	9%	14%	28%	6%	1%	2%	1%	1%	4%	7%	8%	10%	4%	
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Typically our respondents did not examine the journals either because the contents did not relate to their interests or because they lacked reading time. The only exception was Ecm. Of those who did not examine this journal, 37 per cent indicated the high technical level as the deterrent.

Personal Subscriptions to Journals in Economics

Each respondent was asked to list all journals in economics other than AER and JEL to which he or she personally subscribed. Subscriptions held by our respondents ranged from zero to 16. In addition to the AEA journals, those in the General Group subscribed to an average of 2.1 economics journals. The monetary economists subscribed to an average of 2.9 journals while the labor economists subscribed to an average of 2.0 journals.

In Tables 4, 5 and 6 we list in rank order the journals most frequently subscribed to by those in the General Group, the Monetary Group and the Labor Group respectively.

Hawkins, Ritter and Walter [1973] conducted a survey to determine how economists ranked economics journals in terms of prestige. We wanted to ascertain whether those journals that are held in high esteem are more likely than other journals to be purchased by individuals. Table 4 contains a comparison of the top 30 journals purchased by our respondents with their rankings in the Hawkins, Ritter, Walter study. Their study provided two sets of rankings -- a "mean rank" and a "prestige rank," the latter being the result of multiplying the score that determined the former by a familiarity index.

Of the top 12 journals in their prestige rankings, 4 were not on our list of 30 with the greatest number of subscribers. These are the

TABLE 4 *Personal Subscriptions*
of Respondents in the General Group, Ranked
by the Number of Subscriptions (Excluding AEA Journals)

<i>Journal</i>	<i>Number of subscriptions</i>	<i>Rankings from the Hawkins, Ritter and Walter Study</i>	
		<i>Mean rank</i>	<i>Prestige rank</i>
1 <u><i>Journal of Political Economy</i></u>	59	3	2
2 <u><i>Bell Journal of Economics</i></u>	40	27	39
3 <u><i>Quarterly Journal of Economics</i></u>	33	4	4
4 <u><i>Economic Inquiry</i></u>	32	34	24
5 <u><i>Southern Economic Journal</i></u>	32	21	13
6 <u><i>Econometrica</i></u>	28	2	3
7 <u><i>Review of Economics & Statistics</i></u>	26	5	6
8 <u><i>American Journal of Agricultural Economics</i></u>	25	NR	NR
9 <u><i>Economic Journal</i></u>	23	7	5
10 <u><i>Brookings Papers on Economic Activity</i></u>	23	NR	NR
11 <u><i>Journal of Law & Economics</i></u>	22	15	14
12 <u><i>Canadian Journal of Economics</i></u>	18	17	17
13 <u><i>Journal of Finance</i></u>	17	14	11
14 <u><i>Economic Development & Cultural Change</i></u>	15	29	23
15 <u><i>National Tax Journal</i></u>	12	36	26
16 <u><i>Journal of the American Statistical Association</i></u>	12	10	9
17 <u><i>International Economic Review</i></u>	10	NR	NR
18 <u><i>Journal of Regional Science</i></u>	10	31	34
19 <u><i>Journal of Money, Credit & Banking</i></u>	9	19	22
20 <u><i>Journal of Econometrics</i></u>	9	NR	NR
21 <u><i>Journal of Economic Issues</i></u>	8	65	47
22 <u><i>Challenge</i></u>	8	NR	NR
23 <u><i>The American Economist</i></u>	7	NR	NR
24 <u><i>Journal of International Economics</i></u>	7	18	35
25 <u><i>Business Economics</i></u>	6	68	57
26 <u><i>Journal of Financial Economics</i></u>	6	NR	NR
27 <u><i>Journal of Human Resources</i></u>	6	33	32
28 <u><i>Journal of Monetary Economics</i></u>	6	NR	NR
29 <u><i>Journal of Public Economics</i></u>	6	NR	NR
30 <u><i>Land Economics</i></u>	6	44	29

NR = Not Rated.

TABLE 5 *Personal Subscriptions of Respondents
in the Monetary Group Ranked by the Number of Subscriptions*

<i>Journal</i>	<i>Number of subscriptions</i>	<i>Per cent of Monetary Group</i>
1 <u><i>Journal of Money, Credit & Banking</i></u>	25	43.1%
2 <u><i>Journal of Political Economy</i></u>	24	41.4%
3 <u><i>Journal of Finance</i></u>	20	34.5%
4 <u><i>Southern Economic Journal</i></u>	13	22.4%
5 <u><i>Journal of Monetary Economics</i></u>	10	17.2%
6 <u><i>Economic Inquiry</i></u>	9	15.5%
7 <u><i>Review of Economics & Statistics</i></u>	9	15.5%
8 <u><i>Brookings Papers on Economic Activity</i></u>	8	13.8%
9 <u><i>Quarterly Journal of Economics</i></u>	8	13.8%
10 <u><i>Econometrica</i></u>	7	12.1%

