

THE ECONOMIC IMPACT OF LIBRARIES IN INDIANA

Commissioned by: Indiana State Library

Funding from: Institute of Museum and Library Services, a federal agency, through the Library Services and Technology Act

Prepared by: Indiana Business Research Center



KELLEY SCHOOL OF BUSINESS

INDIANA UNIVERSITY
Indiana Business Research Center

Nov. 2007

Table of Contents

Table of Contents	1
List of Tables.....	2
Executive Summary	4
Key Findings.....	5
Recommendations.....	6
Introduction and Motivation	7
Study Goals.....	7
Report Organization.....	9
Methodology	10
Lessons Learned from Previous Studies.....	10
Direct and Measurable Economic Impact.....	12
The Economic Effects of Library Expenditures.....	12
The Economic Effects of Library Cultural and Arts Attractions.....	12
Market Value of Library Resources and Services.....	13
Perceptions of the Role of Public Libraries in Local Economic Development.....	18
Surveys of Key Stakeholder Groups.....	18
Public Libraries and Social Capital.....	19
Direct Economic Effects	21
Economic Impact of Library Expenditures.....	21
Market Value of Library Events.....	22
Surveys of Key Stakeholder Groups	26
Survey of Public Library Directors.....	26
Characteristics of Responding Libraries.....	26
Economic Benefits and Impacts on the Business Community.....	27
Survey of Public Library Staff.....	32
Survey of Patrons.....	35
Characteristics of Responding Patrons.....	35
Library Usage and Attitudes.....	36
Survey of Business and Community Leaders.....	38
Economic Benefits and Impacts on the Business Community.....	38
Case Studies	42
Purpose.....	42
About the Communities.....	42
Interview Responses in General.....	44
Specific Responses from Public Library Directors.....	45
Specific Responses from Other Community Leaders.....	45
Specific Responses from School Administrators.....	46
Community Connections.....	47
Academic Libraries	50
Economic Impact of Academic Library Expenditures.....	53
Additional Observations about Academic Libraries.....	53
Key Findings, Recommendations and Conclusions	55
Key Findings.....	55
Recommendations.....	56
Implement a Program to Expand Business and Economic Development Focus.....	56
Increase Outreach to the Business Community.....	56
Expand Business and Economic Development Services.....	57
Refine and Expand Data Collection.....	58

Help Local Libraries Develop Their Own Benefit-Cost Analyses	59
Encourage Public Libraries to Aggressively Promote Their Economic Significance.....	59
Conclusion.....	60
Post Script.....	60
References.....	62
Appendix I: Profile of Indiana Public Libraries	64
Appendix II: Profile of Indiana Academic Libraries	67
Case Study Community Perceptions of Local Schools, School Libraries and Public School Performance.....	68
Appendix III: Survey Instruments.....	69
Survey of Library Directors.....	70
Survey of Library Staff.....	74
Survey of Library Patrons.....	78
Survey of Community and Business Leaders	80
Appendix IV: Website Features and Content	84
Available Data	84
Public Library Profiles.....	84
Demographic Characteristics for Public Library Districts	85
Future Enhancements.....	86
Appendix V: Calculating the Value of Library Services	87
The Economics of Library Valuation	87
Library Use Valuation Calculator.....	88
Improving the Collection and Reporting of Library Use.....	89
Appendix VI: IBRC Profile	90

List of Figures

Figure 1. Special Competencies, Qualifications or Training of Library Staff.....	32
Figure 2. Ages of Surveyed Patrons	35
Figure 3. Educational Attainment of Surveyed Patrons	36
Figure 4. Indiana's Two-Year, Four-Year and Private Universities, 2006.....	50
Figure 5. Public Library Material Holdings, 2005	65
Figure 6. Interlibrary Loan Transactions, 1997-2005.....	65
Figure 7. Attendance at Library Programs in 2005	66
Figure 8. Attendance at Public Library Programs, 1997-2005.....	66
Figure 9. Academic Library Expenditures by Type (as a Percent of Total).....	68

List of Tables

Table 1. Estimated Prices for Library Services	17
Table 2. Selected Countywide Employment Impact Estimates of Public Libraries.....	22
Table 3. Market Value of Library Circulations & Services – Indiana Totals	22
Table 4. Market Value of Children's Circulation in Detail.....	24
Table 5. Market Value of Adult Circulation in Detail.....	24
Table 6. Benefit-Cost Summary, Indiana Total.....	25

Table 7. Benefits to Local Economic Growth: Library Directors' Ratings	27
Table 8. Contribution to Users' Personal Financial Well-Being	28
Table 9. Extent of Community Support	29
Table 10. Impact on Local Economy.....	29
Table 11. Frequency of Business- or Job-Related Services.....	30
Table 12. Business and Economic-Development Related Resources.....	31
Table 13. Staff Perspective on Business and Economic-Development Related Resources	34
Table 14. Occupations of Surveyed Patrons	35
Table 15. How Often Patrons Use the Local Library.....	36
Table 16. Three Library Services Used Most Often.....	37
Table 17. Activities for which Patrons Have Used the Library	37
Table 18. Benefits to Local Economic Growth: Community Leaders' Ratings.....	38
Table 19. Contribution to Community's Economic Well-Being: Community Leaders' Ratings	39
Table 20. Library Impact on Local Economy: Community Leaders' Ratings	40
Table 21. Frequency of Community Leaders' Use of Library Resources	40
Table 22. Community Leaders' Satisfaction with Library Business Services and Materials	41
Table 23. Library Districts Used In Case Study Analysis.....	43
Table 24. Analysis of Community Connections	48
Table 25. Community Connections and Socio-Economic Characteristics	49
Table 26. Academic R&D Funding at Indiana's Public Universities by Source, 2004	50
Table 27. Academic R&D Funding at Indiana's Private Universities by Source, 2004	51
Table 28. College Freshmen Enrollment and Migration in Indiana, 2002.....	51
Table 29. Indiana's Graduate Student Enrollment in Science and Engineering, 2003	51
Table 30. Academic Libraries by Type of Institution	52
Table 31. Academic Library Staffing and Funding	52
Table 32. Academic Libraries' Economic Impact on Employment.....	53
Table 33. Academic Libraries' Economic Output.....	53
Table 34. Public Library Employment and Expenditure Data, 2005	64
Table 35. Academic Libraries in Indiana.....	67

Executive Summary

The Indiana State Library commissioned the Indiana Business Research Center (IBRC) at Indiana University's Kelley School of Business to conduct a study to measure the economic benefits of Indiana's public libraries. In contrast to most other studies that have attempted to measure the economic impact of public libraries, this study also focused on the role that public libraries play in supporting business and economic development in their communities. This study was designed to help Indiana libraries identify and quantify their benefits in a systematic and objective manner.

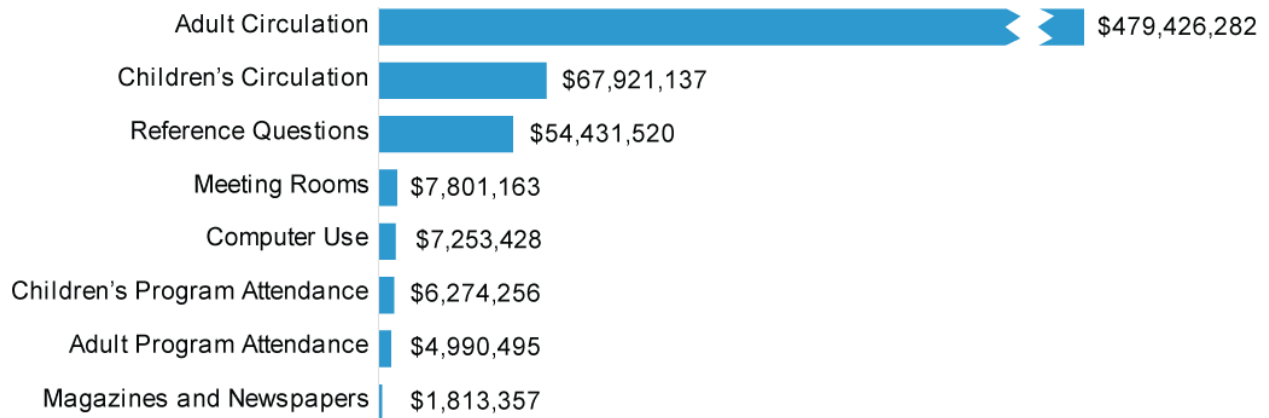
The study focused on three general questions:

1. What are the measurable economic benefits of public and academic (university and college) libraries?
2. How well are libraries doing in playing an active role in economic development?
3. How can Indiana libraries take a more active role in economic development and business growth?

Three tools were used to conduct the research:

1. **Analysis of the Direct Economic Benefits of Libraries:** The analysis of direct economic effects took two tracks: (1) an input-output analysis of the effects of library expenditures on local economies and (2) a benefit-cost analysis that estimates the market value of the range of services that libraries provide and compares that market value with the cost of providing those services (shown below).

Market Value of Indiana's Public Library Circulation and Services



2. **Surveys of Public Library Staff, Library Patrons and Local Leaders:** Indiana public and academic libraries, library patrons, business leaders, chambers of commerce, and Small Business Development Centers were surveyed. These surveys assessed the current capacity of the state's public libraries to serve the information needs of the business community and the extent to which businesses and other economic entities currently make use of public library facilities. In addition, the surveys solicited the attitudes of the business community

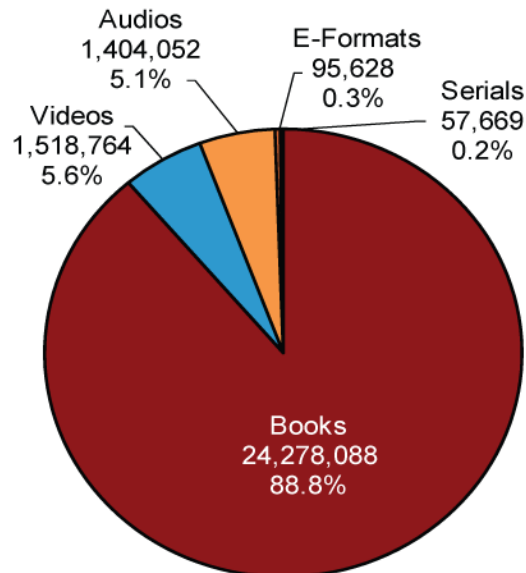
and economic development agencies about the use of the public library for business purposes and possible changes that would allow libraries to better serve the needs of the business community.

3. **Case Studies of 12 Local Libraries:** Case studies were undertaken in 12 Indiana communities to provide an in-depth look at how selected public libraries provide economic development and business resources to their communities.

Key Findings

- Libraries are a good value. The direct economic benefits that communities receive from libraries are significantly greater than the cost to operate the libraries.
- Indiana communities received \$2.38 in direct economic benefits for each dollar of cost.
- Public library salaries and expenditures generate an additional \$216 million in economic activity in Indiana.
- Academic library salaries and expenditures generate an additional \$112 million in economic activity in Indiana.
- Public libraries account for almost 9,000 jobs in Indiana:
 - Nearly 6,900 employed by the libraries themselves
 - Approximately 2,000 additional jobs in industries that support libraries and their staff

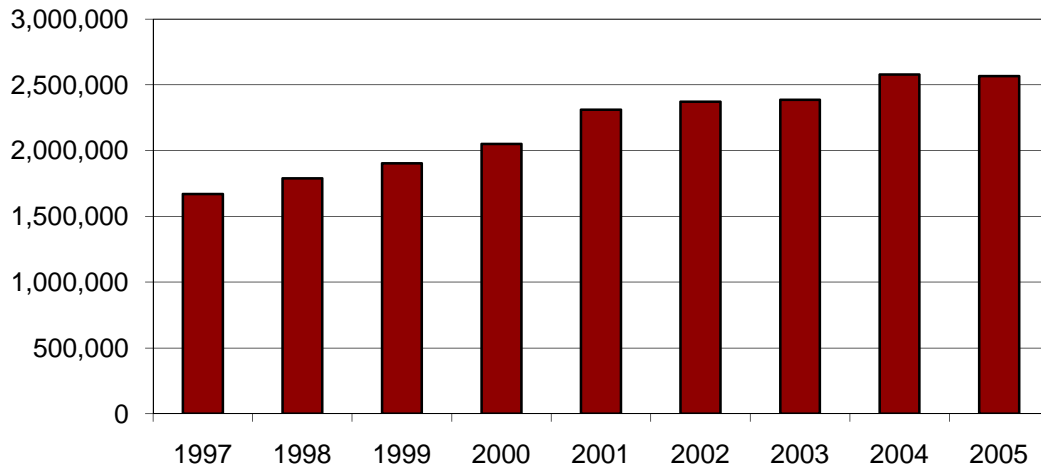
Public Library Material Holdings, 2005



- Academic libraries employ more than 2,200 persons and account for 630 additional jobs in industries that support the libraries and their staff.
 - Over 50 percent of surveyed community leaders—excluding library directors and staff—believe libraries contribute to their local economic prosperity.
 - An even greater percentage of community leaders think libraries significantly improve the local quality of life.
 - Many communities are proud of their libraries, but the perceptions of community and business leaders regarding the performance of their local library vary across the state.
- Community leaders are generally pleased with many features of their library and library staff, but less impressed with the business-related collections and their library’s communication and outreach to the business community.

- The average patron is generally more pleased with her or his library than are local community leaders.
- A higher proportion of library staff has special qualifications in genealogy research than in business resources.
- Libraries serve as a significant channel for delivering educational services for every age, from pre-school through retirement.

Total Attendance at Public Library Programs



Recommendations

These findings lead to the following recommendations to strengthen public libraries' roles in their communities' economies:

1. Implement a strategic program to expand business and economic development focus.
2. Enhance outreach to the business community.
3. Expand business and economic development services.
4. Refine and expand library-use data collection and reporting.
5. Assist local libraries in developing their own benefit-cost analysis.
6. Encourage local public libraries to aggressively promote their economic significance.

Introduction and Motivation

Study Goals

Taxpayers and politicians alike are increasingly calling for reductions in the size of the public sector, of which libraries are an integral part. Budget restrictions have led to cutbacks in funding of public services, especially at the municipal level. Public libraries compete with other public services (such as schools and public health) for their share of scarce funding resources and face increasing requirements to document their value to society.

At the same time, several government-led initiatives aim to encourage and promote business expansion, economic development and workforce enhancement. The greater the degree to which libraries contribute to economic development, the stronger the case that libraries provide a significant return on their expenditures—just as expenditures on education earn a “return on investment.” Therefore, the goal of this research was to estimate the direct and rigorously measured economic benefits of spending taxpayer dollars on libraries as well as to evaluate the contribution of libraries in developing the local economy.¹

In order to make a convincing argument for the economic importance of libraries to the state legislature and local governments, the methodology for such a study must be sound theoretically and empirically. An example from another sphere of valuation studies—university economic impact studies—may be instructive. Loyola University Chicago touted its economic impact to be \$1.42 billion (in 2006 dollars). Northwestern University, of similar size and just a few miles away, estimated its impact to be \$145 million (in 2006 dollars).² It seems unlikely that both estimates are realistic; their methodologies and assumptions beg close scrutiny. The present study was designed and conducted to hold up well to such scrutiny.

When libraries report and promote their economic impact, they can gain currency as key players in economic development. A key challenge for libraries is to identify and quantify their economic benefits to library users. In addition, libraries must identify and take partial credit for those social outcomes for which market or quasi-market prices cannot be determined. As a result, assessing the perceptions of the value of public libraries among individual community members—especially those members who can perceive the economic development benefits or workforce development benefits—can help ascertain the degree to which a library enhances a community.

