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ABSTRACT

The purpose of this study is to provide data for making decisions on whether to buy or borrow research materials and whether to use fee-based suppliers or interlibrary loan for obtaining photocopied materials. The study is based on 1991 information collected in a survey of 76 U.S. and Canadian research libraries. The cost per transaction is broken down into the following categories: staff; networks and communications; materials delivery; photocopying; supplies; equipment and software purchase, rental, and maintenance; and direct and indirect charges for borrowing. The study highlights cost differences among geographic regions and between private and public institutions, which are due to variations in staff deployment and salaries, service levels, and numbers of borrowing and lending transactions. Analysis of the data shows that a research library spends on average \$18.62 to borrow a research document or article or to purchase a photocopy of the item and \$10.93 to lend a document. Staff costs represent about 77% of the cost for borrowing and lending; 16% of the total is for supervisory staff and 61% for nonsupervisory staff. A copy of the survey instrument is appended.
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ARL/RLG INTERLIBRARY LOAN COST STUDY

A Joint Effort by the Association of Research Libraries and
the Research Libraries Group

by Marilyn M. Roche
Research Libraries Group

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Association of Research Libraries

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ARL/RLG Interlibrary Loan Cost Study

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Foreword

This report on the ARL/RLG Interlibrary Loan Cost Study is the culmination of a joint effort by the Association of Research Libraries and the Research Libraries Group on behalf of research libraries. With assistance from the Council on Library Resources, a survey of ARL member libraries was undertaken that provides the most extensive data available on the costs incurred by libraries in interlibrary lending and borrowing operations.

Special recognition is due to the staff members in 76 libraries who found time to collect and submit the data that is the foundation for this project. The survey instrument is comprehensive and the data difficult to gather. The collection efforts of these staff have made possible a detailed and credible picture of the costs of ILL.

The ARL-RLG partnership in this project illustrates the potential of joint initiatives that simultaneously focus the energy and expertise of two organizations toward a common goal. We look forward to other opportunities for cooperative ventures.

James Michalko, President, RLG

Duane Webster, Executive Director, ARL

June 1993

Acknowledgements

Marilyn M. Roche, Consultant to RLG, undertook the central role in the conduct of the ILL Cost Study, assuming responsibilities for the survey instrument, data verification, analysis, and this report. Valuable assistance was provided in the presentation of the data contained in this report by Stacey T. Carpenter and Nicola Daval of ARL, and James W. Coleman, Jonathan Lavigne, and Stephen Sage of RLG. Jaia Barrett, Jutta Reed-Scott, Annette Verna, and Patricia Brennan of ARL assisted in communication components.

The project benefitted from guidance by an advisory committee who promoted library participation in the study, consulted on data presentation, and commented on a draft of the report. Members were: Joan Chambers, Chair, Colorado State University; Dale Canelas, University of Florida; William Crowe, University of Kansas; David Ferriero, Massachusetts Institute of Technology; and Malcolm Getz, Vanderbilt University.

Other colleagues who assisted in a review of the report were: Shirley Baker, Washington University at St. Louis; Mary Jackson, University of Pennsylvania; Ann Okerson, ARL Office of Scientific and Academic Publishing; Martin Runkle, University of Chicago; and Kendon Stubbs, University of Virginia.

ARL/RLG Interlibrary Loan Cost Study

Executive Summary

The **Interlibrary Loan Cost Study** survey instrument, developed by the Research Libraries Group and distributed by the Association of Research Libraries, was used by seventy-six U.S. and Canadian research libraries to collect cost information for 1991 *ILL borrowing* and *lending* operations.

The purpose of the ILL Cost Study was to provide valuable *benchmark data* and a *management tool* to research libraries for informing the following decisions:

- whether to *buy*, catalog, and hold; or to *borrow* research materials,
- whether to use *fee-based suppliers* or *interlibrary loan* for obtaining photocopied materials.

Analysis of the data provided custom *benchmark data* for each participating institution and shows that a research library spends an average of \$18.62 to borrow a research document/article or to purchase a photocopy of the item for a patron, and \$10.93 to lend a document to another library. Therefore, the cost for a completed ILL transaction (combining borrowing and lending components) averages \$29.55.

As a *management tool*, the survey allows each institution to evaluate its cost per transaction for each ILL cost category relative to the average and range of costs within each category for comparable institutions. Cost categories include staff; networks and communications; materials delivery; photocopying; supplies; equipment and software purchase, rental, and maintenance; and direct and indirect charges for borrowing.

Staff costs represent about 77% of the cost for borrowing and lending, while 23% covers the remaining cost categories. Further review of staff costs illustrates that supervisory staff averages 16% and nonsupervisory 61% of the cost.

The study highlights cost differences among geographic regions and between private and public institutions, which are due to variations in staff deployment and salaries, service levels, and numbers of borrowing and lending transactions.

Among the libraries studied, 60% of all filled transactions were completed by supplying photocopies of materials rather than by sending the original item. On average, 49% of all borrowing requests made by these libraries and 64% of all lending requests received by these libraries, were filled with photocopies.

Institutional members of ARL and RLG supported the project with a supplementary grant from the Council on Library Resources.

June 1993

ARL/RLG INTERLIBRARY LOAN
COST STUDY

by Marilyn M. Roche

Introduction

The changing landscape of information delivery dictates that traditional interlibrary loan (ILL) costs be analyzed to determine what role ILL should play in light of the growing number of available alternatives.

Institutions have shifted their focus from dependence on locally-owned collections to an ownership base complemented by resource sharing interdependence among research libraries, and an emerging reliance in the 1990's upon fee-based or commercial suppliers to procure research materials needed by patrons.

The number of interlibrary loan transactions among ARL libraries has increased steadily in the last decade. Lending grew by 52%, borrowing by 108%. Among RLG members, interlibrary loan traffic expanded by 10% in FY 92, and 5% for several years previous. Three converging trends offer a rationale for these increases:

- *more accessible and easy-to-use bibliographic tools*, including on-line library catalogs and other electronic indexes and access tools;
- *a growing universe of published items*; and,
- *reduced buying power* for libraries as a result of increased acquisition costs for most research resources combined with constrained budgets.

In 1992, the Association of Research Libraries (ARL) and the Research Libraries Group (RLG) collaborated in a joint project to collect detailed information on 1991 costs incurred by research libraries for interlibrary loan transactions, including both the borrowing and the lending components. RLG provided the survey instrument, data entry, result analyses, and final report, while ARL provided experience with surveys, contact with research library directors to ensure survey participation, survey distribution, and report publication. Seventy-six (76) research libraries from institutions in the United States and Canada completed the survey (Appendix E).

The survey instrument (Appendix H), developed by an RLG Public Services Committee task force of librarians (Appendix G) familiar with ILL operations, focuses exclusively on those costs directly associated with interlibrary borrowing and lending, and provides a cost "snapshot" of these ILL activities. Captured in the survey are costs for:

- Staff
- Network and Communications
- Delivery
- Photocopy
- Supplies
- Equipment and Software
- Rental and Maintenance
- Direct and Indirect Borrowing Charges

Costs of major library functions such as collection development, acquisitions, cataloging, general circulation, and preservation are not included, nor is general overhead. Although all of these factors are necessary preconditions for an ILL service, their costs do not contribute directly to the "snapshot" of ILL borrowing or lending activities covered in this survey. (See Appendix B for Methodology and Appendix C for definitions of cost categories.)

The study produced two major reports: the first, distributed in December 1992, was a series of customized institutional reports. The second, the report in hand, provides analyses of aggregated data and subsets for all cost categories and component parts.

Institutional members of ARL and RLJ supported the project with a supplementary grant from the Council on Library Resources.

Project Goals

The purpose of the study was twofold: to produce substantive *Benchmark Data* on costs of interlibrary lending and borrowing, which are key components of resource sharing programs, and to provide a *Management Tool* that would enable participating libraries to make preliminary cost comparisons between ILL and alternative methods of obtaining materials for patrons.

Benchmark Data

Since interlibrary loan is a major activity of the North American research libraries programs, the results of this joint project provide important benchmark cost information necessary for meaningful discussions of the economic implications of resource sharing and document delivery.

Data collected by the joint project was analyzed to produce the following information:

- ILL borrowing costs - mean, median and ranges
- ILL lending costs - mean, median and ranges
- ILL cost categories - mean, median and ranges
- Public/private institutions ILL borrowing costs
- Public/private institutions ILL lending costs
- ILL professional, nonprofessional, and student staff costs
- ILL photocopy activity and costs

Although the ILL Cost Study includes the major costs for ILL activities, it does not delineate several categories that may contribute additional cost to the unit cost for each borrowing transaction. These include subscription, per search, telecommunications, and document delivery fees for services such as CARL UnCover, CitaDel, and FirstSearch, and such Center for Research Libraries fees as may be attributed to ILL. These costs may be factored in when using this benchmark data (see Appendix F for instructions).

Management Tool

Seventy-six research libraries participated in the study. Each received a customized ILL cost analysis report illustrating its individual unit costs for lending and borrowing, along with the mean, median, and ranges of aggregated unit costs at a wide variety of research libraries.

This management planning tool allows each institution to assess costs associated with specific ILL operations. The cost study results assist libraries in making preliminary cost comparisons between traditional ILL borrowing and lending and alternative methods of obtaining materials and photocopies for their patrons.

An important caveat: performance was not measured in this survey. The results of the survey, examined in isolation from other local factors, are not a measure of the effectiveness of the ILL services provided by a participating library. Hence, a high or low unit cost is not necessarily indicative of high or low quality service. Low costs may reflect efficiency, or may result from a lower standard of service. High costs may reflect inefficiency, commitment to a higher standard of service (such as fast turnaround), or regional salary or institutional staffing level differences.

As a management tool, the individual and aggregate ILL cost study results should be evaluated along with other local measures such as:

- individual institutional policies regarding the extent of ILL provision for various categories of patrons;
- response time to fill ILL requests (internal and external); and
- percent of requests filled.

The following scenarios illustrate the effect of local policies and practices on ILL costs.

Scenario 1: Institution A provides unlimited kinds and numbers of ILL borrowing transactions for all categories of students, staff, and faculty. Institution B limits the number of transactions for faculty, and provides no ILL for students and staff. The sheer number of transactions processed by Institution A may produce a lower unit borrowing cost than would exist for Institution B with no difference in quality or efficiency.

Scenario 2: Institution A provides ILL lending access to materials housed in remote branch libraries or storage facilities, while Institution B provides ILL access only to materials available in the "main" library. The extra staff and delivery costs incurred in lending materials from Institution A will be reflected in its higher unit lending costs.

Scenario 3. Institution A cancels subscriptions to many popular, easily obtained journals while Institution B cancels only arcane, esoteric, or expensive journals. Each obtains copies of these materials through ILL. The extra staff and network time necessary at Institution B to locate difficult-to-obtain materials may result in a higher unit borrowing cost.

Findings

Unit Costs

Key findings of the ILL survey show that the average unit cost for a research library to borrow an item is \$18.62 and the average unit cost to lend an item is \$10.93. Therefore, a typical ILL transaction, containing both borrowing and lending components, would cost \$29.55. This reflects the cost to one library for initiating the request, and the cost to the other library for filling the request. In addition to the mean (or average) and the median, the cost overview (Figure 1) contains the costs for 10%, 25%, 75%, and 90% of the institutions surveyed. The dollar figure at each percentage level reflects the maximum cost per borrow or loan for that percentage of institutions. (1)

For the middle 80% of the participating institutions, the actual unit cost ranges from \$9.84 to \$30.27 for a borrowing transaction and from \$6.29 to \$17.49 for a lending transaction, resulting in a completed transaction cost ranging from \$16.13 to \$47.26 for institutions in the 10% - 90% range. (2) Bear in mind that many local factors, illustrated by the scenarios described on the previous page, may cause institutions to fall into high (90%) or low (10%) cost categories.

UNIT COST OVERVIEW ALL LIBRARIES (in \$)						
	10%	25%	Mean	Median	75%	90%
Borrow	9.84	12.30	18.62	17.55	23.37	30.27
Lend	6.29	7.14	10.93	9.18	12.27	17.49

Figure 1

Footnotes:

(1) For example, Figure 1 shows that the cost per borrowing transaction for 90% of participating institutions is \$30.27 or less; and that 25% of institutions have lending costs of \$7.14 or less.

(2) To provide confidentiality for individual institutional data as well as to remove any possible distortion provided by extreme values, the scatter diagrams presented throughout this report include data falling within the 10%- 90% range, excluding the highest and lowest ten percent. The mean and median figures reported are calculated on data from all participants.

Two consortia responded to the ARL/RLG offer to provide custom analysis. Institutional data from the Big Ten and the Big Eight consortia (defined in Appendices E2 and E3) were aggregated separately to illustrate additional analyses available using the cost study survey instrument. Comparing the mean, median, and range for the entire survey sample (All) with the mean, median, and range for these two subsets illustrates differences that may result from regional cost, staff deployment, delivery, or service level differentials.

ILL UNIT COST						
TO BORROW (in \$)						
	10%	25%	Mean	Median	75%	90%
ALL	9.84	12.30	18.62	17.55	23.37	30.27
BIG TEN	8.93	18.54	20.01	18.54	28.20	34.10
BIG EIGHT	9.82	10.76	14.88	12.72	19.61	23.05
TO LEND (in \$)						
	10%	25%	Mean	Median	75%	90%
ALL	6.29	7.14	10.93	9.18	12.27	17.49
BIG TEN	6.55	7.57	12.35	10.75	12.75	32.99
BIG EIGHT	4.75	6.59	8.24	7.81	9.12	14.64

Figure 2

While the average cost per *borrow* for All participating institutions is \$18.62, cost for the Big Ten institutions is \$20.01, and for the Big Eight only \$14.88. The average cost per *loan* for All institutions is \$10.93, with the Big Ten recording \$12.35, and the Big Eight, \$8.24.

Cost for a *completed transaction* averages \$29.55 overall, \$33.50 in the Big Ten, and \$23.12 in the Big Eight.

The following scatter diagrams illustrate the range of unit costs for ILL borrowing and lending. Since the *level* of ILL activity, that is, the *number of filled transactions* (3), is a variable considered in this study, the scatter diagrams that follow reflect the unit cost to borrow and to lend based on the number of transactions at each survey site (in most cases, the main ILL operation). The scatter diagrams illustrate however, that the sheer number of transactions is not the only factor moderating the unit cost. Some low volume institutions have relatively low per unit costs while some high volume institutions have relatively high per unit costs, reflecting institutional differences in resource sharing philosophy, ILL service level and quality, deployment of staff, salary levels, and other variables.

Reviewing the scatter diagrams for borrowing transactions (Figures 3, 5, and 6), and lending transactions (Figures 4, 7, and 8), one can test the hypothesis that institutions with a high number of transactions have relatively lower costs per transaction and institutions with low numbers of transactions have relatively higher costs. In the scatter diagrams for all libraries, as well as for subsets of public and private institutions, this tendency is more discernable in lending than in borrowing activity.

Note the greater clustering for unit lending cost as compared to unit borrowing cost. This suggests a more uniform institutional approach to the lending process and highlights further the differences in service and staffing levels between the borrowing and lending transactions.

Footnote:

(3) The study considered only "Filled Transactions," since these are the actual products of the ILL operation.