TABLE 6 *Personal Subscriptions of Respondents
in the Labor Group Ranked by the Number of Subscriptions*

<i>Journal</i>	<i>Number of subscriptions</i>	<i>Per cent of Labor Group</i>
1 <u><i>Journal of Human Resources</i></u>	19	23.8%
2 <u><i>Journal of Political Economy</i></u>	19	23.8%
3 <u><i>Monthly Labor Review</i></u>	16	20.0%
4 <u><i>Industrial Labor Relations Review</i></u>	12	15.0%
5 <u><i>Industrial Relations</i></u>	8	10.0%
6 <u><i>Southern Economic Journal</i></u>	8	10.0%
7 <u><i>Brookings Papers on Economic Activity</i></u>	7	8.8%
8 <u><i>Econometrica</i></u>	6	7.5%
9 <u><i>Economic Journal</i></u>	6	7.5%
10 <u><i>Quarterly Journal of Economics</i></u>	5	6.3%

Journal of Economic Theory, Review of Economic Studies, Economica and Oxford Economic Papers. The first two of these journals emphasize highly technical treatments of economic theory that may be relevant only to specialists. This is confirmed by the ratings of technical levels of ReStud by our respondents. The latter three of the four are British journals. The relatively small numbers of subscribers among economists in the United States may be due to the overseas origin of these journals or perhaps to weak marketing efforts by the publishers. However, the EJ, another British publication, is both highly regarded and has a relatively substantial number of subscribers among our respondents.

Three journals, the Bell Journal of Economics, Economic Inquiry (formerly the Western Economic Journal) and the Southern Economic Journal were among the top five journals in terms of number of subscribers but fared less well in the ranking by Hawkins, Ritter, and Walter. The Bell Journal has a price of zero, which undoubtedly has a positive effect on subscriptions. In addition, the Bell Journal was a new journal at the time of the 1972 survey and its relative prestige ranking may now be greater than was indicated in that study. Economic Inquiry and the Southern Economic Journal are association publications. Subscriptions to these journals involve membership in the association and lower submission fees for manuscripts submitted for publication.

After accounting for these exceptions and for a few journals that were not rated by Hawkins, Ritter, and Walter, we find a rough correspondence between the prestige ranking of their study and the ranking based on the

personal subscriptions of our respondents.

Evaluations of Technical Levels

One of our objectives in this study was to shed some light on the attitudes of economists towards mathematical and statistical exposition in the published literature. We approached this question in two ways: First, we asked members of the sample whether they felt each journal was "too technical," "about right," or "not rigorous enough." Secondly, we observed the relationship between the number of mathematical expressions and the number of readings of each article appearing in the journals on the questionnaire. The results of the latter approach are discussed in a subsequent section. The readers' overall impressions of the technical levels of each journal are summarized in Table 7.

Most of the respondents felt that the nonspecialized journals were "about right" with regard to their technical level. For the JEL, AER/P&P, QJE, EJ, and ReStat, responses of "about right" were obtained from 74 to 87 per cent of those responding. Ecm was deemed "too technical" by some 61 per cent of the respondents, and 40 per cent replied that ReStud is "too technical." We were surprised by the 50 per cent response judging the AER to be "too technical" as compared with the much smaller percentage of respondents who felt that JPE, QJE, and ReStat were "too technical." It had been our impression that the technical level of these journals are roughly similar. Apparently, many of the respondents, perhaps because they are more familiar with the AER which they receive on a regular basis, are dissatisfied with the "too technical" level of the articles published in this particular journal.

TABLE 7 *Distribution of Responses
Concerning the "Technical Level" of Each Journal*

	<u>JEL</u>	<u>AER</u>	<u>AER/P&P</u>	<u>JPE</u>	<u>QJE</u>	<u>ECM</u>	<u>EJ</u>	<u>RESTAT</u>	<u>RESTUD</u>	<u>JMCB</u>	<u>JF</u>	<u>JHR</u>	<u>IR</u>	<u>MLR</u>
<i>Actual number of responses</i>	417	417	364	275	219	216	173	216	119	40	38	50	36	53
<i>Per cent distri- bution of re- sponses on tech- nical level</i>														
<i>Too technical</i>	11%	50%	17%	16%	21%	61%	8%	18%	40%	13%	21%	2%	0%	0%
<i>About right</i>	86%	48%	74%	81%	77%	38%	87%	82%	60%	87%	74%	90%	75%	62%
<i>Not rigorous enough</i>	3%	2%	9%	3%	2%	1%	5%	0%	0%	0%	5%	8%	25%	38%
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Few respondents thought the nonspecialized journals "not rigorous enough." The largest proportion of such citations was only 9 per cent.

Most of the responding monetary economists were satisfied with the technical level of JMCB (87 per cent) and JF (74 per cent); 90 per cent of the labor economists who responded felt that JHR was "about right." While a majority of the Labor Group answered that IR and MLR were "about right," a relatively large group felt that these journals were "not rigorous enough."

