



A Simple Method for Evaluating a Journal Collection: A Case Study of Northwestern University Library's Economics Collection

Harriet Lightman with Sabina Manilov

This article describes an evaluation of Northwestern's economics journal collection. The evaluation process, which combined citation analyses with non-statistical techniques, resulted in lists of titles to cancel and to add to the collection. The article details the process and lists questions intended to help librarians decide whether or not to undertake a similar project.

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Collection development librarians are constantly faced with the delicate problem of balancing the immediate requests of academic departments against the long-range plans for collections. The attempt to achieve balance between departmental needs and long-range planning can be particularly pressing in times of budget constraints and especially profound in disciplines whose most important literature is to be found as much in journals as in monographs. Such is the case with the field of economics.

In the late spring of 1997, Harriet Lightman assumed the position of bibliographer for economics at Northwestern University Library (NUL) and the stewardship of a newly created economics fund. One of her first tasks was to review the library's economics collection in a systematic and very timely fashion. To do this, she developed a methodology suitable to Northwestern's particular circumstances, then worked closely with an assistant (Sabina Manilov) to implement this method. The ultimate result was the development and implementation of collection recommendations. The method of the study, and some of the results, are presented in this article.

Library literature provides numerous examples of the different ways in which collections can be evaluated by using a combination of techniques, such as bibliometric analyses. This same literature provides myriad discussions of the reasons why librarians should evaluate their collections.¹ One of the more recent, and most comprehensive, articles about collection evaluation is the study of a business and economics collection that was completed by David Carpenter and Mal-

colm Getz in 1995.² Parts of their innovative model, albeit in greatly simplified form, were adapted to fit Northwestern's particular circumstances and were used as a basis for a comprehensive review of the economics journal collection housed in the main library. As a result of the review of Northwestern's collection, 10 economics titles were canceled, and seven were added to the main library.

RATIONALE FOR A REVIEW OF THE JOURNAL COLLECTION

A coincidence of factors dictated the need for a review of the journal collection, chiefly the arrival of the new bibliographer and the creation of the new economics fund. There were several specific and compelling reasons for the comprehensive review to:

- Be certain that the correct dollar amount had been allocated for journals, and that the correct journals were charged to the economics fund, when the new fund was created;
- Provide the new bibliographer with a deep understanding of the library's current economics collection;
- Provide the new bibliographer with a snapshot of the research interests of current faculty;
- Review journal titles for relevance and currency, given the fact that the department's needs were becoming more pressing; and
- Develop an objective justification for adding new titles as well as for recommending titles for cancellation.

As alluded to above, prior to the spring of 1997 economics materials were purchased out of a general social science

fund. When the new bibliographer took over, a new economics fund was created. To do this, a certain estimated amount was subtracted from that social science fund. This subtracted amount was used as the basis for the newly created fund and, subsequently, as the basis for the following fiscal year's budget allocation. After one full fiscal year, it became clear that the original estimates were not entirely accurate. When examining the exact cost of individual journal titles, it further became apparent that some of the economics titles no longer matched the research interests of the current faculty, and there appeared to be several titles that could be canceled. There was, simultaneously, an added incentive for performing a review of the journals. In summer 1998, the library was transitioning from its old library management system (NOTIS) to a new system (Voyager). The new economics bibliographer had the opportunity to review the economics journals list title-by-title prior to the migration, and at that time became even more certain that several of the economics titles were no longer relevant to the department's interests, although she had no objective proof of this suspicion. Thus, she had an added incentive for obtaining some objective standard by which to assess the currency and relevance of the journal collection. (Unfortunately, because the journal review project did not coincide with the migration to Voyager, some titles that were migrated to the new system were later canceled.)

