

**Public Libraries' Return from Investment
in CLEVNET**

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Background

The libraries of the CLEVNET resource sharing network requested this study. In 1982, the Cleveland Heights-University Heights Public Library joined in the Cleveland Public Library's automation program. From that beginning, CLEVNET has grown to thirty-one libraries: twenty-eight public libraries and three non-public libraries. This study focuses on twenty-seven of the public libraries that were CLEVNET libraries in 2007. (Table 1)

Participating libraries enter an agreement with Cleveland Public Library. The agreement includes a formula for assessing a fee or "dues" from the contract libraries. In return, CLEVNET contract libraries merge their catalog into a master catalog of the combined collections of all participants. Patrons of any public library in the resource sharing network can search the catalog and borrow materials from any collection in CLEVNET. The statewide delivery system is used to move materials among the libraries. From the patrons' perspective, the integration of library collections occurs seamlessly.

"Behind the counter" contract benefits include a shared catalog operation so that participating libraries no longer need to enter new bibliographic records separately. Records for materials published in the current and preceding year are entered free; bibliographic records for older materials are charged for on a cost recovery basis. Contract libraries also benefit from training, technical consulting services, and networking equipment provided as part of the unified catalog operation. At the same time, contract libraries retain control over their own policies. CLEVNET achieves economy of scale by consolidating the routine aspects of managing the integrated library system (ILS) and maintaining the bibliographic database while contract libraries retain control over acquisition and other policies.

Perceived benefits from the CLEVNET contract include both improvements in efficiency in cataloging and acquisitions processes, since many bibliographic records that would have had to be manually entered or acquired from another bibliographic utility are present in the database, and a greatly expanded inventory of books from which patrons may borrow desired items, fostering a high level of resource sharing.

Scope of the Study

The study examines the benefits obtained by contract libraries through participation in CLEVNET. It compares the costs assessed as dues in CLEVNET with the benefits of participating in the resource sharing network. The result shows the return on investment in CLEVNET both in terms of benefits for library patrons (Section A) and in terms of improved ability to provide library services (Section B).

A technical appendix provides some additional information for the libraries about methods for quantifying the value of library services.

Table 1: CLEVNET Libraries

A. Public Libraries in CLEVNET Study	County	Cardholders
1. Birchard Public Library	Sandusky	25,368
2. Bellevue Public Library	Huron	8,988
3. Burton Public Library	Geauga	11,236
4. Cleveland Hts-University Hts P. L.	Cuyahoga	42,950
5. Clyde Public Library	Sandusky	6,346
6. Cleveland Public Library	Cuyahoga	470,227
7. East Cleveland Public Library	Cuyahoga	12,125
8. Elyria Public Library	Lorain	33,862
9. Euclid Public Library	Cuyahoga	28,282
10. Fairport Public Library	Lake	3,459
11. Huron Public Library	Erie	7,063
12. Hudson Library & Historical Society	Summit	22,327
13. Kirtland Public Library	Lake	5,450
14. Lorain Public Library	Lorain	67,151
15. Madison Public Library	Lake	12,466
16. Medina County Library District	Medina	75,662
17. Milan-Berlin Public Library	Erie	5,854
18. Orrville Public Library	Wayne	11,817
19. Peninsula Public Library	Summit	2,028
20. Perry Public Library	Lake	6,854
21. Ritter Public Library	Lorain	12,395
22. Sandusky Library	Erie	29,567
23. Shaker Hts Public Library	Cuyahoga	30,349
24. Twinsburg Public Library	Summit	24,406
25. Wayne County Public Library	Wayne	51,130
26. Willoughby-Eastlake Public Library	Lake	31,590
27. Wickliffe Public Library	Lake	10,602
Total		1,049,554

Comparison of CLEVNET Network Costs and Benefits

CLEVNET contract libraries pay a two-part fee to participate in the network. One part of the fee results from a cost recovery formula designed to apportion the network's general costs based on the size of each library's collection and circulation and on the number of workstations connected to the network. The second part of the fee divides the cost of the CLEVNET's electronic database and other electronic media services according to the number of workstations connected to the network in each library system.