Evaluations of Overall Quality

In addition to questions pertaining specifically to technical levels, the respondents who said they were familiar with a journal were asked to describe their judgment of the overall quality of the journal as "excellent," "good," "fair," or "poor." The results are displayed in Table 8. If an evaluation of "excellent" or "good" is viewed as an indication of user satisfaction, a clear majority of the respondents seem satisfied with the quality of most of the journals. The ranking of the nonspecialized journals, based on the percentage of respondents who cited each journal as "excellent" or "good," is as follows:

<u>Journal</u>	<u>Per cent Indicating Satisfaction (Ratings of "excellent or good") with Quality</u>
JEL	89
JPE	87
EJ	84
ReStat	84
Ecp	83
ReStud	83
QJE	79
AER	76
<u>AER/PEP</u>	76

TABLE 8 Distribution of Responses
Concerning "Overall Quality" of Each Journal

	<u>JEL</u>	<u>AER</u>	<u>AER/P&P</u>	<u>JPE</u>	<u>QJE</u>	<u>ECM</u>	<u>EJ</u>	<u>RESTAT</u>	<u>RESTUD</u>	<u>JMCB</u>	<u>JF</u>	<u>JHR</u>	<u>IR</u>	<u>MLR</u>
Actual number of responses	429	427	404	308	251	219	190	238	127	46	43	55	38	61
Per cent distri- bution of re- sponses on quality														
Excellent	34%	27%	22%	39%	22%	34%	23%	27%	19%	22%	26%	18%	21%	26%
Good	55%	49%	54%	48%	57%	49%	61%	57%	64%	65%	47%	67%	55%	38%
Fair	9%	19%	20%	12%	19%	14%	14%	13%	14%	13%	25%	13%	21%	33%
Poor	2%	5%	4%	1%	2%	3%	2%	3%	3%	0%	2%	2%	3%	3%
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

By examining both the quality ratings and the perception of technical levels, it would appear that the JEL and the JPE have best served the needs or tastes of economists. The JEL provides not only an index, abstracts, and book reviews, about which more will be said shortly, but survey articles on selected topics in economic research as well. These are usually commissioned articles and, historically, have not been overly technical, thus stimulating the interest of a wide range of economists.

Other than the JEL, which has a character quite unlike the primary research journals, the JPE stands alone. In addition to the relatively high number who examine this journal and the high number who hold personal subscriptions, 87 per cent of the respondents judged the overall quality of the JPE as "good" or "excellent" with 39 per cent (the largest for any of the publications) citing the journal as "excellent." From our survey, we can offer no reasons for the high esteem in which this publication is held. We would suggest, however, that part of the satisfaction with this journal can be attributed to its reputation for publishing new ideas, and part to its relationship to the Department of Economics of the University of Chicago, the activities of which are known to attract the interest of a large spectrum of economists.

The EJ appeals to a large number (84 per cent) of those familiar with its contents, although most of the respondents (61 per cent) cited its quality as "good." This journal seems to owe its high ranking by our respondents to the fact that the largest proportion (87 per cent) cited it as being "about right" in technical level.

Ecm was regarded as satisfactory by 83 per cent of the respondents, including the 34 per cent who thought the journal's quality "excellent." It comes as little surprise that 61 per cent felt that Ecm is "too technical."

However, it appears that the readers are, in general, very satisfied.

The AER and its annual issue, Papers and Proceedings, fared relatively poorly in this ranking. As virtually all respondents receive the AER, we find that, while substantial numbers of readers are satisfied, 24 per cent listed the quality of the AER as "fair" or "poor" and 24 per cent placed AER/P&P in the same categories. With regard to the AER/P&P, it is possible to venture a guess as to why a relatively large number are not satisfied. Since a major function of the P&P is to publish the unrefereed papers presented at the preceding annual meeting of the Association, the quality of the material in the annual issue may not be up to the level of the material in refereed journals. Furthermore, a few respondents criticized the method of selecting individuals to present papers as "elitist" or "oligarchic."⁸

The relatively low rating accorded the AER by the respondents deserves attention especially since this publication is received regularly (and automatically as a benefit of membership in the AEA) by a rather large number of economists. While a significant proportion were satisfied with the AER (27 per cent rated the publication "excellent"), a sizable proportion, 24 per cent, indicated their dissatisfaction by rating the overall quality as only "fair" or as "poor." Aside from P&P, this is the weakest showing of any of the nonspecialized journals. Comments about the journals offered by the respondents and discussed in the next section will reveal a few of the reasons for the apparent dissatisfaction with the AER among some

⁸ It has been customary that the president-elect of the Association selects the topics and the session chairmen, and the chairmen select the individual participants.

economists.

On the question of overall quality, we found no striking differences in the evaluations of respondents with different job affiliations. Concerning technical levels, however, we found that students and economists associated with research organizations were much less likely than the entire group of respondents to cite a journal as "too technical," whereas a larger percentage of business economists and government economists considered the journals "too technical."