Benefit-cost analysis is used to measure and compare public libraries’ total costs and benefits to the population. The costs of providing library services are relatively easy to measure. The benefits, however, are far more complex to define and measure. First, because many library services have no market price to gauge their values, the benefit to the community for those library services must be imputed based on the closest substitute that has a market price. Secondly, there may be many social, cultural and economic benefits to libraries well beyond the scope of benefit-cost analysis. Social networks, community amenities and the value of literacy are difficult to value in dollars and cents.

¹ Appendix V provides definitions of key economic terms and concepts used in this study.

² As reported in Siegfried et al. (2006).

Additionally, those same elements may not only enhance the quality of life in a locale, they may contribute to economic well-being and business development. “Social capital,” a concept popularized by Robert Putnam (2000) in *Bowling Alone: The Collapse and Revival of American Community*, describes the relationships among people that serve as social glue. These relationships are considered productive, just like financial capital, because they enable a community to achieve goals that benefit the entire community. Many studies attest to the social and community benefits of public libraries. For example, public libraries provide:

- Information resources for everyday use by individuals, for recreation and to support formal and informal education and lifelong learning
- Access to government and other electronically-delivered information from sources beyond the walls of the library
- Information, referral services and facilities that contribute to community development
- Programs for children (such as story time), adults (such as quilt making) and organizations (such as workshops on grant writing)
- Places for social interaction
- Equitable access to services and resources for all members of the community
- Literacy programs
- Space for cultural events
- Information technology training
- Research and information seeking skills

Aside from the fact that many library expenditures and local library staff salaries are re-circulated in the community, there are economic benefits that relate particularly to business and economic development:

- Information services and support to businesses
- Assistance in finding jobs
- Opportunities for developing skills, with consequent increases in productivity
- Introduction of new technology to the community
- Increased attractiveness of the community to business because of its cultural and educational assets
- Free library materials for patrons free up personal discretionary income that may be spent at local businesses
- Reducing the cost of doing business for small, local companies because libraries can serve as the lowest-cost channel for accessing market information. For example, libraries subscribe to databases and online information services that, while useful to businesses, may be too expensive for many firms to subscribe to individually.

This study aimed to help Indiana libraries identify and quantify their economic benefits in a systematic and objective manner. The report makes the case that the benefits of libraries significantly outweigh their costs. In addition, libraries can play a vital role in economic development and this report sets out several strategies to expand their influence in vitalizing Indiana’s economy.

Pursuant to these goals, the study focused on three questions. (1) What are the measurable economic benefits of libraries, both public and academic? (2) How well are libraries doing in playing an active

role in economic development? (3) What actions can Indiana libraries take to develop strategies to enhance their role in economic development and business growth?

Report Organization

The main body of this report begins with a brief review of lessons learned from earlier studies on the economic benefits of public libraries. This section is a “short course” about measuring the economic impact of institutions like libraries and estimating the economic value of non-market goods and services. The lessons-learned section leads to a discussion of the methods used in the current study.

Analyses of the direct economic effects are presented in the following chapter. The two most obvious and measurable economic impacts are the effects associated with library spending on salaries, materials and services, and the value of library services themselves.

The next chapter discusses findings from surveys of library directors, staff and patrons, as well as local community leaders and key actors in economic development. These surveys provided essential information for the economic impact analyses as well as insights from key stakeholders about how public libraries serve business and economic development needs.

Deeper insights into the role public libraries play in supporting local economic development are then provided by findings from interviews with community leaders in a number of case study communities throughout Indiana.

Academic (higher education) libraries also play an important role in economic development, as discussed in the subsequent chapter. The final chapter of the report reviews the study’s key findings, draws conclusions and makes recommendations for strengthening libraries’ roles in supporting economic development.

Finally, there is a postscript. While this report was in final review, the Americans for Libraries Council released a report on the valuation of libraries (Imholz and Arms, 2007). Time did not allow a complete integration of *Worth Their Weight: An Assessment of the Evolving Field of Library Valuation* into this study. In general, the present report for the Indiana State Library stands up well vis-à-vis the state-of-the-art and other library valuation studies described in that report.

Important information is also contained in the appendices. This includes profiles of Indiana’s public, academic and school libraries; an in-depth discussion on the case study findings, especially as they relate to school libraries; the survey instruments used in the research; discussion of the project website, which provides access to a rich database of detailed information on Indiana’s public libraries and the areas they serve, as well as continuing data updates and enhancements to the report; and finally a brief overview of the Indiana Business Research Center that conducted the study.

Methodology

Lessons Learned from Previous Studies

Measuring the value of a library service is difficult because library service benefits are not easy to quantify (Ellis 1994). These benefits can be categorized into two distinct groups: direct and indirect. “The term ‘direct benefits’ ... refers to the direct value to those who use or who have access to the library services. The term ‘indirect benefits’ reflects the benefits that third parties or the population as a whole derive when individuals use the services of a public institution” (Holt, Elliot and Moore 1998, 99). A key issue is how to identify, quantify, and place dollar values on the tangible and the intangible benefits derived from public library use, whether direct or indirect.

Previous research provides a foundation for understanding benefits resulting from the use of public libraries. Fitch and Warner (1998) found that public libraries assist local communities in supporting and encouraging the democratic nature of a society. For example, libraries provide citizens with accessibility to information regardless of race, income, class, age or gender. For patrons, libraries provide free substitutes for privately marketed goods and services. Public libraries also generate benefits beyond those received directly by their patrons, and as a result, determining the value of the benefits resulting from the operations of public libraries is a very complex process.

Placing a value on as many direct services and benefits as possible is fundamental to the goal of assessing the economic benefits that taxpayers receive for the dollars they spend on libraries. This approach is called “benefit-cost analysis.”³ Holt et al. (1998) used benefit-cost analysis to assist in their valuation of public library services, noting that benefit-cost analysis is a good tool for measuring both direct and indirect benefits. One manner of measuring the economic benefit received by patrons is in terms of the amount of savings a patron receives from a program or service, taking into account what it would cost to pay for an equivalent good, program or service in the marketplace.

What, then, are such equivalent marketplace goods and services, and what prices does one assign to those equivalents? There is no general agreement in the practice of library valuation. Some libraries have gone so far as to assign the average price of a new book as the economic benefit for each book borrowed. Other studies have used percentages of the average price of a new book to document the benefits of library services. There is no consensus in the academic literature either. Some studies argue for the “price” of a borrowed book to be 7 percent of the purchase price of a new book; other academics have posited a percentage as high as 25 percent. After reviewing this literature, Morris et al. (2002) present a case for valuing a “read” of a book rather than a lending transaction that may result in an unread book or a renewal of a book already borrowed. In order to account for unread books and renewals in the circulation statistics, Morris et al. ratchet the higher threshold value of 25 percent of the book purchase price down to 20 percent.

Conveniently, using the Morris “20 percent rule” comports reasonably well with economic theory. According to economic theory, the estimated value of a borrowed book is the price of the next cheapest market alternative. Used books sold on the Web or in a used bookstore are deeply discounted and often cost less than 20 percent of the price of a new book. Using the market place as

³ Benefit-cost analysis calculated the relationship, or ratio, between the economic benefits derived from the use of the public library and the cost to taxpayers and benefactors to make the libraries available.

a benchmark for price, economic analysts can readily place a market value on some library programs and services, such as books, Internet access or video rentals.

Other studies, however, suggest that market value should be estimated by determining the dollar amount patrons are *willing to pay* for a library's programs and services. However, there are difficulties with this approach. For example, patrons may not have complete information to assess value. Moreover, without having to make tradeoffs among goods and services within a budget constraint, values can vary widely. Ignoring the high expense associated with an extensive survey of patrons, the subjective valuation of patrons can be at great variance with any established market alternative. For example, in the study by Griffiths et al. (2004), nearly a third of the households surveyed would be willing to pay less than \$10 for a library card, rather than pay taxes.⁴ More than a third of in-library patrons surveyed would be willing to pay \$10 for a library card rather than pay taxes.⁵

Indirect benefits refer to the benefits that third parties or the community as a whole derive when individuals use library services (Holt et al. 1998). Public libraries support and promote literacy in their community, support educational activities, and provide free Internet access. Measuring the indirect benefits of public libraries precisely is difficult, if not impossible. However, other areas such as education have attempted it with some measure of success. The public library is an educational and cultural institution. For that matter, a member of the community that never uses a library may be willing to pay for services that the local library provides. The patron and the non-user may both value the indirect benefits that a library confers upon the community. As a result, some of the measures of indirect benefits in education and workforce development could apply to the library.

There is a large body of economic research, both academic and practical, measuring indirect benefits—especially in the realm of environmental and natural resource economics. For example, the federal government often requires a benefit-cost analysis for federal regulation such as endangered species protection and employs a method called “contingent valuation.” In these cases, individuals with no prospects of enjoying direct benefits associated with a tract of wilderness or a species place a value on that resource, thereby making a “non-use” value judgment.

To avoid the expense and subjective nature of measuring indirect benefits, other studies have proposed broader conceptual frameworks related to studying economic benefits. For example, the Southern Ontario Library System (1998) identified and categorized a wide variety of possible impacts public libraries have on their communities.

Surprisingly, one of the most detailed studies on the economic development benefits of libraries did not attempt to report any valuation in dollars and cents. The study conducted for the Kansas State Library by the Policy Research Institute of the University of Kansas (2000) did not use benefit-cost analysis. Instead, the study focused on surveys of libraries and their business patrons. The researchers tabulated the business-related resources at public libraries and solicited the opinions of the business and economic development community. In this way, the researchers could analyze the gap between the libraries' efforts to support economic development and how libraries could better meet the needs of the business community.

⁴ See responses to question 57 in Detailed Results & Study Methods – Part II.

⁵ For comparison with the value of the willingness to pay, the per patron costs of operating a library can exceed \$200 a year, depending on the size of the library and the population of the service area. Per capita expenditures, that are significantly less than per patron expenditures, were \$43.80 in 2005 in Indiana.

The research team designed and implemented the present study using insights garnered from the previous academic and applied research on library valuation. The research team considered the measurement of direct economic benefits to be of ultimate importance to those Indiana libraries that must justify their existence in dollars and cents. Secondly, it was also imperative to understand the opinions of patrons and community and business leaders in order to assess the level of importance they attribute to their local library. Finally, following the approach of the Kansas study, the research team considered it strategically important for libraries to know how they can improve their role in economic development.

The following three questions helped to frame the research design: (1) What are the measurable economic benefits of libraries, both public and academic? (2) How well are libraries playing an active role in economic development? (3) What actions can Indiana libraries take to become more active in economic development and business growth?

Direct and Measurable Economic Impact

The Economic Effects of Library Expenditures

Direct economic effects are assessed in terms of the library's local spending on staff compensation and on goods and services. This type of economic impact can be thought of in terms of the additional local jobs that are attributable to the spending of a library. In addition to salaries paid to staff that are spent on items such as housing, groceries and utilities, libraries also buy services from local plumbers, copier repair firms and utilities. These purchases have secondary and tertiary economic effects. In short, library spending helps support the network of local economic transactions.

Input-output analysis is a common tool for measuring the secondary and tertiary economic effects of a firm's employment and spending on inputs (materials and services) used in production. While libraries don't make profits like companies engaged in producing furniture or providing Internet access, their expenditures on salaries and inputs do have indirect and induced effects on the area's economy in the same way that private companies do.

The *indirect* effects represent the purchases of goods and services that libraries make in the local (or regional or state) economy and thus, the output and employment that the firms producing those goods and services contribute to the local economy. For example, the indirect effects associated with purchases by the Marion County libraries were estimated to result in over \$6 million in economic activity and about 50 jobs.

The *induced* effects represent the spending on goods and services by households of both the library staff and of the additional employees of companies that provide goods and services to the library that result from the library's business with those firms. The total induced effects associated with the Marion County libraries was estimated to be almost \$12 million and supported about 110 jobs across a wide array of sectors from retail stores and restaurants to physician offices and entertainment.

The Economic Effects of Library Cultural and Arts Attractions

The Frankfort Library in Clinton County sponsors an annual art festival. The Allen County Public Library has the nation's largest public genealogy collection and the Valparaiso Public Library boasts a genealogy collection of national reputation. Other libraries also boast of cultural events and unique

features and assets that attract people from out of state. In this way, these libraries contribute to local businesses in a very direct way. People that go to Valparaiso to conduct family history research tend to stay a few days. These family researchers stay in local hotels, eat in local restaurants and buy goods in local shops. Such “tourism effects” can have a significant economic impact, especially in smaller communities.

Measuring the tourism effects would bolster the argument that libraries contribute economically to their communities. However, without detailed data on the number of out-of-state tourist days associated with each library event, estimating the economic impact of tourism associated with libraries would be speculative. The conservative approach taken here acknowledges that tourism effects are present, but does not attempt to quantify them. Instead, the research team views the input-output analysis results as the lower boundary of direct economic effects associated with library activities.

Market Value of Library Resources and Services

Methods for Valuing Library Resources and Services

Economists, it is often quipped, know the price of everything and the value of nothing. Libraries provide valuable services to the community, most of which are free and, hence, have no observable price. This is a conundrum for economists. If an economist wishes to determine a library’s benefit-cost ratio, he or she must ascertain a price for the library’s services. Economists have developed several techniques to calculate an approximate price for goods and services that do not have observable market prices. While all these techniques have solid theoretical foundations, each suffers from some empirical or practical weakness. These valuation methods have been used in several detailed studies of library operations at the state and local level.

Variations on the contingent valuation method place value on goods or services that are far removed from any market pricing mechanism. For example, contingent valuation has been used to put a price on a scenic river or endangered species. If applied to libraries, the contingent valuation methods would require library patrons to calculate subjectively how much they would pay for library services. Contingent valuation has at least two major disadvantages. First, it requires detailed surveys of library patrons that are expensive in terms of both time and money. Second, the valuation rests on subjective notions of value, rather than market values, with little regard for level of income or the tradeoffs with other goods and services. As a result, the costly survey yields speculative information.

The cost-of-time and the cost-of-travel methods assume that library patrons value their time at the library relative to another activity of lesser value. The cost of travel includes the cost associated with getting to the library. The cost-of-travel method is often used to value national parks because the cost of travel, in addition to the time required for travel and any user fees, would represent the best estimate of a person or family’s value of enjoying the amenities of the national park. Like the contingent valuation approach, the cost of time and cost of travel methods are expensive because they require extensive surveys.

Another method is the consumer surplus approach. The economic theory of consumer surplus holds that, in a market economy, most consumers are willing to pay more than the market price (where supply equals demand). The difference between what consumers would have been willing to pay and the market price is called ‘consumer surplus’ because most consumers are able to enjoy a relative bargain at the market price. In other words, they would have been willing to pay more than

the market price. If a good or service is free, then the bargain (the consumer surplus) is even greater. The goal of the approach for valuing free library services is to ascertain the additional consumer surplus that results from providing priced goods for free.

The consumer surplus approach attempts to link the services that libraries provide with substitutes in the marketplace. To the greatest degree possible, a substitute is found and a market price is assessed for each library service delivered to a community member. The main drawback of the consumer surplus method (arguments about the proxy for market value notwithstanding) is what it may leave out of the total valuation equation.

For library services, there may be what economists call “nonuse” values. That is, those who do not use the library services may value it as a cultural institution—for example, the fact that a next-door neighbor with a beautiful yard is able to consult books on gardening. This is of practical importance: If nonuse values compose a large fraction of total valuation of public libraries, failing to account for such nonuse values understates libraries’ overall value to a community.