NORTHWESTERN UNIVERSITY AND ITS LIBRARIES

Northwestern is a private university. The main campus, in Evanston, Illinois, reported a total enrollment of 12,064 for fall 1997.³ The NUL system includes the University Library and three branches (Geology Library, Mathematics Library, and the Seeley G. Mudd Library of Science and Engineering) on the Evanston campus as well as the Joseph Schaffner Library on the Chicago campus. Galter Health Sciences Library and the Pritzker Legal Research Center are located on the Chicago campus. (The United Library of Garrett-Evangelical and Seabury-Western Theological Seminaries is also located on the Evanston campus.) The University Library, on the Evanston campus, supports the Judd A. and Marjorie Weinberg College of Arts and Sciences (of which the Economics Department is a part) as well

as many of the schools within the university system, including the Kellogg Graduate School of Management. Most mathematical materials, and pure and applied science, are housed in a separate building. The Transportation Library, one of Northwestern's premier collections, is housed in a separate unit within the University Library's main building on the Evanston campus, as is the Government Publications and Maps Department. The Law School library (the Pritzker Legal Research Center), on which the Economics Department often depends, is entirely separate from the University Library, and it is housed on the Northwestern's Chicago campus.

THE ECONOMICS DEPARTMENT

In 1997, Northwestern's Economics Department awarded 11 Ph.D. degrees, 13 Master's degrees, and 232 Bachelor's degrees, the latter being the highest number of Bachelor's degrees conferred in any given major graduating from the Weinberg College of Arts and Sciences in that year.⁴ In 1998, *U.S. News & World Report* ranked the department's doctoral program 8th in the United States.⁵ The faculty is world-renowned, and includes in its ranks numerous prize-winning, distinguished economists. The department is, and has traditionally been, completely separate from the University's Kellogg Graduate School of Management, although some faculty have joint appointments.

NORTHWESTERN UNIVERSITY LIBRARY'S ECONOMICS COLLECTIONS

Economics materials are housed in a number of areas within Northwestern's library system. Many statistical materials as well as foreign and domestic government publications are housed in the Government Publications and Maps Department. Other statistical sources, and many materials on mathematical economics and quantitative methods, are housed in the Mathematics Library, whereas most datasets, and the University ICPSR (Inter-University Consortium of Political and Social Research) materials, are the purview of Government Publications. Books, working papers, and journals in transportation economics are separately collected and housed in the Transportation Library.

Although overlap is inevitable, and cooperation between the library's economics bibliographer and the management bibliographer is on-going, purchase of materials in support of Kellogg is handled

by funds that are separate from those that support the Economics Department. Similarly, there is much overlap with the political science collection, particularly in the area of political economy. Faculty research needs are also strongly supported by the Transportation Library and the Government Publications and Maps Department, as well as by materials in the Pritzker Legal Research Center. Northwestern's extremely strong history collection also supports economic history. Reference materials are purchased either out of the economics fund or, in most cases, from general reference department funds.

DEVELOPMENT AND FINALIZATION OF A SIMPLE METHODOLOGY

Because time was at a premium (the economics bibliographer wanted to complete the review of Northwestern's collection in time to use it as the basis for any budget adjustments for the coming fiscal year) the methodology could not be complicated, nor could the procedure be too time-consuming. It was decided that only journals and those annuals and working papers that were charged to the journals fund would be reviewed; subscriptions to non-journal/working paper electronic products were not included in this study. The first step after making this determination was to find a sound, accurate methodology that did not depend on sophisticated statistical techniques that were beyond the purview of the Bibliographer. To do this, Lightman studied the methodology developed by Carpenter and Getz, then adopted, and adapted, many of their suggestions, though by no means all.

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Carpenter and Getz evaluated the collections of economics monographs and

serials (by which they meant journals, annuals, and subscriptions to electronic products) of the Jean and Alexander Heard Library of Vanderbilt University. To review Vanderbilt's journal collection, they looked for the most important journals in the fields of economics, the journals most often cited by their faculty, the journals covered by major indexes, and subscription costs. To analyze their library's coverage, they used William Katz's *Magazines for Libraries*, the databases *EconLit* and *ABI/Inform*, and the *ISI Journal Citation Reports* Impact Factor and ISI Cited Half-life.⁶ To complete their monograph review, they compared Vanderbilt's holdings to a wide range of titles drawn from other sources. Their tools for this monographic analysis included the *Amigos Collection Analysis CD*, *Books for College Libraries*, and local circulation histories.⁷ Sophisticated statistical techniques were used to analyze much of their data.⁸