The respondents in the two samples of specialists answered the same question concerning the overall quality of the selected specialized journals. Comparative rankings of the journals are meaningless, because of the great dissimilarities among these journals. Unlike the question on technical levels, where the monetary and labor economists viewed their specialized journals more favorably than they viewed the nonspecialized journals, there seems to be no significant difference in attitudes concerning quality between the nonspecialized journals and two of the specialized journals, JMCB and JHR. However, compared with the nonspecialized journals, a greater portion of specialists classified the remaining three, JF, IR, and MLR as "fair."

Opinions and Suggestions Offered by the Respondents

Respondents were invited to make comments "concerning the editorial policy, subscription price, size, frequency of publication and any other aspect" of each of the journals included in the survey. Our purpose was to obtain nonquantitative support for inferences regarding the habits and attitudes of journal users that are based primarily on the quantitative data derived from other portions of the questionnaire. These open-ended

questions also gave the respondents an opportunity to express views and raise issues that, owing to the rigid design of the questionnaire, would not have come to our attention. The response rate was gratifying with the number of commentaries ranging from 144 for the AER to 15 for ReStud. Unfortunately, no more than eight comments were made about any of the five specialized journals and we found it would not be reasonable to report them.

In many cases the same or very similar comments about individual journals were offered by several respondents. Hence, we are able to report on these comments by grouping responses into an appropriate number of categories. By observing the frequency of responses for each category we can develop an impression of the users' attitudes. Some respondents made more than one comment about particular journals, hence there are a greater number of comments than there are respondents.

The summaries of the comments should be interpreted with care. First, the remarks cannot be interpreted as representing the feelings of any given percentage of the membership of the Association. Rather, they reflect the views of a number of respondents whose satisfaction, or dissatisfaction, with the journals motivated them to express judgments that could not be captured by the other sections of the questionnaire. What is significant is the similarity of some frequent comments, suggesting widely held feelings about particular journals. Secondly, many of the categories into which we placed respondents' comments overlap. For example, respondents have variously characterized the content of journals as being too technical, too mathematical, too theoretical, too abstract, too esoteric, over-specialized, or trivial. In categorizing the comments, it was clear that the intended meaning imputed to these descriptions varied from person to person with terms

used interchangeably by some respondents and with great care by others. In the few cases where interpretation presented a problem, the explicit language of the respondent was used as a guide and we created as many categories as necessary to accommodate the differences of meaning.

We had expected that there would be a preponderance of negative comments about the journals on the theory that those who were dissatisfied would be more likely to express themselves than those who were satisfied. We found, however, that the respondents were as likely to express great satisfaction as they were to express great dissatisfaction. As will be shown below, a large number of favorable comments were made about the editorial policies of the JEL and the JPE, the two journals rated highest in "overall quality," while a large number of unfavorable comments were made about the AER. In addition, some respondents made explicit suggestions for changes.

For each journal, we present the number of respondents who made comments, a list of the comments, and the number of times each comment was made. Remarks that were made only once are included in a miscellaneous category. Categories that are similar in meaning are list contiguously, with those types of comments made most frequently listed roughly in rank order.

American Economic Review - Comments by 144 Respondents

Opinions

	<u>Number</u>
1. A good or useful journal	4
2. Too technical, too mathematical	40
3. Too theoretical	4
4. Too much econometrics	4
5. Too abstract, esoteric, over-specialized	14
6. Too specialized for a general-readership journal	14

7. Economic analyses of issues subordinated to technical refinements	15
8. Lacks relevance to the "real world"	17
9. Too little on policy issues	11
10. Lacks practical applications of theory	4
11. Too many articles on trivial or unimportant issues	5
12. Journal is dull, not useful, or disappointing	13
13. The quality of the journal has declined	6
14. The technical quality is excellent but the journal is of limited use	3
15. Articles do not typically increase "state of knowledge"	3
16. Quality of articles is uneven	5
17. Forum for a few economists addressing a few other economists	4
18. Editorial policy or decisions are clique-ish	11
19. Refereeing and publishing process takes too long	2
20. Not useful for teaching undergraduates	2
21. Too expensive	2

Suggestions

1. Authors should be required to be more descriptive of technical material.	11
2. The AEA should give members the option to subscribe separately to AER.	6
3. Should have fewer, but longer articles	3
4. Should have abstracts as in JPE	2
5. AEA pricing policy should be uniform	2
6. The AER should have more articles on: economic history	3
history of economic theory and "methodology"	2
7. Miscellaneous comments	21

American Economic Review/Papers & Proceedings

Comments by 60 Respondents

Opinions

1. More useful or better than the AER	18
2. A good or useful publication	7
3. Good for keeping abreast of the literature	4
4. More useful for teaching than research	2
5. Papers vary in quality	5
6. Poor or disappointing journal	6
7. Papers cover trivial or unimportant issues	4
8. Papers are too technical	4
9. Little relevance to "the real world"	3

Suggestions

1. Papers should be refereed	3
2. Should include all convention (ASSA) papers	3
3. Bring back discussants' comments or provide more space for discussants	3
4. Should be priced separately from other AEA publications	2
5. Miscellaneous comments	5