This study employed the consumer surplus approach. Library services were catalogued and matched to the types of library “events” that were reported in the *Statistics of Indiana Public Libraries* (Indiana State Library 2005). Then, the usage of library services, as represented by the record of library events, was assigned a value based on similar services, or substitutes, in the market. The results of the “event analysis” might be considered a conservative estimate, or lower end of the value range, for library services because it does not include nonuse values. The IBRC used community leader surveys to assess the value they ascribe to their public library, even if they or their organizations did not use the public libraries. In this way, a non-dollar value of the “social capital” effects of libraries can be assessed.

Valuation of Specific Library Services

The following analysis examines a variety of library services and assigns a value to each service. Federal and state regulators require public libraries to compile and submit detailed annual statistics about library usage and finances, and the Indiana State Library collects and reports these data. The type of data collected for the *Statistics of Indiana Public Libraries* (SIPL) did not allow a fine-grained analysis of the many types of services and resources available at libraries. These data provided most of the event information—or the type and frequency of the services provided—used for the valuation process. In most other evaluation studies, circulation information was available for many different types of media. The SIPL reports combine library book loans with audio and video loans. As a result, the circulation statistics by media type had to be estimated. For the purposes of this study, event counts for each type of media were allocated according to the relative holdings of each medium.

Comparable market values were derived from a variety of sources and methods. In some cases, this study followed previous studies that measured the value of public libraries. In other cases—for example, if the prices used by earlier studies were significantly higher than the price of the next cheapest alternative—an updated price was assigned based on more relevant and up-to-date market dynamics.

Cataloguing Resources and Services

Libraries provide a wide range of services. One can borrow a book about personal finances or, depending on the particular library, attend a workshop on making quilts. Whether accessing the

library computer to check e-mail or referencing documents to research genealogy, library patrons enjoy a stream of benefits from using the library. To take a full account of the value of libraries, it is important to include all library services. The following list includes the types of library services for which values have been imputed in earlier studies:

- Children's books
- Books for adults
- Videos/films
- Audio/music
- E-Books
- Magazines/Newspapers
- Computer services
- Reference and research services
- Special events
- Craft and activity programs
- Adult education programs
- Other library-sponsored seminars or workshops
- Children's programs
- Meeting space
- Encyclopedias
- Dictionaries and almanacs
- Data downloads
- Toys
- Parent-teacher materials

These library resources and services cover most of the waterfront, but one especially important service for this study is access to business-related databases. The citizens of Indiana, whether sitting at home or at a computer in a public library, have access to many databases through the INSPIRE website.⁶ Valuing this access and putting a value on data downloads is challenging. That said, one could calculate the cost to the state for providing the service and compare it with a reasonable estimate of the value of the service to a typical user. Because college and university students use INSPIRE as a gateway to on-line resources for their coursework, the pool of users is assumed to be students at Indiana institutions of higher learning. By rendering a "cost per student," one can deduce an order of magnitude benefit-cost relationship. In the case of INSPIRE, the costs are low relative to any reasonable assessment of benefits. Given the limited size of the assumed pool of users relative to all the INSPIRE users in the state of Indiana, the benefit-cost ratio greatly exceeds one-to-one.⁷

⁶ INSPIRE (www.inspire.net) is a state-supported, online collection of periodicals, commercial databases and other information resources that can be accessed by Indiana residents at no cost. INSPIRE is a service of the Indiana Cooperative Library Services Authority (INCOLSA). INSPIRE is supported by the Institute of Museums and Library Services under the provisions of the Library Services and Technology Act, administered by the Indiana State Library.

⁷ Given the arguably improbable results and the cost to administer contingent valuation (CV) surveys, CV studies have many critics (see, for example, Niewijk 1994). It may make more sense to simply calculate the costs per person and compare that cost per capita to a reasonable order of magnitude estimate of benefits.

Several earlier studies that measured the economic benefits of libraries used the above resources and services. In order to value library services, or event types, one must know the number of times those services were used, and in some cases the length of use, in the course of a year. This study used available data collected for the *Statistics of Indiana Public Libraries*, or, in some cases, proxy data. For example, the research team used the event counts of one type of library service to measure the frequency of the use for another service. In another case, an estimate for meeting room use was made based on data collected in the survey of library directors. In other cases, the research team could find no reasonable proxy from the available data or within a reasonable timeframe and budget.⁸

Market Values

In economics, the market determines the price (or cost) of a good or service. Libraries, on the other hand, provide free goods and services. How, then, can one ascribe an economic value to library goods and services?

A fundamental principle of economics is that a rational consumer will purchase a good (or service) at its lowest cost, all other considerations equal. It follows then that for two services that are substitutes for each other, a consumer is likelier to purchase service X rather than substitute service Y if the price of X falls relative to Y. For example, if the price of the airport shuttle approaches the price of taxi fare, then it is increasingly likely that one will take a taxi from the airport rather than taking the shuttle. If a service (or good) is free, the best estimate for the value of the free service is the cost of the closest substitute. Thus, the best estimate for the market value of “free” hotel shuttle from the hotel to the airport is the cheaper of either a taxi or another shuttle operator. Unless it were cheaper than either a taxi or a non-hotel shuttle, the cost of a limo or rental car would not be the best estimate for the cost of the free hotel shuttle. The best estimate for the market cost of that free shuttle trip is certainly not the cost of buying a car.

The nonmarket value of a library service, therefore, is the cost of the cheapest substitute for an equivalent service in the market place. The total value of library services is equal to the value of the closest substitute—the “price”—multiplied by the number of times a library provides the service (or event)—the “quantity.” Price times quantity equals value.

The research team aggregated service types for valuation into the following categories based on the service and event types reported in the Public Library Annual Report:

- Children’s book circulation
- Young adult and adult book circulation
- Number of computer uses
- Number of reference requests
- Attendance at children’s programs
- Attendance at young adult and adult programs
- Number of non-library sponsored events in library meeting rooms

In order to assess the benefit-cost ratio for library expenditures, one must assign a dollar value to these services. This assignment only estimates the direct benefit from library services to a particular

⁸ The recommendations at the end of the report present additional data series needed for more robust estimates of the value of library services.

user. A direct benefit represents the first-order value of the item, information or entertainment provided by the library service. For example, a person who makes a meal using a recipe from a library book receives the economic value of that cookbook measured by some discounted value of the book.⁹

Table 1 presents the library service prices used in the study. The price for books was estimated to be 20 percent of the average hardcover price for books in 2005, as reported by *The Bowker Annual Library and Book Trade Almanac* (Bogart 2006). Although there is academic support for discounting the price of books by more than 20 percent, Morris et al. (2002) make a persuasive case for the relatively high 20 percent. Recall that the cheapest price substitute is the appropriate estimate for the pricing of library services. As a result, the active online resale market for similar items served as the basis for the prices for video and audio media. While much of the content is available on the Web for free, the value of magazines and periodicals was considered to be non-zero. Using the cover price, however, would not reflect much of the free content. The value of using library computers was based on the price of a computer, minimal software and the cost of a household Internet connection for three years divided by the number of hours in three years of the standard workweek. This approach is corroborated by the approximate cost differential between a cup of coffee in a regular coffee shop and the price at a cyber café where computer use is “free.”

Table 1. Estimated Prices for Library Services

Library Service	Indiana Event Category	Library Service Price
Children’s books borrowed	Children’s books circulation	\$4.14
Young adult and adult books borrowed	General (non-children’s) circulation †	\$7.42
Videos/films borrowed	General (non-children’s) circulation †	\$1.00
Audio/music borrowed	General (non-children’s) circulation †	\$3.00
E-Books downloaded	General (non-children’s) circulation †	\$7.42
Magazines/newspapers read	Number of computer using patrons (proxy)	\$0.25
Computer access services	Number of computer using patrons	\$0.50 per user hour
Reference and research services	Number of reference requests/transactions	\$10.00
Special events, adult education programs and other workshops	General (non-child) program attendance	\$5 per person per program event
Children’s programs	Children’s program attendance	\$4 per person per program
Meeting space	Number of non-library program events	\$75
Encyclopedias, dictionaries, almanacs, data downloads, parent-teacher materials	Treated as free, no reasonable proxy data	free

† Circulation data for non-book media is estimated based on the proportion of total holdings accounted for by a given medium. Source: IBRC, using Indiana State Library data

The research team used the highest wage for a reference librarian in the state,¹⁰ according to the *Statistics of Indiana Public Libraries*, as the base for the hourly value of a reference librarian’s services. The rough rule of thumb for consulting firms, law firms and the like is that billable hours can be broken down into thirds: one third for the compensation of the employee, one third for overhead

⁹ One must note that what has social value is a “read” of a book, not just checking it out of a library. Morris, Sumsion and Hawkins (2002) argue that 75 percent of circulation events result in a read book. In the Public Library Annual Report, renewals are reported as circulation transactions. The 75 percent discounts circulation statistics for renewals and unread books.

¹⁰ The SIPL data does not allow one to calculate a statewide average wage for references librarians. The research team assumed that the preponderance of reference librarians were located in urban or semi-urban areas and were thus able to command a higher wage. In addition, the higher wage counterbalances the assumed average length of time per reference transaction that may be too low.

and one third for profit. Following this rule of thumb, a billable hour for a reference librarian is approximately \$100 an hour. Absent data on the average length of a reference transaction, the research team assumed a tenth of an hour per transaction. Granted, some transactions would take considerably longer than six minutes, but others would take considerably less time. The study used \$10 per event for each reference transaction. The Indiana State Library collects and reports reference transactions in its annual survey and report on library statistics.

Library programs, both adult and children's, were valued by sampling the cost of seminars and courses offered by various parks and recreation departments throughout the state. The costs for courses offered by municipalities in Indiana were on par with those offered in other states by adult education and community organizations. In the same way, the research team used a \$75 price tag for the use of meeting rooms based on rates for half-day rentals of meeting space at a variety of facilities around the state. (Of course, meeting room rental rates vary greatly with location and facility characteristics.)

Unfortunately, the research team could not find any practical proxy data for the use of encyclopedias, dictionaries, almanacs, data downloads and parent-teacher materials. That does not mean these resources have no value; it means that credibly estimating the value is difficult. This is not the only study that priced these resources and services as free (e.g., Holt et al. 1997). The use of INSPIRE was considered too important to "price as free." The research team did not directly impute the value of INSPIRE usage, but instead calculated the cost of INSPIRE per college and university student (because the number of students is well known). In this way, the cost per student can serve as a point of comparison for any reasonable estimate for the *benefit* per Hoosier college student. Given that there are approximately 361,250 college and university students in the state and that the cost of the INSPIRE databases, administration and marketing is approximately \$2 million, then the cost per student is \$5.50. Considering the cost of textbooks, who can argue that students derive considerably more than \$5.50 worth of annual benefits from INSPIRE? Now add in the number of non-student users in Indiana, and the cost per user declines substantially more. This sort of back-of-the-envelope calculation that compares a known cost against a reasonable estimate of benefits saves researcher the effort and uncertainty associated with willingness-to-pay studies (referenced above).

Perceptions of the Role of Public Libraries in Local Economic Development

Surveys of Key Stakeholder Groups

Web-based online surveys were designed and disseminated to four groups of key stakeholders soliciting their views and other information concerning public libraries. These groups included public library directors, staff and patrons, plus business and community leaders. Each of the four surveys, which are reproduced in Appendix III, is discussed below.

Library Directors and Staff

In order to understand how those responsible for libraries view their role in the community and their role in facilitating economic development, and also to get a more detailed account of the business-related resources available at their libraries, the research team developed a survey targeted to library directors. Library staff completed a somewhat shorter version of the director's survey. One

of the desired outcomes of these two surveys was to get an accurate accounting of how library services relate to business and economic development.

The online surveys each took about 15 to 20 minutes to complete. The Indiana State Library provided a list of library directors for each public library across the state, together with their e-mail addresses. The IBRC sent the directors a letter of introduction explaining the purpose of the study and asking for their participation and support, as well as the participation of their staff. The letter provided links to the Web-based survey for both library directors and their staff.

Patrons

Patrons had their own much shorter survey. Library directors in the targeted communities placed signs in their libraries soliciting patron participation. To minimize respondent burden and encourage maximum response, the patron survey was briefer than the surveys for the other groups. The survey asked in-library patrons what services they use most, how often they visit libraries and some basic demographic information in order to profile a typical library patron. Finally, patrons provided their thoughts on how the local library benefited the community in financial or economic terms.

The patron survey was also available on paper for those who were unable or chose not to enter the information on a library computer. This approach sought to appeal to patrons who were less familiar with using computers. Moreover, during periods of heavy computer usage, a terminal may not have been available for a patron to take the four-minute survey. As a result, the research team concluded that paper-based surveys would expand both patron participation and the capacity to gather responses during periods of heavy library usage.

Community and Business Leaders

The research team designed an online survey specifically for the business and economic development community in order to characterize the role of libraries in providing information to businesses and promoting economic development from the perspective of businesses, local officials, community foundations, chambers of commerce, school district administrators, Small Business Development Centers (SBDCs) and other relevant organizations. The IBRC sent e-mail invitations to officials of these organizations throughout Indiana.

The purpose of the community and business leader survey was to probe whether these local leaders used the resources at the local public library, the degree to which they were satisfied with those resources, and how closely they and other local leaders worked with the library to promote economic development and achieve other community goals.

Public Libraries and Social Capital

Case Study Community Surveys

Libraries have long operated as anchors in communities. Andrew Carnegie, for example, thought so highly of libraries as an important cultural institution that he endowed thousands of libraries across the country. Many still operate in Indiana in their original buildings. Other Carnegie structures still serve as a wing in expanded library facilities.

Libraries contribute to the social fabric of a community by promoting the types of interactions and social integration that builds trust, cooperation, shared values and civic participation. In short,

libraries build “social capital.”¹¹ Communities with high social capital tend to have lower crime rates, better health, better educational achievement and greater economic success. As one researcher put it, members of these communities are more likely to be housed, hired and happy.

The relatively recent interest in social capital has helped develop a language to describe the effects that libraries have on their locale. Putnam (2000) laments the increasing tendency for Americans to “bowl alone” and the decreasing tendency for regular contacts with friends and neighbors. Given this landscape, the public space of libraries where people from all occupations and lifestyles can interact and potentially build social capital is that much more important. A study by Bryson et al. (2003) concluded that the net effect of building a library fosters the social links and cooperation that bind the community together. There is, according to Goulding (2004), a grand opportunity for librarians to make substantiated claims that libraries play a vital role in civic renewal and community building.

That role in building social capital, the research team reckoned, may not appear in the statistics generated by Web-based surveys. As a result, the research team chose 12 case study counties or library districts to conduct face-to-face interviews with library directors and community and business leaders. These communities were selected to represent a range of city and library sizes, and to ensure that all four corners of the state were represented.

While the community and business leader survey instrument for the case study communities was essentially the same as the online survey, the face-to-face element and the open-ended questions allowed for additional probing and provided rich commentary and anecdotes. The researchers conducting the case study interviews were able to gain a personal feel for the communities and a sense of the enthusiasm that community members had for each other and the libraries in their town.

This was also true of the personal interviews with library directors. Interviewers got a sense of the pride and dedication to the community that each library director had. The fact that the interviewer could improvise somewhat after the standard part of the questionnaire was completed helped yield additional insights through further probing about the best practices of library operations.

¹¹ Social capital can be defined as *social networks* of trust, cooperation, shared values and community participation that enable a community to achieve its goals. One might think of social capital as a community’s ability to be self-reliant and solve its own problems. To the extent that libraries foster productive relationships within a community, they are an important community asset.

