

Return on Public Investment: Valuing Montgomery County's Public Libraries

Executive Summary

What value do libraries have in their communities? How do you quantify the value of a public library's service? The four libraries of Montgomery County - Dayton Metro Library, Germantown Public Library, Washington-Centerville Public Library and Wright Memorial Library - have attempted to find answers those questions by examining how often its collections and services were used and comparing them to economic equivalent services in retail and commercial environments.

When expressed as a Return on Investment (ROI), the four libraries in Montgomery County returned \$3.69 in value for every dollar spent.

In 2006 Montgomery County libraries spent over \$35.6 million to delivery a wide range of materials and services to its residents. This study calculates that in return for the public investment these four libraries have delivered over \$131.6 million in benefits. When expressed as a Return on Investment (ROI), the libraries in Montgomery County returned \$3.69 in value for every dollar spent.

Did you know?

- The 25 library locations in Montgomery County serve a population of over 550,000 people. The libraries circulated more than 9.5 million items in 2006. That is an average of over 17 items per person!
- Montgomery County librarians answer more than 1.2 million reference questions each year.
- More than 4.7 million people visit Montgomery County libraries every year. By comparison, Kings Island entertains about 3 million visitors annually.

These numbers fall short in demonstrating the true impact of library service. Although broad measures of activity as shown in this study captures many of the ways in which libraries provide value to the communities they serve, it is important to note this study does not attempt to calculate the qualitative value the results from use of library services. In other words, this study will readily demonstrate how much library users save by borrowing books instead of buying them or using a library computer instead of visiting a cyber-café; however this study cannot quantify the money saved when someone uses library books and magazines to make a better choice in selecting a new car, a business finds new customers from the Library's commercial databases or the joy a blind senior receives from an audio book delivered to her home.

How the study calculated values

Significant work has been done by libraries around the country to estimate the economic impact of their services. Earlier this year a report published by the *Americans for Libraries Council* reviewed 17 recent studies attempting to estimate the economic value of Library services. While each of these studies borrowed methodologies from other studies they also used differing assumptions, defined different scopes of coverage and consequently ended up with different results.

This study follows methodology developed by the Columbus, Ohio consulting firm of Levin, Driscoll and Fleeter in a 2006 study, *Value for Money: Southwestern Ohio's Return from Investment in Public Libraries*, covering the nine public libraries in Hamilton, Clermont, Butler and Warren Counties. That report can be found at <http://www.9libraries.info>.

Most of the methodologies and assumptions used in the Levin, Driscoll and Fleeter study have been used in this study of Montgomery County libraries even though their methodology have produced some of the most conservative results. **To illustrate, this study estimates the economic impact for Montgomery County libraries using several other methodologies.**

As each and every economic impact study has cautioned its readers, while it is possible to assign a value to some services and experiences, it is difficult—if not impossible—to quantify the economic value of all the Library has to offer.

Library funding in Ohio

Beginning in the 1930s Ohio funded its public libraries with revenue from the local property tax charged against certain kinds of intangible personal property. Since 1986 a percentage of Ohio's personal income tax was deposited into the Library and Local Government Support Fund (LLGSF). In 2002, temporary law froze Library funding based on 2001 levels, but poor state revenue resulted in read dollar reductions in 2003. LLGSF distributions have been all but frozen since then leaving state funding for libraries at 1999 levels.

In 2007 Governor Ted Strickland signed legislation that substantial changes the primary source of funds for Ohio public libraries. The LLGSF would draw upon a percentage of total state general fund revenues instead of being dependent on personal income tax revenues.

On a personal level

Ask any active library users and they will tell you how much they value their library. But most couldn't express that appreciation in dollars and cents.

On average every cardholder in Montgomery County borrows more than 23 items each year. They also seek answer to more than 3 reference questions and use online databases at least 3 times each year. The average cardholder also spends more than two hours on the Internet each year.

This study found that when the value of basic library services are totaled the average cardholder receives over \$200 in services.

Borrowed items	\$138.03
Answered questions	\$19.91
Online journals downloaded	\$24.20
Computer sessions	\$25.40
Programs and meetings	\$3.63

Local communities have increasingly filled the library funding gap by asking voter approval of property tax levies and bond issues. In Montgomery County, Dayton Metro Library is supported by a five-year 1.25 mil operating levy passed in 2004, Washington-Centerville Library is supported by ten year 2.7 mil operating levy passed in 2003 and Wright Library in Oakwood receives local funding from a five year xx.x levy passed in 2007.