Journal of Economic Literature - Comments by 112 Respondents

Opinions

1. A good or useful journal	13
2. Useful for keeping abreast of the literature and recent research	11
3. Survey articles are good or useful	26
4. Book reviews are good or useful	11
5. Selected abstracts are good or useful	6
6. <u>JEL</u> is a valuable bibliographic and reference tool	11
7. Contents of Current Periodicals good or useful	5
8. Subject index good or useful	4
9. <u>JEL</u> is more useful than <u>AER</u>	3
10. The editor is doing a good job	5
11. Disappointing journal	3
12. Uneven or disappointing survey articles	9
13. Contents of Current Periodicals not useful	3
14. Selected abstracts not useful	2
15. Disappointing book reviews	2
16. Little relevance to "real world" or to policy issues	6
17. Publishes much dated material	6
18. Publishing policy is clique-ish	5
19. A few economists writing for a few readers	2
20. Some survey articles based on one school of thought	2
21. Too expensive	2
22. Not enough representation of radical views	2

Suggestions

1. Articles should be kept non-technical	3
2. More book reviews	3
3. Review textbooks	3
4. More survey articles	3
5. The <u>JEL</u> should be priced separately	5
6. Keep the author index	3
7. Miscellaneous comments	19

Journal of Political Economy - Comments by 54 RespondentsOpinions

1. A good or useful journal	11
2. The best journal in economics	7
3. Better than the <u>AER</u>	4
4. Too much "Chicago school" orientation	14
5. Too technical or abstract	6
6. Too expensive	2
7. Quality of articles variable	2
8. Only read when articles are referred to in <u>JEL</u> or elsewhere	5
9. Miscellaneous comments	11

Econometrica - Comments by 37 RespondentsOpinions

1. Useful as a reference tool	3
2. Too mathematical, technical, obscure, specialized	11
3. A good journal, but useful only to mathematicians, statisticians, econometricians	9
4. Topics are trivial or uninteresting	4
5. Uneven or declining in quality	5
6. Recent emphasis on theory has reduced utility	2
7. Too expensive	3
8. Time lag in publication is too long	2
9. No relevance to the "real world"	2

Suggestions

1. Should include more applied or empirical work	5
2. Each article should include a less technical discussion of findings	2
3. Miscellaneous comments	1

Quarterly Journal of Economics - Comments by 31 RespondentsOpinions

1. A good or useful journal	5
2. Symposia are interesting	2
3. Stodgy editorial policy	3
4. Quality has been declining	3
5. Too much a Harvard house organ	3
6. Too technical, mathematical, abstract or esoteric	5
7. Little relevance to "real world" issues	3
8. Only read the <u>QJE</u> when articles are referenced in <u>JEL</u> or elsewhere	4
9. Miscellaneous comments	10

Review of Economics & Statistics - Comments by 20 Respondents

Opinions

- | | |
|---|---|
| 1. A good or useful journal | 5 |
| 2. Good journal for empirical work | 4 |
| 3. Too technical | 5 |
| 4. Lacks relevance to "real world" issues | 2 |
| 5. Too expensive | 2 |
| 6. Miscellaneous comments | 4 |

Economic Journal - Comments by 19 Respondents

Opinions

- | | |
|--|---|
| 1. Best journal in economics | 5 |
| 2. Articles are well-written | 3 |
| 3. Better than the AER | 2 |
| 4. Good or useful journal | 3 |
| 5. Only read <u>EJ</u> when articles are referenced in <u>JEL</u> or elsewhere | 2 |
| 6. Miscellaneous comments | 8 |

Review of Economic Studies - Comments by 15 Respondents

Opinions

- | | |
|---|---|
| 1. Too mathematical | 4 |
| 2. Esoteric, trivial, uninteresting | 4 |
| 3. Only read <u>ReStud</u> when articles are referenced in <u>JEL</u>
or elsewhere | 3 |
| 4. Miscellaneous comments | 4 |

V. THE READING OF ARTICLES

Respondents were asked to examine a list of the articles appearing in an issue of each of the journals on the questionnaire (most of the issues selected were published in the fall of 1975). For each article, the following questions were asked: (1) Did you read this article? (Choice of responses: (a) Yes - in this journal, (b) Yes - prepublished form, and (c) No.) (2) If so, how carefully did you read this article? (Choice of responses: (a) With great care, (b) With attention to main points and (c) Just to get the idea.) (3) Why did you read this article? (Choice of responses: (a) Related to my research, (b) Related to my teaching, (c) General interest, (d) Part of my coursework as a student, (e) For a thesis or dissertation, and (f) Other.) (4) In retrospect, how did you judge the article? (Choice of responses: (a) Useful or interesting, (b) Moderately useful, and (c) Not useful.) The responses are analyzed in the sections that follow.⁹

Number of Readers per Article

A measure of the number of readers per article will provide an indication of the extent of use of the journals. It would be difficult to establish criteria for deciding whether the number of readers per article for a journal is large or small. What may be considered a large number of readers for one journal would be considered small for other journals, depending on the degree of specialization, the subject areas covered, the number of practitioners

⁹ We shall be unable in this publication to present all of the available detail on our findings on the reading of articles. To do so would require some 18 additional pages of text with 13 accompanying statistical tables. The interested reader may obtain copies of the unabridged version of this material by contacting the authors at the Center for Applied Economics, New York University.

in the field, the ease with which readers may gain access to the journal, and so on. Nevertheless, if it is suspected that many articles are read by only a few people and that many more articles are read by no one at all, it would be worthwhile to attempt even a rough estimate of the actual number of readers.