UNIT COST PER BORROW All Libraries

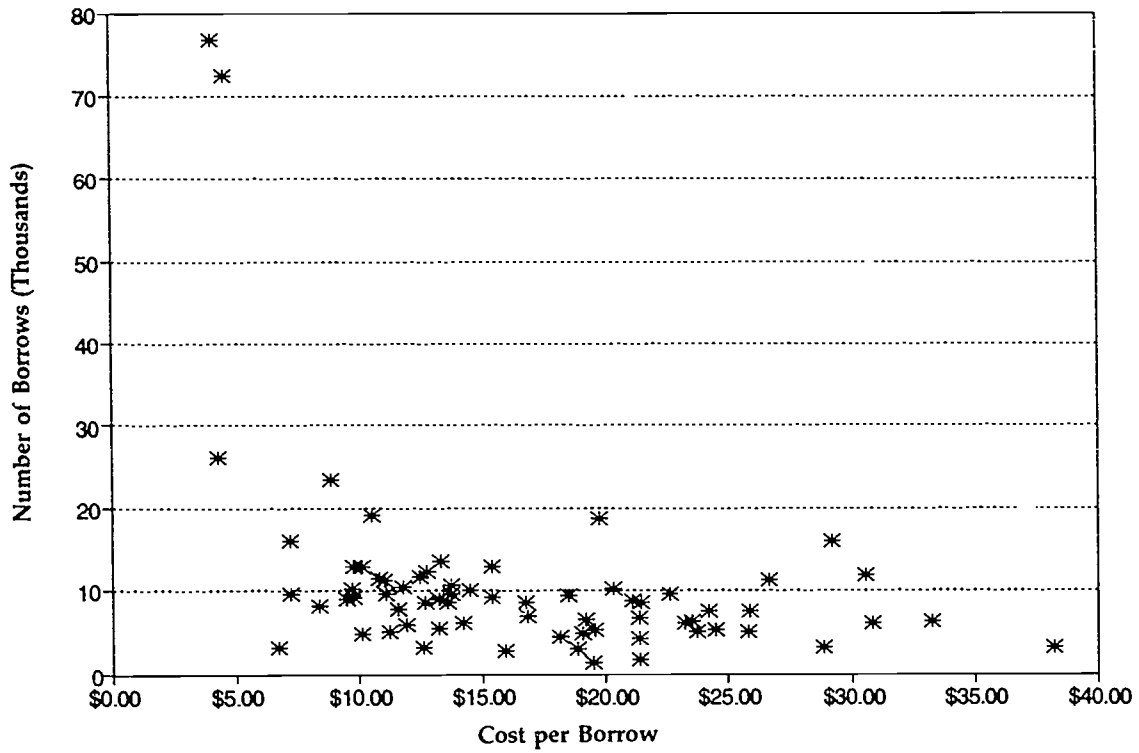


Figure 3

UNIT COST PER LOAN All Libraries

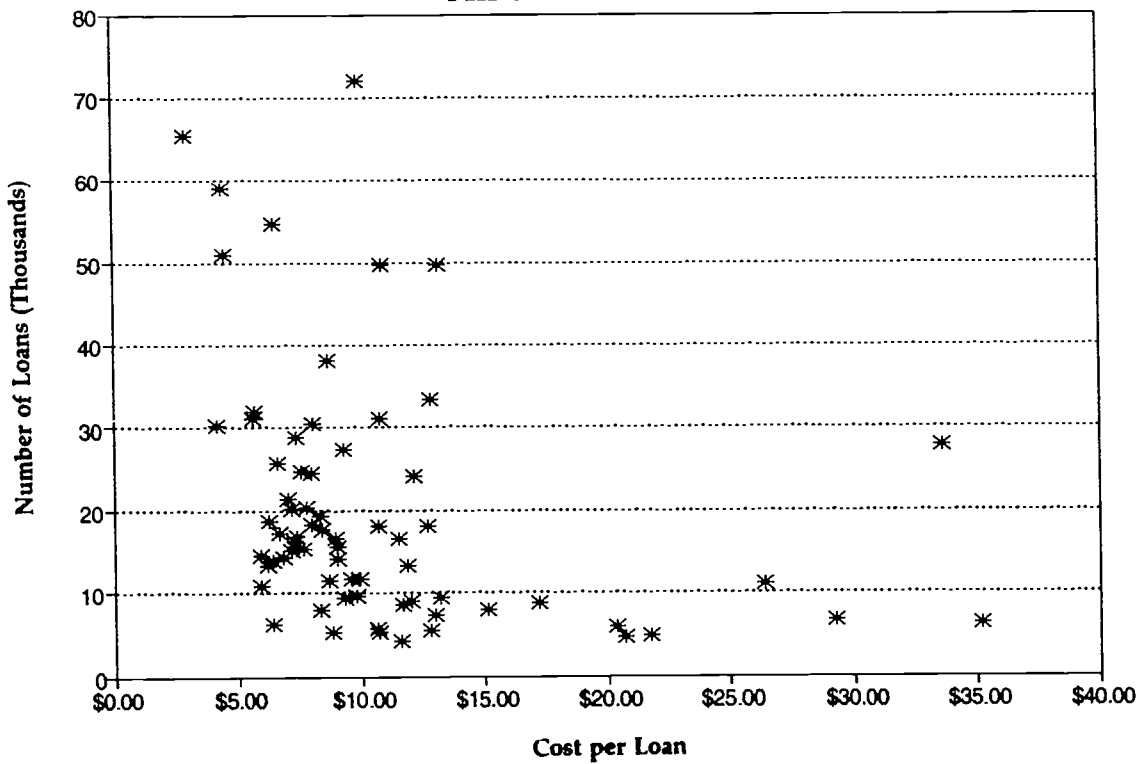


Figure 4

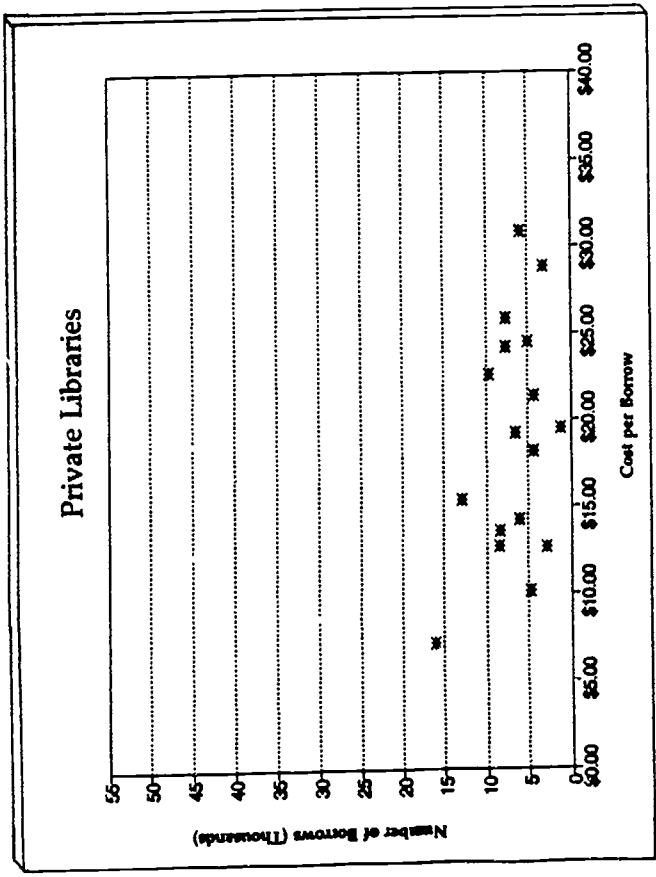
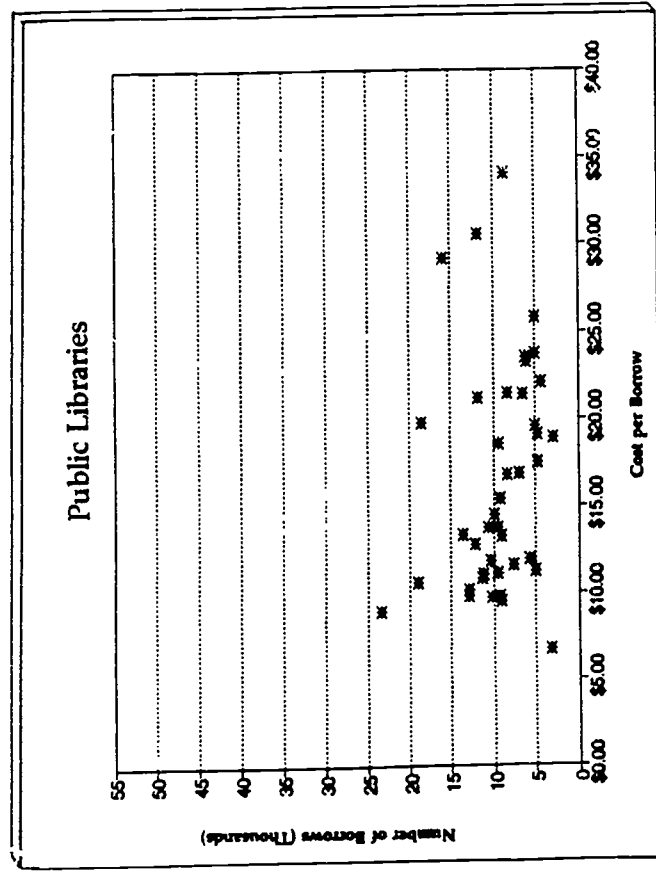
Public/Private Subsets

The following scatter diagrams (Figures 5-8) display cost data for public and for private institutions. Public/private displays include only U.S. institutions because of the difficulty ascribing public/private status to Canadian institutions.

Figures 5-8 show that public institutions process more loans than private institutions. This may be due to state mandates requiring public research universities to provide research materials to other state-funded institutions such as high school, community college, other four-year college, and public libraries.

In addition, the unit costs for lending are generally lower and have a narrower range among public than among private universities/institutions. Differences in level of ILL activity may account for some of these cost and range differences. However, *underreporting* of costs by public institutions may also contribute to the public/private differences. The costs of telecommunications, delivery, supplies, and even staff are often difficult to determine accurately for public institutions because of intricate state budgeting, accounting, and funding procedures. For example, delineating accurate costs for state shuttles for transporting materials or for state-supported electronic networks was onerous. Private institutions also had some difficulty estimating costs for services, such as telecommunications, delivery, or staff, that are not specifically itemized by department.

UNIT COST PER BORROW

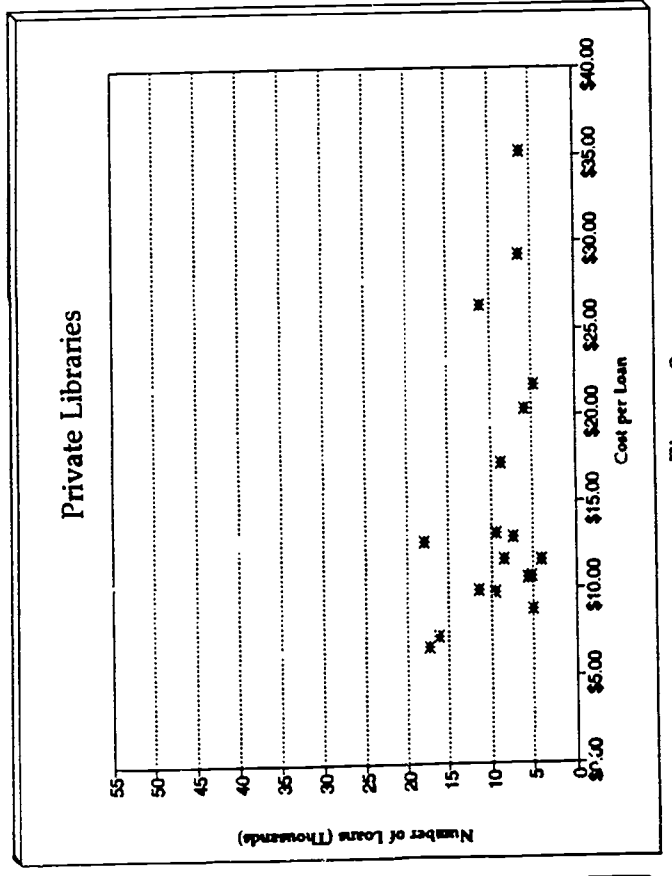
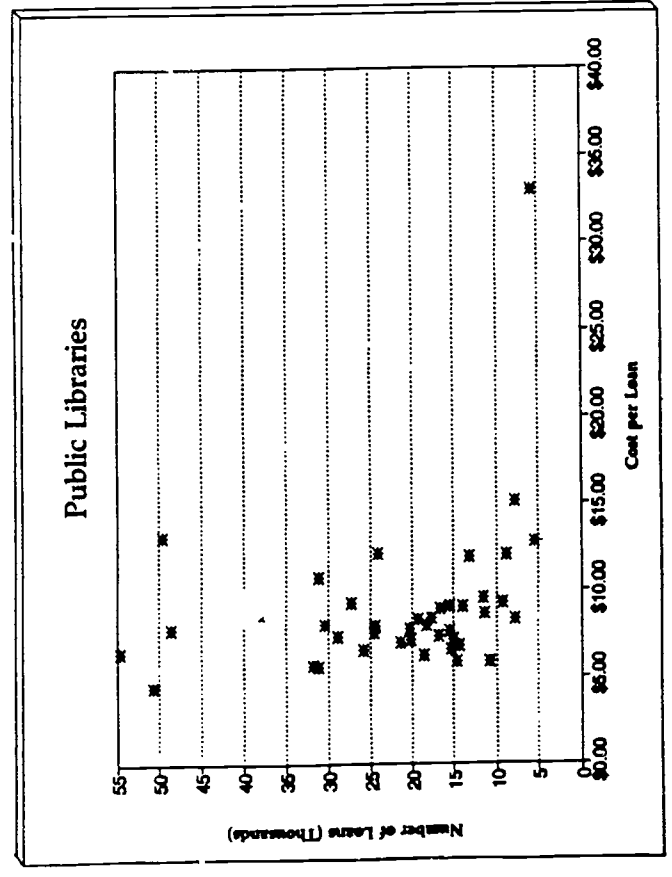


6

Figure 5

Figure 6

UNIT COST PER LOAN



18

Figure 7

Figure 8

Cost by Categories of ILL Activity

Average Costs by Category

The cost data was also broken down into major cost categories for participating institutions as a whole and for the Big Ten and Big Eight consortia institutions separately. The first bar graph (Figure 9) illustrates the average borrowing, lending, and combined transaction unit costs for these various ILL cost categories for all participants.

AVERAGE COST PER ILL CATEGORY

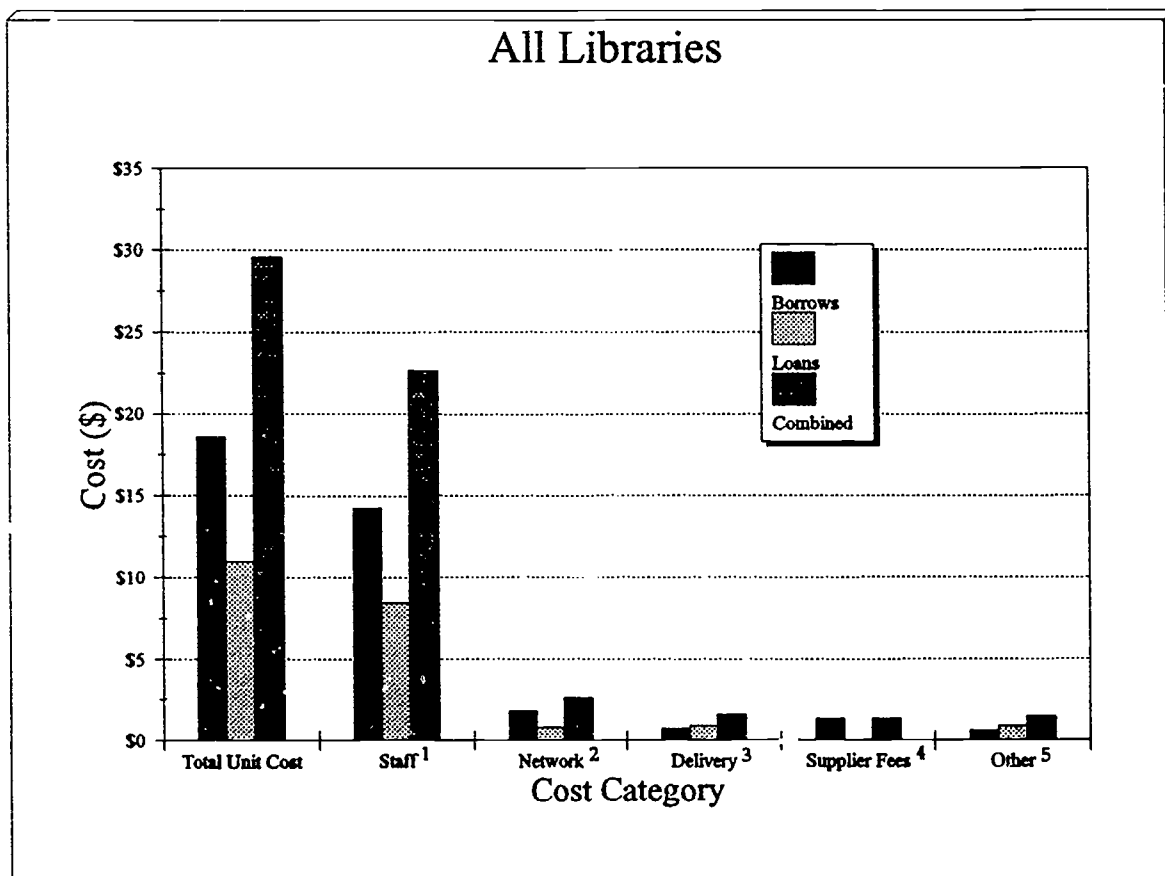


Figure 9

¹Professional, nonprofessional, and student staff including staff from other departments providing ILL support, (e.g. reference, photoduplication, mailroom)

²Telephone, electronic mail and network fees

³Postage, parcel delivery, fax and other delivery systems

⁴For borrowing only, fees paid by library to suppliers (fee-based or commercial document delivery services)

⁵Equipment and software (purchase, rental and maintenance), supplies, and photocopy expenses (excluding staff)

Figures 10-11 present the cost category data for the Big Ten and the Big Eight consortia. Note that although the Big Ten total unit costs are higher than either all libraries or Big Eight total unit costs, its network costs are somewhat lower.

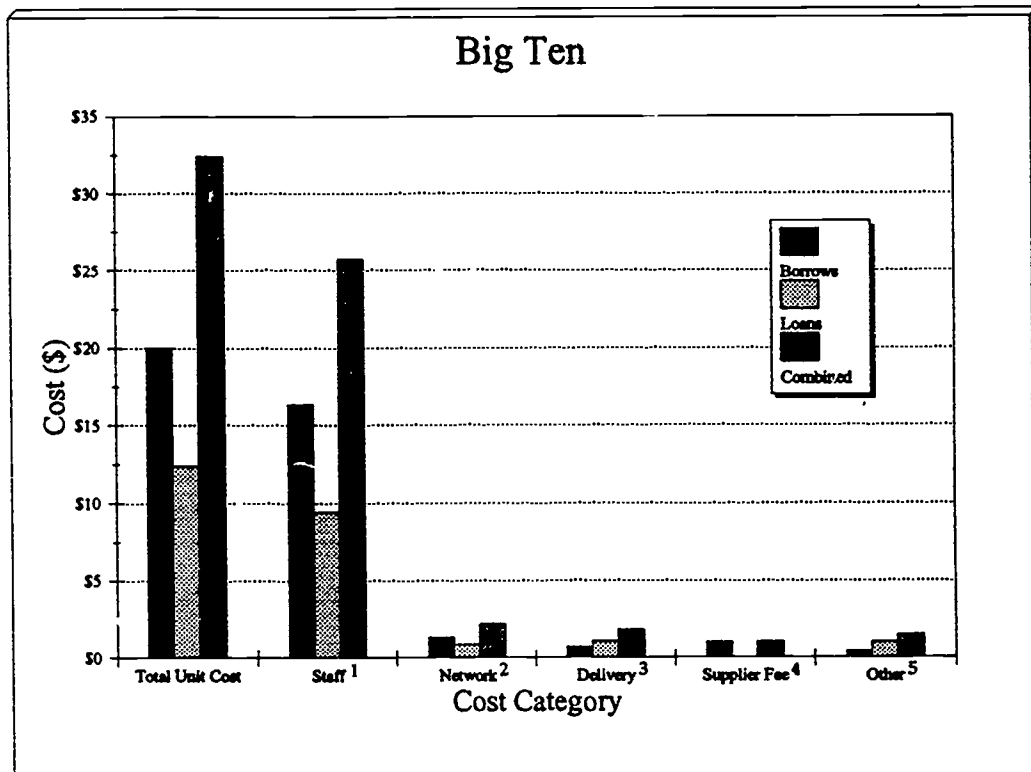


Figure 10

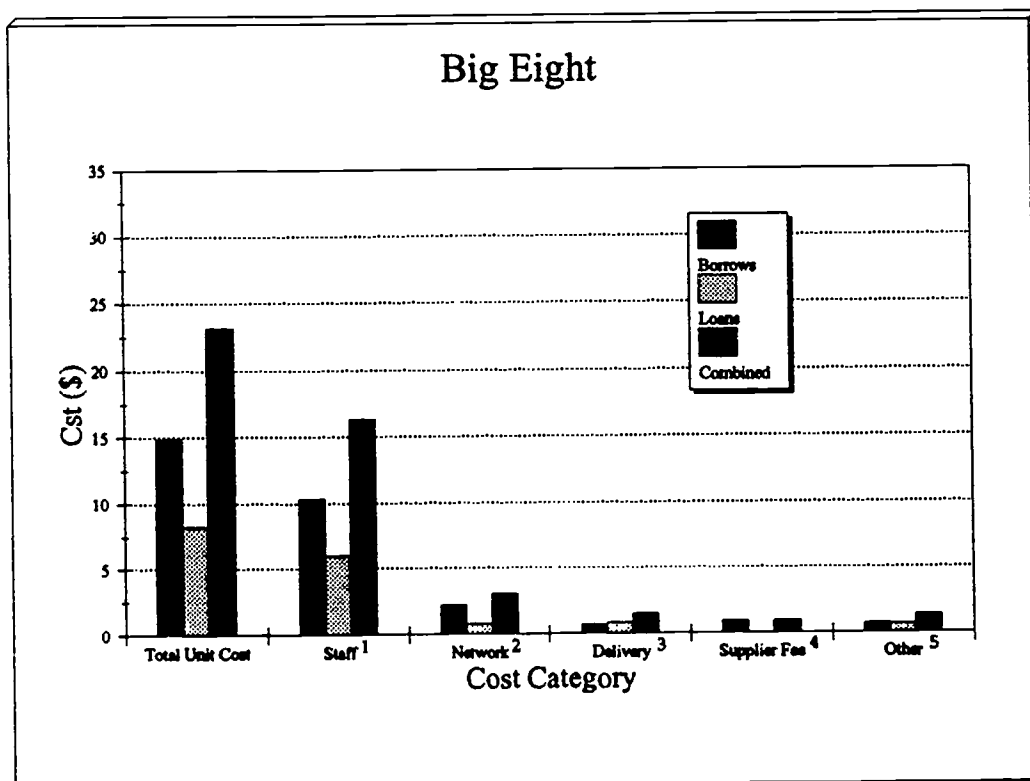


Figure 11

Cost Categories as Percentage of Total

The next three bar graphs (Figures 12-14) show categories of ILL activity costs as a percent of total unit borrowing or total unit lending cost. Note the differences among All, Big Ten, and Big Eight libraries, especially in average staff and network costs as percentages of total costs.