In the main, the Northwestern study followed Carpenter and Getz's model of using citation analyses to analyze a journal collection, as well as certain of their other suggestions. However, whereas they focused on analyzing journals cited by their faculty, we examined citations to Northwestern faculty as well as citations by Northwestern faculty. This technique provided a completely comprehensive picture of the range of economics journals whose research focus touched on the research interests of Northwestern faculty, and, thus, had the added benefit of providing Northwestern's new economics bibliographer with a profound understanding of the department's research interests as well as its impact on the larger academic community. The Northwestern study also eliminated certain other steps that Carpenter and Getz suggested, specifically their use of the ISI Impact Factor and the ISI Cited Half-life and their analysis of journal prices. Northwestern's choices for cancellations/additions to the collection were based largely on faculty approval of the titles on a list that was developed as part of the citation analyses. Finally, the Northwestern study, unlike Carpenter and Getz's work, excluded monographs from the evaluation.⁹

The Northwestern journals that were charged to the newly created economics fund were first reviewed title-by-title. Then, a multi-step evaluation process was followed:

- Performance/completion of citation analyses;
- Checking of certain portions of the lists of cited titles against Northwestern's holdings;
- Checking of the list of titles funded by the newly created economics fund against standard journal lists and against the results of the citation analyses;
- Identification of titles for cancellation/transfer to other funds; and
- Checking of the cancellation list against the online catalog's charge/browse records and against OCLC's *WorldCat* to determine whether the listed journals were held elsewhere in the state of Illinois.

In completing the citation analyses, the study was limited only to those faculty who were listed on the Economics Department's Web page as of October 8, 1998 (i.e., Kellogg faculty members were not included unless they were also listed on the Economics Department's Web page).

As suggested earlier, the Northwestern study employed a number of sources, chief among them was the Web version of the *Social Sciences Citation Index (SSCI)*. The *SSCI* is part of the *ISI Web of Science* citation databases (the companion products are the *Science Citation Index* and the *Arts & Humanities Citation Index*).¹⁰ Via the *SSCI*, which is updated weekly, researchers can track citations to their published journal articles, track citations to the work of others, or do subject searches. Although the *SSCI* is a thorough index, it is not comprehensive. Many foreign language journals and working papers are not indexed in the *SSCI*, and hence numerous publications to which Northwestern subscribes did not appear in the citation analyses. The use of this latter group was assessed by compiling historical browse/charge statistics from Northwestern's library management system, Voyager. However, this was far from being a scientific measure because these browse/charge statistics were not in themselves an accurate measure because journals do not circulate outside of library offices and carrels.

Using the *SSCI*, we tracked citations by, and citations to, those Northwestern economics faculty who were listed on the department's Web page as of October 8, 1998.¹¹ Two faculty members, however, were excluded from the study because

their names were very common and the *SSCI* search produced publications that were written by other individuals with the same name, making it impossible to distinguish whether it was a Northwestern faculty member who wrote the article. Because our intention was to get a gross idea of the most important journals for the research focus of our collection, we were looking for journals in which our faculty were cited and journals that our faculty cited.

By now it is clear that, although the methodology was ultimately effective for Northwestern's purposes, neither the method nor the sample chosen for this study was entirely scientific. The method did, however, provide a set of fairly objective standards against which to develop a list of recommended cancellations and additions. One of the chief drawbacks to the approach, for example, is reflected in the fact that we did not adjust our analysis to match ISI's weekly updates. This was because it was assumed, rightly or wrongly, that the numbers reflected in the final analyses would not change dramatically in the course of a few weeks.

Citations were gathered during the following periods:

- Of the faculty: January 1992–October 1998; and
- By the faculty: January 1990–November 1998 (only the articles that were written during this period, and were cited, are recorded).

The choice of chronological citation parameter was not arbitrary. The period beginning 1992 seemed to provide an adequate and current snapshot of journals that cite prestigious articles, although we did choose to check the journals cited by the faculty for a slightly longer period of time (1990–1998).