Calculating the Four County Library Systems' Value

Montgomery County public libraries spent **\$35,680,282** to provide collections of materials, programs, and services to residents at 25 different locations throughout the county in 2006. Those collections include books, magazines, media, online content and a range of information services.

Table 1 Operating Expenditures for Montgomery County Libraries in 2006

Dayton Metro Library	\$27,125,243
Germantown Public Library	\$759,596
Washington-Centerville Public Library	\$6,176,933
Wright Memorial Library	\$1,608,510
Total	\$35,680,282

Significant expenditures are made annually in technology to provide computing and Internet access to those who find themselves on the other side of the digital divide. Assistance in locating, evaluating and analyzing the

world of information is a traditional Library service that has been enhanced by the use of the Internet. Library programs aimed at every age level enrich lives, enable advancement and prepare residents for a lifetime of success.

The libraries offers a variety of materials for patrons to borrow such as fiction books, DVDs, books on CD, chapter books for children etc. It also provides magazine subscriptions and reference materials for use within the Library as well as electronic databases accessible in the Library or from remote locations. Computers are made available for use in the Library; meeting rooms are available for nonprofit organizations free of charge; and programs are available for all ages on a variety of subjects from fitness to travel to the magical world of Harry Potter.

A return on investment analysis must assign a dollar value to these services if possible and this report will estimate only the direct benefit from Library services. A “direct” benefit represents the value of the item, information, or entertainment provided by the Library service itself. For example, the person who uses a Library computer to complete a resume for a job interview receives the economic value of that service measured approximately by the value of the service.

An “indirect” benefit represents the value derived from the use of the item, information, or entertainment provided by the Library service. The person who uses the Library computer to complete a resume to obtain a good job obtains an indirect benefit from the Library service. Knowledge of this indirect benefit is not available since the Library does not know that the use of its services or materials in each circumstance had a specific effect. Therefore, indirect benefits will not be quantified however qualitative documentation can be provided.

This analysis will examine a variety of Library services one by one and will assign a value to each service. The usage data comes from the Library itself, much of it compiled for the State Library of Ohio, which requires libraries in the state to submit detailed annual statistics about Library usage and finances. *Unless otherwise specified, all statistical information relates to Library services or programs in 2006.*

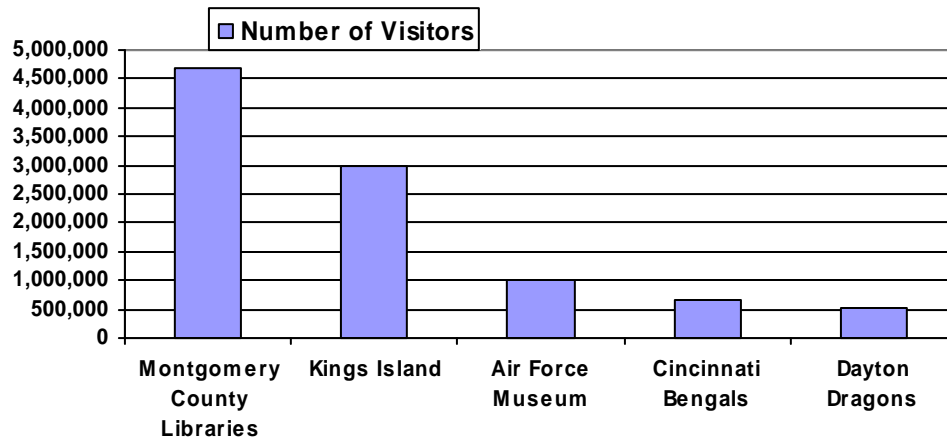
Table 2 shows a number of basic facts about Montgomery County’s four public libraries. Seventy-six percent, or 3 out of every 4 residents, have a library card. Just as impressive is that the typical card holder is a regular user borrowing an average of 23 items during 2006.

Table 1 Basic Facts about Montgomery County libraries

Library	Library Cardholders	Service Area Population	Circulation	Staff	Annual Visits
Dayton Metro Library	318,503	480,000	6,632,822	396	3,600,000
Germantown Public Library	10,422	9,787	206,088	17	205,716
Washington-Centerville Public Library	65,646	52,188	2,193,059	155	720,799
Wright Memorial Library	23,624	9,215	479,840	44	196,561
County Total	418,195	551,190	9,511,809	612	4,723,076

It is hard to find comparable counts for visits to other attractions in Montgomery County. There were 4.7 million visits to a Montgomery County library location in 2006. This chart shows how that number compares with other area attractions. The Library is arguably a top destination in the region.