AVERAGE % OF COST PER ILL CATEGORY

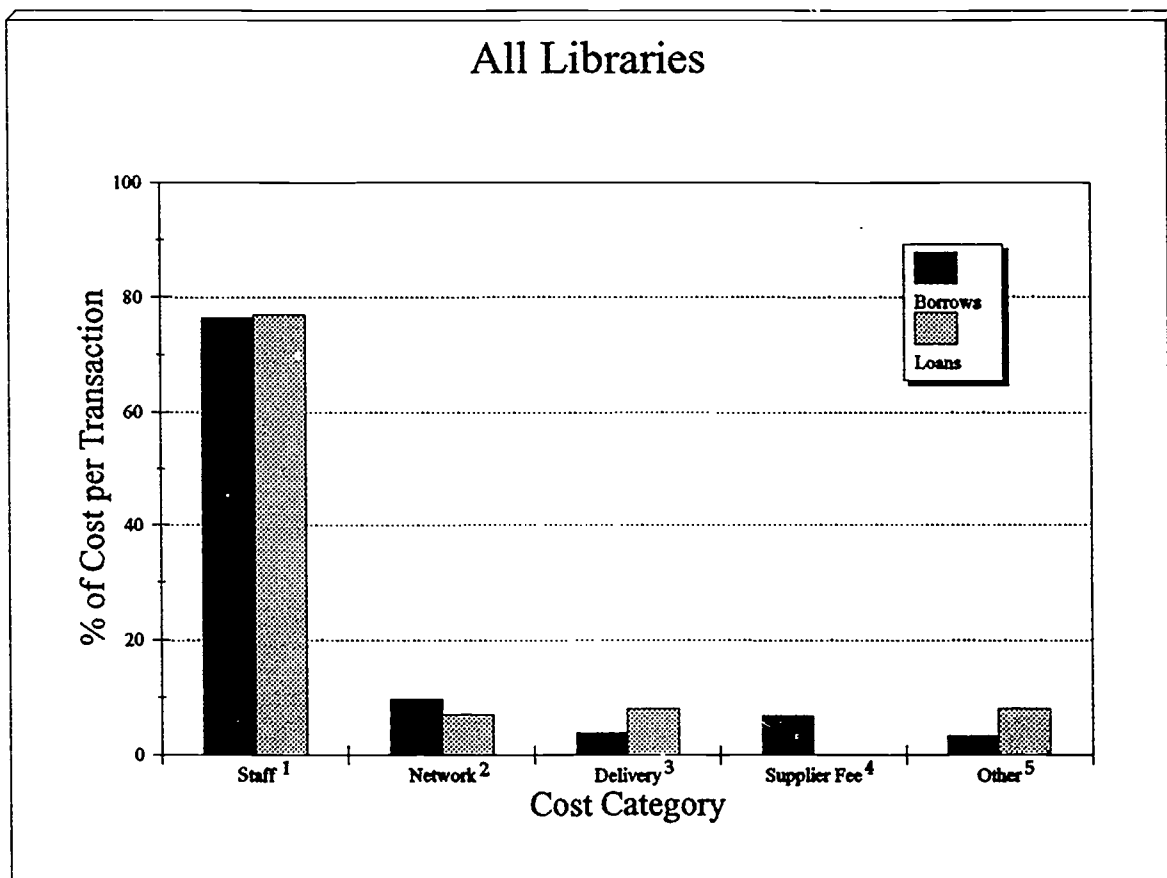


Figure 12

¹Professional, nonprofessional, and student staff including staff from other departments providing ILL support, (e.g. reference, photoduplication, mailroom)

²Telephone, electronic mail and network fees

³Postage, parcel delivery, fax and other delivery systems

⁴For borrowing only, fees paid by library to suppliers (fee-based or commercial document delivery services)

⁵Equipment and software (purchase, rental and maintenance), supplies, and photocopy expenses (excluding staff)

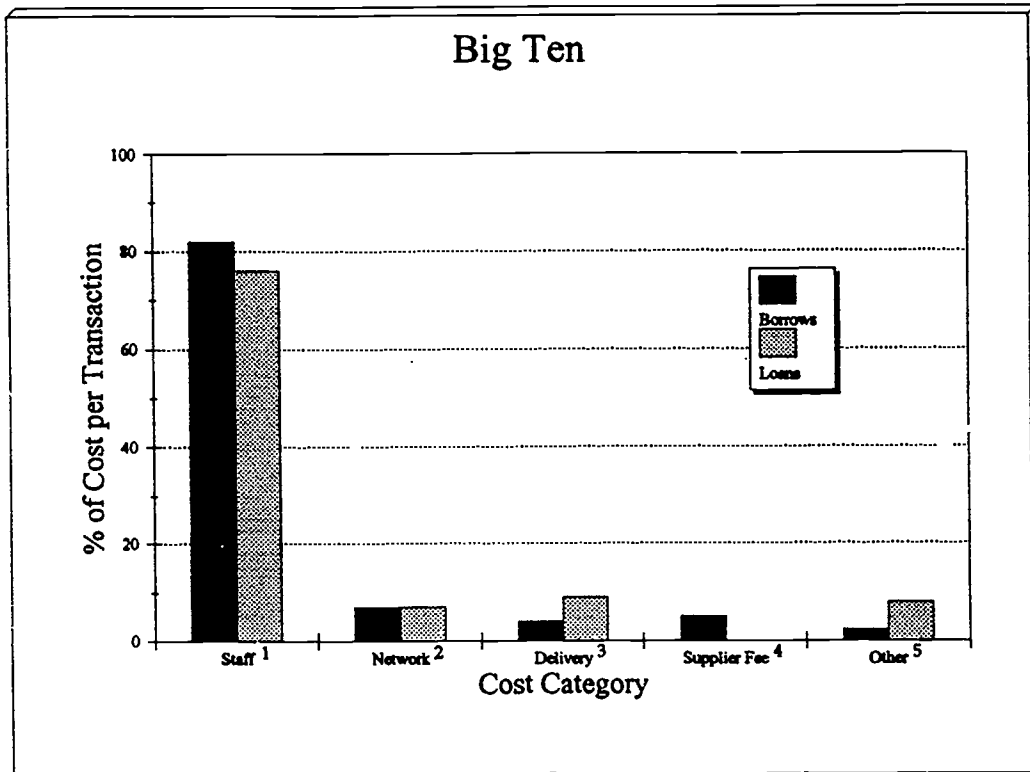


Figure 13

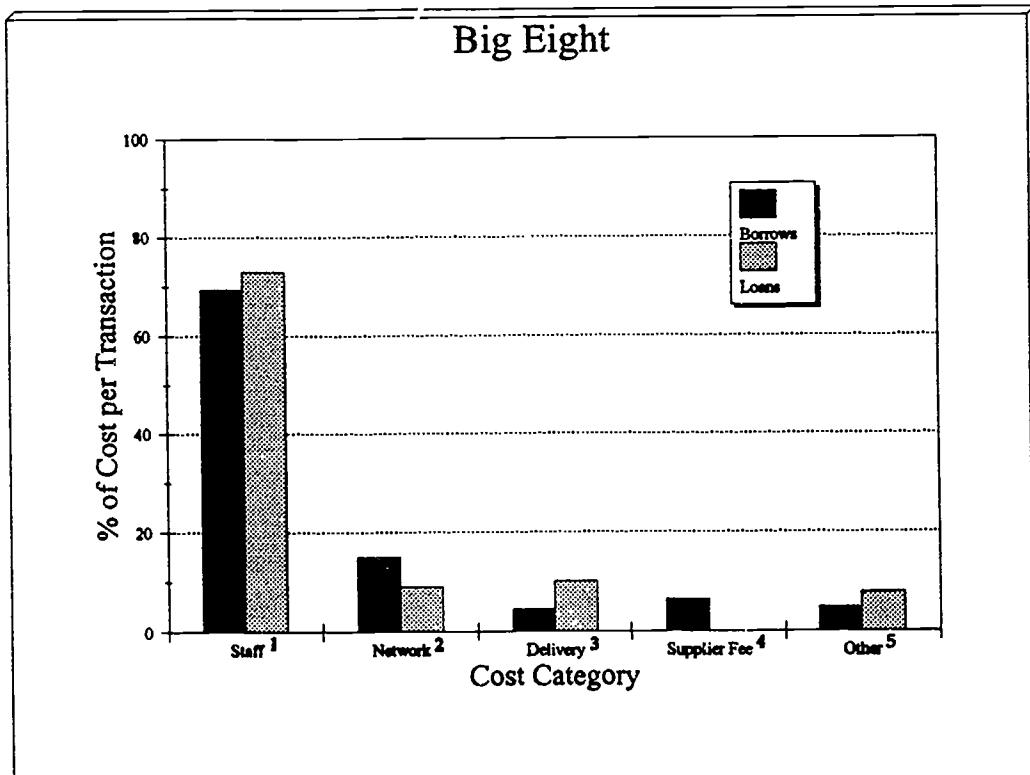


Figure 14

Unit Costs by Category

The following charts (Figures 15-20) display actual unit dollar figures for each ILL cost category. Figure 15 illustrates the mean, median, and range for each cost component for borrowing for all libraries. For example, of the \$18.62 spent on an average borrow, networks cost \$1.79 and delivery costs \$0.71. The sum of the mean costs for each category equals the mean Total Unit Cost (4).

UNIT COST TO BORROW ALL LIBRARIES (in \$)						
	10%	25%	Mean	Median	75%	90%
TOTAL Unit Cost	9.84	12.30	18.62	17.55	23.37	30.27
Staff: General Supervisory						
Professional	.28	.77	1.62	1.03	2.12	3.77
Non Professional	.00	.03	1.05	.63	1.33	2.18
Staff: Non Supervisory						
Professional	.00	.00	1.39	.43	2.31	5.53
Non Professional	2.95	4.37	9.23	7.69	13.71	15.54
Student Staff	.00	.34	.93	.80	1.34	2.22
Networks	.66	1.04	1.79	1.53	2.13	3.00
Delivery	.11	.36	.71	.69	1.03	1.27
Photocopy	.00	.00	.07	.02	.05	.14
Supplies	.04	.07	.20	.17	.27	.43
Other*	.01	.46	1.63	1.06	2.21	3.91

* includes costs for equipment and software; rental and maintenance; and borrow-related purchasing fees

Figure 15

Footnote

(4) In Figure 16, there is a .01 discrepancy in the sum of the mean costs for each category and the mean Total Unit Cost due to rounding. In Figures 15 and 16, the sum of costs at the 10% level for each category will not equal the Total Unit Cost at the 10% level. This is because a different institution may fall at the 10% level for each of the seven categories, while the Total Unit Cost represents a single institution whose Total Unit Cost falls at the 10% level. For example, institution A could represent the 10% level for staff, institution B for networks, and institution C for delivery. And, institution D, whose costs may fall at the 10%, 25%, or other levels for each of the seven cost categories, could have a Total Unit Cost which falls at the 10% level. Thus, Total Unit Cost reflects the sum of institution D's individual costs, not a composite of the costs at the 10% level incurred by institutions A, B, C, as noted above. This caveat applies to the median, and to the 25%, 75%, and 90% levels, as well.

Figure 16 provides similar unit dollar expenditure data for each lending cost category for all libraries. Note that the "Other" category does not include supplier fees as no such costs are incurred by the lender. Similar information is displayed on the following page for the Big Ten and the Big Eight institutions (5).

UNIT COST TO LOAN ALL LIBRARIES (in \$)						
	10%	25%	Mean	Median	75%	90%
TOTAL Unit Cost	6.29	7.14	10.93	9.18	12.27	17.49
Staff: General Supervisory						
Professional	.27	.65	1.27	.97	1.69	2.72
Non Professional	.00	.07	.79	.65	1.10	1.97
Staff: Non Supervisory						
Professional	.00	.00	.27	.00	.26	.72
Non Professional	1.49	2.68	5.13	3.72	6.51	10.34
Student Staff	.08	.40	.94	.73	1.32	1.87
Networks	.11	.33	.79	.70	1.08	1.58
Delivery	.33	.50	.86	.82	1.17	1.46
Photocopy	.05	.14	.36	.25	.40	.73
Supplies	.04	.07	.20	.14	.25	.45
Other*	.00	.05	.31	.16	.31	.65

* includes costs for equipment and software; rental and maintenance

Figure 16

Footnote

(5) The unit cost per cost category is reflected for the mean and median, as well as for 10%, 25%, 75%, and 90% of the Big Ten and the Big Eight institutions in the same fashion as depicted for all participants. See preceding footnote.

**UNIT COST TO BORROW
BIG TEN
(in \$)**

	10%	25%	Mean	Median	75%	90%
TOTAL Unit Cost	8.93	14.65	20.79	18.54	28.20	34.10
Staff: General Supervisory						
Professional	.28	1.00	1.45	1.17	2.15	2.51
Non Professional	.08	.00	.67	.62	1.22	1.94
Staff: Non Supervisory						
Professional	.00	.00	1.30	.09	2.38	6.51
Non Professional	2.43	5.25	11.71	10.56	18.48	22.54
Student Staff	.06	.42	1.22	.84	2.23	2.43
Networks	.31	1.08	1.37	1.41	1.78	1.95
Delivery	.32	.35	.75	.60	1.24	1.35
Photocopy	.00	.00	.02	.01	.04	.08
Supplies	.07	.09	.177	.16	.25	.29
Other*						

Figure 17

**UNIT COST TO BORROW
BIG EIGHT
(in \$)**

	10%	25%	Mean	Median	75%	90%
TOTAL Unit Cost	9.82	10.76	14.88	12.72	19.61	23.05
Staff: General Supervisory						
Professional	.07	.80	1.13	.94	1.57	2.34
Non Professional	.03	.59	1.49	1.58	2.16	3.17
Staff: Non Supervisory						
Professional	.62	.00	.75	.49	1.27	2.34
Non Professional	2.95	3.19	5.69	5.14	7.95	10.37
Student Staff	.54	.87	1.27	1.01	1.55	2.77
Networks	.99	1.16	2.23	1.84	2.17	7.10
Delivery	.66	.64	.04	.35	.93	1.26
Photocopy	.06	.04	.00	.01	.09	.19
Supplies	.20	.18	.01	.08	.27	.54
Other*						

Figure 18

* Other is omitted for Big Ten and Big Eight charts.

**UNIT COST TO LOAN
BIG TEN
(in \$)**

	10%	25%	Mean	Median	75%	90%
TOTAL Unit Cost	7.57	10.75	12.71	11.16	12.75	32.99
Staff: General Supervisory						
Professional	.28	.85	1.27	1.02	1.90	2.49
Non Professional	.00	.00	.62	.35	1.22	1.89
Staff: Non Supervisory						
Professional	.00	.00	.40	.00	.25	3.11
Non Professional	1.12	3.24	5.75	4.21	7.77	16.45
Student Staff	.08	.30	1.36	1.00	2.18	4.42
Networks	.09	.23	.84	.69	1.37	2.22
Delivery	.47	.70	1.08	1.19	1.44	1.74
Photocopy	.10	.19	.33	.32	.46	.61
Supplies	.07	.12	.20	.16	.30	.38
Other*						

Figure 19

**UNIT COST TO LOAN
BIG EIGHT
(in \$)**

	10%	25%	Mean	Median	75%	90%
TOTAL Unit Cost	4.75	6.59	8.24	7.81	9.12	14.64
Staff: General Supervisory						
Professional	.06	.69	.98	.89	1.23	2.29
Non Professional	.03	.47	1.36	1.06	2.20	3.22
Staff: Non Supervisory						
Professional	.00	.00	.16	.00	.34	.69
Non Professional	.58	1.76	2.74	2.31	3.48	6.01
Student Staff	.29	.38	.77	.64	1.33	1.44
Networks	.07	.36	.77	.63	1.14	1.74
Delivery	.81	.89	.32	.47	1.01	1.37
Photocopy	.24	.22	.11	.18	.28	.41
Supplies	.15	.14	.07	.08	.25	.26
Other*						

Figure 20

* Other is omitted for Big Ten and Big Eight charts.

Staff Costs

As illustrated, the major cost component of ILL operations is staff, representing 77% of the cost for borrowing and lending. Cost study participants may use their local cost data to review current staffing patterns and compare them to alternative staffing options possible with different methods of resource sharing and information delivery.

Figures 21-38 display staff costs by professional, nonprofessional, and student staff categories.

Professional Staff

Figures 21-28, showing professional staff costs for all libraries and for three regions (6), indicate that many institutions use no professional staff in either the borrowing or the lending operations. (Note the number of institutions with scatter marks at \$0.00 for professional staff cost per transaction.) However for complete accounting of ILL costs, staff in the ILL cost study includes staff in the ILL department as well as in other departments providing ILL support services such as reference, photoduplication and mailroom. Costs for staff from these other departments were prorated based on time spent on ILL transactions.

Comparing the professional staff cost for borrowing to the professional staff cost for lending illustrates that institutions that do utilize professional staff do so more for borrowing transactions than for lending. This is consistent with the traditional philosophy of ILL staff deployment to use professional staff to provide bibliographic verification of the requests from local patrons. The borrowing process, which also includes assessing patron's research needs and deciding location choice by evaluating consortial agreements, costs, turnaround time, etc., is usually more challenging than the lending process.

Footnote:

(6) Regional data for Canada and the West omitted because of small number of institutions reporting and need to protect confidentiality of data.