The first two rows of Table 9 show the average number of respondents in the General Group who read a full-size article and a shorter paper, note or communication in each of the nonspecialized journals.¹⁰ The last two rows of the table presents estimates of the number of readers per full-size article and shorter paper for the total population of 15,860 domestic members of the AEA. These estimates are extrapolations obtained by multiplying the corresponding result obtained for the sample by approximately 50, the multiplicative factor by which the population size exceeds the sample size.

The results indicate that for most of the journals the average number of readers of the average article is far above zero. It is also apparent that full-size articles are more likely to be read than are the shorter papers, notes, and communications appearing in the journals.

Since all respondents receive the JEL and the AER, comparisons between these two journals and the rest are not advisable. The most widely read of the journals, other than the JEL and the AER, is the JPE with over 1,000 readers in the designated population for an average full-size article. The journal with the smallest number of readers per article is ReStud with approximately 200 in the population.

10

Because of the large number of papers in AER/P&P, we did not ask the respondents about particular papers in this publication.

TABLE 9 Average Number of Readers for Full-Size Articles and
for a Shorter Paper, Note or Communication in Eight Nonspecialized Journals
(Number and Per Cent of Respondents)

	<u>JEL</u>	<u>AER</u>	<u>JPE</u>	<u>EJ</u>	<u>QJE</u>	<u>ECM</u>	<u>RESTAT</u>	<u>RESTUD</u>
<i>Results for the 317 re-</i>								
<i>spondents in the General</i>								
<i>Group:</i>								
<i>Average number (and per</i>								
<i>cent) of respondents</i>								
<i>who read a full-size</i>								
<i>article</i>								
	82	67	22	20	17	12	11	4
	(25.9%)	(19.2%)	(6.9%)	(6.3%)	(5.4%)	(3.8%)	(3.5%)	(1.3%)
<i>Average number (and per</i>								
<i>cent) of respondents who</i>								
<i>read a shorter paper, note</i>								
<i>or communication</i>								
	37	38	15	11	13	8	8	1
	(9.8%)	(12.0%)	(4.7%)	(3.5%)	(4.1%)	(2.5%)	(2.5%)	(0.3%)
<i>Estimates for the population</i>								
<i>of 15,860 domestic economists:</i>								
<i>Average number (and per cent</i>								
<i>of population) who read a</i>								
<i>full-size article</i>								
	4,103	3,052	1,101	1,001	851	600	550	200
	(25.9%)	(19.2%)	(6.9%)	(6.3%)	(5.4%)	(3.8%)	(3.5%)	(1.3%)
<i>Average number (and per cent</i>								
<i>of population) who read a</i>								
<i>shorter paper, note or</i>								
<i>communication</i>								
	1,551	1,901	750	550	650	400	400	50
	(9.8%)	(12.0%)	(4.7%)	(3.5%)	(4.1%)	(2.5%)	(2.5%)	(0.3%)

For the two groups of specialists the findings on number of readers per article in the monetary and labor journals are given in Table 10. We shall not attempt to derive an estimate of the number of readers for the overall population of specialists in monetary economics and labor economics as had been done for the nonspecialized journals, because it is difficult to specify the sizes of the appropriate populations.

TABLE 10 *Average Number of Readers for a Full-Size Article and for A Shorter Paper, Note, or Communication in the Specialized Journals*
Number and Per Cent of Respondents

<i>Results for the 58 respondents in the Monetary Group</i>		<u>JMCB</u>		<u>JF</u>			
<i>Average number (and per cent) of respondents who read a full-size article</i>	11 (19.0%)	3	(5.2%)				
<i>Average number (and per cent) of respondents who read a shorter paper, note or communication</i>	19 (32.8%)	5	(8.6%)				
<i>Results for the 80 respondents in the Labor Group</i>		<u>JHR</u>		<u>IR</u>		<u>MLR</u>	
<i>Average number (and per cent) of respondents who read a full-size article</i>	16 (20.0%)	9	(11.3%)	13	(16.3%)		
<i>Average number (and per cent) of respondents who read a shorter paper, note or communication</i>	11 (13.8%)	6	(7.5%)	14	(17.5%)		

As shown in Table 10, an average of 11 out of the 58 respondents, or 19 per cent of the responding group of monetary economists, read the average full-size article in JMCB. JF has a comparatively small number

of readers, only 3 out of 58, or 5.2 per cent, for an average full-size article. For both of these monetary journals, the average number of readers for an average shorter paper, note or communication is greater than for full-size articles, substantially so in the case of JMCB. This is in contrast to the results observed for all eight of the nonspecialized journals, for which the number of readers of full-size articles was consistently greater than the number of readers of shorter papers, notes and communications.