Direct Economic Effects

Economic Impact of Library Expenditures

Indiana's public libraries directly employed 6,898 people in 2005 and contributed nearly \$262.9 million into the state's economy through payrolls and expenditures on goods and services. These direct impacts have a ripple effect throughout the economy that one can measure using input-output analysis, a technique discussed earlier in this report.

The results of the input-output analysis indicate that library expenditures combine to generate an estimated \$215.8 million in additional economic activity throughout the state while also supporting nearly 2,000 additional jobs. These figures represent both indirect and induced impacts. Indirect impacts refer to additional activity in the economy triggered by library expenditures on goods and services (i.e., additional jobs in supplier firms and additional spending by those firms on the inputs they require). Induced impacts measure the household spending from salaries paid to library employees and to the incremental employees in vendor firms that provide goods and services to libraries.

The indirect impacts of the state's libraries generate just over \$67.7 million of economic output and support an additional 537 jobs. The estimated induced impacts of Indiana's libraries are \$148 million in economic output and 1,448 jobs. The greatest induced employment resulting from library spending occurs in the health care and social services sector and the retail sector, with roughly 295 additional jobs each statewide. In terms of the dollar value of economic activity, the health care and social services sector is also the greatest beneficiary of library spending with \$23 million in induced output.

In addition to a statewide input-output analysis, the economic impacts of public libraries on each of Indiana's 92 counties were analyzed. Table 2 shows a sample of countywide employment impacts. These communities represent counties with small, medium, and large populations. The counties listed in this table are for illustrative purposes to show the great range in populations and the dramatic differences in employment and impacts between large urban areas and smaller counties and service areas.¹² A county-by-county reckoning of the indirect and induced economic effects of library expenditures is available online at www.stats.indiana.edu/topic/libraries.asp.

¹² The breakdown of small, medium and large populations in Table 2 is different from that traditionally used by the Indiana State Library. The breakdown in Table 2 shows a greater range of service area populations.

Table 2. Selected Countywide Employment Impact Estimates of Public Libraries

County (Largest City/Town)	Direct Employment	Indirect Employment	Induced Employment	Total Employment Impact
Marion County (Indianapolis)	765	49.5	110.3	924.8
Allen County (Ft. Wayne)	398	41.5	84.7	524.2
Putnam County (Greencastle)	33	0.9	2.4	36.3
Gibson County (Princeton)	35	1.3	1.9	38.2
Benton County (Fowler)	20	0.5	0.9	21.4
Ohio County (Rising Sun)	6	0.1	0.3	6.5

Source: IBRC, using Indiana State Library data

Market Value of Library Events

The most important direct economic benefit that public libraries provide their communities is the set of services the libraries make available at no, or very low, cost. In this way, the library provides an economic return—albeit a return not measured in the market place—for each tax dollar that the community appropriates. Table 3 outlines the estimated market value of the goods and services provided by all of Indiana’s public libraries in 2005. Not surprisingly, the bulk of library activity involved the circulation of books and audio/visual media such as music CDs and films. Indiana borrowers checked out over 87.5 million volumes from both children’s and adult collections for an estimated market value of \$547.3 million.

Table 3. Market Value of Library Circulations & Services – Indiana Totals

Service	Annual Number of Uses	Market Price	Estimated Value
Adult Circulation	70,142,220	Books & E-Formats - \$7.42 Audio/music Materials - \$3.00 Video/film Materials - \$1.00	\$479,426,282
Children’s Circulation	17,388,835	Books & E-Formats - \$4.14 Audio/music Materials - \$3.00 Video/film Materials - \$1.00	\$67,921,137
Reference Questions	5,443,152		\$10.00 \$54,431,520
Children’s Program Attendance	1,568,564		\$4.00 \$6,274,256
Adult Program Attendance	998,099		\$5.00 \$4,990,495
Computer Use	7,253,428		\$1.00 \$7,253,428
Magazines and Newspapers	7,253,428*		0.25 \$1,813,357
Meeting Rooms	104,016*		\$75.00 \$7,801,163

*estimates

Source: IBRC, using Indiana State Library data

Of course, libraries do more than lend books, movies and CDs. Libraries offer many services that provide value to a community, including special programs and events, computer access, and expert assistance on difficult research questions. Reference librarians perform a critical service by shepherding patrons through vast library holdings and Internet resources to locate the materials that best suit their specific need. For a patron, this service saves time and improves results. Each public library reports to the ISL the average estimated number of reference questions it fields in a typical week. The annual number of reference questions in Table 3 is the sum of each library's weekly reference question estimate multiplied by 52 weeks. A reference inquiry is a reference transaction if the question calls on the professional training of library staff to locate, navigate or interpret specific library offerings. General inquiries on library holdings, policies, services or activities are not considered reference questions. Public libraries throughout Indiana assisted with an estimated 5.4 million reference questions in 2005. At \$10 per reference "transaction," reference services represent a \$54.4 million market value.

Libraries also offer a variety of programs and events. Many are educational while others are purely for entertainment. These programs represent only those that library staff plan, sponsor or administer and do not include other programs held at the library but sponsored by other entities. More than 2.5 million people attended children's and adult programs sponsored by Indiana libraries in 2005 for a combined market value of more than \$12.3 million.

Access to computers, computer software, the Internet and other electronic resources is an increasingly important service provided by public libraries. Similar to reference questions, libraries report an *estimated* number of weekly computer uses to the ISL each year. The number of annual computer uses statewide found in Table 3 is the sum of this estimated weekly usage that libraries reported to the ISL and multiplied by 52. This estimated usage figure is almost certainly too low.¹³ Libraries do not report the number of hours of computer use. Assuming that each computer use lasts two hours and using the \$0.50 per hour cost imputation, the resulting estimated market value of computer usage is \$7.3 million.

Another important service that a library provides is access to newspapers and periodicals. Patrons consume these resources during a library visit and, as a result, libraries do not count their use as an official circulation transaction. Libraries do not report periodical use to the ISL. In order to get an estimate of the value of these resources to patrons, the research team treated the number of computer as a proxy for the number of periodicals accessed.¹⁴ Therefore, at \$0.25 per use, access to periodicals has a market value estimated at \$1.8 million.

Many libraries offer meeting space to organizations and individuals, usually free of charge. Unfortunately, libraries do not collect data on the number of meetings held at libraries throughout the state. In order to assign a value to this service, a sample of public libraries were surveyed to determine their estimated annual meeting room usage. There is a wide range of meeting room usage in the state, from as few as three to as many as 4,000 per year. Based on the survey sample, the total meeting room usage is 13,408. The libraries that responded represent 13 percent of Indiana's

¹³ Casual observations made in the case study communities would make one think that computer use rivals the more traditional library offerings, e.g., children's books and periodicals. Libraries should consider using server logon information and weblogs to collect usage information.

¹⁴ Based on this study's survey of patrons, there are about twice as many computer users as there are users of periodicals. Users of periodicals often read or browse more than one newspaper or magazine per visit. Thus, absent data for periodical use, it is not unreasonable to use the number of computer users as a proxy for the readers of periodicals.

population that lives within a library district. If the survey sample is representative of the state, the state aggregate estimate of 104,016 annual meeting room uses, at \$75 per use, has a total market value of \$7.8 million.

Given that circulation of books and audio/visual materials accounts for roughly 87 percent of the market value of services provided by Indiana libraries, it is useful to take a closer look at the role that each component plays within this estimate. Unfortunately, the available data report only circulation of these materials in total, so a detailed analysis of each media type is not possible. For the purposes of this analysis, the share of each medium’s circulation is assumed to be directly proportional to its share of total holdings. For example, video materials account for roughly 6 percent of library holdings. Video circulation, therefore, is estimated to be 6 percent of total circulation.

Using this approach, books account for nearly 89 percent of all circulation, yielding an estimated value of \$63.9 million for children’s reading materials and \$462.7 million for adults’ (see Table 4 and Table 5). At an estimated 5.1 percent of circulation, adults’ and children’s audio materials have a collective value of \$13.4 million, while videos have a combined worth estimated at \$4.9 million. Electronic formats, which include CD-ROMs and non-film DVDs, make up only 0.4 percent of total circulation and have an approximate value of nearly \$2.4 million.

Table 4. Market Value of Children’s Circulation in Detail

Service	Annual Number of Uses	Market Price	Estimated Value
Books	15,458,674	\$4.14	\$63,998,912
Video	973,775	\$1.00	\$973,775
Audio	886,831	\$3.00	\$2,660,492
E-Formats	69,555	\$4.14	\$287,959

Source: IBRC, using Indiana State Library data

Table 5. Market Value of Adult Circulation in Detail

Service	Annual Number of Uses	Market Price	Estimated Value
Books	62,356,434	\$7.42	\$462,684,737
Video	3,927,964	\$1.00	\$3,927,964
Audio	3,577,253	\$3.00	\$10,731,760
E-Formats	280,569	\$7.42	\$2,081,821

Source: IBRC, using Indiana State Library data

What, then, is the total market value of public library services in Indiana? Excluding the intangible benefits and the benefits associated with INSPIRE, the total market value of the goods and services provided by the state’s public libraries is \$629.9 million.

Approximately 6.05 million Hoosiers lived within a library district in 2005, which means that the market value of library services per capita would amount to roughly \$104.09. Of course, local taxes are the primary means of support for public libraries. As a result, any analysis of their value must take into account the public “investment” that makes them possible. The total operating expenses for Indiana’s public libraries in 2005 were \$265.1 million or \$43.80 per capita. Ultimately, this results in \$2.38 in benefits for each dollar of library expenditure (see Table 6).

One cannot reasonably attack the foregoing analysis for “inflating the numbers.” The actual benefit-cost ratio is higher, probably appreciably higher. More accurate and more comprehensive raw data on library usage would serve to refine the benefit-cost ratio. Absent better usage data, the \$2.38 represents a conservative and defensible estimate of the value Hoosiers derive from their libraries.

Table 6. Benefit-Cost Summary, Indiana Total

Total Market Value of Library Services (2005)	\$629,911,638
Indiana Population within a Public Library District (2005 estimate)	6,051,615
Market Value of Library Services per Capita (2005)	\$104.09
Total Library Operating Expenses (2005)	\$265,088,105
Operating Expense per Capita (2005)	\$43.80
Public Benefit-Cost Ratio (Total Value / Total Operating Expense)	\$2.38

Source: IBRC, using Indiana State Library data

Surveys of Key Stakeholder Groups

Survey of Public Library Directors

Of Indiana's 239 public libraries, the directors of all but the case study communities were invited via e-mail to take part in a Web-based survey. The directors of the libraries in the case study communities were interviewed in person with the same questions, as described in more detail in the next chapter. Data from both online surveys and personal interviews are included in the analysis described below. The survey instruments for library directors and for the other survey target audiences appear in Appendix III.

The directors' survey posed several questions about general library characteristics and then asked a number of questions regarding the library's role in supporting business and economic development in the community, both for businesses and for the economic advancement of patrons in general. It also inquired about services and resources provided by the library that relate to business and economic development.

Surveying library directors and business leaders using the same questions permitted comparisons of the perceptions of those who run libraries versus those who use libraries.

Characteristics of Responding Libraries

A total of 101 library directors provided usable responses to the survey, representing 42 percent of all public libraries in Indiana. These libraries:

- Served populations ranging from 709 to 172,000 (mean = 19,617; median = 8,966)
- Employed staffs ranging from one to 160 full-time equivalent positions (mean = 16.6; median = 6.0)
- Had annual operating budgets ranging from under \$40,000 to more than \$10 million (mean = \$1,000,569; median = \$409,000)
- Were open to the public between 22 and 72 hours per week (mean = 53; median = 56)
- Almost universally (98 percent) tended to collaborate with other libraries for interlibrary loans, reciprocal privileges or similar arrangements

Economic Benefits and Impacts on the Business Community

The first question regarding the library’s economic role asked directors to rate how beneficial various library services and resources are to business and economic growth in their community (see Table 7).

Table 7. Benefits to Local Economic Growth: Library Directors’ Ratings

How beneficial to business and economic growth in your community are the following library services or resources?	Percent of Respondents Indicating			
	not beneficial	slightly beneficial	moderately beneficial	very beneficial
High-speed Internet access for public use	0	0	4	96
Space and facilities for holding business meetings	6	10	24	60
Books or other information on starting or managing a business	1	19	32	48
Economic and/or demographic data and statistics	1	21	37	41
Legal information or resources	1	15	48	36
Directories of businesses (local, state or national)	1	27	40	32
Local job postings	12	30	27	31
Resources for non-profit planning	4	20	50	26
Small-business tax information	4	39	33	25
Resources for real-estate related research	11	28	37	24
Other specific business-related databases	7	20	51	23
Business-related programs or workshops	7	33	39	21
Government documents and/or databases	8	31	46	19
Business periodicals	2	36	43	19
Information on patents and/or trademarks	14	48	30	7

Note: Rows may not sum to 100 percent due to rounding.
Source: Survey of Library Directors

The most beneficial service by far was high-speed Internet access for public use, followed by space and facilities for holding business meetings. Other services or resources rated highly as benefiting business and economic growth included information on managing and starting businesses, economic and demographic statistics, legal information and business directories.

Another dimension of libraries’ economic impacts is their contribution to users’ personal financial well-being. Table 8 reports the directors’ ratings.

Table 8. Contribution to Users' Personal Financial Well-Being

How have the following library services contributed to your users' personal financial well-being?	Percent of Respondents Indicating			
	not contributed	contributed slightly	contributed moderately	contributed greatly
Health information and resources	0	7	29	64
Consumer information to help with purchase decisions	0	12	34	54
Resources for college planning	0	14	34	53
Information on income-tax preparation	3	18	27	51
Legal information and resources	0	9	43	48
Job or career planning resources	1	16	42	41
Information for accessing government agencies or resources	3	14	43	40
Information on investments or business ventures	5	30	33	32
Bookmobile	73	7	7	13
Salary statistics to support a pay raise	12	45	32	10

Source: Survey of Library Directors

Interestingly, directors rated health information and resources as contributing the most to patrons' personal financial well-being. Patrons did not highly rate information to help with purchase decisions, college planning and income tax preparation. Significant contributors were resources related to legal information, career planning and accessing government agencies. Relatively few directors felt that salary statistics contribute significantly to users' financial well-being.

According to 66 percent of library directors that responded to the survey, meeting the needs of business and economic development has consumed an increasing share of the total budget, while one-third indicated that spending had received a decreasing share of the budget over the past three years. Of those reporting increased budget shares for business, 61 percent indicated that increased demand from the business community was a factor, while about one-third (32 percent) reported that business materials were increasing in cost at a faster rate than other materials. Twenty percent of those devoting a larger budget share to business needs indicated that greater overall revenues made this possible, and 9 percent said they were able to spend more on business needs because higher priority needs had already been met.

Of directors reporting a decreased budget share directed to business needs, 59 percent attributed this to a reduction in overall library revenues; 41 percent indicated that other library needs now have higher priority; and one-third (34 percent) reported decreased demand from the business community. A few also noted that more business resources are now available free on the Internet.

Directors were asked to rate the support their libraries receive from various types of stakeholders. As revealed in Table 9, the community foundation and civic/service organizations were the strongest sources of support for public libraries, followed closely by local media and school administrators. A majority of directors also felt that local elected officials provide robust support.