PROFESSIONAL STAFF COST PER BORROW

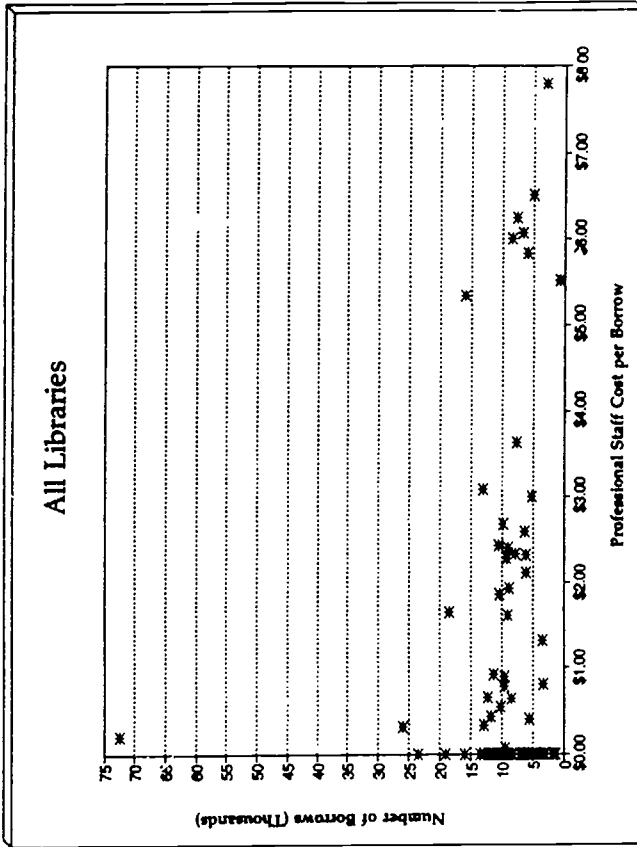


Figure 21

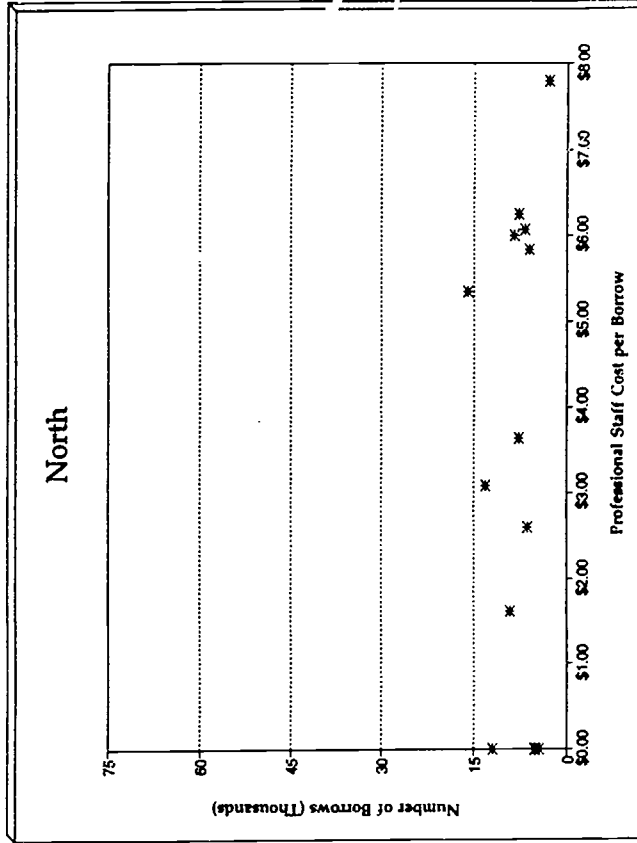


Figure 22

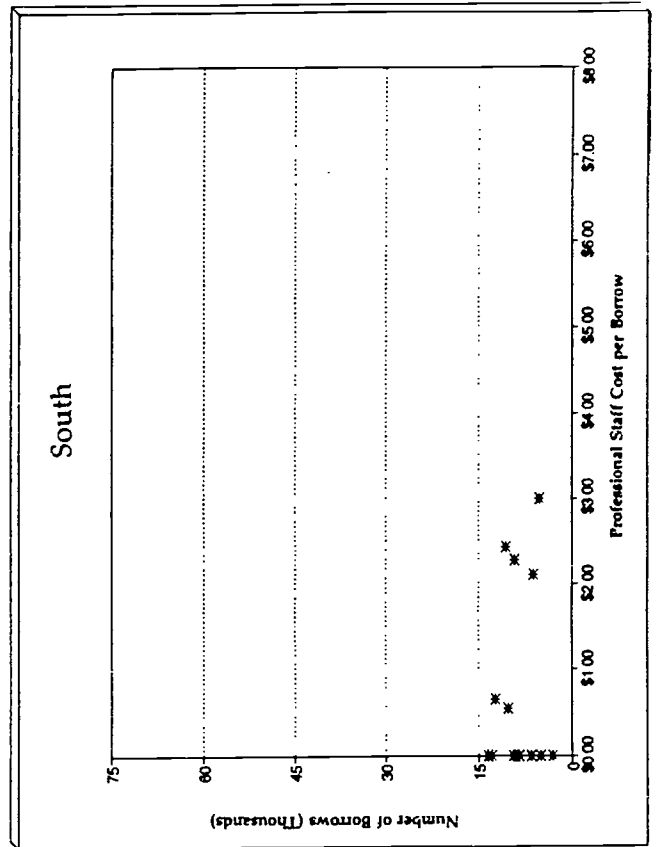


Figure 23

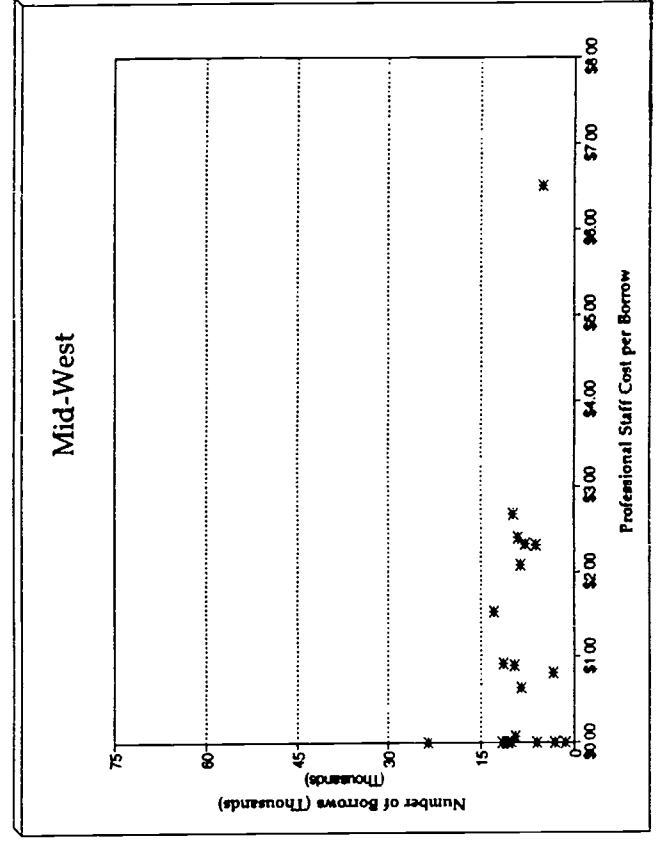


Figure 24

PROFESSIONAL STAFF COST PER LOAN

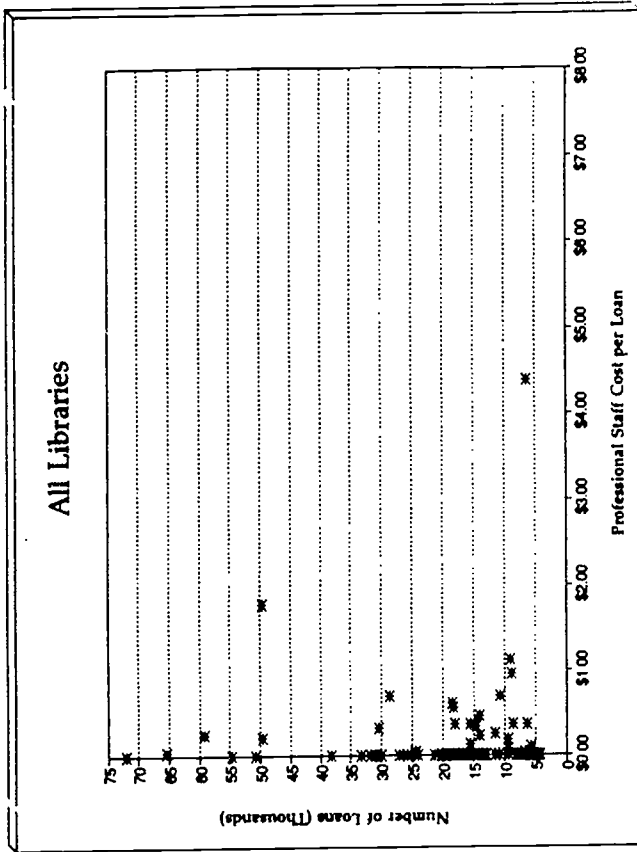


Figure 25

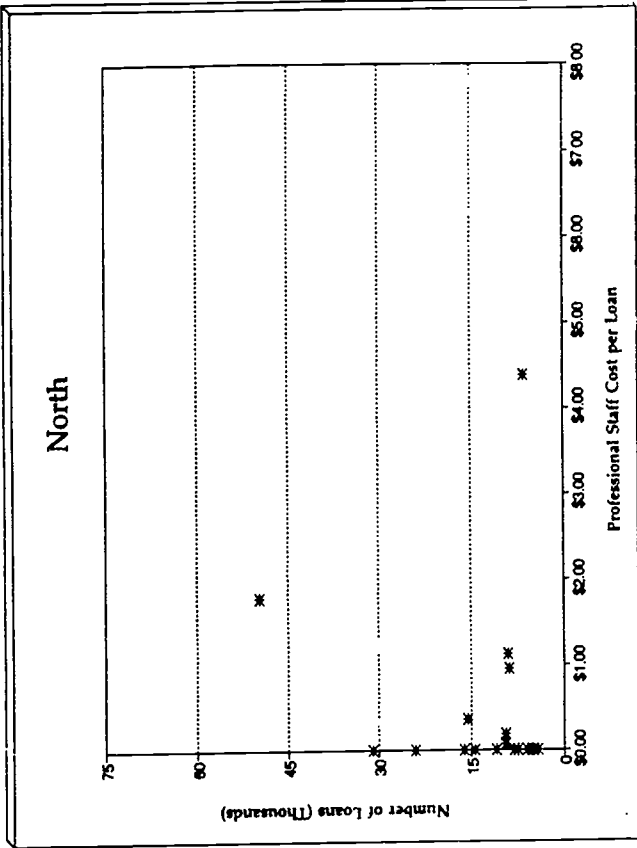


Figure 26

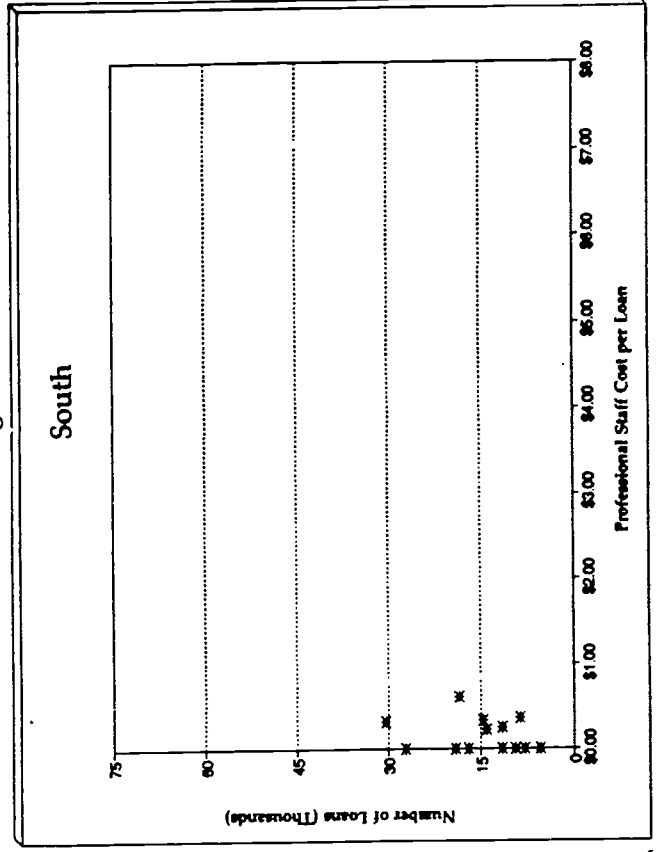


Figure 27

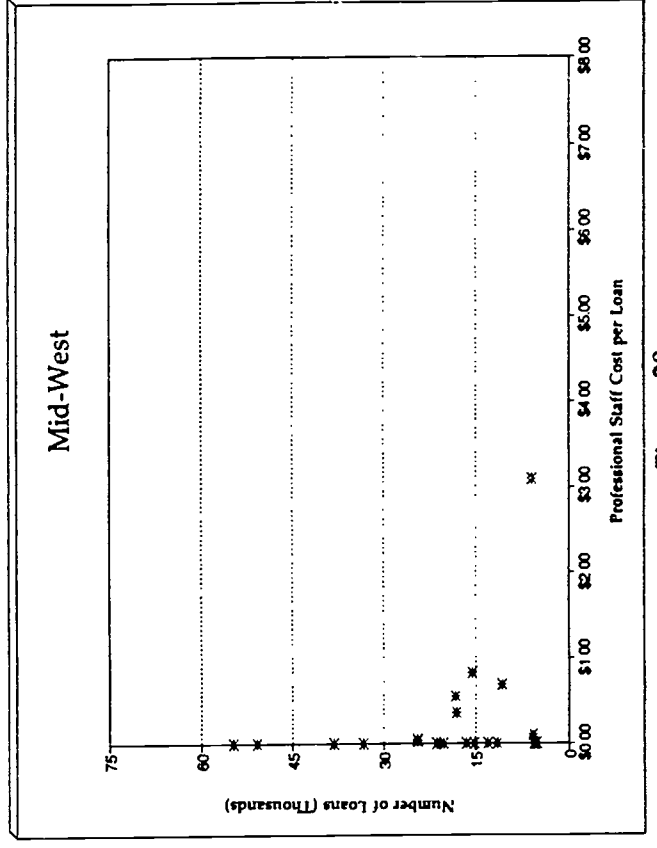


Figure 28

Nonprofessional Staff

Scatter diagrams (Figures 29-36) for nonprofessional staff costs show that the average cost for nonprofessional staff per borrow is higher than the average cost for nonprofessional staff per loan. The scatter patterns also suggest a more similar use of nonprofessional staff between the borrowing and lending operations than was found for professional staff.

Regional illustrations reflect higher staff costs in the North, lower in other regions.