Among the labor journals, JHR had the greatest number of readers (16 of 80 respondents read the average article) for full-size articles, and MLR had the greatest number of readers (14 out of 80) for the shorter papers, notes and communications.

Summary of Additional Findings

In this section we shall merely summarize the remaining findings that pertain to the use of individual articles and shall not display the statistical tables upon which they are based.

Intensity of Use -- For the full-size articles in all eight nonspecialized journals, only 15 per cent of the reading was done with great care, while the remaining 85 per cent was evenly divided between reading done with attention to main points and just to get the idea. For shorter papers, notes, and communications, some 18 per cent of the reading was done with great care, 45 per cent with attention to main points and 37 per cent just to get the idea. There was a total of 75 full-size articles in the selected issues of the eight nonspecialized journals. Of the 317 respondents, 201, or about 63 per cent, read none of these 75 articles with great care. Nearly 90 per cent read only two or fewer articles with great care. In the specialized journals, the percentage of reading done with great care was, as might be expected, greater than that for the nonspecialized journals.

These findings indicate a tendency on the part of many readers to use recent issues of journals more as tools of current awareness, as one might use a volume of abstracts or annotations, and less as a means of mastering the finer points of the current state of knowledge in economics.

Concentration of Reading Among the Respondents -- When we ranked the 317 respondents according to the number of articles they read, beginning with those who read least, we found that the least active 10 per cent of the respondents accounted for zero per cent of total readings, the least active 20 per cent of the respondents accounted for only 1 per cent of

total readings, 50 per cent of the respondents accounted for 13 per cent of total readings, and 90 per cent of the respondents accounted for 65 per cent of total readings. Conversely, the most active 10 per cent of the readers accounted for 35 per cent of total readings.

The Purposes for Which Articles are Read -- Most of the readings done in JEL, AER, QJE, Ecm, and EJ were motivated by general interest. For JEL, an unparalleled 73 per cent of the readings were motivated by general interest. For JPE, ReStat, and ReStud, the largest proportion of readings, ranging from 42 to 45 per cent, were related to research.

A simultaneous comparison of the purposes for which articles were read and the intensity with which articles were read reveals that approximately 25 per cent of the readings done for research purposes were done with great care, while only 8 per cent of the readings motivated by general interest were done with great care.

Evaluations of the Usefulness of Individual Articles -- The respondents were asked to evaluate each article they had read. The results can be summarized very roughly by saying that approximately 30 per cent of the articles were considered by the readers to be useful or interesting, 10 per cent were considered not useful, and the rest were judged moderately useful. For individual journals, the proportion of readings that were judged useful or interesting by the General Group ranged from a high of 43 per cent for EJ to a low of 21 per cent for ReStud. The proportion of readings that were judged not useful ranged from a low of 7 per cent for EJ to a high of 14 per cent for QJE. EJ holds the enviable position of having both the

highest percentage of readings judged useful or interesting and the lowest percentage judged not useful. If, for the nonspecialized journals, the categories useful or interesting and moderately useful are combined, the percentage of readings judged favorably by the General Group ranges from 86 per cent to 93 per cent. Clearly, the readers found a large majority of the articles they had read in these journals to be at least moderately useful.

Special Survey Questions Relating to the AER -- In a special section of our questionnaire, the respondents were asked whether they felt each of the regular features of the AER, including Papers and Proceedings, were very useful, fairly useful, or not useful. The results are consistent with other sections of this study dealing with the AER and AER/P&P. About half of the respondents (49 to 58 per cent) felt that each of the features were fairly useful. The full-size articles and shorter papers were judged not useful by 31 per cent and 29 per cent respectively, while some 14 per cent regarded these two sections of the AER to be very useful. This pattern of response was reversed in the cases of invited discussions on policy issues and the Papers and Proceedings with 32 per cent and 37 per cent, respectively, citing these as very useful, and 18 per cent and 14 per cent citing them as not useful.

Special Survey Questions Relating to the JEL -- Respondents were also asked to give overall evaluations of the various sections that are published regularly in the JEL. The responses indicate that the various information services offered by the JEL are extremely popular among readers. The most

highly rated was "Subject Index of Articles in Current Periodicals," with "Selected Abstracts" running a close second. About 99 per cent of those evaluating these two sections judged them as useful or interesting or moderately useful, with the clear majority falling in the former category. Fewer than 8 per cent judged any of the JEL sections not useful. Compared with the evaluations of the various sections of the AER, these are very strong endorsements.

Mathematics and the Number of Readers -- Some of the findings presented thus far suggest that a substantial number of economists do not value the prominence of mathematics in the exposition of theoretical and empirical research in economics. If these attitudes carry over into actual article-reading habits, we might expect the number of readers of an article to decline with increases in the degree of mathematical exposition in the article. Exceptions might be those journals, such as Ecm and ReStud, that are known to emphasize mathematical exposition.