Table 9. Extent of Community Support

To what extent do you agree or disagree that your library receives robust community support (e.g., funding, in-kind, political, volunteer services, etc.) from each of the following?	Percent of Respondents Indicating				
	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
The local/community foundation	0	3	12	40	45
Civic or service organizations in your community	1	1	12	43	42
Representatives of local media	0	3	17	38	41
School administrators or school library directors	2	9	13	43	34
Chamber of commerce	3	2	39	23	33
Local elected officials	1	5	31	41	21
Local economic development organizations	2	8	42	31	17
Your state Representative or state Senator	1	14	35	34	15
Parent-teacher organization or association	6	11	46	22	15

Source: Survey of Library Directors

When asked about the extent to which the presence of their libraries produces a variety of impacts on the local economy, directors’ opinions were generally quite positive. Very few expressed any disagreement that their libraries enhanced the community’s economy (see Table 10).

Table 10. Impact on Local Economy

How strongly do you agree or disagree that the presence of your library in the community:	Percent of Respondents Indicating				
	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
Significantly improves the local quality of life	0	1	1	11	87
Significantly contributes to local economic prosperity	0	1	16	31	52
Increases local residential property values	1	0	17	35	47
Plays a vital role in helping individuals find employment	1	2	12	52	33
Attracts new businesses to the community	0	4	40	31	25
Plays a vital role in helping <i>existing</i> local businesses grow	0	2	29	51	17

Source: Survey of Library Directors

Improving the local quality of life was the impact directors most strongly agreed resulted from their libraries, and more than 80 percent expressed some level of agreement that their libraries contribute to local economic prosperity, increase residential property values, and help individuals find employment. Smaller majorities also agreed that their library’s presence helps current businesses grow and new businesses choose to locate locally. Clearly, directors feel that public libraries contribute favorably to the local economic environment.

Directors next indicated how frequently their libraries provide a variety of services or information that help businesses or help individuals with respect to employment. The general impression one takes away from Table 11 is that library directors do not view their libraries' services as very often helpful to businesses or to workers in job-related ways.

Table 11. Frequency of Business- or Job-Related Services

How many times per year (on average) does your library provide services or information that:	Percent of Respondents Indicating					
	never	Less than once a month	Several times per month	Several times a week	About once a day	Several times a day
Helps users search for or obtain a new job	0	9	33	29	11	18
Makes users more productive in their jobs	6	21	27	28	9	10
Helps users with career decisions	0	26	34	24	6	10
Helps a business obtain other needed information	4	36	31	17	9	2
Helps improve an existing business	7	43	31	13	3	3
Supports starting a new business	4	53	23	15	2	2
Helps a business research its markets	19	49	12	12	4	2
Helps with the business incorporation process	31	57	4	7	1	0

Source: Survey of Library Directors

Not surprisingly, the most frequently provided services or information helped patrons in job-related ways, with 16 to 29 percent of the libraries providing such assistance once a day or more. Substantially less frequent were instances of helping businesses with information or assistance; helping with the incorporation process was the least frequently used type of assistance. Nonetheless, it's worth noting that more than 40 percent of libraries reported assisting businesses at least several times per month in ways that support starting new businesses, improve existing business, or provide other needed information.

The last objective question asked public library directors which business and economic-development related resources and services they provide (see Table 12).

Table 12. Business and Economic-Development Related Resources

What business and economic-development related resources and services do you provide?	
Percent of Libraries	Resource or Service
90	Guides for starting a business and/or writing a business plan
78	Meeting rooms for free
75	Technology education and computer literacy programs
66	Access to databases for business and/or economic statistics, either on-line or CD-ROMs
60	Directories for non-profits to use to apply for grants, e.g., The Foundation Center database
56	A reference section devoted to business and economic development
55	Volumes of statistics and demographic data from government and/or private sources
48	Directories of trade and professional associations
43	<i>Encyclopedia of Business and Information Sources</i> and/or <i>Encyclopedia of Associations</i>
39	U.S. industry profiles and/or country economic reports
29	Almanacs on business, e.g., <i>Almanac of Business and Industrial Financial Ratios</i>
27	A reference librarian trained in business-related subjects
25	Programs on finding employment
25	Programs to promote economic development
22	Meeting rooms with a user charge
15	Programs on career planning
12	Other (describe)

Source: Survey of Library Directors

No strong patterns are apparent in these responses. Free meeting rooms are much more common than rooms for a fee. Programs on various topics are less common than are reference materials such as directories, databases and economic or demographic statistics. Only about a quarter of public libraries have a reference librarian trained in business-related subjects.

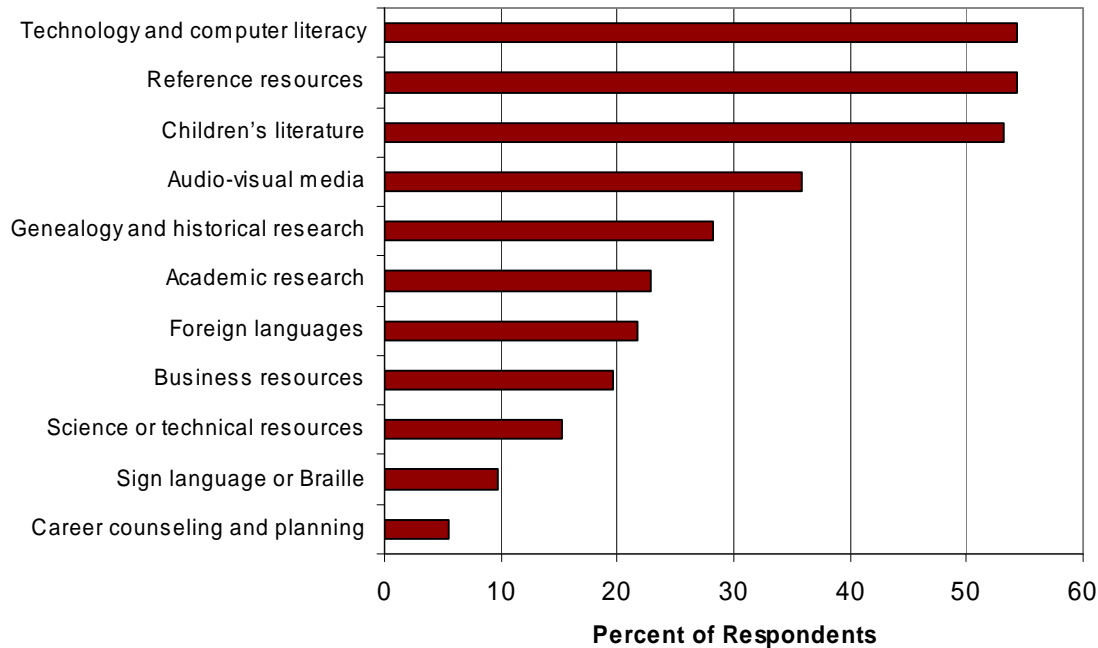
Of special interest is the response that directors gave when asked whether they provide “access to databases and/or economic statistics, either on-line or CD-ROMs.” One could claim that since all libraries in Indiana have access to such resources through the INSPIRE network, the response *should* total 100 percent. On the other hand, library directors may be responding to the fact that the business resources available through INSPIRE are not comprehensive and thus not sufficient for the needs of their patrons. For example, one cannot access the Dun & Bradstreet database through INSPIRE. As one will see in the next section, the response rate is less than 100 percent for library staff as well. Not all business resources are created equal, and perhaps those managing INSPIRE should re-evaluate the resources available through this doorway.

Survey of Public Library Staff

The IBRC asked public library directors to encourage their staff members who have regular contact with the public to complete an online survey similar to the one designed for directors. The rationale for this survey was that front-line staff might have additional insight into how the library serves the needs of business and economic development since they work directly with users.

Usable responses from library staff totaled 119. Their libraries represent a broad cross-section of Indiana’s public libraries, serving populations from less than 700 to more than 300,000. Hours of operation ranged from 20 to 80 hours per week. These staff members were relatively well educated: 39 percent had a graduate degree, 29 percent a bachelor’s degree, 8 percent an associate degree, and 28 percent a high school diploma. As Figure 1 reveals, more than half of the staff had training or qualifications in technology and computer literacy, reference resources and children’s literature. Only 20 percent had competencies in business resources, and 5 percent rated themselves competent in career counseling and planning.

Figure 1. Special Competencies, Qualifications or Training of Library Staff



Source: Survey of Library Staff

Library staff rated the **value of library services and resources to community business and economic growth** similarly to library directors with a few differences. Overall, staff tended to be more positive than directors in their ratings of the benefit of these services and resources. Both groups agreed that the most beneficial offerings were high-speed Internet access, facilities for business meetings and information on starting or managing a business. Both groups also rated legal information and business directories as quite beneficial, while information on patents and trademarks received the lowest beneficial offering.

Library staff rated government documents and/or databases substantially more beneficial than did directors (85 percent rated moderately or very beneficial vs. 65 percent, respectively). Staff also found business periodicals more beneficial to business users than did directors (85 percent vs. 62

percent). These differences may reflect greater interaction with business patrons by staff than by directors.

Staff generally gave higher ratings than directors with respect to **library services' contributions to patrons' personal financial well-being**. For all of the 10 listed services, at least half of responding staff deemed their contributions moderate or great. A majority of library staff did not view bookmobile service as contributing to users' financial well-being, in contrast to library directors. Salary statistics to support a pay raise were viewed by both groups as only a modest contributor to users' well-being.

With respect to perceived **support for the library coming from various community groups**, library directors and staff ranked them quite similarly, with the local community foundation, civic/service organizations and local media topping the list. Directors' ratings of support were slightly higher than ratings from staff for many of the groups, perhaps reflecting directors' role as the primary point of contact to the library for stakeholder groups.

When asked the **extent to which the presence of their libraries produces various impacts on the local economy**, staff showed positive regard for those impacts at levels very much like those of library directors. The one factor for which substantially more directors (82 percent) than staff (71 percent) expressed agreement was the assertion that the presence of the library increased local residential property values. This may reflect the greater involvement that directors have with property tax issues, since much of public library funding derives from taxes based on assessed value.

Library staff next responded to a question asking **how frequently the library provides various kinds of service or information**. Staff ranked the various services very similarly to the directors' ranks. Information or services supporting patrons' employment were the most frequently provided types, followed by information for businesses' research and information to improve existing businesses or start new ones. Most libraries did not provide information to help with the incorporation process as often as the other kinds of help.

Library staff indicated **which business-related services and resources their library provided**. Once again, responses from staff and directors tended to be similar, although there were a few significant differences of opinion, to wit: meeting rooms for a fee, databases for business/economic statistics, business almanacs, directories of trade and professional associations, and U.S. industry profiles or country economic reports (see Table 13). Such differences may reflect staff's greater familiarity with libraries' business collections and services, or they could simply mean that the samples of directors and staffs that responded to the survey did not equally represent all the same libraries.

Table 13. Staff Perspective on Business and Economic-Development Related Resources

What business and economic-development related resources and services do you provide?	
Percent of Libraries	Resource or Service
87	Access to databases for business and/or economic statistics, either on-line or CD-ROMs
86	Guides for starting a business and/or writing a business plan
75	Meeting Rooms for free
74	Technology education and computer literacy programs
68	Directories for non-profits to use to apply for grants, e.g., The Foundation Center database
66	Volumes of statistics and demographic data from government and/or private sources
65	A reference section devoted to business and economic development
63	Directories of trade and professional associations
53	<i>Encyclopedia of Business and Information Sources</i> and/or <i>Encyclopedia of Associations</i>
52	U.S. industry profiles and/or country economic reports
46	Meeting Rooms with a user charge
45	Almanacs on Business, e.g., <i>Almanac of Business and Industrial Financial Ratios</i>
33	A reference librarian trained in business-related subjects
28	Programs to promote economic development
22	Programs on finding employment
22	Programs on career planning
4	Other (describe)

Source: Survey of Library Staff

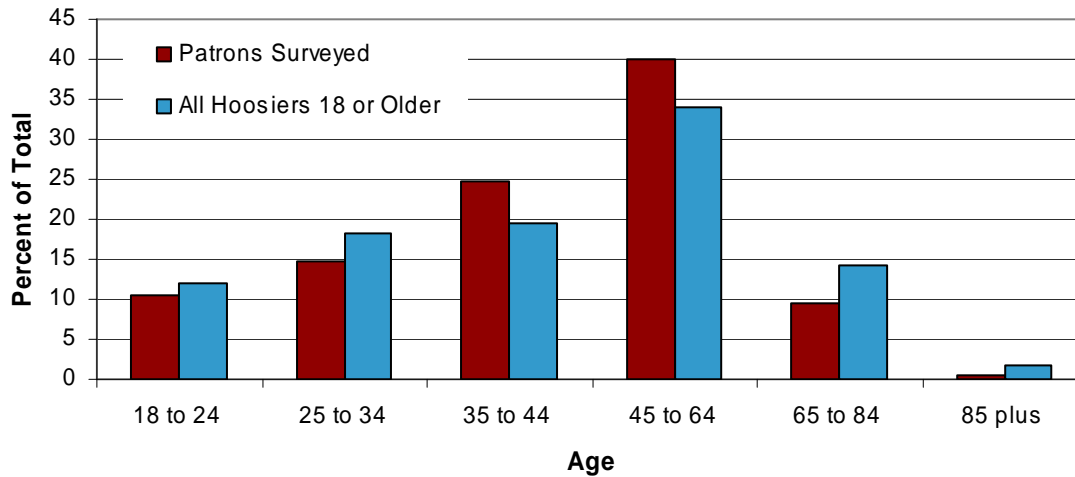
Survey of Patrons

The IBRC invited the directors of all public libraries to encourage patrons age 18 and older to complete a brief survey on their usage of library services and resources. In addition, the survey asked patrons about the impact of the library on local business and economic development. Patrons could complete the survey online (using computers at the library or elsewhere) or on paper.

Characteristics of Responding Patrons

The patrons spanned a range of ages, though they tended to be relatively more middle-aged than the average adult Indiana resident, as shown in Figure 2.

Figure 2. Ages of Surveyed Patrons



Source: Survey of Library Patrons

These patrons reported a wide variety of occupations, as shown in Table 14.

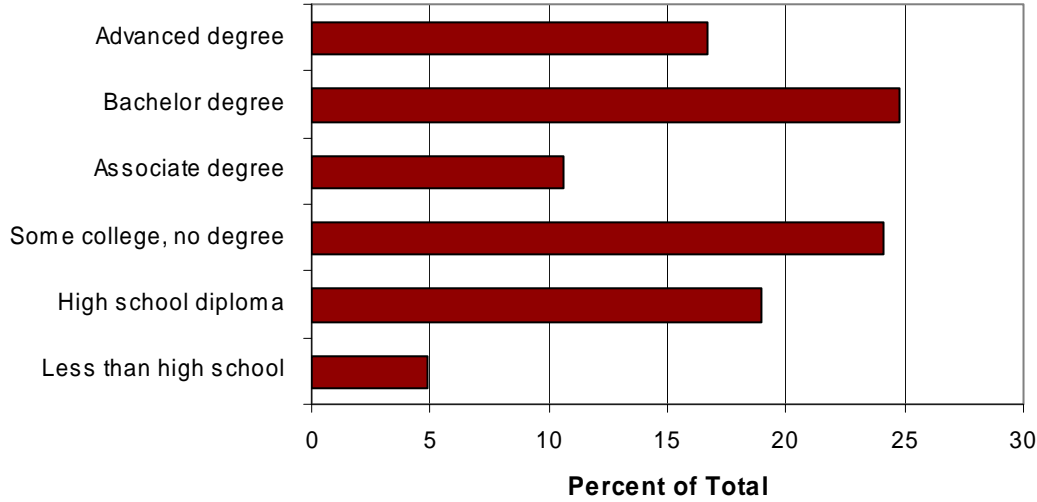
Table 14. Occupations of Surveyed Patrons

Occupation	Percent
Other	15.7
Full-time homemaker	14.2
Retired	12.8
Educator	10.7
Licensed professional	10.2
Business owner or manager	9.0
Student	8.7
Scientific or technical worker	5.6
Manufacturing worker	3.8
Skilled laborer or tradesman	3.7
Retail, hotel or restaurant worker	3.5
Transportation or warehousing worker	2.0

Source: Survey of Library Patrons

Not surprisingly, the surveyed patrons tended to be better educated than Hoosiers generally, as shown in Figure 3. Whereas only 19.6 percent of Indiana residents over 18 have a college degree, 41.4 percent of the library patrons reported having a degree. At the other end of the education spectrum, 4.9 percent of the patrons did not have a high school diploma, compared to 15.3 percent of Hoosiers over 18.