Each year, payment of the fees entitles a contract library to certain benefits provided as CLEVNET services. Cleveland Public Library's Automation Services Department does the actual work and delivers the services. This study made no attempt to analyze the operation of the CLEVNET's fee structure in detail. Rather, it focused on measurement of the benefits received from CLEVNET participation compared to the cost paid by libraries to belong to the resource sharing network.

A. Direct Benefits for Library Patrons

Interlibrary Loans

CLEVNET contract libraries operate a shared catalog of items for use by patrons. While each library maintains its own collection and makes its own purchasing decisions, the circulating items in each library's collection appear in one consolidated catalog. Any registered patron of a library in the resource sharing network can borrow items from that catalog. For example, most libraries will stock well-known works by famous authors, such as *Tom Sawyer*, by Mark Twain. A patron of the relatively small Kirtland Public Library might find that popular work in the collection of his or her community library. Suppose that patron wants to read a collection of Twain's correspondence? Kirtland Public Library cannot afford to maintain such a specialized work, but a larger library like Cleveland Public Library maintains a larger collection designed to support research as well as general reading. The Kirtland patron will see the availability of Twain's correspondence in the other library's collection. The book can be ordered by a Kirtland Public Library patron, either from home or other remote location, or from within the library, and the Statewide delivery system delivers the book to the Kirtland Public Library for its patron's use. In fact, the Kirtland patron could order the book for delivery to *any* branch of *any* CLEVNET library. All of this occurs in a seamless manner. The Kirtland Public Library patron benefits directly by obtaining access to a book not otherwise available through the local collection only.

In 2007, over 2.8 million such transactions occurred in the CLEVNET system where a patron of one "home" library obtained the loan of an item from the collection of another library of the resource sharing network. These library patrons benefited directly by obtaining an item not otherwise available. While other options for obtaining the loan of an item through interlibrary transactions do exist, they often involve transaction or

postage costs. CLEVNET's interlibrary loan system eliminates any per item transaction costs.

Electronic Services

CLEVNET also provides direct benefits to library patrons in electronic form. First, the resource sharing network provides to patrons of participating libraries access to an electronic database collection. The combined purchasing power of the resource sharing network enables smaller libraries especially to obtain access to electronic database services otherwise beyond their ability to afford.

Second, the resource sharing network's electronic services also include access by which patrons can download electronic books, movies, audiobooks, and music directly to their own computers. Patrons benefit directly by obtaining access to these electronic items.

Third, through CLEVNET, contract libraries make Wifi connection services available to patrons in their libraries.

Valuing CLEVNET Benefits for Library Patrons

The valuation of direct benefits to library patrons derived from CLEVNET services is relatively easy. The resource sharing network's control over the catalog and circulation system enables the creation of detailed statistics about inter-library activity and about the benefits of electronic services.

Table 2 shows the benefit derived by patrons of each library from materials that they borrowed from other libraries in CLEVNET. To quantify the benefits obtained by patrons from library transactions, the study assigned a dollar amount to each type of item borrowed or downloaded based on conservative assumptions about the value of books, films, database access, and other types of information shared through the combined catalog. A technical appendix provides additional detail about the specific valuation methods used.

Detailed statistics about the kinds of items borrowed or used and the "home" libraries of the patrons who borrowed or used them provided a basis for assigning CLEVNET benefits to each public library in the resource sharing network.

For example, patrons of Birchard Public Library borrowed 23,950 books from other CLEVNET libraries. Since the adjusted value of a borrowed book equals an estimated average of \$7.96, the value of books borrowed by Birchard patrons from other libraries equals 23,950 times \$7.96. The product equals \$190,642 as shown in the first column of estimates in Table 2 in the row for Birchard Public Library. Similarly, Birchard patrons borrowed 9,267 DVDs and videos from the collections of other CLEVNET libraries. At \$3 per occasion, the value of this aspect of CLEVNET participation to Birchard equaled 9,267 times \$3 or \$27,801, and so on. (The addition of 33 video downloads brings Birchard's total value from CLEVNET to \$27,900 as shown on Table 2.)

Cumulatively, the expanded opportunities enabled by the integrated CLEVNET catalog delivered \$19.7 million in benefits to patrons of the contract libraries.