To test these propositions, ordinary least-squares regressions were performed using the data on the reading of articles obtained from our survey. The number of readers of an article was specified as the dependent variable and the total number of lines of mathematics divided by the number of pages in the article was specified as the independent variable. Journals for which there was less than an average of one equation per page and where there were small variations in the number of equations among articles were excluded. These were JEL, EJ, IR, and MLR.

For the most part, the regression results conformed to expectations. For

Ecm and ReStud, no relationship between reading and the amount of mathematics per page was found. We did, however, obtain the expected negative relationship for AER (significant at the 3 per cent level), QJE (15 per cent level), ReStat (7 per cent level), and JMCB (19 per cent level). The rate of loss of readers for each additional equation per page in an article in these journals ranged from 7 to 11 per cent. The amount of mathematics in an article explained 30 per cent of the variation in the number of readers for AER, 22 per cent for QJE, 16 per cent for ReStat and 20 per cent for JMCB.

The Supply of and Demand for Articles by Field of Specialization -- Data from our survey and from other sources enabled us to examine the supply of articles, by field, and to compare the supply with the demand for articles in various fields, as revealed by the distribution of readings by our respondents.

We first compared the distribution among primary fields of specialization of members of the AEA who are listed in the Directory of Members with the distribution of articles published in all journals indexed by the JEL in the four issues of that publication in 1976. With the exception of field 500, "Administration; Business Finance; Marketing; Accounting," which was somewhat underserved (11.0 per cent of the members of the AEA list this as their primary field; only 6.5 per cent of the articles indexed in the JEL in 1976 were classified in this field) there was a rough symmetry between the population of economists in broad field categories and the number of articles published in the journals.

With regard to articles published in the selected issues of the high-prestige journals included in this survey, the emphasis was clearly on economic theory with 36.3 per cent of all articles falling under the

category "General economics; Theory; History; Systems." While only 17.5 per cent of those in the General Group listed this field as their primary interest, this field accounted for 31.7 per cent of all readings. The proportion of theoretical articles read would have been even greater in relation to the proportion of articles published had we excluded Ecm and ReStud from the analysis. These two journals accounted for 19 of the 40 articles appearing in General Economic Theory (subfield 020) but drew comparatively few readers.¹¹ In general, it would seem safe to infer that the emphasis on theory in the remaining nonspecialized journals is justified by reader demand.¹²

Other fields in which the proportion of reading done by our respondents is significantly greater than the proportion of articles available in the selected issues of the journals included the category "Economic Growth, Development, Planning; Fluctuations," the category "Domestic Monetary and Fiscal Theory and Institutions," and the category "Manpower; Labor; Population." The respondents read comparatively few articles in the categories "Quantitative Economic Methods and Data," "International Economics," "Administration; Business Finance; Marketing; Accounting," "Industrial Organization; Technological change; Industry Studies," and "Agriculture; Natural Resources."

VI. CONCLUSIONS AND POLICY ISSUES

We set out to investigate the degree to which economists are satisfied with economics journals. The results that we have reported do not allow us to draw any definitive conclusions. We found varying degrees of satisfaction among re-

¹¹ The subject matter appearing in ReStud was mathematically oriented with an emphasis on general economic theory. Ecm, by contrast, published about half in theory and half in econometric methods and models. In our survey the articles in Ecm on econometrics were read by an average of 23.2 respondents while articles on theory were read by an average of only 6.8 respondents.

¹² General Economic Theory includes general-equilibrium theory, microeconomics, macroeconomics, welfare theory and social choice. Among these, the largest number of readers per article was recorded for macroeconomics, followed by microeconomics and welfare theory. The smallest numbers of readings were recorded for articles in general-equilibrium theory and social choice.

respondents and with regard to individual journals. Among those who indicated unhappiness with publication policies, some seemed motivated by a dissatisfaction with the general direction in economic research while others seemed motivated by a dissatisfaction with the editorial policies of particular journals. By and large, we shall let the findings presented in previous sections speak for themselves. However, we believe the study justifies a few concluding observations.

It is likely that editors will attract a larger audience for their journals by requiring authors to prepare nontechnical synopses of technical material. This will accommodate both the specialist who may prefer to pore meticulously over the contents of an article, and the general reader who may have interest, but who may lack either the necessary technical background or the time needed to benefit by the technical exposition. Our findings suggest that the majority of readers of any given article are of the latter type, reading with attention to main points or just to get the idea rather than with great care.

While many members of the AEA are satisfied with the Association's policies on publications, a substantial number indicate that their interests are not being served. In view of some of our findings, the Association might give consideration to these suggested alternatives:

(1) Publishing more articles relevant to current business conditions and public policy in the AER;

(2) Publishing a new journal that would be policy-oriented while preserving the AER as a basic-research journal;

(3) Giving members a choice in selecting the publications they wish to receive by "unbundling" the membership package, that is, pricing each journal separately.

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