Carpenter and Getz, as suggested above, discussed the ISI Impact Factor, another important measure of the significance of a given journal. The ISI Impact Factor is intended to measure the significance of a given journal within a given field. However, it is a global measure (i.e., it measures the importance of a given journal overall, as found by citations in mostly English-language journals within a given field). It does not, in other words, tell a researcher which journals are locally most important. Chiefly for this reason, as well as for reasons of limited time and resources, we chose to ignore the Impact Factor for the purposes of our

study. Instead, we chose, in effect, to set up a localized version of an Impact Factor. By matching the titles on the “citations by” list with the titles on the “citations to” list, it was possible to determine whether Northwestern faculty were citing the same journals in which they, in turn, were cited. This matching provided a good (although again, neither strictly scientific nor comprehensive) measure of the most important journals for NUL’s collection.¹²

In addition to citation analyses, we chose to look at two standard lists of economics journals: the list in William Katz’s *Magazines for Libraries* and the list of journals indexed by *EconLit*.¹³ Finally, before recommending any journal for cancellation, we checked the historical charges/browses on our local library management system, Voyager; checked the OPAC for a comprehensive overview of the extent of our holdings of a given journal; and checked titles in OCLC’s *WorldCat* to determine if any of the journals proposed for cancellation were available elsewhere in the state of Illinois.

RESULTS OF THE CITATION ANALYSES

Table 1 shows those journals indexed in the *SSCI* in which there are 16 or more citations to members of Northwestern’s economics faculty during the period January 1992–October 1998. The number 16+ was arbitrarily chosen. This table also shows:

- Total number of citations to Northwestern economics faculty; and
- Number of faculty cited by each journal.

The titles listed on Table 1 were searched against NUL’s holdings, and it was determined that the library held all but one title on this list (*Journal of the Japanese and International Economies*, which cited Northwestern faculty 16 times during the study period). To check the completeness of Northwestern’s holdings, the titles that had between three and 15 citations to Northwestern faculty during the study period were also searched.¹⁴ Table 2 shows which of this latter group of titles were not held by the library.

Table 3 indicates the journals to which there were nine or more citations made by Northwestern economics faculty during the period January 1990–November 1998. Nine was an arbitrarily chosen number.

Table 1
Top Economics Journals Citing Northwestern University Economics Faculty (January 1992–October 1998)

Journal	Total No. of Citations to NU Economics Faculty	No. of Faculty Cited
<i>Journal of Economic Theory</i>	92	13
<i>Journal of Monetary Economics</i>	88	9
<i>American Economic Review</i>	78	23
<i>Econometrica</i>	58	14
<i>Review of Economic Studies</i>	51	17
<i>European Economic Review</i>	50	12
<i>International Economic Review</i>	49	11
<i>Journal of Economic Dynamics and Control</i> ⁺	48	11
<i>Economics Letters</i>	46	15
<i>Journal of Political Economy</i> ⁺	46	12
<i>Journal of Economic History</i> ⁺	43	7
<i>Journal of Econometrics</i>	39	10
<i>Journal of Money Credit and Banking</i> ⁺	38	10
<i>Journal of Economic Perspectives</i> ⁺	37	13
<i>Games and Economic Behavior</i> ⁺	36	6
<i>Applied Economics</i>	33	10
<i>Rand Journal of Economics</i>	32	13
<i>Economic Journal</i>	31	13
<i>Journal of Economic Literature</i> ⁺	31	14
<i>Journal of Public Economics</i>	29	10
<i>Review of Economics and Statistics</i> ⁺	29	10
<i>Economic History Review</i> ⁺	27	3
<i>Quarterly Journal of Economics</i>	27	12
<i>Canadian Journal of Economics</i>	26	9
<i>Journal of Human Resources</i> ⁺	24	10
<i>Journal of Macroeconomics</i>	24	7
<i>Journal of Labor Economics</i>	23	5
<i>Southern Economic Journal</i>	23	12
<i>Economic Inquiry</i>	21	11
<i>Journal of Business and Economic Statistics</i> ⁺	21	7
<i>Economic Theory</i>	20	6
<i>Journal of International Money and Finance</i> ⁺	19	5
<i>Explorations in Economic History</i>	19	4
<i>Journal of Applied Econometrics</i>	18	10
<i>Journal of Risk and Uncertainty</i>	18	4
<i>Journal of Economic Behavior and Organization</i>	17	10
<i>Journal of International Economics</i>	17	7
<i>Economica</i>	16	7
<i>Journal of Economics and Management Strategy</i> ⁺	16	9
<i>Journal of the Japanese and International Economies</i> ^x	16	6
<i>Oxford Economic Papers-New Series</i>	16	10
<i>Revue Economique</i>	16	7

Notes: ⁺Not charged to Economics Fund.
^xLibrary does not subscribe.