Table 3 summarizes the results of a comparison of CLEVNET costs to the benefits derived by the contract library just from the value of interlibrary borrowing. The amounts shown in the column labeled “Interlibrary Loan Benefit” come directly from the last column in Table 2. A comparison of these benefits to the “Total Cost” of CLEVNET participation shows that every library receives more benefits in the form of additional access to library materials for its patrons than the cost of participation.

Higher ratios of benefits to costs appear to result from two different features of contract libraries. First, small libraries tend to benefit more than large libraries. Intuitively, this result makes sense. With smaller collections, these libraries have less variety to offer to their patrons. Expansion of their collections through the CLEVNET integrated catalog increases the selection for patrons. Second, some high circulation libraries also benefit from the expanded selection even though the “home” library collection is already large.

In addition to the benefits of its interlibrary loan system, patrons of CLEVNET libraries also receive access to electronic resources purchased by the resource sharing network. These electronic resources take two forms. First, patrons can access electronic databases. Second, patrons can download books, movies, and music in electronic format.

Table 3 includes the list of costs paid by participating libraries to obtain these electronic resources. The 27 libraries pay about \$1.15 million to access the database collection and to download electronic books, movies, and music. The data provided by CLEVNET show downloads of media items from the electronic services package separately by library. With this information, it is possible to estimate the value obtained by the patrons of each CLEVNET library through the use of these electronic media.

However, the data cannot break out the uses of the electronic databases according to each database user’s library. Therefore, it is not possible to estimate the value of the database service on a library-by-library basis. The value of the aggregate database usage is estimated at \$6.9 million. This value represents an additional return to the \$1.15 million spent by CLEVNET libraries to obtain electronic services, but no method exists to trace separate portions of that value back as a benefit to each CLEVNET contract library.

The combination of the benefits to patrons recorded on Table 3 plus the \$6.9 million in database usage value yields a total benefit for patrons from CLEVNET of \$26,594,035. At a cost of \$4,267,763, the return to patrons specifically from CLEVNET participation equals a return of about 6.2 to 1.

Table 2 : Value of Items Borrowed by a Patron of a Contract Library from Another CLEVNET Library Plus Value of Downloaded Items – 2007 (In Dollars)

Library	Books	Video - Films	Recordings - Music	Recorded Books	Software	Magazines	E-Books	Total Value
BIR	\$190,642	\$27,900	\$23,972	\$54,294	\$672	\$389	\$4,060	\$301,928
BLV	\$124,375	\$10,125	\$13,347	\$25,672	\$357	\$182	\$833	\$174,891
BTN	\$110,214	\$22,560	\$18,005	\$28,010	\$381	\$158	\$343	\$179,671
CH	\$1,670,939	\$262,518	\$236,101	\$325,691	\$3,384	\$12,497	\$17,969	\$2,529,100
CLY	\$61,563	\$8,574	\$5,089	\$17,450	\$249	\$450	\$1,155	\$94,529
CPL	\$2,153,005	\$552,141	\$465,159	\$643,574	\$10,554	\$23,957	\$42,595	\$3,890,985
EC	\$144,283	\$20,937	\$12,336	\$18,206	\$198	\$734	\$252	\$196,945
EL	\$458,974	\$86,865	\$82,703	\$123,861	\$945	\$1,545	\$8,372	\$763,265
EU	\$451,189	\$86,535	\$81,508	\$111,718	\$2,346	\$3,737	\$3,066	\$740,099
FH	\$74,227	\$18,144	\$17,950	\$39,650	\$207	\$51	\$329	\$150,558
HRN	\$121,008	\$15,216	\$13,764	\$30,727	\$195	\$156	\$1,722	\$182,787
HU	\$453,425	\$65,052	\$78,606	\$136,472	\$2,430	\$4,770	\$8,379	\$749,135
KRT	\$96,045	\$15,702	\$20,996	\$31,357	\$252	\$270	\$2,863	\$167,484
LOR	\$844,612	\$166,803	\$119,015	\$223,400	\$3,249	\$1,742	\$13,090	\$1,371,911
MDSN	\$209,993	\$35,262	\$37,686	\$58,827	\$921	\$729	\$9,408	\$352,826
ME	\$1,151,326	\$218,634	\$199,377	\$300,487	\$4,527	\$4,126	\$16,520	\$1,894,998
MIL	\$64,396	\$10,053	\$7,068	\$21,372	\$231	\$90	\$1,344	\$104,554
OR	\$376,229	\$48,423	\$36,446	\$71,780	\$624	\$1,225	\$6,090	\$540,817
PEN	\$43,828	\$7,419	\$13,630	\$22,272	\$96	\$85	\$343	\$87,673
PER	\$145,541	\$24,471	\$24,929	\$41,791	\$246	\$695	\$1,218	\$238,890
RIT	\$157,122	\$20,136	\$20,589	\$46,828	\$369	\$231	\$1,050	\$246,325
SA	\$331,900	\$41,859	\$39,849	\$62,263	\$624	\$685	\$9,296	\$486,476
SH	\$601,474	\$105,297	\$99,245	\$147,644	\$1,125	\$6,585	\$11,298	\$972,667
TW	\$420,145	\$101,172	\$84,012	\$160,435	\$1,680	\$2,671	\$5,194	\$775,309
WA	\$931,575	\$131,055	\$124,937	\$188,787	\$4,161	\$3,157	\$9,422	\$1,393,094
WE	\$416,579	\$90,690	\$79,489	\$144,496	\$1,656	\$2,821	\$10,115	\$745,846
WKPL	\$249,872	\$36,327	\$34,631	\$44,759	\$915	\$1,830	\$1,715	\$370,049
Total	\$12,054,481	\$2,229,870	\$1,990,438	\$3,121,823	\$42,594	\$75,568	\$188,041	\$19,702,815