Figure 3. Educational Attainment of Surveyed Patrons



Source: Survey of Library Patrons

Library Usage and Attitudes

Library patrons who responded to the survey tended to be rather frequent visitors to their local libraries. Half reported visiting the library more than once a week, with another 40 percent visiting more than once a month. Only 3 percent of patrons reported using their public library less than once a month, as shown in Table 15.

Table 15. How Often Patrons Use the Local Library

Frequency of Library Use	Percent of Patrons
More than once a week	49.2
More than once a month	40.5
About once a month	7.0
Three to 10 times a year	2.4
Once or twice a year	0.8
Less than once a year	0.2

Source: Survey of Library Patrons

In the survey, patrons noted the three library services they used most often. It comes as no surprise that the most heavily used service was borrowing books (90 percent of patrons), followed by borrowing CDs or DVDs (68 percent). Less than a majority of patrons rated the remaining services among the top three, as shown in Table 16. Internet usage was the third most frequently used service. Small percentages of patrons reported usage of meeting facilities and electronic databases, which are common business uses of libraries.

Table 16. Three Library Services Used Most Often

Library Service	Percent of Patrons
Borrowing books	89.5
Borrowing CD/DVD media	67.6
Use the Internet	31.2
Reference materials	22.6
Read newspapers or magazines	16.7
Special programs (e.g. children's story time)	12.1
Study and work	11.2
Consult with reference librarian	9.5
Use the photocopier	8.6
Use meeting facilities	5.6
Use computer software	5.6
Use online databases or CD-ROMs	2.9

Source: Survey of Library Patrons

Table 17 indicates the percentage of patrons reporting various past uses of their local library. Several of these activities are or may be business-related, including the most common activity, getting scientific or technical information. However, some of the latter usage may relate to non-business interests in scientific or technical information (e.g., school assignments, hobbies or general interest). Several other uses of the library likely have direct impacts on the local business climate, as they relate to productivity at work, starting or expanding a business, seeking employment, sharpening computer skills and the like.

Table 17. Activities for which Patrons Have Used the Library

Activity	Percent of Patrons
Get scientific or technical information	49.8
Attend a children's program (e.g. story time)	43.0
Attend an adult program (e.g. book club)	30.2
Gain technical or computer skills	28.6
Look for employment	28.3
Get legal information	26.2
Learn how to be more productive at work	21.5
Research your ancestry	21.2
Get information about starting a business	17.3
Learn how to improve or expand a business	10.8

Source: Survey of Library Patrons

Survey of Business and Community Leaders

The IBRC emailed survey invitations to 550 individuals involved with business and economic development in the state. These included business owners and managers, school district administrators, local government officials, and executives of community foundations, chambers of commerce, SBDCs and other relevant organizations.

Many questions on this survey were taken from the survey of library directors and staff, focusing on leaders’ perceptions of the benefits of the public library to the community’s business and economic growth, support received by the library, their own usage of and satisfaction with library services and materials, and the value they perceive libraries to offer.

In total, 96 community leaders responded. They represented all regions of the state in various types of organizations, including school districts (21 percent), businesses (20 percent), chambers of commerce (17 percent), community foundations (15 percent), local economic development organizations (7 percent), political officials (6 percent), SBDCs (2 percent) and other community leaders (15 percent).

Economic Benefits and Impacts on the Business Community

Community leaders rated how beneficial various library services and resources are to business and economic growth in their community, as shown in Table 18.

Table 18. Benefits to Local Economic Growth: Community Leaders’ Ratings

How beneficial to business and economic growth in your community are the following library services or resources?	Percent of Respondents Indicating			
	not beneficial	slightly beneficial	moderately beneficial	very beneficial
High-speed Internet access for public use	5	11	15	69
Business periodicals	8	12	21	58
Space and facilities for holding business meetings	20	11	17	52
Economic and/or demographic data and statistics	10	14	32	44
Books or other information on starting or managing a business	5	17	37	41
Government documents and/or databases	13	17	33	37
Directories of businesses (local, state or national)	9	19	41	31
Resources for non-profit planning	15	24	33	28
Resources for real-estate related research	18	26	33	23
Business-related programs or workshops	24	20	33	23
Legal information or resources	11	20	48	21
Small-business tax information	9	29	43	20
Other specific business-related databases	11	26	45	19
Local job postings	34	23	26	17
Information on patents and/or trademarks	18	37	35	10

Source: Survey of Community Leaders

The community leaders’ ratings largely paralleled those of library directors, with a few notable differences. Thirty-one percent of library directors viewed local job postings as “very beneficial” to the community’s business and economic growth, compared to just 17 percent of community leaders. On the other hand, library directors tended to view government documents and databases as less valuable to business than did community leaders, receiving “very beneficial” ratings from 19 percent and 37 percent of respondents, respectively. There was a more marked contrast regarding business periodicals. A large majority of community leaders viewed them as very beneficial whereas only 19 percent of library directors did.

Community leaders next rated how various library services contribute to the economic well-being of their communities. Table 19 shows that community leaders ratings roughly parallel the ratings given by library directors. Directors viewed income tax preparation information as contributing somewhat more greatly than did community leaders. While only 20 percent of library directors saw bookmobile service as making a moderate or great contribution, 58 percent of community leaders gave it those ratings.

Table 19. Contribution to Community’s Economic Well-Being: Community Leaders’ Ratings

How have the following library services contributed to your users’ personal financial well-being?	Percent of Respondents Indicating			
	not contributed	contributed slightly	contributed moderately	contributed greatly
Information on income-tax preparation	8	14	38	40
Health information and resources	5	18	51	27
Information for accessing government agencies or resources	12	14	38	36
Resources for college planning	8	19	36	36
Consumer information to help with purchase decisions	11	17	39	33
Legal information and resources	14	23	48	15
Bookmobile	32	11	21	37
Job or career planning resources	14	31	46	9
Information on investments or business ventures	16	31	38	15
Salary statistics to support a pay raise	32	34	27	8

Source: Survey of Community Leaders

Community leaders’ perceptions of support for their public library coming from various community sources closely mirrored those of library directors. Between about one-half and three-fourths of community leaders either agreed or strongly agreed that their libraries received robust support from every listed source, and only one in 10 or fewer expressed any disagreement.

Asked how the presence of the public library affects the community in a number of ways, local leaders were generally quite positive, though not as strongly so as library directors. Community leaders’ responses, summarized in Table 20, clearly support the consensus that public libraries have beneficial effects on the local economy. The proportion of local leaders who disagreed or were undecided about these effects ranged from 10 percent in the case of improving local quality of life to 54 percent in the case of helping individuals find employment.

Table 20. Library Impact on Local Economy: Community Leaders' Ratings

How strongly do you agree or disagree that the presence of the public library in your community:	Percent of Respondents Indicating				
	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
Significantly improves the local quality of life	2	5	3	30	59
Significantly contributes to local economic prosperity	3	11	14	34	38
Increases local residential property values	4	3	25	48	20
Plays a vital role in helping individuals find employment	4	14	35	33	13
Attracts new businesses to the community	5	15	26	39	15
Plays a vital role in helping <i>existing</i> local businesses grow	5	12	28	37	18

Source: Survey of Community Leaders

The community and business leaders next indicated how often they use various business-related library materials or services. Interestingly, as shown Table 21, most of them use these resources rarely if ever. Only two resources on the list—meeting rooms and business related reference materials—were used several times a year or more frequently by at least a quarter of community leaders. The survey did not explore reasons for such infrequent use, and many possibilities could explain the findings, such as lack of interest, access to these resources from other sources (such as at work), or access to colleagues who use the library for these resources.

Table 21. Frequency of Community Leaders' Use of Library Resources

How frequently do you use the following library materials or services?	Percent of Respondents Indicating					
	never	less than once a year	several times a year	about once a month	a few times a month	more than once a week
Electronic databases (online or CD-ROM)	63	15	11	1	8	2
Internet access	59	19	12	5	2	3
Meeting rooms	40	23	24	9	4	0
Business related reference materials	39	31	21	5	1	2
Business related periodicals and trade journals	40	36	17	5	1	0
Resources to improve an existing business	61	28	10	1	0	1
Business reference librarian	52	31	14	2	1	0
Legal or government regulatory resources	47	37	16	0	0	0
Attending programs focused on economic development	60	24	14	1	0	0
Career enhancement materials	63	28	6	2	1	0

Source: Survey of Community Leaders

Table 21 reveals an interesting pattern underlying usage of library resources. The materials and services are sorted by the approximate total volume of annual usage implied by these data. For example, although 63 percent of the local leaders did not go to their libraries to use electronic

databases, 10 percent of them did so from a few dozen to several dozen times per year, accounting for most of the usage of those databases. This general pattern, replicated for several of the other resources, reveals a pattern very familiar in the business world: a small percentage of users account for the majority of usage.

Table 22 shows how satisfied business and community leaders were with the services and materials at their local library. Dissatisfaction is generally rare except, perhaps, for library outreach to business and library staff familiarity with business terminology. Sizable numbers of local leaders were neither satisfied nor dissatisfied (possibly due in some cases to unfamiliarity with the local library's offerings). Slightly more than half of respondents expressed satisfaction with their library's services and materials for businesses.

Table 22. Community Leaders' Satisfaction with Library Business Services and Materials

How satisfied are you with these services or materials at your local library?	Percent of Respondents Indicating				
	Extremely unsatisfied	Moderately unsatisfied	Neutral	Moderately satisfied	Extremely satisfied
Equipment and technology available to business patrons	0	4	36	22	37
Electronic accessibility of staff and resources from business offices	1	4	42	17	36
Speed of the response (or turnaround) to business requests	0	4	44	21	31
General services libraries provide business	0	9	34	34	23
Library staff's familiarity with business resources and materials	0	6	42	30	23
Business collections, periodicals, databases or other resources	0	6	42	31	20
Communication and outreach to business patrons	2	15	45	23	15
Library staff's familiarity with business terminology	0	11	46	29	14
Library staff's training to meet the needs of the business community	1	9	48	31	11

Source: Survey of Community Leaders

An interesting pair of questions posed to community leaders asked them first how much they think their county's library system costs each year per household (the actual state average in 2005 was approximately \$269), and second, how much of an increase per household they would advocate to support local library services. Estimates of per-household library cost ranged from \$3 to \$1,000, with a mean of \$127. Sixty percent guessed under \$100, 19 percent guessed between \$100 and \$199, and 23 percent guessed \$200 or more.

When asked about spending more to support libraries, 30 percent said they wouldn't support such a move, and another 23 percent were willing to increase spending by less than \$25 per household. Nineteen percent were willing to increase spending by \$25 to \$49, while 17 percent would support an increase of \$50 to \$99, and 11 percent would support a \$100 or higher increase. The mean increase across all respondents (including those who would not pay more) was \$31 per household.

Case Studies

Purpose

To understand better the role of public libraries in their communities' business life, the Indiana Business Research Center conducted personal interviews with public library directors and various business and community leaders in 12 Indiana communities. A secondary purpose of the community case studies was to assess community and business leader perceptions of the strength of public school libraries and media centers in helping prepare students to contribute to the area's economic vitality. In addition, the research team sought to assess the degree of communication and cooperation between public libraries and grade K-12 educators and school librarians. Appendix II provides a majority of the school system related answers.

About the Communities

The case study communities were chosen somewhat randomly but with some effort to achieve geographic and demographic diversity. These communities varied in service-area population:

- **Large:** Three communities had populations of more than 100,000.
- **Mid-Size:** Four communities had populations between 30,000 and 75,000.
- **Small:** Five communities had populations of 26,000 or less.

This breakdown of small, medium and large cities reflected a range of rural and urban cities and towns. The dozen case studies are a mix reflecting Indiana's local peculiarities. Some districts serve only one community or township. Others serve multiple communities and/or townships while still others serve entire counties.

To preserve confidentiality of survey participant responses, the school districts are referenced as **A through L** and the study communities as **M through X** (see Table 23).

Table 23. Library Districts Used In Case Study Analysis

Community Designation	Library District Population	Population Rank	School District Designation	Public School Enrollment	Enrollment Rank
LARGE			LARGE		
M		1	A	23,600	1
N		2	B	22,200	2
O		3	C	16,400	3
Average	153,000		Subtotal	62,200	
MID-SIZE			MID-SIZE		
P		4	D	11,100	4
Q		5	E	6,900	5
R		6	F	6,900	5
S		7	G	5,300	7
Average	45,000		Subtotal	30,200	
SMALL			SMALL		
T		8	H	4,200	8
U		9	I	3,800	9
V		10	J	3,200	10
W		11	K	2,400	11
X		12	L	2,200	12
Average	19,000		Subtotal	15,800	
Total	737,000		Total	107,000	
Average	61,400		Average	8,900	
Median	31,900		Median	6,100	

Note: Library and school districts are arranged by size; thus, the library and school district sharing a given line in the table are not necessarily in the same geographic area. Source: IBRC, using data from the Indiana State Library and local school district administrators

To ensure consistent and comparative results, the IBRC interviewed the following individuals in each community:

- The public library director
- The president or executive director of the local Chamber of Commerce
- An administrator from the local school district(s)
- The executive director or program director for the community foundation and other local development organizations

As time and opportunity allowed, other community leaders were interviewed, such as representatives of the local media, directors of economic and community development corporations and elected officials.

Statistics regarding public school library facilities were obtained from the local school district administrator. Data regarding school academics came from the Indiana Department of Education, and additional data were from Census 2000.

Interview Responses in General

The library directors were knowledgeable and willing to share their opinions in a candid fashion. In most cases, it seemed that promoting economic development for their community was not near the top of the library director's priority list. Their focus on economic development seemed to be related to the proportion of patron demand devoted to children's programs, genealogy research, general literature stock, DVDs, etc.

Much of their business-related demand comes from self-employed individuals and small businesses rather than from the larger business community that has access to personal computers and, in many instances, company business libraries. Interestingly, in many smaller communities the directors stated that much of their demand for assistance to small businesses and the self-employed comes from women wanting to start or improve a small business.

In interviewing business leaders, it was clear a majority were unaware of resources the public library could offer. County and community foundation administrators were somewhat more knowledgeable about library resources; in many cases, this may reflect their service on the library's board of trustees and/or involvement in addressing library financial grant needs. However, they too, had limited knowledge of most library business and economic resources.

The school administrators had better insight as to the public library's economic impact, perhaps reflecting their familiarity with operations of public non-profit services or the fact that many of them serve on the local library's board of trustees. It is interesting to note that in only three of the 12 communities surveyed do the public librarian and the school representative on the library board have regularly scheduled meetings. Like the other community leaders surveyed, the school administrators knew relatively little about public library outreach and assistance to the business community and economic well-being of their community.