Table 2
Titles Not Held by Northwestern University Library That Cite NU Faculty between Three and 15 Times

Journal title	No. of Citations to Northwestern Faculty
<i>International Journal of Industrial Ergonomics</i>	12
* <i>Oxford Review of Economic Policy</i>	12
<i>Journal of Population Economics</i>	8
<i>Non-Profit and Voluntary Sector Quarterly</i>	8
<i>European Journal of Operational Research</i>	6
<i>Politicka Ekonomie/Journal of Political Economy</i>	4
<i>Population and Environment</i>	4
<i>Service Industries Journal</i>	4
<i>Austrian Journal of Public Administration/Zeitschrift fur Offentliches Recht</i>	3
* <i>Health Economics</i>	3
<i>Open Research Letters</i>	3

Note: *Indicates titles added as a result of the serials review.

The titles listed in Tables 3 and 4 were searched against NUL's holdings. Again, to check the completeness of the library's collection, those titles that were cited by Northwestern faculty between two and eight times were also searched against the library's catalog.¹⁵ Table 4 shows which of this latter group of titles were not held by the library.

As mentioned earlier, NUL's holdings were also checked against standard lists of economics periodicals. *Magazines for Libraries* listed 86 print journals that are considered important for research collections. As of the end of 1998, NUL held 79 titles, or 91.9% of this list of 86.¹⁶ The list of journals indexed by *EconLit* was also examined, but these journals were not correlated to the library's holdings (we had begun such a correlation, but found that it was very time-consuming).

USE OF VOYAGER DATA AND WORLDCAT RECORDS

The final step in compiling suggestions for titles to be canceled involved identifying journals that were funded by the newly created economics fund, but did not appear on any of the lists generated by the citation analyses and were not listed in Katz's *Magazines for Libraries*. Because this list included many foreign-language journals that would most likely not be picked up by the *SSCI* or by Katz, the circulation records were checked in Voyager, but because journals only circulate

to library offices and carrels, this measure of a journal's use was only suggestive. Journals that were ultimately put on the recommended cancellation list had two or fewer historic charges/browses. However, not all journals with two or fewer charges/browses appeared on the cancellation list. Some journals were kept in the collection for subjective reasons (e.g., they provided coverage of an otherwise under-represented area). Finally, the titles on the cancellation list were checked against *WorldCat* to determine if these titles were available elsewhere in the state of Illinois.

PRICES OF JOURNALS

In conjunction with this project, pricing information was gathered to help in estimating the overall cost of annual subscriptions and in making projections for the future. To do this, journals currently paid for out of the economics fund were examined, then divided into categories by imprint locations (e.g., France, Germany, and the Netherlands), and finally, an average per journal cost was calculated. The results are not included in this article, and this information did not have a direct impact on cancellation/addition recommendations. It is worth noting, however, that such information provided one more useful benchmark for use in budget projections.¹⁷

DISCUSSION

This study had four direct results:

- Provided information that was necessary for the development of a cancellation/addition list;
- Helped to guide future budget planning;
- Provided a snapshot of the chief areas of research of the faculty; and
- Provided the tools to examine the placement of journals within the payment structure of NUL; it is now known, for example, that several well-used economics journals are assigned to funds other than the economics fund.

It was ultimately recommended that 11 journals and statistical publications be transferred (titles and their funds) from the economics fund to more appropriate funds. This recommendation was based on the fact that these publications did not appear on any of the citation lists, and/or in Katz. Outright cancellation of these journals was not recommended because these titles were all cross-disciplinary and, thus, might be used by scholars in fields other than economics. This list was circulated to other bibliographers, with the caveat that journals that other bibliographers did not want would be recommended to the Economics Department for cancellation. Of these 11 titles, only two were eventually added to the list of recommended cancellations.

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The next step was to develop a list of "under-cited"/under-browsed/under-charged titles. This list of 11 titles, which included the two titles that were not picked up by other bibliographers, was circulated to the Economics Department as possible candidates for cancellation. The department recommended canceling 10 titles on this list of 11.