NONPROFESSIONAL STAFF COST PER BORROW

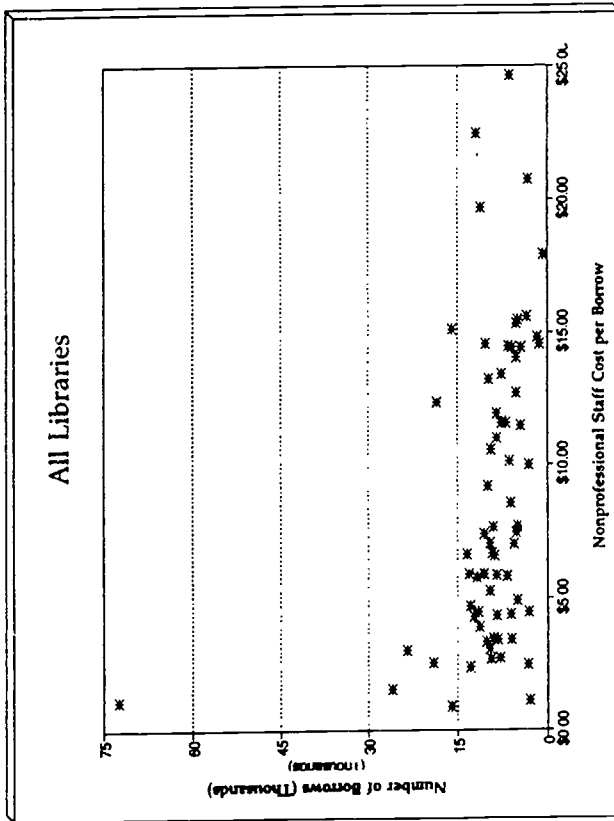


Figure 29

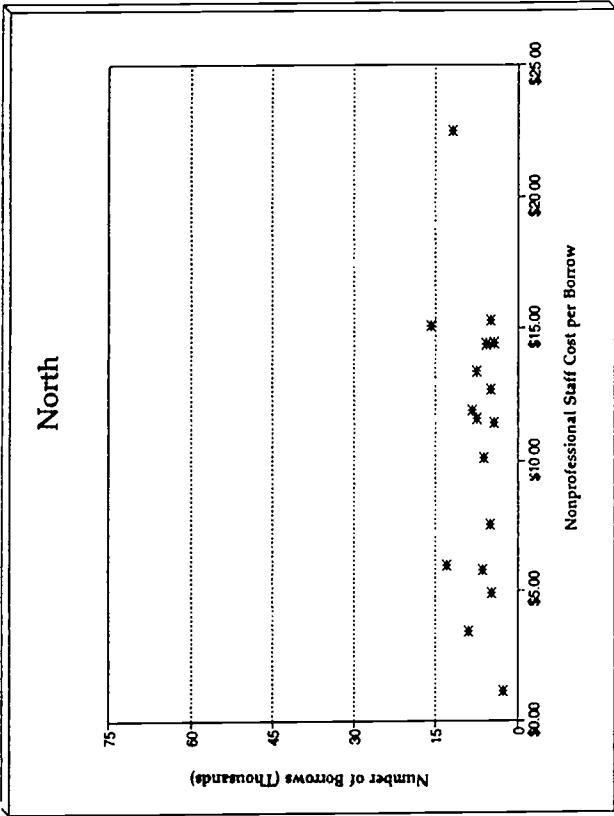


Figure 30

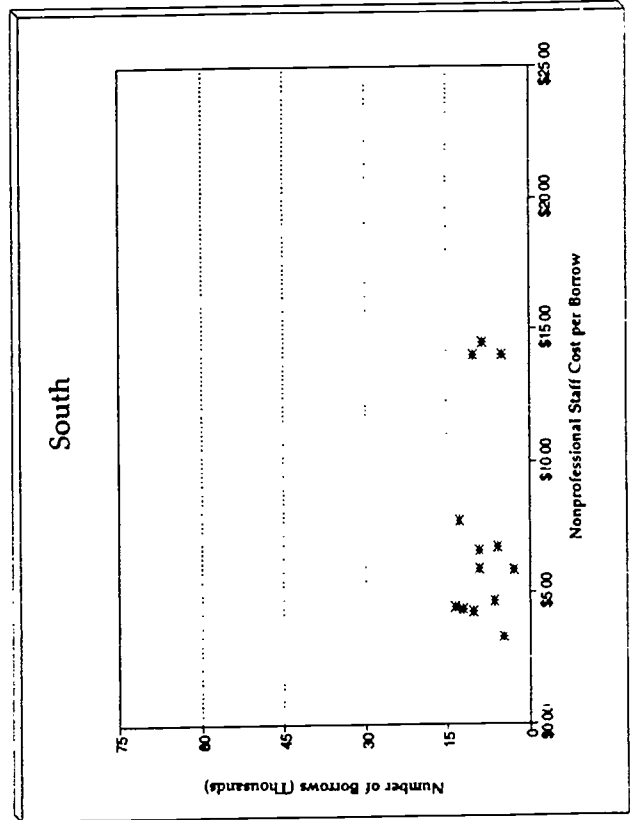


Figure 31

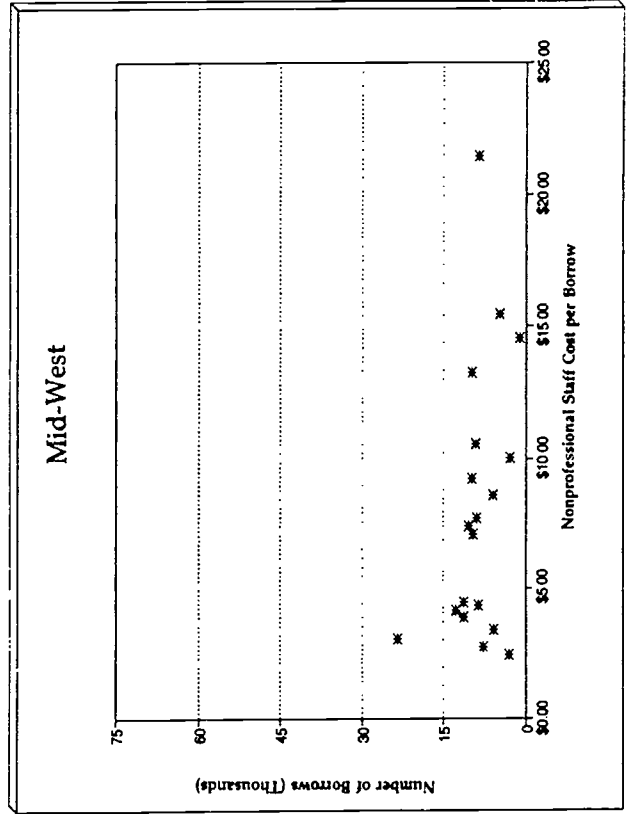


Figure 32

NONPROFESSIONAL STAFF COST PER LOAN

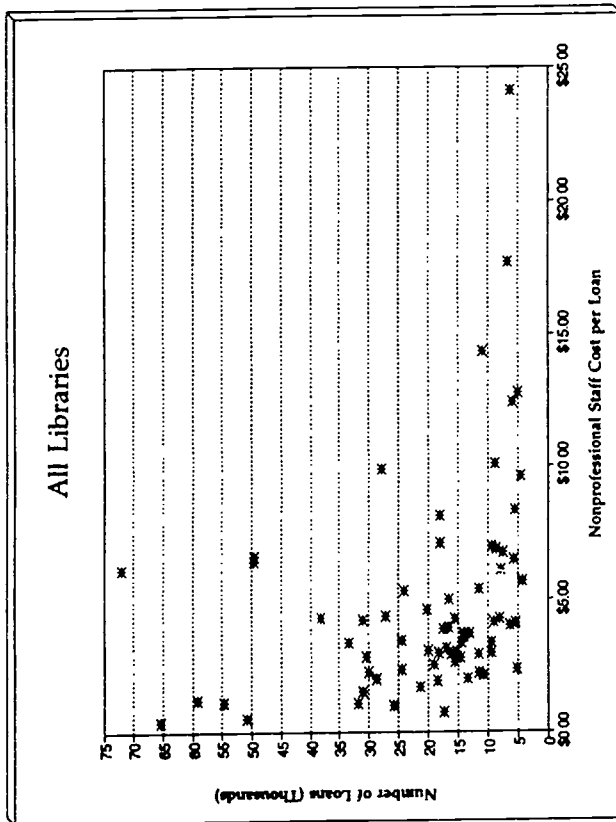


Figure 33

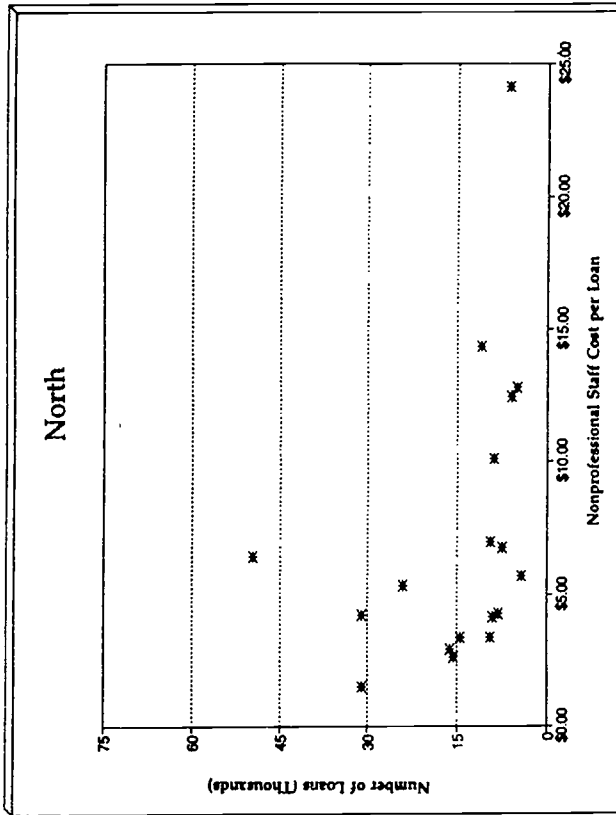


Figure 34

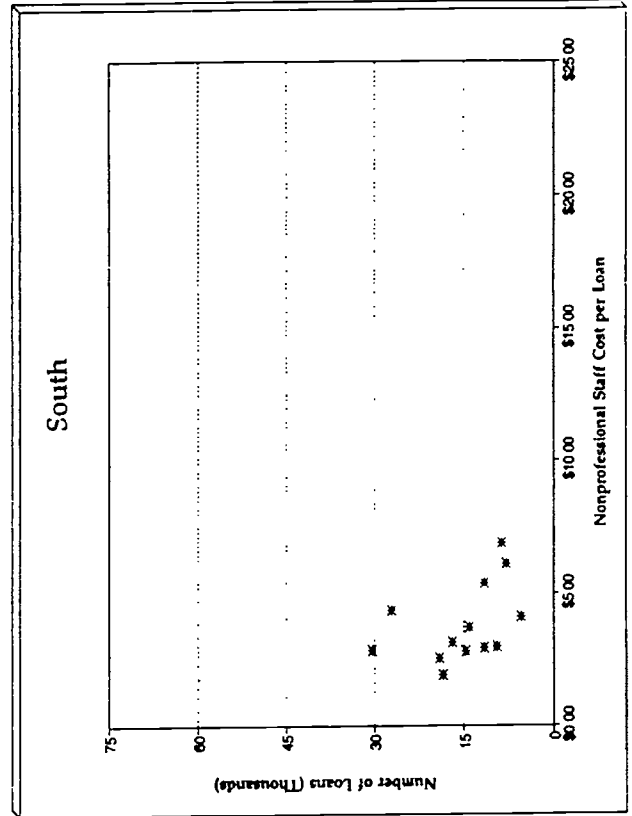


Figure 35

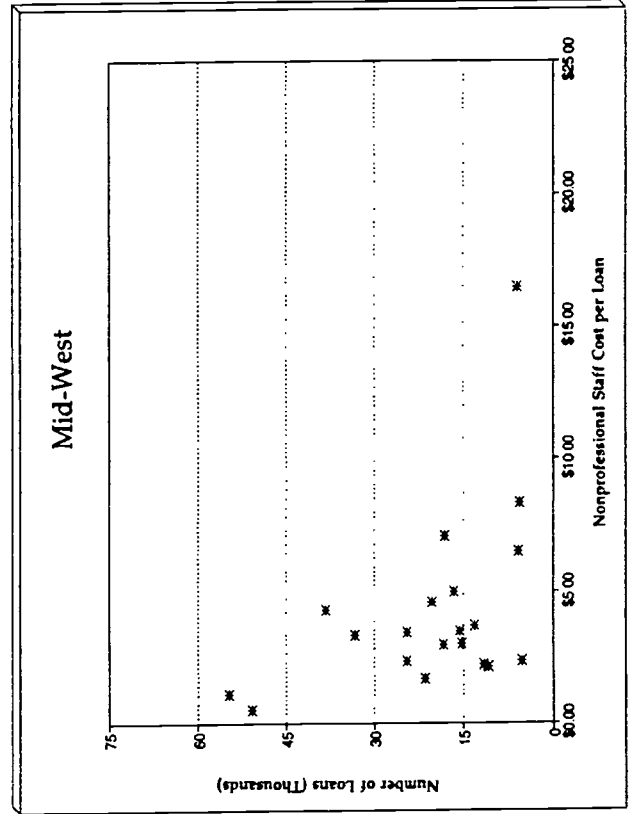


Figure 36

Student Staff

Student staff (Figures 37 and 38) appears to contribute more to lending costs than to borrowing costs. This reflects the ILL practice of deploying student staff in the lending arena more readily than in borrowing.

STUDENT STAFF COST PER TRANSACTION

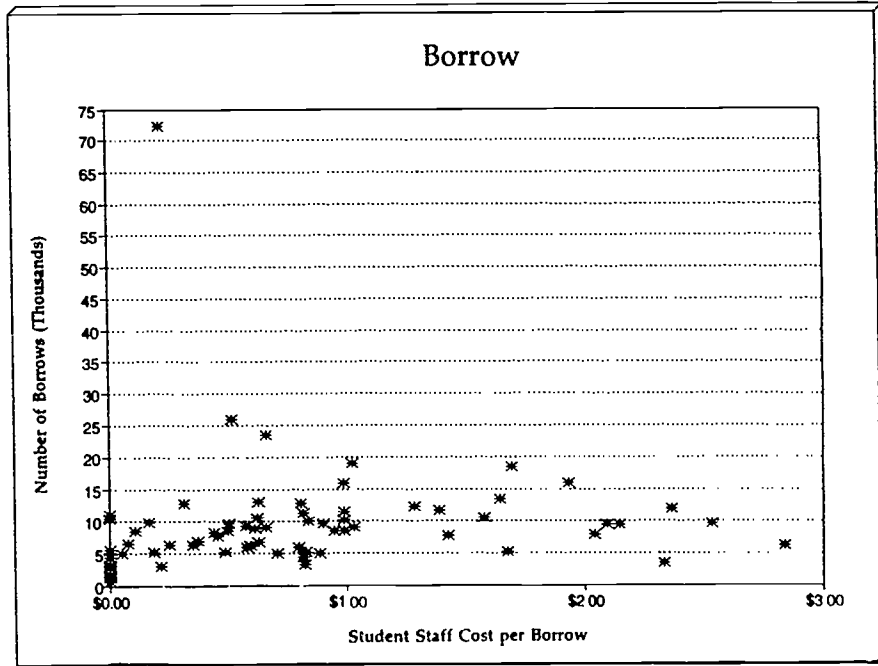


Figure 37

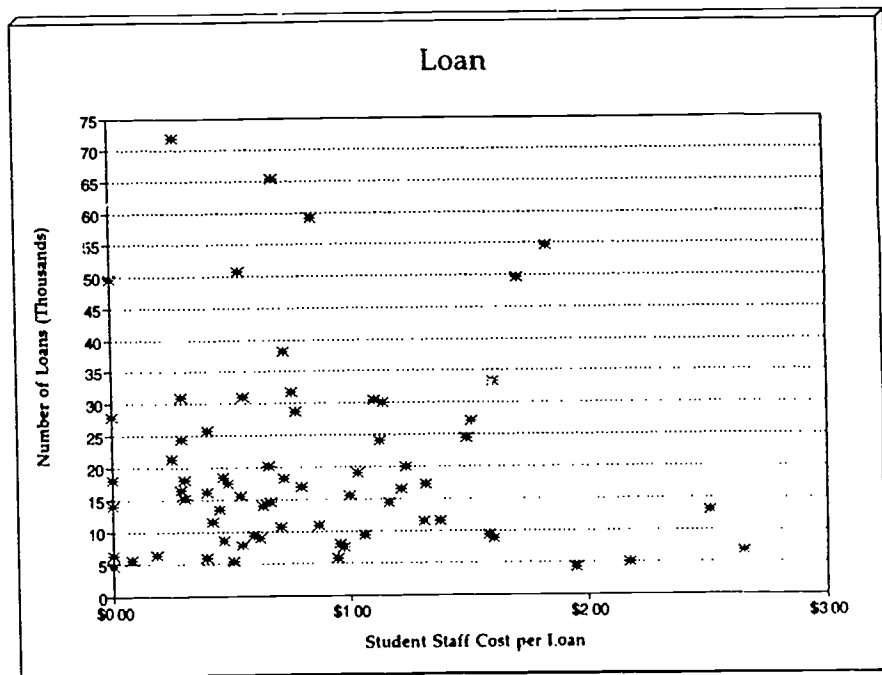


Figure 38

Supervisory/Nonsupervisory Staff Costs

Sorting and analyzing staff costs by professional, nonprofessional, and student components is but one survey option. The following bar graphs (Figures 39-41) divide the staff into supervisory (7) and nonsupervisory components for all participating institutions, and for Big Ten and Big Eight subsets. Note the differences in staff deployment among the groups. Although all three have similar average costs per transaction for supervisory staff, the average cost per transaction for nonsupervisory staff is greater, with the Big Ten nonsupervisory staff costing almost twice as much per transaction as the Big Eight nonsupervisory staff. This suggests higher salaries and/or lower supervisor/nonsupervisor ratios.

ILL STAFF COST PER TRANSACTION

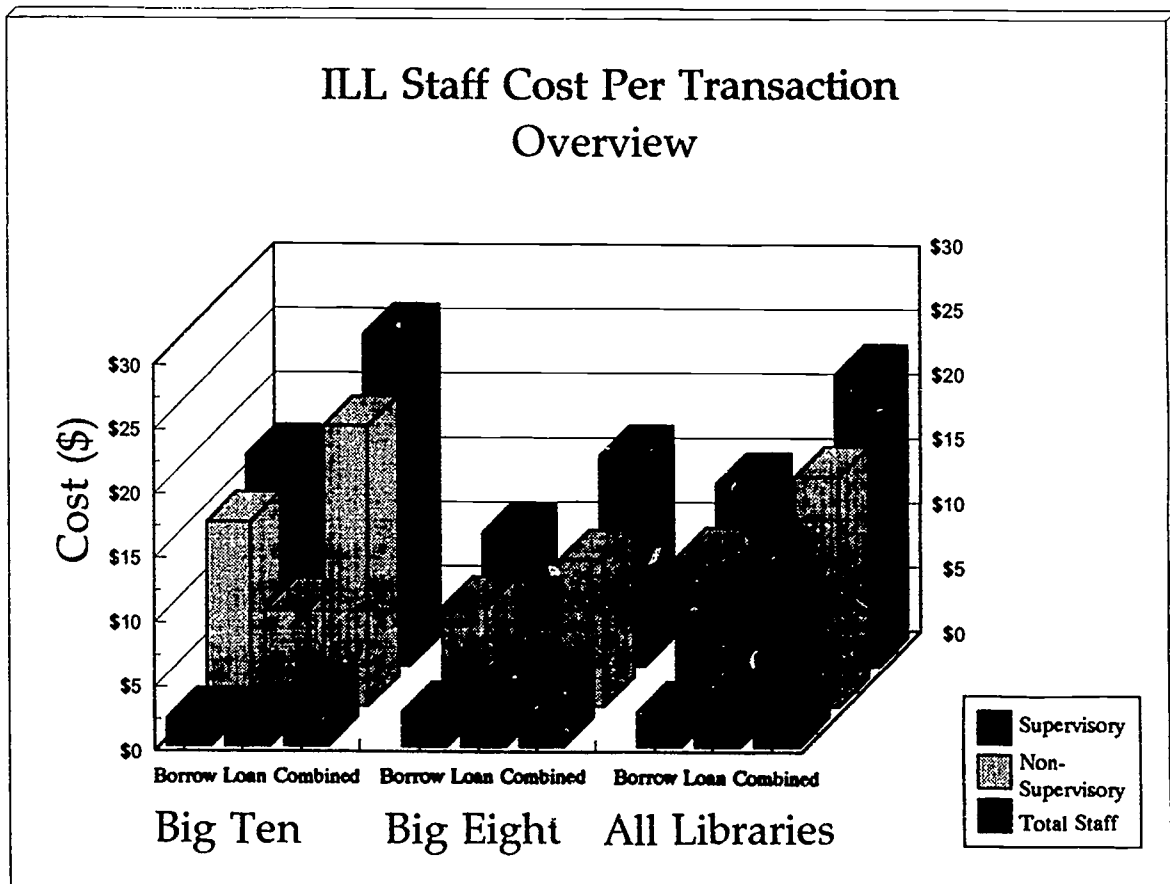


Figure 39

Footnote:

(7) Costs for supervisory and nonsupervisory components cover staff from both the ILL department and other departments servicing ILL requests (e.g. reference, photoduplication, mailroom). Such costs were prorated based on the percentage of time these staff spent on ILL transactions.

ILL STAFF COST PER TRANSACTION

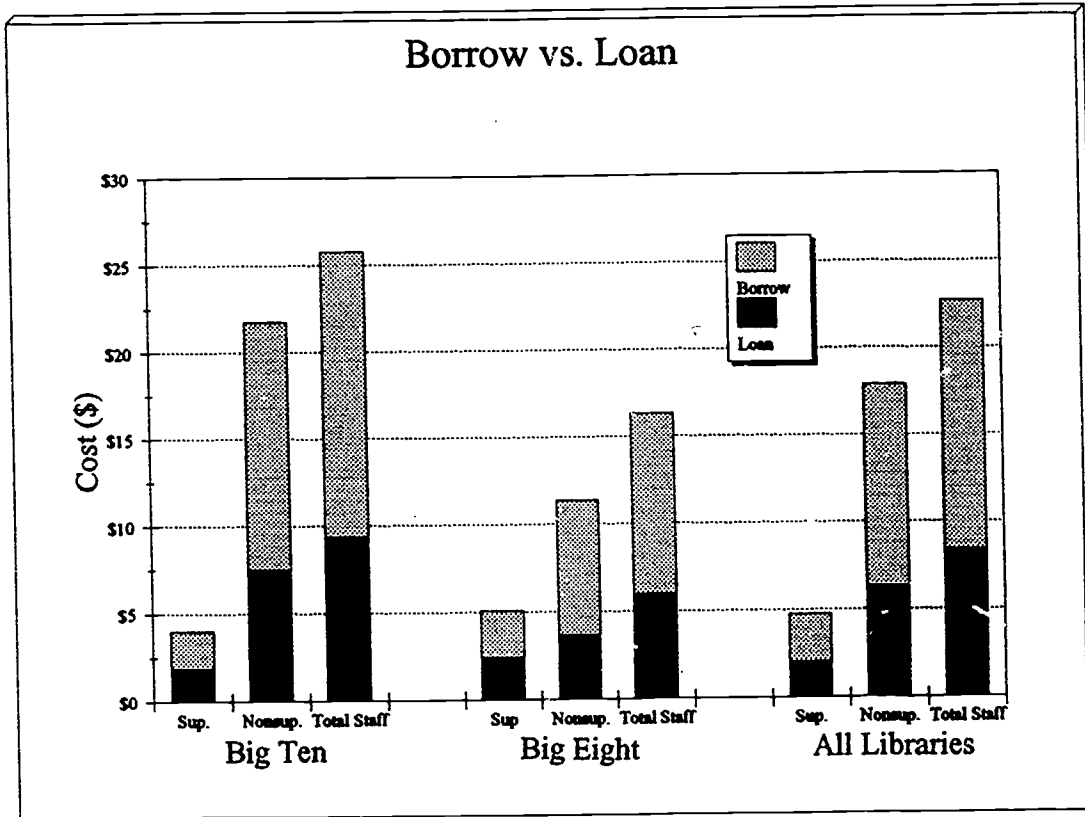


Figure 40

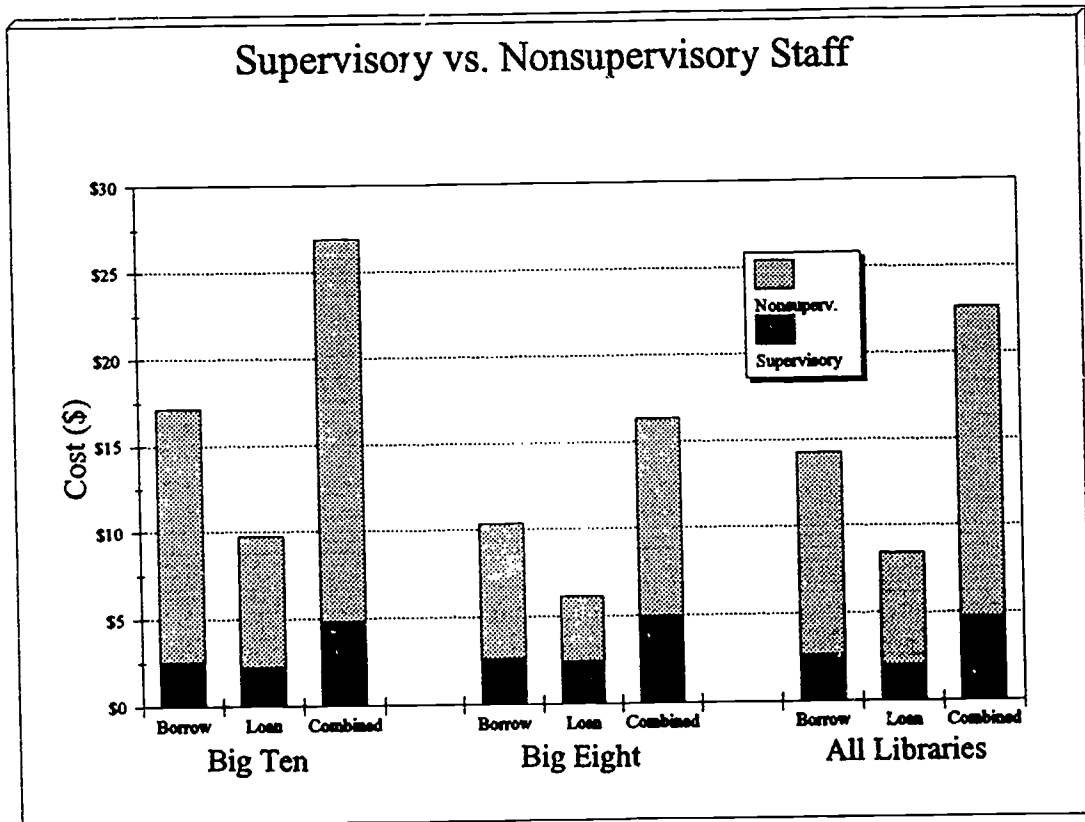


Figure 41

Total Expenditures

Figures 42 and 43 present the actual gross dollars expended by all libraries in the study for borrowing and lending operations. As before, the mean and median are displayed as well as data on institutions at the 10%, 25%, 75%, and 90% levels.