Table 3 : Value of Items Borrowed by a Patron of a Contract Library from Another CLEVNET Library Compared to Cost of CLEVNET Participation- 2007

Library	Contract Formula Cost	Electronic Database Cost	Total Cost	Interlibrary Loan + Electronic Media Download Benefit	Benefit Per Dollar of Cost
Birchard	\$58,957	\$19,336	\$78,293	\$301,928	\$3.90
Bellevue	\$25,827	\$8,681	\$34,508	\$174,891	\$5.10
Burton	\$29,512	\$8,681	\$38,193	\$179,671	\$4.70
Heights	\$181,603	\$84,446	\$266,049	\$2,529,100	\$9.50
Clyde	\$16,941	\$8,681	\$25,622	\$94,529	\$3.70
Cleveland	\$1,081,998	\$371,720	\$1,453,718	\$3,890,985	\$2.70
E.Cleveland	\$69,149	\$44,985	\$114,134	\$196,945	\$1.70
Elyria	\$115,731	\$43,012	\$158,744	\$763,265	\$4.80
Euclid	\$123,331	\$44,196	\$167,527	\$740,099	\$4.40
Fairport	\$12,911	\$5,130	\$18,041	\$150,558	\$8.30
Huron	\$27,462	\$14,995	\$42,457	\$182,787	\$4.30
Hudson	\$64,936	\$20,914	\$85,850	\$749,135	\$8.70
Kirtland	\$17,882	\$5,525	\$23,406	\$167,484	\$7.20
Lorain	\$239,502	\$99,836	\$339,338	\$1,371,911	\$4.00
Madison	\$47,672	\$16,968	\$64,640	\$352,826	\$5.50
Medina	\$230,747	\$62,743	\$293,489	\$1,894,998	\$6.50
Milan	\$32,114	\$13,022	\$45,136	\$104,554	\$2.30
Orrville	\$41,050	\$13,811	\$54,862	\$540,817	\$9.90
Peninsula	\$13,508	\$6,708	\$20,217	\$87,673	\$4.30
Perry	\$24,665	\$6,708	\$31,374	\$238,890	\$7.60
Ritter	\$28,805	\$10,654	\$39,459	\$246,325	\$6.20
Sandusky	\$84,262	\$44,196	\$128,458	\$486,476	\$3.80
Shaker Hts	\$133,830	\$53,667	\$187,496	\$972,667	\$5.20
Twinsburg	\$88,669	\$31,569	\$120,238	\$775,309	\$6.40
Wayne Cty	\$150,753	\$54,061	\$204,814	\$1,393,094	\$6.80
Willoughby	\$133,150	\$41,434	\$174,584	\$745,846	\$4.30

Wickliffe	\$43,701	\$13,417	\$57,117	\$370,049	\$6.50
Total	\$3,118,667	\$1,149,096	\$4,267,763	\$19,702,815	\$4.60

Cumulatively, the expanded opportunities enabled by the integrated CLEVNET catalog delivered \$19.7 million in benefits to patrons of the contract libraries. The measurement of value presented on Tables 2 and 3 shows the return on investment for each contract library exclusive of the benefits derived from access to electronic databases. The additional \$6.9 million in the value of database usage increases the total benefits from participation to more than \$26 million.