Third, the Economics Department was given a list of suggested additions to the

Table 3
Top Journals Cited by Northwestern University Economics Faculty
(January 1990–November 1998)

Journal	Total No. of Citations by NU Economics Faculty	No. of Faculty Citing
<i>American Economic Review</i>	78	16
<i>Econometrica</i>	60	12
<i>Journal of Political Economy</i> ⁺	50	14
<i>NBER Papers</i>	45	14
<i>Quarterly Journal of Economics</i>	40	13
<i>Review of Economic Studies</i>	39	11
<i>Rand Journal of Economics</i>	36	9
<i>Journal of Economic Theory</i>	30	10
<i>Journal of Monetary Economics</i>	28	3
<i>New York Times</i>	28	5
<i>Journal of Economic Literature</i> ⁺	26	8
<i>Journal of Economic History</i> ⁺	22	4
<i>Wall Street Journal</i>	21	4
<i>Brookings Papers on Economic Activity</i>	17	9
<i>Health Affairs</i> ⁺	14	3
<i>Journal of Econometrics</i>	14	4
<i>Journal of Business and Economic Statistics</i> ⁺	13	5
<i>Journal of Economic Dynamics and Control</i> ⁺	13	6
<i>Journal of Human Resources</i> ⁺	12	4
<i>Economic History Review</i> ⁺	11	2
<i>Journal of Economic Perspectives</i> ⁺	11	8
<i>Accident Analysis and Prevention</i> ⁺	10	2
<i>European Economic Review</i>	10	3
<i>Journal of Finance</i> ⁺	10	3
<i>Journal of the American Statistical Association</i> ⁺	10	2
<i>Economic Theory</i>	9	5
<i>JAMA-Journal of the American Medical Association</i> ⁺	9	3
<i>Journal of Development Economics</i>	9	3
<i>Journal of Money Credit and Banking</i> ⁺	9	3
<i>New England Journal of Medicine</i> ⁺	9	2
<i>Review of Economics and Statistics</i> ⁺	9	6

Note: ⁺Not charged to Economics Fund.

collection. This list was compiled from the results of the citation analyses and also from lists of new journals (journals probably so new, in other words, that they had not yet been indexed in *SSCI* or listed in Katz). When this suggested additions list was sent to the Economics Department, it was noted that these additions could not be funded without canceling other journals. The economics bibliographer asked for priority

ranking for suggested new additions and recommendations of other materials that might be of benefit. The department returned a list of eight journal titles to be added; seven were added immediately.

As was expected, the cost of adding all of the new journals would have outweighed the savings gained by canceling every title on the recommended cancellation list. Thus, this study was used as a

discussion point for conversations about funding implications for the newly created economics fund. Given the importance of the Economics Department to the University, and its place in the larger academic community, it could further be argued that it was critical to refine the collection to meet departmental needs and that the library needed to be well-pre-

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pared to adjust budget priorities in the coming year to position ourselves to serve the department adequately. It is also clear that a full-scale review of the placement of all economics-related journals may, in the future, be warranted.

FUTURE DIRECTION AND SUGGESTED GUIDELINES

This study can be used as a model for other journal collection evaluations. It can, and should, be modified to fit the circumstances of a particular library, just as the NUL study modified Carpenter and Getz's original model to fit Northwestern's circumstances. The combination of techniques discussed in this article will, when applied, give selectors a worthy snapshot of the uses their constituents are making of their collections. The method used at NUL can be further tailored to meet the research skills of the investigating librarian(s).

Before undertaking a comprehensive journal collection review, however, librarians might ask themselves the questions listed below. These questions could be used as broad guidelines in determining whether it is feasible or even necessary to undertake a full-scale review:

- *Relevance*: Do I need a serials review? Have the departments for which I am responsible changed faculty? Have the graduate and/or undergraduate populations of the college/university changed? Has there been a change in focus on the part of the Economics Department? Has there been a change in strategic focus on the part of the college/university that might have an

Table 4
Titles Not Held by Northwestern University Library That Are Cited by
NU Economics Faculty between Two and Eight Times

Journals Not Held by NUL	No. of Citations by Northwestern Faculty
<i>Journal of the Japanese and International Economies</i>	5
<i>Defence and Peace Economics</i>	4
<i>Journal of Population Economics</i>	2
* <i>Resource and Energy Economics</i>	2
<i>Review of International Political Economy</i>	2

Note: *Indicates title added as a result of the serials review.

impact on the library's economics collection?