COST TO BORROW ALL LIBRARIES (in \$)						
	10%	25%	Mean	Median	75%	90%
Staff: General Supervisory						
Professional	657	3,030	11,540	9440	17,235	24,995
Non Professional	0	0	8,080	3,484	10,832	23,390
Staff: Non Supervisory						
Professional	0	0	10,699	407	18,083	32,709
Non Professional	15,057	30,350	68,349	59,179	84,649	150,050
Student Staff	0	1,637	8,079	5,112	14,584	19,968
Networks	31,81	5,788	13,642	12,867	17,436	25,414
Delivery	227	2,495	5,229	5,105	6,900	10,452
Photocopy	0	0	378	100	384	1,105
Supplies	41	463	1,658	1,115	1,930	3,065
Other*	0	2,496	11,969	6,657	19,428	31,159

* includes costs for equipment and software; rental and maintenance; and borrow-related purchasing fees

Figure 42

COST TO LOAN ALL LIBRARIES (in \$)						
	10%	25%	Mean	Median	75%	90%
Staff: General Supervisory						
Professional	99,914	10,079	27,580	18,514	27,033	50,511
Non Professional	0	454	21,542	9,234	24,680	52,379
Staff: Non Supervisory						
Professional	0	0	5,206	0	5,440	13,659
Non Professional	24,494	36,795	106,554	53,808	92,201	158,167
Student Staff	2,231	5,554	17,148	10,500	21,738	34,180
Networks	2,083	4,690	24,066	7,984	19,765	30,607
Delivery	4,838	7,247	18,034	11,462	19,451	28,797
Photocopy	459	1,781	8,151	3,299	8,536	24,138
Supplies	408	940	4,386	2,222	4,507	12,156
Other*	0	656	6,004	2,492	5,047	18,864

* includes costs for equipment and software; rental and maintenance

Figure 43

Photocopy Activity and Cost

Figures 44-46 display photocopy activity within ILL. The study confirms that among the libraries studied, 60% of completed ILL transactions were filled by supplying photocopies of materials rather than by sending the original item. On average, 49% of all borrowing requests made by the libraries studied and 64% of the ILL lending requests received by these libraries were fulfilled with photocopies rather than original materials (see Figure 44).

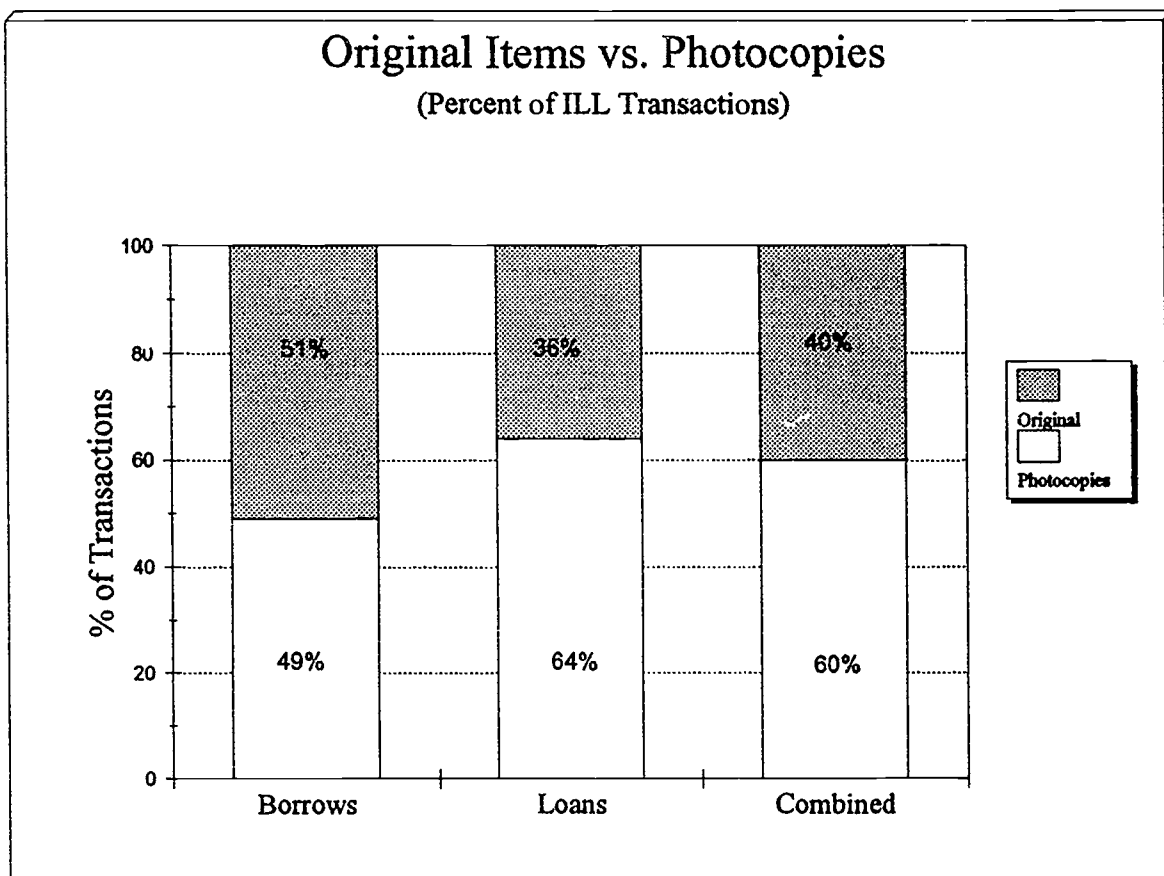


Figure 44

The following scatter diagrams, (Figures 45 and 46) display the unit cost by percent of photocopies. Note some tendency for the Unit Cost per Borrow to decrease as the rate of photocopy traffic increases. Since "borrowing" photocopies does not require returning the materials, one would expect this trend toward lower cost for a copy than for an original.

Note that although Unit Costs per Loan are much more tightly clustered than Unit Costs per Borrow, the same tendency exists toward lower unit cost as the rate of photocopy activity increases. And, empirical evidence suggests that photocopy transactions are less expensive to process than transactions that require circulation recordkeeping.

UNIT COST BY PHOTOCOPY ACTIVITY

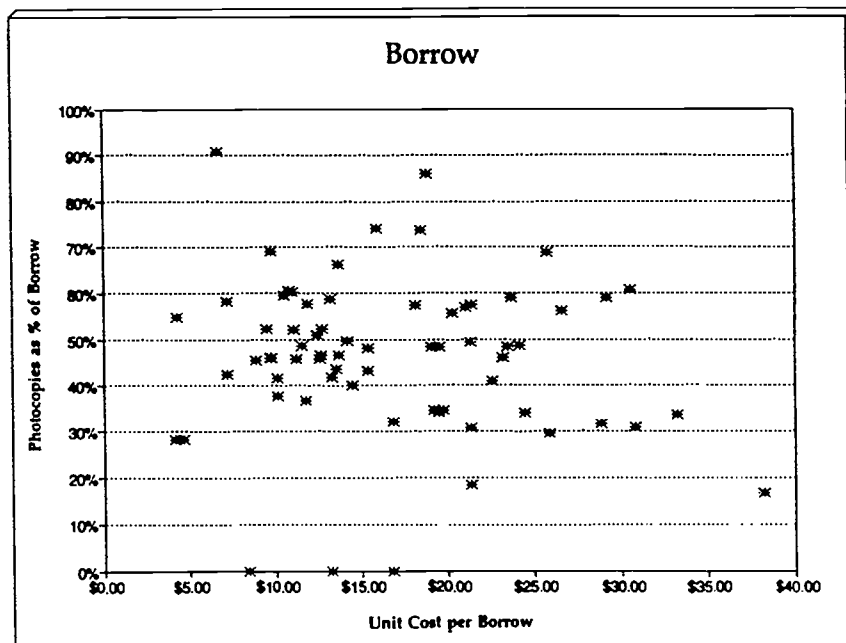


Figure 45

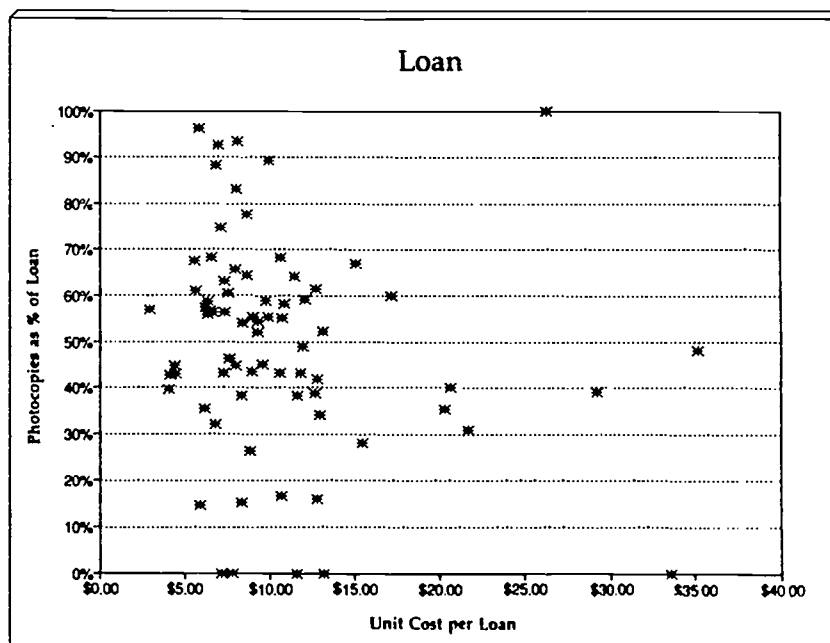


Figure 46

Conclusions

The study yielded a range of data useful to participating research libraries. Each participating institution received a customized analysis of its ILL "snapshot" costs. This analysis included each research library's unit (per item) cost for borrowing and for lending and the component cost for each contributing cost category (e.g. staff). In addition, the mean, median, and range for all participating libraries unit and component costs for borrowing and lending were provided.

The aggregate data for the 76 participating libraries showed the mean unit cost for borrowing to be \$18.62, and the mean unit cost for lending, \$10.93. Combining these two components results in a mean cost per filled ILL transaction of \$29.55.

Processing an ILL transaction requires two major parts, the borrowing or requesting effort, and the lending or filling effort. Therefore, in order to determine the total cost involved in filling an ILL request, the costs incurred by the borrower must be added to the costs incurred by the lender. As noted before, this study indicates that the average cost for a complete transaction is \$29.55 for the sample population.

Average cost for borrowing	=	\$18.62
Average cost for lending	=	\$10.93
Total average transaction cost	=	<u>\$29.55</u>

An individual institution can determine its own unit transaction cost by adding its unit cost for borrowing to the average cost for lending.

Figures from *ARL Statistics 1991-92*, indicate that a total of 4.1 million items were loaned and 1.4 million items were borrowed by 120 research libraries in North America. Projecting the cost study results to these figures suggests that in 1991-92 all ARL libraries spent \$71 million on interlibrary loan operations; \$26 million to borrow materials for local users and \$45 million to loan materials to other libraries.

The most significant cost for ILL operations is staff. Of the \$29.55 average cost per filled ILL transaction, \$22.62 may be attributed to staff costs. Staff costs for all participating institutions represent 77% of the cost of an average ILL transaction, with general supervisory staff costs averaging 16% of the total cost, and nonsupervisory costs averaging about 61%. Further analysis shows that the professional staff component is 15% of the total unit cost, nonprofessional staff is 56%, and student staff is 6%.

For the Big Ten and the Big Eight consortia, staff costs for an average ILL transaction represent 80% and 74% of the total cost with general supervisory costs averaging about 12% and 14% and nonsupervisory costs averaging about 68% and 60%, respectively.

Libraries experiencing increased demand for information services without increased resources may use the unit cost information provided by the study to decide whether to:

- buy materials or journals for the collection, or borrow an item through traditional ILL,
- use commercial or fee-based document delivery services in lieu of traditional ILL resource sharing,
- revise current ILL operations to accommodate new technology such as electronic document transmission over the Internet (e.g. Ariel).

For the *buy/borrow* decision, research libraries need to gather and analyze data on the costs for acquiring, cataloging, servicing, and storing research materials in addition to the *benchmark data for borrowing and lending* included in this report. For the *commercial supplier/ILL* decision, information on fees and delivery time for commercially-supplied materials is necessary. Diverting some ILL traffic (specifically for recent journal articles) away from libraries to fee-based/commercial suppliers may allow libraries to respond more quickly to requests for those materials that only libraries can supply.

In addition, the study provides sufficient, detailed information about ILL costs to permit institutions to analyze the interlibrary loan consequences of local serial cancellations.

Libraries that did not participate in the cost study may also benefit from the study results. For example, libraries with ILL operations that match the profile of participants in the 10% - 90% range (Figure 47), may use the aggregate cost data to determine if their local operations conform to the same pattern of costs.

ILL TRANSACTIONS ALL LIBRARIES						
	10%	25%	Mean	Median	75%	90%
# of Borrows	2,948	4,878	8,016	8,046	10,369	13,001
# of Loans	5,641	8,949	25,487	15,864	25,472	49,557

Figure 47

APPENDICES

Appendix A
1991 ARL/RLG COST STUDY
COST CATEGORY SUMMARY TABLE
(in \$)

Staff: General Supervisory

	<u>10%</u>	<u>25%</u>	<u>Mean</u>	<u>Median</u>	<u>75%</u>	<u>90%</u>
Professional						
Borrow	656.88	3,030.25	11,539.62	9,439.50	17,235.17	24,995.37
Unit Cost	.28	.77	1.62	1.03	2.12	3.77
Lend	1,913.99	10,079.36	27,579.54	18,514.22	27,033.18	50,510.92
Unit Cost	.27	.65	1.27	.97	1.69	2.72
Non Professional						
Borrow	.00	.00	8,080.25	3,484.13	10,832.18	23,389.92
Unit Cost	.00	.03	1.05	.63	1.33	2.18
Lend	.00	453.89	21,542.37	9,234.41	24,680.17	52,378.55
Unit Cost	.00	.07	.79	.65	1.10	1.97
Group Total*						
Borrow	2,935.37	7,771.14	19,740.20	16,032.69	25,822.88	48,098.95
Unit Cost	.88	1.18	2.68	2.09	2.83	4.78
Lend	6,796.49	17,865.49	49,261.86	24,783.52	50,825.46	103,383.56
Unit Cost	.82	1.11	2.07	1.94	2.74	3.99

Staff: Non Supervisory

Professional						
Borrow	.00	.00	10,699.34	406.98	18,082.75	32,708.51
Unit Cost	.00	.00	1.39	.43	2.31	5.53
Lend	.00	.00	5,205.58	.00	5,440.25	13,659.18
Unit Cost	.00	.00	.27	.00	.26	.72
Non Professional						
Borrow	15,057.16	30,350.79	68,349.08	59,179.04	84,648.88	150,049.55
Unit Cost	2.95	4.37	9.23	7.69	13.71	15.54
Lend	26,494.16	36,794.99	106,553.92	53,808.11	92,200.75	158,166.71
Unit Cost	1.49	2.68	5.13	3.72	6.51	10.34
Student Staff						
Borrow	.00	1,636.98	8,078.59	5,112.40	14,583.54	19,968.18
Unit Cost	.00	.34	.93	.80	1.34	2.22
Lend	2,231.25	5,553.96	17,148.25	10,500.00	21,737.71	34,180.11
Unit Cost	.08	.40	.94	.73	1.32	1.87
Group Total						
Borrow	23,120.79	45,987.17	87,127.01	78,401.00	100,237.73	157,635.85
Unit Cost	4.79	6.41	11.55	10.03	15.78	20.90
Lend	38,333.22	52,102.71	128,907.75	67,901.09	138,481.38	181,997.04
Unit Cost	2.68	3.57	6.35	5.01	7.72	12.69

* includes minimal costs for some general supervisory work done by students.

Networks

	10%	25%	Mean	Median	75%	90%
RLIN						
Borrow	.00	.00	2,752.74	245.50	3,646.50	11,028.60
Unit Cost	.00	.00	.39	.05	.54	1.20
Lend	.00	.00	2,378.57	.00	3,883.50	9,074.90
Unit Cost	.00	.00	.16	.00	.25	.54
OCLC						
Borrow	.00	2,433.50	7,445.03	5,671.50	10,550.25	17,883.30
Unit Cost	.18	.43	.96	.77	1.40	1.98
Lend	.00	2,355.75	8,258.65	5,248.50	11,054.75	19,899.20
Unit Cost	.00	.12	.45	.38	.67	.99
Group Total*						
Borrow	3,181.15	5,787.56	13,642.46	12,867.39	17,435.75	25,413.72
Unit Cost	.66	1.04	1.79	1.53	2.13	3.00
Lend	2,083.20	4,689.75	24,065.50	7,983.50	19,765.00	30,606.70
Unit Cost	.11	.33	.79	.70	1.08	1.58
Delivery						
Borrow	227.10	2,494.50	5,229.37	5,104.50	6,899.75	10,452.31
Unit Cost	.11	.36	.71	.69	1.03	1.27
Lend	4,838.40	7,246.50	18,033.85	11,462.00	19,450.75	28,797.40
Unit Cost	.33	.50	.86	.82	1.17	1.46
Photocopy						
Borrow	.00	.00	377.59	100.00	384.00	1,104.83
Unit Cost	.00	.00	.07	.02	.05	.14
Lend	459.00	1,780.75	8,150.96	3,299.00	8,536.00	24,137.90
Unit Cost	.05	.14	.36	.25	.40	.73
Supplies						
Borrow	41.40	462.50	1,657.62	1,115.00	1,930.05	3,065.20
Unit Cost	.04	.07	.20	.17	.27	.43
Lend	408.10	940.25	4,386.32	2,221.50	4,506.75	12,155.70
Unit Cost	.04	.07	.20	.14	.25	.45
Equipment & Software						
Borrow	.00	584.25	2,107.29	1,404.50	2,467.75	6,233.00
Unit Cost	.00	.09	.30	.18	.32	.89
Lend	.00	656.25	3,518.79	1,985.00	3,691.50	12,997.50
Unit Cost	.00	.05	.23	.13	.23	.43
Rental & Maintenance						
Borrow	.00	.00	469.10	98.50	578.00	919.80
Unit Cost	.00	.00	.06	.02	.07	.16
Lend	.00	.00	2,485.31	507.00	1,354.75	5,866.00
Unit Cost	.00	.00	.08	.03	.08	.22
Purchasing Fees Charged**						
Borrow	.00	1,912.27	9,392.91	5,153.00	16,381.55	24,005.60
Unit Cost	.01	.37	1.27	.86	1.82	2.86

* includes the sum of all reported networks

** addresses only borrow-related fees

Appendix B

Methodology

The methodology for this study was adapted from the cost model published by Stephen Dickson and Virginia Boucher in *Research Access Through New Technology*, edited Mary E. Jackson, AMS, 1989. The model employed in the current study covers both borrowing and lending costs whereas the original dealt exclusively with lending costs.