Table 2 Attendance at popular Dayton area attractions¹



Estimating the Value of Public Benefits

The value Library users and their families receive from Library services can be classified in many ways. For the purposes of this report benefits fall into two categories: quantifiable and qualitative. The main focus of this report is to assign a dollar value to benefits that can be compared to marketplace equivalent services. Using comparable services available in the private sector, Montgomery County residents received **\$88,313,821** in direct economic benefits. When the Household Expenditure multiplier calculated by the U.S. Department of Commerce² is added, the total quantifiable economic benefit of Library services equals **\$131,534,605** or a **\$3.69** return for every dollar expended on Library operations.

This study focused on six areas where direct economic equivalents can be readily identified. The values calculated for each type of library service was established using a different set of assumptions and criteria, and wherever possible using local commercial or retail costs. For instance, the actual discounted costs for library books enjoyed by high volume purchasing were used instead of list price and a local Kinko’s store Internet and computer access rates were used to calculate the value of a library computer session.

Table 3 Estimated value of specific library services

Library Service	Estimated Value
Borrowed Library Materials	\$57,725,322
Reference Assistance	\$8,327,225
Online Databases and Full-text Journals	\$10,120,317
Computer and High Speed Internet Access	\$10,623,972
Library Educational Programs	\$1,290,685
Meeting Room Use	\$226,300
Total	\$88,313,821

Borrowing Library Materials

Estimating the value of Library service begins with an examination of the items borrowed by Library users or used on site. As the goal of this study is to find real world and marketplace equivalents, different strategies and formulas were used to reach the values found.

Most people consider a Library’s collection of books, magazines, videos and music as its signature asset. It is not surprising that borrowed materials were the highest value calculated in our analysis of economic benefits. For certain materials such as the **3,206,645** videos and **642,218** books-on-CD, finding a comparable private sector model was easy. Following the Levin, Driscoll and Fleeter methodology, the value received from these borrowed Library materials is equivalent to what a resident would have to pay for a video store or mail-in rental.

While there is not a rental market equivalent available to easily calculate the economic benefit received from the **5,155,488** books and **383,948** sound recordings borrowed in 2006, the Levin, Driscoll and Fleeter study devised an alternative market based model. In their study they arrived at a market value by calculating the purchase price of books less what might be received back as resale as a used book.

For purposes of this study, the cost of purchasing a book for Dayton Metro Library during 2006 was used. Using their formula Montgomery County libraries received an equivalent economic benefit totaling **\$32,969,346** for books and **\$2,802,820** for music CDs.

Table 4 Materials circulated by Montgomery County Libraries and estimated value

Library Item	Circulation	Market Comparison	Market Price	Sellback Deflator	Estimated Value
Books	5,155,488	Purchase	\$12.79	50%	\$32,969,346
Films	3,206,645	Rent	\$3	NA	\$9,619,935
Audio CDs	383,948	Purchase	\$14.60	50%	\$2,802,820
Books on CD	642,218	Rent	\$11.45		\$7,353,396
In-house Use	1,689,157	Purchase	\$12.79	80%	\$4,324,242
Periodicals	71,784	Purchase	\$5		\$358,920
CD-ROMs	17,788	Purchase	\$9.97		\$177,346
Downloadables	6,100	Purchase	\$19.56		\$119,316
Total					\$57,725,322

Book Circulation

Levin, Driscoll & Fleeter believe this method produces a very conservative result for several reasons. First, using the actual cost of books to the library results in a lower value than if the suggested retail price were used. Other economic impact studies have used the *Bowker Annual*, a handbook of the book publishing industry, to assign a market value to Library circulation. Bowker lists the average price of hardcover fiction books at \$26.59 for 2005, the most current statistic available. This underscores the intrinsically conservative nature of this Levin, Driscoll & Fleeter methodology. The Dayton Metro Library's calculated average value for each book circulated is less than 24 percent of the average cost of new materials. Had the used the Bowker figure and included a sellback price the value of the books circulated by Montgomery County libraries would have been \$68,542,212. Knowing that not everyone who purchases a book will sell it, we could easily argue a sellback price should not be included, making the value of these circulated books \$137,084,426. Using this same argument with Music CD's, the estimated value could increase to \$5,605,641.