In general, four ways were noted by which public libraries augment the public school educational programs:

- Being open hours (evenings and weekends) when school media centers are not
- Computers with Internet access available to students for research and projects
- Student tutorial and homework help programs
- Summer reading programs

In addition, in a very few school districts, each student is issued a public library card. In only two of the dozen communities surveyed do the schools and public library work in concert on any of these programs. In all other cases, the public library initiates and runs the educational programs without help or input from the schools.

Demand for K-12 educational assistance from public libraries comes from two other areas. First, students from private and parochial schools use the public library because their school library is not up to par with the public school media centers. Second, as the numbers of home-schooled children

continue to accelerate, more students and their families use the public library facilities and resources. In four of the 12 communities, home-school students and/or their families have regularly scheduled meetings one or more days a week at the public library.

Specific Responses from Public Library Directors

Of the 12 public library directors, 10 stated they or the library belonged to one or more organizations concerned with community and economic development. (Of the two non-joiners, one stated their board of trustees refused to let the library join the Chamber of Commerce.)

Eight of the public librarians stated their library was a Chamber member. Three serve on the boards of the local community foundation and/or economic development commission boards. Two serve on “Main Street” boards and two others on boards for community development corporations. Finally, two serve on boards of organizations focused upon adult literacy and job training.

Specific Responses from Other Community Leaders

In all case study communities, a member of the IBRC research team interviewed the county foundation executive director or program manager, as well as the presidents or executive directors of all 12 Chambers of Commerce. In addition, other community leaders were surveyed including representatives of local economic development organizations, elected officials and representatives of local print media.

Most interviewees ventured a guess as to how much the average household pays in property taxes to support the local library. The average of those who responded was \$60 annually. After being informed of the actual amount the average household pays via property taxes for library support, about a fifth stated they would not be willing to pay any additional taxes to support library services. The remaining 81 percent were willing to pay an average additional \$35 more per year for expanded library services. Thirty-six percent stated they would support their suggested increase only if the funds were used for outreach to and services for the local business community and/or adult education programs.

Of those who responded, 38 percent believed the “return on investment” in the library system was excellent and 43 percent rated it as good, while only 5 percent considered the return on library expenditures as poor.

Other than “better communication and outreach,” 41 percent of respondents had no specific ideas on how the local library might improve services to the business community. Among the specific comments on how libraries might be involved in better outreach:

- Author a regular column in the Chamber of Commerce newsletter regarding resources for businesses.
- Bring in representatives from the Small Business Administration and/or Small Business Development Corporation once a month to answer community questions and provide advice.
- Schedule Department of Workforce Development programs at the library.

- Host regional economic development conferences.
- Bring in economic development speakers or organizations.
- The community political leaders/appointees and school administrators (who make up the bulk of library trustees) need to recognize that the library boards need some representation from the business and economic development communities.

Specific Responses from School Administrators

Thirteen school administrators were asked a series of open-ended questions regarding their local public library (one community surveyed had two school districts within the public library patronage area).

1. How much money do you think your community's library system **costs each year per household**?
 - Six respondents had no idea and the remaining seven guessed an average of \$70.
2. When informed of the approximate amount of property tax dollars per household in their community (somewhat misleading since the amount does not take into consideration property taxes paid by businesses), they were then asked if they would be **willing to spend more for library services and, if so, how much of a dollar increase they would support**.
 - All respondents replied in the affirmative and were willing to see their property taxes increase by an average of \$45 annually to support more library services.
 - When asked if they would like to see those dollars go to specific library services, four said they would leave the decision of how best to use the additional funds to the board of trustees. Four would like to see those dollars go for adult literacy and/or educational programs for growing Hispanic communities. Three would like money to go toward expanded hours of operation and staffing. Only two cited the desire for their tax dollars to go toward expanded outreach efforts to the business community.
3. The respondents were asked if they were involved with any civic group or organization that used the library on a regular basis.
 - Five of the respondents answered in the affirmative. They included a county reading council, community foundations, an investment club, a civic sorority and a monthly Saturday legislative forum.
4. Respondents were asked how they would characterize the **return on investment** of the community's library system to the area's taxpayers.
 - Seven respondents (54 percent) considered the return on investment as "excellent," five considered it "good," and one rated the return as just "fair."

Most thought the most important argument for library support was that a strong library paid off in a better-educated community and workforce.

5. The final question posed was how might the local library improve services and outreach to local businesses and organizations concerned with economic development.
 - Only four respondents (31 percent) gave a specific response. Each, to some degree, remarked on the need for better communication and marketing by the library with and to the business and economic development communities. In particular, they cited the need for involvement with the local Chamber of Commerce as the first and best step. Two suggested it would be beneficial for their libraries to hold “business open houses” in a cooperative measure with the Chamber.

When asked to rate their agreement that the local school’s libraries significantly help prepare students to succeed in college level studies and be valuable contributors in the workforce, community leaders had an appreciably lower opinion of the performance of libraries/media centers than did school officials. Each group also responded to the assertion that the public library system receives robust community support from school administrators or school librarians. About two-thirds of community leaders either agreed or strongly agreed with the statement, while over 92 percent of school officials agreed or strongly agreed.¹⁵

Community Connections

Public libraries serve communities representing a wide range of ages with vastly different interests and needs. Given the great dissimilarities among libraries across the state, even for communities of similar size, it would appear that public libraries have differing views about their appropriate roles within the community. Interviews with library directors and community leaders suggest some discrepancies between what libraries believe the community wants and what the community desires from the libraries.

Many libraries face facility and budget constraints, particularly in communities once heavily reliant on manufacturing for their economic health. Even so, Table 24 attempts to measure the degree of connection for the case study libraries. The summary “connection ranking” is based upon the size of the community and the extent of library facilities, resources and services. The “connection ranking” measures are typically used as output measures to gauge library performance. The answer to the question “How is our library doing compared to other communities?” does not appear to be driven by the size of the library or the size of the community. Overall, smaller communities had, on average, more library visits per capita than medium sized communities. As the table shows, the relative weakness of the smaller libraries is in the use of electronic resources.

Table 25 matches library performance with the community’s socio-economic characteristics. Again, no discernable pattern emerges. One cannot state unequivocally that library performance and “community vigor” as measured by its socio-economic resources are related. Perhaps the take away point is that library performance is determined by the vision and energy of the library director and

¹⁵ For an extensive tabulation of the performance of case study community school libraries, please visit the website www.stats.indiana.edu/topic/libraries.asp.

staff, rather than the relative wealth and educational level and growth of its service region. While this comparison is a far from perfect, the case study interviews and ranking in the tables do seem consistent with the views expressed within the communities, as well as those of library staff and patrons surveyed online.

Table 24. Analysis of Community Connections

Library District	Percent of Population Registered	Circulation per Capita	Collection Volumes per Capita	Library Visits per Capita	Electronic Resource Use per Capita	Registered Population	Circulation per Capita	Collection Volumes per Capita	Library Visits per Capita	Electronic Resource Use per Capita	Average Community Connection Ranking	Public Library Connection
LARGE						Rank	Rank	Rank	Rank	Rank		Rank
M	84%	23	6	5	3.1	1	1	2	10	1	3.0	2
N	48%	15	4	12	0.7	11	4	6	1	9	6.2	5
O	56%	9	3	7	1.2	5	8	12	6	6	7.4	8
Average	64%	16	5	8	1.7							
MID-SIZE												
P	77%	10	3	5	1.6	2	7	11	11	3	6.8	6
Q	72%	19	7	9	1.3	3	2	1	4	4	2.8	1
R	53%	6	5	1	0.7	7	12	5	12	8	8.8	10
S	52%	11	5	10	2.1	8	5	4	2	2	4.2	3
Average	65%	10	4	5	1.4							
SMALL												
T	58%	8	4	5	0.0	4	10	8	9	12	8.6	9
U	54%	18	5	9	0.0	6	3	3	3	11	5.2	4
V	49%	8	3	6	0.5	10	9	10	7	10	9.2	12
W	50%	10	4	7	0.9	9	6	7	5	7	6.8	6
X	45%	7	3	6	1.3	12	11	9	8	5	9.0	11
Average	52%	10	4	7	0.4							

Notes: The rank of "1" is highest; "12" is lowest. "Average Community Connection Ranking" is an unweighted average. The averages for large, medium and small communities are averages of the totals for the entire group for each measure, not simple averages of the numbers presented in the table.

Source: IBRC, using Indiana State Library data

Table 25. Community Connections and Socio-Economic Characteristics

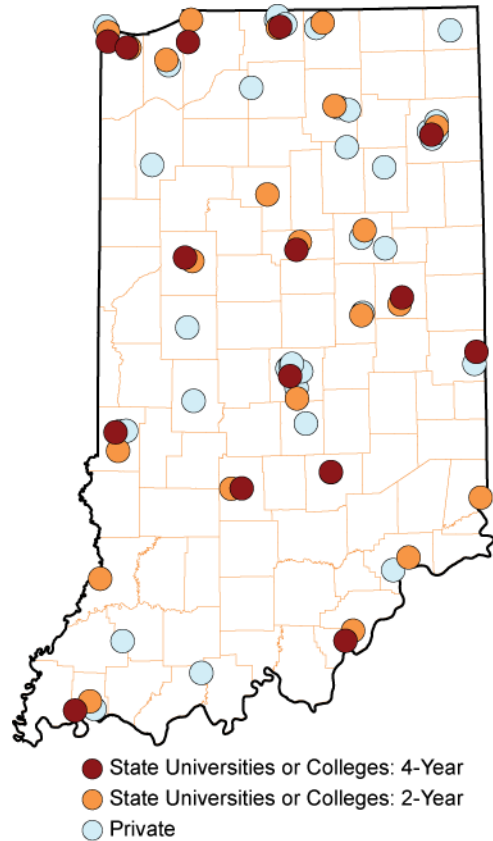
Library District	Public Library Connection *	Public Library Expenditure per Capita	Median Family Income	Adults w/ Less than High School Education	Adults w/ Bachelor's Degree or Higher	Families Below Poverty	County Population Growth Rate 1990-2005	Average Community Vigor Ranking	Community Vigor
LARGE	Rank	Rank	Rank	Rank**	Rank	Rank**	Rank		Rank
M	2	9	1	1	1	1	1	2.3	1
N	5	6	4	3	5	9	10	6.2	6
O	8	2	6	5	3	10	7	5.5	4
MID-SIZE									
P	6	7	3	2	2	4	5	3.8	3
Q	1	4	8	5	6	3	8	5.7	5
R	10	11	9	10	7	11	11	9.8	12
S	3	8	10	9	8	12	12	9.4	11
SMALL									
T	9	10	5	12	12	5	5	8.2	10
U	4	12	7	7	9	6	3	7.3	7
V	12	4	2	4	4	2	3	3.2	2
W	6	1	12	8	10	8	9	8.0	9
X	11	3	11	11	10	7	2	7.3	7

Note: * Ranking from Table 24. ** Ranking is based on the desirability of a particular characteristic. Hence, the community with the lowest proportion of adults without a high school education and the lowest proportion of families below the poverty level achieved the highest rank.
 Source: Indiana Business Research Center calculations using STATS Indiana and Indiana State Library data.

Academic Libraries

Are Indiana’s universities “engines of economic development”? Yes, if one considers the considerable research conducted by, and the research funding distributed to, our major educational institutions. Figure 4 shows Indiana’s universities. Nearly \$1 billion in research and development funding was granted to Indiana’s public and private universities in 2004 (the latest data available at this writing), as shown in Table 26 and Table 27.

Figure 4. Indiana’s Two-Year, Four-Year and Private Universities, 2006



Source: IBRC

Table 26. Academic R&D Funding at Indiana’s Public Universities by Source, 2004

Source of Funding	Amount (in Thousands)	Rank in United States	Percent of Total	Rank in United States
Total	\$ 759,110	15	100.0%	
Federal Government	315,191	19	41.5%	48
State and Local Governments	51,823	18	6.8%	29
Industry	47,792	10	6.3%	7
Institutional Funds	294,110	5	38.7%	4
All other sources	50,194	9	6.6%	12

Source: IBRC and National Science Foundation

Table 27. Academic R&D Funding at Indiana’s Private Universities by Source, 2004

Source of Funding	Amount (in Thousands)	Rank in United States	Percent of Total	Rank in United States
Total	\$ 81,847	21	100.0%	
Federal Government	50,145	22	61.3%	32
State and local Governments	2,175	18	2.7%	11
Industry	7,370	17	9.0%	5
Institutional Funds	16,532	17	20.2%	11
All other sources	5,625	20	6.9%	21

Source: IBRC and National Science Foundation

At the same time, Indiana is one of the nation’s leading “importers” of freshman students, with more than 11,000 non-resident freshmen enrolling in Indiana’s institutions of higher education in 2002 (NCES, the National Center for Education Statistics). In a national context, Indiana ranks second on this measure of attracting out-of-state students as presented in Table 28 and Table 29.

Table 28. College Freshmen Enrollment and Migration in Indiana, 2002

	Number	Rank in United States	Percent of Total	Rank in United States
Total Enrollment in Indiana - all degree granting institutions	342,064	16		
Freshmen Enrollment*				
Freshmen Enrollment in Indiana Schools	40,033	9	100.0%	
In-state students	28,725	9	71.8%	22
Out-of-state students	11,308	4	28.2%	30
Freshmen from Indiana Enrolled Anywhere	32,767	10	100.0%	
Going In-state	28,725	9	87.7%	3
Going Out-of-state	4,042	21	12.3%	49
Net Migration of Freshmen	7,266	2		

*Freshmen students in four-year degree-granting institutions graduated from high school in the previous 12 months
Source: National Center for Education Statistics

Table 29. Indiana’s Graduate Student Enrollment in Science and Engineering, 2003

	Number	Rank in United States	Percent of Total	Rank in United States
Science Graduate Students	6,364	16	100.0%	
Minorities	726	24	11.4%	39
On temporary visas	2,129	12	33.5%	2
Engineering Graduate Students	2,600	14	100.0%	
Minorities	254	21	9.8%	34
On temporary visas	1,446	13	55.6%	14

Source: National Center for Education Statistics

More than 3,600 academic libraries operate in the United States, including 79 in Indiana, according to the NCES. Indiana’s share of total U.S. academic libraries is 2.2 percent, nearly identical to Indiana’s share of the national population (2.1 percent). These top-level statistics, however, belie the true “size” of the institutions of which these libraries are a part. Table 30 and Table 31 report the number, employment and spending of Indiana’s academic libraries.

Table 30. Academic Libraries by Type of Institution

		United States		Indiana		Indiana as a Percent of United States
		Number	Percent of Total	Number	Percent of Total	
Total		3,653	100%	79	100%	2.2%
Four-Year		2,217	61%	55	70%	2.5%
Less than Four-Year		1,436	39%	24	30%	1.7%
Institutions Classified by Highest Degree Issued	Ph.D.	597	16%	12	15%	2.0%
	Master's	918	25%	32	41%	3.5%
	Bachelor's	668	18%	11	14%	1.6%
Public		1,581	43%	28	35%	1.8%
Private		2,072	57%	51	65%	2.5%

Source: National Center for Education Statistics

Table 31. Academic Library Staffing and Funding

Expenditures	United States	Indiana
Total Academic Libraries	3,653	79
Total Expenditures	\$5,751,247,194	136,074,301
Salaries and Wages	\$2,913,221,078	62,890,585
Percent of Total	51%	46%
Information Resources	\$2,157,531,102	54,199,607
Percent of Total	38%	40%
Operating	\$680,495,014	18,984,109
Percent of Total	12%	14%
Average Expenditures	\$1,574,390	\$1,722,460
Average Spent on Salaries	\$797,487	\$796,083
Average Spent on Resources	\$590,619	\$686,071

Source: National Center for Education Statistics

Economic Impact of Academic Library Expenditures

According to the NCES, Indiana’s college and university libraries had a combined staffing of 2,216 full-time equivalent employees in 2004. Additionally, these academic libraries circulated \$136.1 million throughout the state economy in the form of wages and expenditures on goods and services. Just as with public libraries, input-output analysis is the appropriate method to estimate the economy-wide effect of these activities (see Table 32 and Table 33). Such analysis reveals that, in total, expenditures of academic libraries supported 638 additional jobs and approximately \$112.1 million in additional economic activity in 2004 throughout Indiana.