Appendix C

Project Cost Categories

The ILL cost study focused exclusively on costs directly associated with interlibrary borrowing and lending activities. Costs captured by the survey have been grouped into the following cost categories:

- Staff - Two major categories, Supervisory and Nonsupervisory; within these categories, staff were divided into three levels, Professional, Nonprofessional and Student.
- Network and Communications - Telephone (local and long distance), electronic mail, and network services (dial-up and leased lines, searching fees, and terminal maintenance).
- Delivery - Postage, parcel delivery service, fax, courier/shuttle, other delivery options.
- Photocopy - Copying for filling ILL requests and for other ILL purposes. Some institutions were unable to separate out staff and paper costs for photocopy; these costs are included in the Staff and Supplies cost categories.
- Supplies - Paper for printer, fax, and photocopy, printer cartridges, mailing labels, imprinted envelopes, special wrapping supplies.
- Equipment and Software - Annual use charges (25% of purchase price for equipment less than five years old) for equipment; purchase price for software.
- Rental and Maintenance - Equipment rental and maintenance, annual software leasing.
- Direct and Indirect Borrowing Charges - Coupons, debit accounts, charges from suppliers, including copyright fees.
- Borrowing Cost Recovery - Reimbursement/income recovered from borrowing activity. (See point 4 in Appendix D)
- Lending Cost Recovery - Reimbursement/income recovered from lending activity. (See point 4 in Appendix D)

Appendix D

Data Collection and Analysis

1. Filled transactions - Since filled transactions are the "products" of interlibrary loan, only filled transactions are used to produce unit costs. One could compare this to a company determining unit cost of manufacturing based on finished goods.
2. Network costs - Network costs represent the costs for various telecommunications alternatives, including fees for Internet; RLIN, OCLC, and other leased or dial-up connections; and telephone (local and long distance). The unit costs for all networking components indicate that part of the unit borrowing or lending cost that can be ascribed to telecommunications. The unit costs listed under RLIN or OCLC reflect the cost per unit attributed to these particular services.
3. Center for Research Libraries fees - ARL/FLG decided not to include CRL fees when producing the Unit Cost per Borrow because the focus of CRL is cooperative collection development, not document delivery. Cost Study participants were referred to the instructions contained in Appendix F to determine how to allocate any ILL-related portion of their CRL fees to their Unit Cost per Borrow.
4. Reimbursements/cost recovery - Because no standard reimbursement or cost recovery model for all participating institutions exists, the analysis does not include the reimbursements received by the individual institutions and focuses only on the gross rather than net costs for borrowing or lending. To include these reimbursements would artificially reduce the true costs for borrowing or lending, and would disallow cost comparisons across institutions. These cost recoveries could be in the form of direct revenues for services rendered, such as user fees, state subsidies for document delivery and student aid, or free state shuttle or networking services.
5. Normalization of salaries - Resources did not permit the normalization of salaries to be included in this analysis of cost study data.
6. Confidentiality of data - Participants in this study data were guaranteed confidentiality of their data. However, many have agreed to consider requests from researchers for access to the data specific to their library. ARL maintains a list of contacts for such requests.

Appendix E

1. All Participating Institutions

Main Libraries unless otherwise noted.

NORTH

Brown University*
Columbia University*
University of Connecticut
Dartmouth College*
Massachusetts Institute of Technology*
Massachusetts Institute of Technology --
MicroReproduction Lab*
New York State Library
SUNY at Albany
SUNY at Buffalo
SUNY at Stony Brook
University of Pennsylvania*
Pennsylvania State University
University of Rochester*
Rutgers University
Syracuse University*
Temple University
Yale University*

MIDWEST

Center for Research Libraries
University of Illinois at Chicago
University of Illinois at Chicago --
Health Sciences
University of Illinois at Chicago --
Document Delivery
University of Illinois at
Urbana-Champaign
Indiana University at Bloomington
Iowa State University
University of Kansas
University of Michigan, Medical
University of Michigan
Michigan State University
University of Missouri at Columbia
University of Nebraska at Lincoln
Northwestern University*
University of Notre Dame*
Ohio State University
Purdue University
Southern Illinois University
Washington University at St. Louis*
Wayne State University
University of Wisconsin at Madison

* indicates private institution

SOUTH

University of Arkansas
University of Delaware
Duke University*
University of Florida
Florida State University
Georgetown University*
University of Houston
Johns Hopkins University*
Library of Congress
National Library of Medicine
North Carolina State University
University of Oklahoma
Rice University*
University of South Carolina
University of Tennessee
Texas A&M University
University of Texas at Austin
Vanderbilt University*
University of Virginia
Virginia Polytechnic and State University

WEST

University of Arizona
Arizona State University
Brigham Young University*
University California at Berkeley
University of California at Davis
University of Colorado at Boulder
Colorado State University
Stanford University*
University of Washington
University of Wyoming

CANADA

University of British Columbia
Canada Institute for Scientific and
Technical Information
University of Laval
University of Manitoba
McGill University
McMaster University
National Library of Canada
University of Toronto

2. Big Ten Consortium

University of Illinois at Chicago
University of Illinois at
Urbana- Champaign
Indiana University at Bloomington
University of Michigan
Michigan State University
Northwestern University
Ohio State University
Pennsylvania State University
Purdue University
University of Wisconsin at Madison

3. Big Eight Consortium

University of Arkansas*
Colorado State University
Iowa State University
Southern Illinois University
University of Colorado
University of Kansas
University of Missouri
University of Nebraska
University of Oklahoma
University of Wyoming*

* consortial partners of the Big Eight

Appendix F

Additional Cost Components of the Unit Cost per Borrow

Charges for subscription, per search, telecommunications, and document delivery for services such as CARL UnCover, CitaDel, and FirstSearch and the portion of the Center for Research Libraries fees attributable to ILL, may be included as costs for ILL activity. The following process may be used to determine appropriate allocation of these fees to a Unit Cost per Borrow.

Example: "Sample" University processed 16,480* borrows in 1991 and had a Unit Cost per Borrow of \$15.48**, as determined by the ARL/RLG ILL Cost Study. "Sample" determines that its ILL share of costs for fee-based services totals \$24,720.

The additional unit cost generated by these fees can be obtained by dividing the total cost (attributable to ILL) for these services by the total number of ILL Borrow Transactions (filled)*:

$$\frac{\$24,720}{16,480^*} = \$ 1.50 \text{ Cost per Borrow}$$

Add this additional cost per borrow to the Unit Cost per Borrow** for a more accurate reflection of activity-level cost for each borrowing transaction.

$$\$15.48^{**} + \$ 1.50 = \$16.98 \text{ Unit Cost per Borrow}$$

Appendix G

RLG ILL Cost Study Task Force

Chair: Vivienne Roumani-Denn, University of California at Berkeley
Sharon Bonk, SUNY at Albany
Susanne McNatt, Princeton University
Patricia Renfro, University of Pennsylvania
Marilyn Roche, Research Libraries Group
N. J. Wolfe, New York University - Medical College

ARL/RLG INTERLIBRARY LOAN COST STUDY

INTRODUCTION

The purpose of this joint ARL/RLG Interlibrary Loan Cost Study is to establish benchmark data for discussion within the ARL community of the economics of document delivery.

The RLG Public Services Committee developed the draft interlibrary loan (ILL) cost study in spring 1991 to identify the unit cost of an ILL transaction for use in making preliminary comparisons with the cost of alternative methods of obtaining information and documents for the patrons of its member institutions. In the fall of 1991, RLG approached ARL to suggest that the ILL study be undertaken jointly so as to assure a larger number of participating institutions that would yield useful aggregate data and provide benchmark data for ILL costs in North American research libraries. In October, the ARL Board endorsed the joint project. The work plan for the project anticipates that each organization will contribute expertise in its areas of strength: RLG its data analysis capabilities, and ARL its experience with survey instruments and techniques, and its direct ties to directors of 119 research libraries.

Libraries experiencing increased demand for information services without increased resources, may use unit cost information:

1. to decide whether to borrow an item through ILL or acquire it for the collection;
2. to decide when to use a commercial document delivery service in lieu of traditional ILL procedures; and
3. to study the impact of serial cancellations.

This study focuses exclusively on costs directly associated with interlibrary borrowing and lending activities. Costs of major library functions such as collection development, acquisitions, cataloging, and general circulation are not included, nor are any factors representing general overhead. All of these activities are necessary preconditions for an ILL service but are viewed as indirect costs and are not included in this study. Obvious exceptions to these guidelines include non-circulating libraries where the entire circulation function exists primarily for the purpose of interlibrary loan.

The methodology is adapted from the cost study model published by Stephen Dickson and Virginia Boucher in *Research Access Through New Technology*, edited by Mary Jackson, NY: AMS, 1989. The major difference is that our model deals with both borrowing and lending costs whereas the original dealt exclusively with lending costs.

Although this present study should yield wide ranges of data useful to participating institutions, the chief goal is to determine unit borrowing and lending cost information for ILL transactions. Care should be exercised when comparing this unit cost information with that from other ILL cost studies which may or may not include indirect and/or overhead costs.

Note: The data collected in this survey will be reported in the aggregate only. Data will not be made available for comparison on a library-by-library basis.

INSTRUCTIONS

DEFINITIONS AND GENERAL INSTRUCTIONS

1. Please read all instructions carefully, section by section, before answering the questionnaire. Answer questions as completely as possible; if an exact number is not available, please give your best estimate. Use the "COMMENTS" section freely to expand on or clarify your responses (see page W-11 of the questionnaire).
2. In this survey, the term "ILL" connotes borrowing and lending activity as a whole. Where one or the other service is intended, the specific term "borrowing" or "lending" is used. FTE stands for full time equivalent. All staff time is converted to a proportion of full time equivalent staff time. For example, a full time staff member is 100% FTE, while half time is 50% FTE.
3. Please do not use decimals. All figures should be rounded to the nearest whole number.
4. Please do not leave any lines blank. If the appropriate answer is zero or none, use "0". If an exact figure is unavailable use "U/A". If a question is not applicable, use "N/A".
5. All questions assume a fiscal year ending June 30, 1991. If your library's fiscal year is different, please use the "COMMENTS" section to explain.
6. Use the most recent year's cost figures and statistics. Information needed to complete this study should be available from library financial and personnel records. As noted, the questionnaire assumes a fiscal year ending June 31, 1991; indicate in the "COMMENTS" section if you use a different fiscal year. Please supply data for the entire fiscal year, based on actual statistics collected or interpolated from sampling. When figures are not available, as may be the case with telephone bills, use the most recent cost figures and statistics available for the category. If necessary, keep a detailed log for a period long enough to give representative data (see "Sample Log" below). Please indicate in the "COMMENTS" section when data reported is derived from sampling.

Sample log:

Dates Covered: April 12-30, 1990

Staff: Chris A. Lender

Day	Task	Minutes	Borrowing	Lending
1	Searching	25	X	
2	Searching	55	X	

If the only information available for a particular cost category is for the library as a whole, e.g., postage, estimate the interlibrary loan percentage by consulting staff most closely involved in the activity or keep a detailed log.

7. Please separate borrowing and lending costs. This cost model requires you to separate borrowing and lending costs. For some categories, where actual costs associated with borrowing and lending cannot be differentiated, estimate the percentage for borrowing and lending by consulting with staff most closely involved with the activity, or keep a log. Or, when an activity cost, e.g. shipping, is about the same for a borrowing transaction as for a lending transaction, use the general ratio of your borrowing to your lending to apportion the total ILL shipping cost. For example, if your general borrowing (3000 books) to lending (1000 books) ratio is 3:1, and total shipping costs are \$20,000, then borrowing costs would be \$15,000 and lending costs would be \$5,000. This ratio is derived from the figures you supply for borrowing and lending on the attached general profile sheet.

8. **Categories of costs.** Costs have been grouped under the following categories:

- Staff costs
- Network and communications costs
- Delivery costs
- Photocopy costs
- Supply costs
- Equipment and software costs
- Rental and maintenance costs
- Direct and indirect charges for borrowing from other suppliers
- Cost recovery from borrowing activity
- Cost recovery from lending activity

Each category is explained, and separate instructions and worksheets for recording the necessary data are provided. Some costs may fit logically under several categories, e.g., your unit cost per page of photocopy may actually include staff cost. If so, include the staff cost portion under **either** photocopy or staff costs (preferably staff), but do not include it in both areas. **Do not duplicate costs.** Please use the "COMMENTS" section to explain your answers as necessary.

9. **Covered/Recovered costs.**

Costs for some interlibrary loan services may be covered outside the library's own budget, or may be recovered by the library. These services usually take two different forms:

- *Subsidized Services* for which no costs are incurred by the library and no income is generated, such as state delivery and campus shuttle services for which the state or university absorb all costs. List these services in the "General Profile" section (Worksheet I). Generally, cost figures are unknown for these services.
- *Cost-Recovered/Reimbursed Services*, budgeted for by the library, for which some or all cost is recovered. This category includes transactions such as loans, photocopies, faxes and printer output, services such as reference or database searching, and network reimbursements for which the library receives payment directly from individuals, library patrons or other libraries, or through debit accounts, invoices, and grants.

First, determine the entire cost; then, in the appropriate section, determine the amount recovered. Actual cost will be the difference between the two. The cost recovery items will be captured in the appropriate sections. Note: Some categories will not be applicable to all institutions.

10. Canadian libraries should report cost figures only in Canadian dollars. These amounts will be translated to U.S. dollars by ARL at the rate of 1.1547 Canadian dollars to 1 U.S. dollar (the average monthly noon exchange rate published in the Board of Canada *Review* for the period July 1990 through June 1991).
11. If you have any questions about completing the questionnaire, contact Marilyn Roche at RLG by telephone (415-691-2284) or electronic mail (BL.MXR@RLG.BITNET)
12. The questionnaire should be returned to the ARL office, 1527 New Hampshire Ave., N. W., Washington, DC 20036. The deadline is April 3, 1992.

SPECIFIC INSTRUCTIONS

WORKSHEET I: GENERAL PROFILE OF ILL UNIT COMPLETING THIS STUDY (see p. W-1)

Collect data only from the central ILL unit or, in the case of decentralized ILL operations, from the main library or largest ILL service unit. Please be sure to indicate the name of this unit.

WORKSHEETS II: NON-SUPERVISORY STAFF COSTS (see p. W-3)

When identifying staff, include all those employed in other library operations services, or branches who spend part time or sporadic amounts of time processing or servicing ILL requests at the main ILL unit only. The aim is to be comprehensive in accounting for staff time for processing ILL requests. In some instances, a central service unit providing a direct service for ILL requests, such as photocopying, may charge interlibrary loan a flat fee or a unit cost per request that includes not only staff costs but also machine and supplies costs. If you are unable to separate out staff costs, include these comprehensive charges in **total** under another heading (e.g. delivery costs, photocopy costs). **Please do not duplicate staff costs here if you are including them in another category.**

Only aggregate staffing cost data is to be reported in this survey. To assist in the calculation of total costs, a worksheet for individual staff members is included with the instructions (see page I-5). **DO NOT INCLUDE THIS WORKSHEET WITH YOUR COMPLETED QUESTIONNAIRE.**

1. Identify all staff members who assist in processing ILL requests. Fill out a separate section on the worksheet for each one, recording separately the percentage of time for borrowing and for lending activities.
2. Determine the salary of each staff member. Convert hourly or monthly salary to an annual rate.
3. Record the institutional fringe benefit rate for individuals who receive fringe benefits.
4. Determine the percentages of time spent on borrowing and lending. If the total amount, or the percentage for borrowing and lending, is not known, have someone close to the activity estimate, or keep a detailed log long enough to provide representative data. Since staff time accounts for a major proportion of costs, make these numbers as accurate as possible.
5. Include staff for whom you get partial or full reimbursement from a source other than the library budget, or for whom there is no cost (e.g. students on financial aid). State the salary equivalent for such staff, and the percentage of reimbursement, if any.
6. Add costs together and report only the total for each group: professional, nonprofessional, and student FTE. Also, please indicate the number of staff in each category.

WORKSHEET FOR CALCULATING STAFF COSTS**(1) Staff member**

- a. Professional
- b. Nonprofessional
- c. Student
- d. _____ Annual salary
- e. _____ (%) Fringe benefit rate
- f. _____ Percent of time in borrowing
- g. _____ Percent of time in lending
- h. _____ Percent (if any) reimbursed

(2) Staff member

- a. Professional
- b. Nonprofessional
- c. Student
- d. _____ Annual salary
- e. _____ (%) Fringe benefit rate
- f. _____ Percent of time in borrowing
- g. _____ Percent of time in lending
- h. _____ Percent (if any) reimbursed

(3) Staff member

- a. Professional
- b. Nonprofessional
- c. Student
- d. _____ Annual salary
- e. _____ (%) Fringe benefit rate
- f. _____ Percent of time in borrowing
- g. _____ Percent of time in lending
- h. _____ Percent (if any) reimbursed

(4) Staff member

- a. Professional
- b. Nonprofessional
- c. Student
- d. _____ Annual salary
- e. _____ (%) Fringe benefit rate
- f. _____ Percent of time in borrowing
- g. _____ Percent of time in lending
- h. _____ Percent (if any) reimbursed

Do not return this worksheet. Report total staff costs in Worksheet II.

WORKSHEET III: GENERAL SUPERVISORY STAFF COSTS *(see p. W-3)*

Supervisory and managerial staff costs, which are to be included here, may be difficult to collect for this study. **Identify and include only those costs directly associated with ILL operations.** Since ILL supervision and management responsibilities may be spread among several persons both within and outside the ILL department (e.g. circulation supervisor—see items 6 and 7), please use the list of activities below to decide the appropriate staff member and the proportion of his/her time that should be included on "WORKSHEET III: GENERAL SUPERVISORY STAFF COSTS".

1. Daily supervising and coordinating the processing of ILL requests
2. Training ILL staff
3. Hiring decisions for ILL staff
4. Preparing budget information for ILL.
5. Drafting ILL reports, for example, contract activity.
6. Resolving ILL problems, including bibliographic and patron-related problems.
7. Coordinating regularly the ILL-related activity carried out by staff in several library units.
8. Interpreting policy to ILL patrons.
9. Performing general ILL duties not directly attributed to either borrowing or lending
10. Participating in other library or professional activities, such as committee work, by anyone who is substantially involved in any of the above activities.

To compute the cost of each general supervisory staff member, use the following formula:

$$\text{Supervisory Cost} = \text{Time} \times (\text{Salary} + (\text{Salary} \times \text{Fringe Benefits}))$$

G = General Supervisory Staff Cost

S = Average salary for rank or range

F = Fringe benefit rate

T = % of time spent in general supervisory activity

Report only the total supervisory staff costs in each category (professional, nonprofessional, and student FTE).

WORKSHEET IV: NETWORK AND COMMUNICATIONS COSTS *(see p. W-4)*

Included here are applicable costs of telephone, electronic mail, network fees (e.g. RLIN, OCLC).

Telephone services

Calculate total cost for borrowing and for lending, or estimate percentages for borrowing and lending, or keep a log. Include:

1. Local service cost, that is, flat rate phone fees, and local area message unit costs. Include here only desk phones. Telecommunications charges for other equipment, such as RLIN, FAX, OCLC, DOBIS, UTLAS, E-Mail systems, are captured elsewhere in the survey.
2. Long distance. If specific long distance charges are not available, estimate the total ILL portion of the phone bill.