B. Benefits for Contract Libraries

Some benefits of CLEVNET participation assist the staff of the contract libraries to do library work. These benefits indirectly flow to patrons because economies of scale obtained through CLEVNET operations enable contract libraries to use the savings from higher efficiency to enhance their collections or to improve other programmatic offerings.

Generally, CLEVNET helps its contract libraries by assuming responsibility for almost the entire cataloging functions required by all libraries in the resource sharing network. In addition, CLEVNET operations handle major aspects of library circulation services, and CLEVNET benefits help contract libraries deliver the aspects of circulation retained in the contract library locations.

The following figure lists the assistance provided to libraries through CLEVNET.

Figure 1: Major Services Provided to Libraries through CLEVNET

<p><u>Catalog Services</u> Catalog books and all other items in library collections Maintain centralized catalog Track circulation of materials through the computerized catalog system</p>
<p><u>Technical Assistance</u> Train librarians in catalog use Train librarians in use of electronic database systems Hardware and software troubleshooting and consulting</p>
<p><u>Provide Hardware for Catalog System</u> Installation Provide, install, configure, and maintain hardware and software for the shared system Maintain and secure the data Provide, install, configure and maintain the shared network Facilities design consultation</p>
<p><u>Reports</u> Maintain records and generate reports about system usage Notify patrons about overdue items, holds waiting, etc.</p>

Value of Services Provided to Contract Libraries Through CLEVNET

This section of the report assigns a value to some of the services provided to contract libraries as a result of their CLEVNET participation. These values are different from the values received by patrons. In a sense, the return on CLEVNET participation does not increase the ultimate ratio of library returns to expenditures. Instead, it increases the efficiency of library operations by enabling libraries to offer more service for a given level of expenditure.

The data for estimating the increased efficiency obtained from participation in CLEVNET are relatively sparse. The estimates here attempt to extrapolate efficiency benefits from a small base of information. With the caveat that data are limited, the extrapolation of values could be obtained in the following aspects of CLEVNET activities.

1) Cataloging

Each library needs bibliographic records for most essential library processes (acquisitions, serials control, providing a patron catalog, and circulation activities). Since the CLEVNET system is a single shared database, the costs of acquiring and maintaining bibliographic records is greatly reduced for each contract library. They can use records entered for other libraries. Additionally the Cleveland Public Library does not charge for entering bibliographic records published in the current and preceding year.

Table 4 on the next page shows the number of bibliographic records each contract library would have had to enter individually to support their local operations just for materials published in 2007 if the library were not in CLEVNET. A total of 155,993 titles were catalogued by CLEVNET for contract libraries in 2007. Using the cost of transferring a title record from OCLC, each instance in which the library catalogued a title had a value to a CLEVNET contract library of \$1.88. Therefore, the aggregate value of the cataloging service provided through CLEVNET equaled \$293,267.

2) Computer Equipment

Capital improvements to the networking equipment and central servers hosting the shared ILS were valued at \$317,359 in 2007.

3) Computer and Other Professional Support

CLEVNET assesses costs to contract libraries for the professional personnel required to deliver its services to the contract libraries. These personnel costs total \$1,680,274.

4) Consolidated Circulation System

Cleveland Public Library reported that inter-library loan (ILL) transactions conducted outside of the CLEVNET system ranged in cost between \$10 to \$30 per transaction. The

total number of ILL transactions among the CLEVNET contract libraries in 2007 equaled 2.8 million. At \$10 per transaction, the cost savings obtained by the consolidated circulation system equaled about \$28.4 million.