- *Time and Sources:* How time-consuming will it be for the study principal(s) to learn to use the *SSCI* and to use it effectively once it is learned? Will the study principal(s) need student resources, and will such resources be readily available? Does the *SSCI* index the journals which most concern the college/university collection that is being evaluated? Should the citation portion of a serials review be eliminated altogether, and should the principal(s) instead rely strictly on consultations with faculty, standard lists, and circulation records? Will the latter provide an accurate snapshot of the relevance of the collection and of its currency?
- *Funding:* Has the need to add titles outweighed possible subtractions? Has the budget kept up with demand and with price increases in needed materials, or is quantitative justification needed for any requests for increases? How in-depth must a serials review be before there is sufficient quantitative justification for a budget increase?

CONCLUSION

In the final analysis, the review of Northwestern's serials collection had several immediate benefits. It:

- Resulted in additions of new journals and cancellations of other titles to shape a collection that was well-matched to the Economics Department's needs and strengths;
- Paved the way for future budget planning exercises by giving the new economics bibliographer some specific local data to aid in budgeting;
- Allowed the new bibliographer to

open communication channels with the Economics Department; and

- Gave the new bibliographer a thorough picture of the department's research interests and how those interests matched the library's collection.

Reviewing a journal collection, as suggested above, is no easy matter. The process is time-consuming and often, as was the case with the Northwestern review, statistically inaccurate and unscientific in methodology. The process can also be frustrating, particularly when costly decisions will ultimately be made based on methods that blend subjectivity and objectivity. Yet, these negatives, all of which are important concerns for librarians undertaking a comprehensive serials review, are ultimately outweighed by the benefits.

The review of Northwestern's economics serials collection was an extremely important and useful exercise that had direct benefits for both the Economics Department and the University Library. The quasi-scientific approach suited my skills, and, thus, the exercise became manageable and hence successful. Carpenter and Getz's study was an excellent and adaptable model. Other social science collection development librarians should be encouraged to undertake a similar review and to be prepared to modify models to suit their own libraries' needs. Too, we would encourage other librarians to share their experiences in using models such as that of Carpenter and Getz in performing collection reviews because these shared experiences are of great benefit to the collection evaluation community.

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NOTES AND REFERENCES

1. In *Collection Evaluation in Academic Libraries: A Literature Guide and Annotated Bibliography* (Englewood, CO: Libraries Unlimited, 1992), Thomas E. Nisonger provides a masterful and comprehensive guide to the literature on the very broad subject of collection evaluation. His annotations are excellent, especially his chapters "Evaluation of Serials" (pp. 150-176) and "Citation Studies" (pp. 97-119). This latter provides a very thorough overview of some of the best articles on the use of citation analyses (see pp. 106-111). It is noteworthy that none of these articles focuses specifically on economics collections, as does the article by Carpenter and Getz cited in note 2 below. Too, the most recent date of articles cited in Nisonger is 1991. Also see John T. Gillespie & Ralph J. Folcarelli, *Guides to Library Collection Development* (Englewood, CO: Libraries Unlimited, 1994), which provides bibliographic lists that can be used as checklists for collection evaluation purposes.
2. David Carpenter & Malcolm Getz, "Evaluation of Library Resources in the Field of Economics: A Case Study," *Collection Management* 20(1/2) (1995): 49-89.
3. *Northwestern University Data Book*, 30th ed. (Evanston, IL: Office of Administration and Planning, Northwestern University, 1997-1998), p. 3. The total enrollment figure given above is, it should be reiterated, for the Evanston, Illinois, campus only, for fall 1997. This figure included the following categories: Weinberg College of Arts and Sciences, Education, Journalism, Management, Music, Speech, and Engineering. The figure also included undergraduates and graduate students and full- and part-time students.
4. *Ibid.*, pp. 92, 94, and 99.
5. *U.S. News & World Report* top schools for doctoral degrees in economics, 1998; *U.S. News & World Report* Best Graduate Schools; *U.S. News & World Report*, 1998. Cited in *Educational Rankings Annual 1999*, edited by Lynn C. Hattendorf Westney (Detroit, MI: Gale, 1998), p. 196.
6. Carpenter & Getz, "Evaluation of Library Resources," pp. 58-68. See their definitions of the Impact Factor (pp. 62-63) and the ISI Cited Half-life (pp. 63-64). Their other referenced sources include *Magazines for Libraries*, 7th ed., edited by William A. Katz (New Providence, NJ: Bowker, 1992); Institute for Scientific In-