Network services

Using annual invoices, determine dialup and leased line telecommunication charges, terminal maintenance fees, basic service fees for RLIN, OCLC, DOBIS, UTLAS, and other electronic network systems used by ILL.

1. Do not include membership fees unless the network is used exclusively by or for ILL.
2. Where devices are shared, estimate the percentage of charges that reflect ILL use.
3. Calculate cost for borrowing and lending. If necessary, estimate to determine percentages of borrowing and lending or keep a log.
4. Actual costs are highly desirable, but if cost of electronic mail and network and services are unavailable, use vendor price lists.
5. Telecommunication costs associated with telefacsimile use are included under DELIVERY COSTS. DO NOT include here.

WORKSHEET V: DELIVERY COSTS (*see p. W-6*)

If cost information is available for the entire library only, determine the percentage applicable to ILL through records or observation.

1. Determine the lending and borrowing costs for postage, parcel delivery service, fax, and other delivery systems.
2. Determine fax telecommunication charges, using either actual costs or observation. Fax equipment and rental fees are better accounted for on Worksheet VIII (for equipment costs) and Worksheet IX (for rental and maintenance costs).
3. Cost incurred by the library for courier, intrainstitutional shuttle, or delivery service between institutions, should be included here. For delivery services that exist for purposes beyond serving ILL needs, include the ILL portion of the cost, or estimate if necessary. If staff costs can be separated out, include under STAFF COSTS. Otherwise, include here all costs associated with the ILL delivery service—staff, vehicle (using 25% of purchase cost if vehicle is less than four years old), and maintenance, etc.
4. Identify any costs recovered, e.g. network reimbursement, fee paid by recipient of service, etc.
5. Calculate cost for borrowing and lending. Estimate, if necessary, the percentages of borrowing and lending or keep a log.

WORKSHEET VI: PHOTOCOPY COSTS (*see p. W-7*)

Record the cost of all photocopies made in response to individual photocopy orders from other institutions as well as photocopies made for other ILL purposes. Include fiche to fiche photocopies; DO NOT include original filming.

This study recognizes that ILL photocopy work may be carried out in a variety of ways at an institution: work done by ILL staff, work done by a central photocopy service, work done by branch library staff. In most operations, a total amount is paid for these services.

Whenever possible, include the costs of staff, supplies, equipment, etc., associated with photocopy service separately, under relevant categories (STAFF COSTS, etc.), unless you are using a per page cost that includes these costs. When ILL photocopy cost is not available, estimate the total number

of pages photocopied for lending and borrowing per year, and apply your institutional per page cost. If you do not have an institutional per page photocopy cost, use \$.07 per page as a standard.

Any photocopy paper costs for forms reproduced by in-house photocopy methods should be covered here, NOT under SUPPLY COSTS.

Revenue or reimbursement recovered by charging for photocopies on a per transaction basis, should be entered on Worksheet XI and Worksheet XII.

WORKSHEET VII: SUPPLY COSTS (see p. W-7)

Record costs for specialized supplies that are used primarily for ILL, including printer, facsimile, or photocopy paper used for ILL operations, printer ribbon or ink cartridges, mailing labels, imprinted envelopes or other forms such as ILL notices, specials wrapping supplies, and ALA forms. Cost for general office supplies, such as pencils and paperclips, are minimal; do not calculate.

Estimate annual borrowing and lending costs for supplies for which actual costs are not known.

Do *not* include photocopy paper costs for forms reproduced by in-house photocopy methods and covered above under PHOTOCOPY COSTS.

WORKSHEET VIII: EQUIPMENT AND SOFTWARE COSTS (see p. W-8)

This model employs the concept of annual use charges, widely used in government contracts, to assign an estimated cost for equipment even in periods when no new equipment is purchased.

1. On the data sheet list separately each piece of equipment and software used in ILL activity.

Do not include here photocopy equipment for which a factor was included in the per page cost used above under PHOTOCOPY COSTS. When use of a photocopy machine for ILL purposes is very light or sporadic, exclude it from this list.

Include costs for all terminals or computers used, that are not already counted under network costs, etc. List separately any software not included in the computer purchase price.

General office equipment, such as desks, and file cabinets, for which the number of useful years cannot be estimated (twenty years or more), is not included since the proportional costs would be such a small component of overall costs.

2. Determine the purchase price of each of these items using invoices and price lists.

This model assumes an average "life" for equipment or software to be four years. Annual cost is therefore 25% of purchase price. Estimate for all equipment regardless of age. If an item is used both for ILL work and other work, enter a percentage of the cost equivalent to the percentage of ILL use. (Note: Purchase price for items more than four years old is 0.)

3. For each piece of equipment calculate the cost for borrowing and lending based upon percentage of use. If equipment is used equally for borrowing and lending, then you may want to apportion the total ILL cost to borrowing and lending using the general ratio of your borrowing activity to your lending activity. This ratio will be derived from the figures you supply for borrowing and lending on the attached general profile sheet.
4. In the spaces showing percentages of reimbursement and under "Donated/ Locally developed equipment and software", include the value of any equipment and software for which the library was totally or partially reimbursed. Remember to include equipment covered by a grant, such as telefacsimile.

WORKSHEET IX: RENTAL AND MAINTENANCE COSTS *(see p. W-9)*

Equipment rental, maintenance, and annual software licensing costs that have not already been included in other cost categories (such as network costs) should be included here.

1. Find the rental, maintenance, and annual software licensing costs for each piece of equipment used by Borrowing and Lending.

Vendor invoices, rental and maintenance contracts should be used as the source of data, and monthly charges converted to annual ones as necessary.

2. Indicate the percent of use by borrowing and lending.

WORKSHEET X: FEES CHARGED FOR PURCHASING FROM OTHER SUPPLIERS *(see p. W-10)*

Determine the annual costs for each type itemized on the worksheet. Where costs are not incurred on an annual basis (such as a block of coupons bought in advance, for example, from NTIS or the American Chemical Society), estimate annual usage. Add additional types if necessary.

WORKSHEET XI: BORROWING ACTIVITY - INCOME RECOVERED *(see p. W-10)*

Any reimbursement or cost recovery not covered under other categories for borrowing should be included here. This section may be primarily, but not exclusively, money recovered from local patrons.

WORKSHEET XII: LENDING ACTIVITY - INCOME RECOVERED *(see p. W-11)*

Any reimbursement or cost recovery not covered under other categories should be included here. This section covers money recovered from other sources.

ARL/RLG INTERLIBRARY LOAN COST STUDY

Reporting institution _____ Date returned to ARL _____
 Questionnaire completed by (name) _____
 Position _____ Phone _____
 Contact person (if different) _____
 Position _____ Phone _____
 Total number of ILL service points in library system _____

WORKSHEET I: GENERAL PROFILE FOR ILL UNIT COMPLETING THIS STUDY (see p. I-4)

ILL unit responding located in: _____
 Campus libraries served by this unit: _____

Borrowing Activity

	Filled	Unfilled	Total
Total requests per year	_____	_____	_____
Number of loan requests	_____	_____	_____
Number of photocopy requests	_____	_____	_____
Requests per system:			
RLIN	_____	_____	_____
OCLC	_____	_____	_____
DOBIS	_____	_____	_____
UTLAS	_____	_____	_____
Other automated (please specify)	_____	_____	_____
Other not automated (e.g., mail)	_____	_____	_____

Lending Activity

	Filled	Unfilled	Total
Total requests per year	_____	_____	_____
Number of loan requests	_____	_____	_____
Number of photocopy requests	_____	_____	_____
Requests per system			
RLIN	_____	_____	_____
OCLC	_____	_____	_____
DOBIS	_____	_____	_____
UTLAS	_____	_____	_____
Other automated (please specify)	_____	_____	_____
Other not automated (e.g., mail)	_____	_____	_____

Number of paid staff

Supervisory

- _____ Professional
- _____ Nonprofessional
- _____ Student FTE

Nonsupervisory

- _____ Professional
- _____ Nonprofessional
- _____ Student FTE

Number of non-paid staff:

_____ FTEs, volunteers or students not paid through library budget

Major ILL tasks carried out by staff in this and other units (indicate number of full time equivalent staff, e.g., 2.5 FTE, .4 FTE, etc.):

Check all that apply	This ILL Unit	Other Units (e.g. mail room)	Unit Name (specify)
___ Receiving requests	___ FTE	___ FTE	_____
___ Searching local holdings (borrowing)	___ FTE	___ FTE	_____
___ Verification/location information search (borrowing)	___ FTE	___ FTE	_____
___ Searching for call number information (lending)	___ FTE	___ FTE	_____
___ Responding to requests	___ FTE	___ FTE	_____
___ Retrieving volumes (stacks)	___ FTE	___ FTE	_____
___ Reshelving in stacks	___ FTE	___ FTE	_____
___ Wrapping and packaging	___ FTE	___ FTE	_____
___ Receiving/Shipping	___ FTE	___ FTE	_____
___ Making photocopies	___ FTE	___ FTE	_____
___ Sending online requests	___ FTE	___ FTE	_____
___ Creating circulation records	___ FTE	___ FTE	_____
___ Invoicing/billing	___ FTE	___ FTE	_____
___ Collection of fines	___ FTE	___ FTE	_____

Subsidized services

1. Networks, including state-wide networks, etc. (specify): _____
2. Delivery services (specify): _____
3. Other (specify): _____

WORKSHEET II: NON-SUPERVISORY STAFF COSTS (see p. I-4)

(1) Professional Staff:

- a. _____ Number of FTE Professionals
- b. _____ Average Annual Salary
- c. _____ (%) Fringe benefit rate
- d. _____ Percent of time in borrowing
- e. _____ Percent of time in lending
- f. _____ Total amount (\$) reimbursed

(2) Nonprofessional Staff

- a. _____ Number of FTE Nonprofessionals
- b. _____ Average Annual Salary
- c. _____ (%) Fringe benefit rate
- d. _____ Percent of time in borrowing
- e. _____ Percent of time in lending
- f. _____ Total amount (\$) reimbursed

(3) Student Staff

- a. _____ Number of FTE Students
- b. _____ Average Annual Salary
- c. _____ (%) Fringe benefit rate
- d. _____ Percent of time in borrowing
- e. _____ Percent of time in lending
- f. _____ Total amount (\$) reimbursed

WORKSHEET III: GENERAL SUPERVISORY STAFF COSTS (see p. I-6)

Supervisory staff—professional: \$ _____

Supervisory staff—nonprofessional: \$ _____

Supervisory staff—student FTE: \$ _____

Total cost for supervisory staff: \$ _____

WORKSHEET IV: NETWORK AND COMMUNICATIONS COSTS (see p. I-6)

Telephone services

- a. Local cost for basic fees and area message units \$ _____
 - 1. Local cost for borrowing \$ _____
 - 2. Local cost for lending \$ _____
 - 3. Cost recovered for borrowing \$ _____
 - 4. Cost recovered for lending \$ _____
- b. Long Distance calls \$ _____
 - 1. Long distance cost for borrowing \$ _____
 - 2. Long distance cost for lending \$ _____
 - 3. Cost recovered for borrowing \$ _____
 - 4. Cost recovered for lending \$ _____

Network services

RLIN

- a. Dialup telecommunication charges \$ _____
- b. Leased line telecommunication charges \$ _____
- c. Terminal maintenance \$ _____
- d. Searching fees \$ _____
- e. Lending cost (based on % of use) \$ _____
- f. Borrowing cost (based on % of use) \$ _____
- g. Cost recovered for borrowing \$ _____
- h. Cost recovered for lending \$ _____

OCLC

- a. ILL transaction records charge \$ _____
- b. OCLC lending credit \$ _____
- c. Dedicated access \$ _____
- d. Telecommunication equipment \$ _____
- f. Dialup telecommunication charges \$ _____
- g. Display holdings \$ _____
- h. Billed searches \$ _____
- i. Regional net administration fee \$ _____
- j. Other membership fees \$ _____
- k. Borrowing cost (based on % of use) \$ _____
- l. Lending cost (based on % of use) \$ _____
- m. Cost recovered for borrowing \$ _____
- n. Cost recovered for lending \$ _____
- o. ILL tape-loading charge \$ _____

DOBIS

- a. Leased line telecommunication charges \$ _____
- b. Terminal maintenance \$ _____
- c. Hourly connect time charges \$ _____
- d. DOBIS Full Service membership fee \$ _____
- e. Borrowing cost (based on % of use) \$ _____
- f. Lending cost (based on % of use) \$ _____

UTLAS

- a. Hourly network access charges \$ _____
- b. Flat-rate network access charges \$ _____
- c. Searching fees \$ _____
- d. ILL transaction charges \$ _____
- e. Borrowing cost (based on % of use) \$ _____
- f. Lending cost (based on % of use) \$ _____

Other network

- a. Dialup telecommunication charges \$ _____
- b. Leased line telecommunication charges \$ _____
- c. Terminal maintenance \$ _____
- d. Telecommunication equipment \$ _____
- e. Membership fee (if used ILL exclusive) \$ _____
- f. Transaction fees \$ _____
- g. Other charges/fees \$ _____
- h. Borrowing cost (based on % of use) \$ _____
- i. Lending cost (based on % of use) \$ _____
- j. Cost recovered for borrowing \$ _____
- k. Cost recovered for lending \$ _____

Other network (Repeat section above)

Summary for Network and Communications Costs

	Borrowing Cost	Lending Cost	Borrowing Reimbursement	Lending Reimbursement
LOCAL	_____	_____	_____	_____
LD	_____	_____	_____	_____
RLIN	_____	_____	_____	_____
OCLC	_____	_____	_____	_____
DOBIS	_____	_____	_____	_____
UTLAS	_____	_____	_____	_____
OTHER	_____	_____	_____	_____

WORKSHEET V: DELIVERY COSTS (see p. I-7)

a. Postage	Total	\$ _____	
	Borrowing	\$ _____	Reimbursement \$ _____
	Lending	\$ _____	Reimbursement \$ _____
b. Parcel Delivery Service	Total	\$ _____	
	Borrowing	\$ _____	Reimbursement \$ _____
	Lending	\$ _____	Reimbursement \$ _____
c. Telefacsimile Line charges	Total	\$ _____	
	Borrowing	\$ _____	Reimbursement \$ _____
	Lending	\$ _____	Reimbursement \$ _____
d. Courier/ Shuttle	Total	\$ _____	
	Borrowing	\$ _____	Reimbursement \$ _____
	Lending	\$ _____	Reimbursement \$ _____
e. Other	Total	\$ _____	
	Borrowing	\$ _____	Reimbursement \$ _____
	Lending	\$ _____	Reimbursement \$ _____

Summary for Delivery Costs

	Borrowing Cost	Lending Cost	Borrowing Reimbursement	Lending Reimbursement
TOTALS	_____	_____	_____	_____

WORKSHEET VI: PHOTOCOPY COSTS (see p. I-7)

- 1. Photocopy costs for filling ILL requests (lender) (e.g., copying documents, articles) \$ _____
- 2. Photocopy costs for other purposes (e.g., copying ILL forms) Borrowing \$ _____
Lending \$ _____

Summary for Photocopy Costs

	Borrowing Cost	Lending Cost
TOTALS	_____	_____

WORKSHEET VII: SUPPLY COSTS (see p. I-8)

Summary for Supply Costs

	Borrowing Cost	Lending Cost
TOTALS	_____	_____

WORKSHEET VIII: EQUIPMENT AND SOFTWARE COSTS (see p. 1-8)

Purchased Equipment and Software

Enumerate items such as PCs, Ariel equipment, fax equipment, terminals:

1.	_____	ILL total	\$ _____		
		% Borrowing use	_____	% Borrowing reimbursed	_____
		% Lending use	_____	% Lending reimbursed	_____
2.	_____	ILL total	\$ _____		
		% Borrowing use	_____	% Borrowing reimbursed	_____
		% Lending use	_____	% Lending reimbursed	_____
3.	_____	ILL total	\$ _____		
		% Borrowing use	_____	% Borrowing reimbursed	_____
		% Lending use	_____	% Lending reimbursed	_____
4.	_____	ILL total	\$ _____		
		% Borrowing use	_____	% Borrowing reimbursed	_____
		% Lending use	_____	% Lending reimbursed	_____
5.	_____	ILL total	\$ _____		
		% Borrowing use	_____	% Borrowing reimbursed	_____
		% Lending use	_____	% Lending reimbursed	_____
6.	(etc.)				

Donated/Locally Developed Equipment and Software

Enumerate Items:	ILL total \$ value	% Borrowing use	% Lending use
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. (etc.)			

Summary for Equipment and Software Costs

	Borrower Cost	Lender Cost	Borrower Reimbursement	Lender Reimbursement
Purchased	_____	_____	_____	_____
Donated/ Locally Developed	_____	_____	_____	_____

WORKSHEET IX: RENTAL, MAINTENANCE, AND ANNUAL SOFTWARE LICENSING COSTS (see p. I-9)

Enumerate items. *Note:* Items, including recovery items, covered in other sections, such as terminal maintenance fees, should not be included here.

1.	_____	ILL total	\$ _____		
		% Borrowing use	_____	% Borrowing reimbursed	_____
		% Lending use	_____	% Lending reimbursed	_____
2.	_____	ILL total	\$ _____		
		% Borrowing use	_____	% Borrowing reimbursed	_____
		% Lending use	_____	% Lending reimbursed	_____
3.	_____	ILL total	\$ _____		
		% Borrowing use	_____	% Borrowing reimbursed	_____
		% Lending use	_____	% Lending reimbursed	_____
4.	_____	ILL total	\$ _____		
		% Borrowing use	_____	% Borrowing reimbursed	_____
		% Lending use	_____	% Lending reimbursed	_____
5.	_____	ILL total	\$ _____		
		% Borrowing use	_____	% Borrowing reimbursed	_____
		% Lending use	_____	% Lending reimbursed	_____
6.	_____	ILL total	\$ _____		
		% Borrowing use	_____	% Borrowing reimbursed	_____
		% Lending use	_____	% Lending reimbursed	_____
7.					

Summary for Rental and Maintenance Costs

	Borrowing Cost	Lending Cost	Borrowing Reimbursement	Lending Reimbursement
TOTALS	_____	_____	_____	_____

WORKSHEET X: FEES CHARGED FOR PURCHASING FROM OTHER SUPPLIERS (see p. I-9)

Direct charges

- 1. Deposit accounts (estimate annual usage) _____
- 2. Coupons bought in advance (estimate annual usage) _____
- 3. Other invoices paid on library accounts _____
 (paid by the library rather than the individual,
 including commercial document delivery)
- 4. Other annual recurring costs _____

Indirect charges

- 1. Net Borrower charge: _____
- 2. Network charge—other: _____

Summary for Fees Charged for Borrowing from Other Suppliers

	Direct	Indirect
TOTALS	_____	_____

WORKSHEET XI: BORROWING ACTIVITY - INCOME RECOVERED (see p. I-9)

Summary for Borrowing Activity—Income Recovered

TOTAL _____

WORKSHEET XII: LENDING ACTIVITY - INCOME RECOVERED *(see p. I-9)*

- 1. Net Lender reimbursement—RLG: _____
- 2. Network reimbursement—OCLC: _____
- 3. Network reimbursement—DOBIS: _____
- 4. Network reimbursement—other: _____
- 5. State reimbursement: _____
- 6. Direct per transaction reimbursement—Total: _____
- 7. Other (please specify) _____

Summary for Lending Activity—Income Recovered

TOTAL _____

COMMENTS

Please return by April 3, 1992 to:
 Association of Research Libraries