Many of the instances of inter-library borrowing in the CLEVNET system would not have occurred as conventional ILL transactions. Generally, such transactions only provide hard-to-find items or items outside of a library's own catalog. Typically, a conventional ILL transaction would not accommodate a patron where the object of the transaction was a movie or a book catalogued by the patron's own library but out on loan. In some instances, a library might purchase an item rather than pay the freight for an ILL transaction. Of course, each decision to make a purchase under such circumstances would impose an opportunity cost to the extent that the purchase of one item would preclude the purchase of another item with the same dollars.

Table 4: Bibliographic Activity Performed on Behalf of CLEVNET Libraries and Related Cost Savings - 2007

Library	# of Catalog Records	Dollar Value
Birchard	4,715	\$8,864
Bellevue	4,879	\$9,173
Burton	3,852	\$7,242
Cleveland Heights	10,473	\$19,689
East Cleveland	2,583	\$4,856
Elyria	9,732	\$18,296
Euclid	15,709	\$29,533
Fairport	2,850	\$5,358
Huron	1,681	\$3,160
Hudson	5,299	\$9,962
Kirtland	1,656	\$3,113
Lorain	16,029	\$30,135
Madison	5,423	\$10,195
Medina	11,139	\$20,941
Milan	2,231	\$4,194
Orrville	3,298	\$6,200
Peninsula	1,901	\$3,574
Perry	3,695	\$6,947
Ritter	3,427	\$6,443
Sandusky	3,602	\$6,772
Shaker Hts	8,720	\$16,394
Twinsburg	9,114	\$17,134
Wayne Cty	7,329	\$13,779
Willoughby	10,193	\$19,163
Wickliffe	6,463	\$12,150
Total	155,993	\$293,267

An accurate estimate of CLEVNET’s worth can assess how much the contract libraries would pay to obtain the same level of service in the absence of the CLEVNET network. Such an estimate would include the per transaction costs that the system would incur to provide the expanded circulation obtained through the resource sharing network.

This transactional estimate differs from the method used to create Table 3. That method estimated the value of library services as realized by patrons as a direct benefit of the CLEVNET resource sharing network. In contrast, this estimate of transactional savings focuses on the cost savings for the CLEVNET contract libraries obtained by the establishment of a consolidated circulation system. These savings should not be added to the patron benefits summarized in Table 3. Rather, direct patron benefits and library savings present two different ways to think about and estimate the benefits of CLEVNET.

Table 5 shows that total savings obtained from contract libraries through CLEVNET participation is \$30.7 million.

Table 5: Library Savings Obtained from CLEVNET Participation

Library Savings or Benefit	Dollar Value
1. Shared Cataloging	\$293,267
2. Computer Equipment	\$317,359
3. Computer & Other Professional Support	\$1,680,274
4. Consolidated Circulation Savings	\$28,429,370
Total Benefit	\$30,720,270

Summary

This report has focused on the value of participation within the CLEVNET resource sharing network. Two different perspectives provide insight into this value. Section A examines the additional value received by the patrons of CLEVNET contract libraries. This value takes the form of expanded access to circulating library materials and to expanded access to electronic information sources through the electronic media and the additional electronic databases provided through CLEVNET. The CLEVNET portion of the libraries’ cumulative value to patrons equals about \$19.7 million in circulation benefits plus an additional \$6.9 million in electronic database access for a total incremental value from CLEVNET participation of about \$26.6 million. Therefore, in terms of additional benefits derived by library patrons from convenient access to materials held by other libraries in the resource sharing network, the analysis estimated a return of about \$6.00 in expanded borrowing opportunities for each \$1.00 invested by the contract libraries in the CLEVNET system.

Section B considers the benefits of CLEVNET from the perspective of the cost savings obtained from participation in the resource sharing network. While it is relatively easy to identify these benefits as shown in Figure 1, the quantification of the savings for libraries is difficult. Nevertheless, it is possible to identify about \$30.7 million in benefits from

the perspective of the libraries. To maintain the existing level of service, contract libraries would spend about that much in additional services or on additional items for the libraries' collection. Therefore, in terms of savings obtained by libraries through the CLEVNET administration, the return for each dollar invested in participation equaled more than \$7 of savings.

The addition of the benefits shown in Sections A and B would double count the benefits of CLEVNET participation. These perspectives should not be accumulated into a combined total. Rather, they offer alternative ways to think about and value participation in the resource sharing network. The valuation methods in sections A and B each quantify benefits several times as large as the \$4.3 million cost of the system.