formation, Inc., *Social Sciences Citation Index 1988 VI*, and *SSCI Journal Citation Reports: A Bibliometric Analysis of Social Science Journals in the ISI Data Base* (Philadelphia, PA: Institute for Scientific Information, 1989); and the databases *EconLit* and *ABI/Inform*, both of which were on CD-ROM at the time that their article was written.

7. Carpenter & Getz, "Evaluation of Library Resources," pp. 68–76. Note especially their discussion of the *OCLC/Amigos Collection Analysis* CD, which they describe in detail on pp. 70–74 and in note 13, p. 84. Their other referenced sources include Association of College and Research Libraries, *Books for College Libraries: A Core Collection of 50,000 Titles*, 3rd ed. (Chicago, IL: Association of College and Research Libraries, 1988).
8. See especially Carpenter & Getz, "Evaluation of Library Resources," pp. 61–67, and the Appendix, pp. 87–89.
9. Northwestern's monographic collection was not reviewed as part of this study, chiefly because there was no sound methodology that seemed adaptable to our particular circumstances (see especially *Ibid.*, pp. 52–56). Carpenter and Getz could, for example, compile the number of economics and business monographic titles in their collections, break these down by subject area, link these to Library of Congress (LC) call numbers, and provide circulation statistics. At Northwestern, on the other hand, it was not feasible to estimate rapidly or easily how many economics books the library houses because these books span several Dewey call number ranges and because they are not gathered in any one place on campus. Carpenter and Getz also used standard lists (holdings of other libraries, for example) to judge their monographic collections. Again, at Northwestern it was not possible, in a short period of time, to make effective use of these lists. The *Amigos* data, for example, was of little help because these data are arranged by LC classification and Northwestern is a Dewey library. It would have been very time-consuming to map the economics monographic collection, which, as noted, is spread through several call number ranges, to correspondent LC classes.
10. Institute for Scientific Information, *Web of Science: Social Sciences Citation Index, 1987–1998* (Philadelphia, PA: Institute for Scientific Information) [Online]. Available: <http://www.webofscience.com> (by subscription only).
11. The Web page included faculty of all academic ranks, and hence the publication/citation level varied greatly.
12. Carpenter and Getz further employed the ISI Cited Half-life to assess the importance of particular journals. We did not do this because we felt the comparison of the "citations to" and "citations by" lists combined with faculty recommendations was adequate for our purposes. For a detailed discussion of the uses of their various measures of a journal's significance, and/or definitions of these measures, see Carpenter & Getz, "Evaluation of Library Resources," pp. 61–68.
13. Gwyneth H. Crowley, "Economics," in *Magazines for Libraries*, 9th ed., edited by William Katz & Linda Sternberg Katz (New Providence, NJ: Bowker, 1997), pp. 459–478. Also note that *EconLit* is produced by the American Economic Association as is the bibliography of economic literature. NUL subscribes to the Web version of *EconLit* (Norwood, MA: Silver Platter) [Online]. Available: <http://www.econlit.org>.
14. A complete list of all of those journals in the final study that had citations to Northwestern economics faculty is provided in that study, but not in this article.
15. A complete list of all of those journals in the final study that were cited by Northwestern economics faculty is provided in that study, but not in this article.
16. The journals that were listed by Crowley in Katz, *Magazines for Libraries*, but were not held by Northwestern at the time of the serials review are listed below. As a result of the review, we added the two journals marked *.
Communist Economies and Economic Transformation (formerly: *Communist Economies*)
Energy Economics
**International Review of Applied Economics*
Journal of Asian Economics
Petroleum Economist: The International Energy Journal (formerly: *Petroleum Press Service*)
**Review of Industrial Organization*
Review of Political Economy
17. Pricing information was gathered from local sources as well as from *Ulrich's International Periodical Directory* (New York: Bowker, 1996) [CD-ROM].