Reference Assistance

A Library isn't only the materials it circulates. Library reference staff is always available to answer questions from Library patrons. They help patrons identify and find appropriate sources for all types of questions including genealogical, business-related, legal, etc. They also assist patrons in locating and arranging for materials to be sent to the Library for check-out through inter-library loan programs.

"Information brokers" or private sector librarians often sell their expertise by locating and reporting on information for clients and entrepreneurs in this field. According to the Levin study, a conservative estimate of the amount these private information services cost is \$50 per hour for the retrieval of general information by a researcher with a graduate degree such as a Master of Library Science.

Librarians in Montgomery County answered **1,665,445** reference questions in 2006 or **3 questions per capita**. This count includes staff assistance for a wide range of user needs, such helping a business person find market data or child with a homework assignment. It also includes reader's advisory services such as helping someone find that next great novel. This count does not include simple directional questions, such as assistance in finding a restroom.

Assuming a value of \$5.00 per reference transaction (for 1/10 of an hour), the value of the Library service equals approximately **\$8,327,225**.

Table 5 shows the estimated value of reference assistance at each library.

Library	Reference Assistance	Online Journals and Database Usage	Internet and Computer Usage	Totals
Dayton Metro Library	\$6,272,240	\$1,194,950	\$9,134,028	
Germantown Public Library	\$90,740	\$12,730	\$189,000	
Washington Centerville Public Library	\$1,824,265	\$52,188	\$1,107,456	
Wright Memorial Library	\$139,980	\$122,730	\$193,488	
County Total	\$8,327,225	\$15,862,560	\$10,623,972	

It is easy to argue that reference transactions often take more than 6 minutes. For example, 37 questions asked of the Dayton Metro Library business specialist average 1.18 hours in length which would cost \$65 each—or \$2,405 cumulatively--if an information broker was used. The assumption above places the value of these same questions at \$185.

Databases and Full-text Articles

Its common knowledge that not every fact found on the Internet is true but some forget that not everything available on the Internet is free. Among the most used services of the Library’s web site is the group of commercially available databases licensed by the Library for use by its staff and the public. These authoritative sources of research data, business financial and competitive data, full text magazine articles from thousands of journals, and other content. Montgomery County libraries calculate that the equivalent of approximately **1,586,256** full-text articles—or **3 articles per person in Montgomery County**—were downloaded from the Library’s premium databases in 2006. Using an average of \$10 per article, the value of these articles is estimated at **\$15,862,560**.

Computers and Internet Access

The 25 library locations in Montgomery County have over **435 computers** with high speed internet access for use by the public. Approximately **885,331** sessions of computer use were logged by Library users during the past year. This count of sessions when multiplied by the \$12 per hour rate found at local Kinko’s stores results in an economic benefit of **\$10,623,972**.

Library Programs

Libraries in Montgomery County offered **9,047** programs in 2006. Assuming a value equivalent to the average amount price of \$6.55 a movie ticket, the attendance of **197,051 program participants** equates a value of Library produced programs of approximately **\$1,290,684**.

Meeting Room Use

The Library makes all of its meeting rooms available to the non-profit groups. Meeting can last from an hour to all day. The Library calculates that an average \$50 per meeting use fee rent for **4,526 meetings** in 2006 equates to an economic value of **\$226,300**.

Notes

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Montgomery County Public Libraries: Using Levin, Driscoll & Fleeter methodology

¹ Chart 1 shows the comparison between the number of visitors to Dayton Metro Library locations and other area attractions. Dayton Metro Library has 3.6 million visitors a year while Kings Island has around 3 million, according to the Northern Cincinnati Visitors and Convention Bureau. (<http://www.cincynorth.com/kings-island>). The Air Force Museum reports that more than 1 million visitors come through its doors each year. (<http://www.nationalmuseum.af.mil/factsheets/factsheet.asp?id=429>) Like the Library, admission to the Air Force Museum is free. Paul Brown Stadium can seat 65,535 fans. This chart assumes the Bengals host 10 games, including pre-season, and sell-out. Post-season games would generate additional attendance. Sell-out games are also assumed at another sporting venue, the Dayton Dragons stadium which seats 7,230. Seventy games are played there each season.

² <http://www.bea.gov/regional/rims/brfdesc.cfm>