Table 32. Academic Libraries’ Economic Impact on Employment

	Direct Employment	Indirect Employment	Induced Employment	Total Employment Impact
Indiana Academic Libraries	2,216	172.5	465.3	2,853.8

Source: IBRC

As with public library spending, the professional and technical services industry received the greatest benefit with 39 employees and nearly \$8 million in output attributed to academic library expenditures. The utility sector also saw a significant economic boost with \$6.5 million in output.

Table 33. Academic Libraries’ Economic Output

	Direct Output (\$ Millions)	Indirect Output (\$ Millions)	Induced Output (\$ Millions)	Total Output Impact (\$ Millions)
Indiana Academic Libraries	\$136.1	\$35.1	\$77.0	\$248.2

Source: IBRC

In terms of induced effects, approximately 465 Hoosier jobs and \$77 million in output resulted from the household spending stimulated by academic library spending. The health care and social services, government and manufacturing industry sectors received the greatest induced impacts.

Additional Observations about Academic Libraries

To learn more about the ways academic libraries support the needs of business and economic development, librarians from 24 academic libraries were asked to respond to a few questions. These libraries included private and public institutions ranging from small to very large, and were located in places ranging from Indiana’s largest cities to some of its smaller communities. The academic librarians completed a shorter survey than the public librarians that included several of the same questions.

Twelve academic librarians completed the survey. All reported that they participate in programs with other libraries for interlibrary loans and reciprocal privileges for students and/or faculty. In one instance, the institution has no library of its own but its students and staff have an arrangement with Indiana University-Purdue University Indianapolis to use IUPUI’s library facilities.

In contrast to public librarians, academic librarians were more inclined to rate the following services as beneficial:

- Provision of economic and/or demographic data and statistics
- Other specific business-related databases
- Provision of government documents and/or databases

With regard to how libraries have contributed to their users' personal financial well-being, academic librarians gave more beneficial ratings than did public librarians in the following areas:

- Job or career planning resources
- Information for accessing government agencies or resources
- Health information and resources

In rating their agreement that the presence of the library affects their community or state, academic librarians agreed or strongly agreed at a higher percentage than public librarians with regard to:

- Significantly contributing to local or state economic prosperity
- Playing a vital role in helping existing businesses grow

Academic librarians reported helping users search for or obtain new jobs and helping businesses research their markets at a slightly higher rate than public librarians. Moreover, public-university academic libraries also indicated that they help businesses research their markets slightly more often than either community public libraries or academic libraries of private institutions.

Seventy percent of academic library respondents stated that the percentage of their total budget devoted to meeting the needs of the businesses and the economy has been *decreasing* over the past three years, in contrast to most of the public library directors. The 30 percent that had experienced increases in their budget devoted to business resources said it was due to increased demand from the business community.

Those indicating decreased spending cited decreased demand from the business community (43 percent) and an overall reduction in overall library spending (also 43 percent). The most important reason cited for a decrease (71 percent) was that other library needs had higher priority, while 29 percent reported that a decreased budget share spent on meeting business needs was due to the cost of business materials rising less rapidly than other materials and resources.

None of these academic libraries noted any specific programs designed to reach out to the business community.

Key Findings, Recommendations and Conclusions

Key Findings

Public libraries in Indiana directly employed nearly 7,000 people (full and part-time) and were responsible for \$263 million in operating expenditures in 2005. The secondary and tertiary effects of library salaries and expenditures contributed an additional 2,000 jobs and \$216 million in economic activity in Indiana.

The direct economic benefits that communities received from libraries were far greater than the cost to provide those services. For each dollar of expenditures on its public library, the average Indiana community receives at least \$2.38 in direct benefits.

Library directors tend to feel that service and civic organizations and the local media support the library more robustly than do the local Chambers of Commerce or local development organizations. Perhaps this is because economic development and business organizations take a more focused view of what their library can contribute. Indeed, library directors themselves are more inclined to think that libraries contribute more to the local quality of life than to local economic prosperity. Both patrons and community and business leaders share the sentiment that libraries contribute more broadly than to just economic prosperity.

Many communities consider their libraries to be a social and economic anchor. In many of the case study communities, business leaders and community civic leaders are proud of their library. It is not uncommon for a visit to the library to be an important stop on the tour of the community when local leaders are trying to attract a firm to their community. The relative quality of the library, or the degree to which the library director is engaged in local economic development issues, may greatly influence the perspective of the local business people. In some cases, all the local leaders surveyed were convinced that their public library helps to attract new business to the community. In other communities, local leaders strongly disagreed with the statement that the library attracts new business.

While community leaders do not tend to be heavy users of library services, they are generally pleased with the technology and equipment available at their local library, and they're pleased with the responsiveness of library staff to their requests. They are generally less impressed with the business-related collections and databases, and a significant number are dissatisfied with the library's communication and outreach to the business community.

Patrons are about as likely to use a library for enhancing their business or workplace skills as they are to research their ancestry, yet a significantly higher proportion of library staff have special qualifications in genealogy research than in business resources.

Libraries serve as a channel for delivering educational services to toddlers, retirees and all ages in between. Patrons with less than a high school education—a vast majority between the ages of 18 and 24—responded as “student” to the question about occupation. (Perhaps those respondents

were still working toward a high school diploma.). Those with some college were well represented across all age groups and use the library as a resource to continue their learning. In addition, some colleges and universities offer classes in selected public libraries across the state. A few public libraries noted that the library collections at a local college or university are, in effect, an extension of their own and add to their collections based on the acquisitions of their institutional cousin.

Academic libraries tend to view themselves as having a more important role in economic and business development than do public libraries. This isn't surprising given that businesses fortunate enough to be within close proximity to academic libraries—especially those close to public universities—would probably consider academic collections and resources to be broader and deeper than the offerings of local public libraries.

The small survey sample associated with the case study communities does not lend itself to definitive statewide generalizations. That said, the perceptions of community and business leaders appear to differ from those of local school administrators and library directors regarding the quality of school libraries, and how school libraries contribute to the quality of graduates. Other studies that show the linkage between school libraries and educational attainment and graduate quality are probably better guides to confirm this connection.

Recommendations

The findings of this study lead to several recommendations that Indiana libraries should consider in order to strengthen their role in meeting the needs of the business community and promoting economic development.

Implement a Program to Expand Business and Economic Development Focus

The Indiana State Library (ISL) should commit itself to a strategic program to increase the role of local public libraries in supporting the needs of business and economic development. The ISL would then collaborate with local libraries to help them assess the needs of businesses in their communities. This program would tailor the approach for each local library according to the needs of its service area.

Following the needs assessment, the ISL would help the library prepare a plan specifying goals, objectives, budgets, activities, milestones and a process to evaluate the program's success.

Ideally, each library would designate a "business point person" to lead efforts to bolster the library's role in economic development in the community. This person would help the ISL assess the needs of Indiana's business community and contribute to designing a local program to meet those needs. The ISL should additionally ascertain and share the best practices of those libraries that are well engaged with the business community. Finally, the business point person would be a critical player in executing the program and implementing the best practices.

Increase Outreach to the Business Community

Based on survey responses and in-depth case studies from the present research, it is evident that many libraries have forged strong relationships with the business community. Several library directors noted that economic development has become a priority for them, their staff and their

budget commitments. Moreover, several directors of local Chambers of Commerce noted that they are extremely pleased with the services the library offers and they consider the local public library to be an economic anchor for their community.

Unfortunately, these glowing opinions are not universal. Even business and community leaders who are satisfied with their community's library thought the library could do more to promote the business-related services it offers. In some cases, the local library needs to reach out to business leaders. Many business people do not think of libraries as a primary source of information. Many sources of information are available at any office with an Internet connection through the INSPIRE portal, but how many businesses avail themselves of this service?

The exemplary libraries tended to have rather entrepreneurial library directors. The role of salesperson may not be a typical role of a library director, but it would appear that researching how the library can better serve the needs of local businesses and then marketing the library's services are critical for successfully serving this important constituency. In the future, as changing technologies transform the business and employment environment, the need for entrepreneurial library directors who are responsive to changes in the library's operating environment will become even more important.

Thus, the paradigm should continue to shift from "open the library doors and people will come" to extensive outreach to the business community to promote library services.

Expand Business and Economic Development Services

In addition to reaching out to the business community to assess the local needs of businesses and to promote the services that are available at the public library, the ISL and local libraries may want to consider augmenting their business-related services. The following actions could benefit many libraries:

- Expand access to business reference librarians and librarians trained to serve the needs of business and economic development. A majority of libraries do not have a staff person specially trained to serve patrons that request business or economic information. In some cases, it may be appropriate for a library to train a staff person or two in business resources. Another option would be something to the effect of a "dial a business reference librarian" service that would network the business librarian resources across the state. Businesses could either dial a toll-free number directly to speak to a business librarian or access that resource person through e-mail or a website. With modern communications technology, any business librarian across the state who was not currently serving a patron could be the person handling the new request.
- Enhance Web-based applications that allow patrons—businesses or otherwise—to access data resources, or at least request data, through the local public library's website. Many patrons can request data or conduct business with the library via the Internet. Most business and community leaders are very satisfied with the fast turn-around on requests. In addition to insuring easy access for all businesses, expanding the data offerings is in order. While several important sources of information are available through INSPIRE, further expansion of database offerings should be considered.
- Many libraries sponsor seminars and workshops on economic, business or career development, and many more should consider offering this type of outreach.

Notification for these events is easily disseminated via e-mail. In addition, community leaders consider meeting room space to be one of the more important services that libraries provide businesses, yet less than 80 percent of Indiana libraries provide meeting space. Libraries should market this service as well.

The following anecdote presents an interesting perspective of a library's economic value and contribution to local economic development. A small business owner was looking for a location to expand his operations in Indiana. He considered several small communities before deciding on the one where our study interview took place. When asked why he finally selected this particular Hoosier community he replied, "It was the only one where the library was bigger than the jail."

Refine and Expand Data Collection

The ISL annually collects a wealth of data from each of Indiana's public libraries, which can be a significant burden for the local libraries. Without this large collection of information, however, much of the analysis in this report would not have been possible. The research team nonetheless had to make many assumptions because needed data were not available. Small improvements in library data collection would allow for a richer understanding of libraries' economic impacts. Maintaining current impact information could prove helpful when libraries desire to demonstrate their value.

First, the ISL should request disaggregated library circulation data. The current approach treats the circulation of all materials the same regardless of media type. Combining all circulation fails to acknowledge the range in values of various library offerings. At a minimum, libraries should keep separate circulation statistics for young adult and adult books, children's books, books on CD, films, music CDs, electronic book downloads and periodicals. They should also report renewals separately from initial borrowing.

Second, the ISL should expand the event types for which it collects data, even if the federal government does not require it, maintaining an event log for any service that may have a market value. Meeting room use has an economic value. Materials used by parents who home-school are also valuable. Libraries should collect data on the number of those accessing electronic databases—especially business-related databases that are costly to maintain—and the number of downloads. The number of computer users is important, but so are the durations of patrons' computer uses and the site that they visit (which can be tracked without compromising individual privacy rights). In order to calculate an average length of time per reference librarian request, libraries should record and report the length of time each reference librarian transaction takes. They could record the use of periodicals, bookmobiles and other extension activities. To reduce the burden to library staff, monitor each section or service of the library for a month. One month's worth of good data, adjusted for seasonal variations in library usage, would suffice in ascribing an annual value. To the degree that libraries count and report the services they provide, the benefit-cost ratio of the library becomes clearer.

Third, as a part of the strategic planning associated with expanding the economic and business development focus, the ISL would also highlight and track business use. In order to monitor the program's success, the ISL would, for example, track business use of the INSPIRE¹⁶ research tool,

¹⁶ The Indiana Cooperative Library Services Authority (INCOLSA) provided the INSPIRE usage data too late to incorporate into the report. Ideally, business, in-library use and private home use of the INSPIRE portal would be collected from the log of web usage statistics and reported annually.

business-related meeting room use, and record the number of requests businesses make to the reference desk.

Help Local Libraries Develop Their Own Benefit-Cost Analyses

Public libraries must continually demonstrate the critical role they play in their communities. With this in mind, the ISL should encourage local public libraries to produce their own annual benefit-cost analysis. The ISL would be well advised to encourage local public libraries to track the use of each type of service and use a standard, easy-to-use template with standard prices for each service to present a table that summarizes the value the library provides the community.

This analysis need not be exhaustive nor time consuming for the local libraries. A simple matrix that lists the item or service in one column and its comparable market value in another would suffice; this could be set up as an Excel template for ease of use. The local library would simply insert the annual circulation or usage of each item or service to determine its total market value. By comparing its total market value to its annual operating expenses, a local library can estimate its benefit-cost ratio. Libraries should include in their analysis any specialized services they offer, such as educational programs, tax preparation services, etc.

Several library websites host such a “library use valuation calculator.” Most, if not all, do not provide prices for the library services and imputing a price for a library service is the difficult part. As a result, there is a strong possibility that some library services may be over-valued. Even within a particular geographic region, there may be a great difference in the price that one library places on a service over another library. In order to standardize the valuation calculation, and ensure that service prices are economically defensible, Indiana’s library use valuation matrix is presented in Appendix V. (It is also available on the web at www.stats.indiana.edu/topic/libraries.asp.)

In addition, libraries should track any travel and tourism generated by the library’s collections or programs. This is especially true if the local public library lays claim to having an economic impact because it attracts people from out of state to eat at local restaurants and stay in local lodging. How a library would track this element may require some creativity. Perhaps an out-of-state visitor would be entered in a sweepstakes if she or he takes a survey asking how long the person will stay in the town because of a library-related activity and how much the person expects to spend.¹⁷ While burdensome to collect, such data would carry more weight than anecdotes.

Encourage Public Libraries to Aggressively Promote Their Economic Significance

There is nothing original in this recommendation. Many of the studies attempting to measure the economic value of libraries have recommended that the libraries use the numbers to show that communities benefit from libraries, and at a rate that is well above the cost to support them. With a solid benefit-cost analysis in hand, local libraries should proactively share information about the economic contribution they make to the community. A well-orchestrated campaign, which could include press releases, postings on the library property and website, and mailings to local politicians and community leaders, will help raise awareness of the economic benefits of libraries. The ISL should actively encourage local libraries to engage in this process.

¹⁷ The more detailed information about a tourist’s length of stay and spending patterns the better. The IBRC can assist in developing such a survey and calculating the economic impact of tourism.

Conclusion

Indiana's public libraries are a good value. Not only does a dollar spent on libraries earn an average "return" of \$2.38 in direct benefits, the library serves as an important channel for literacy, education and information. Indiana's citizens are generally pleased with their public libraries and consider them important community assets. Those surveyed also think that their library contributes to local economic well-being and is an important resource for businesses.

Many business and community leaders are enthusiastic about the role that their library plays in economic and business development. The performance across libraries, however, is uneven. Not all business and community leaders are enthusiastic about their library's performance. In order to assume a more vital role in economic and business development, libraries need to bolster their business resources and strengthen their outreach to the business community. Designing and implementing a strategic plan to expand the Indiana State Library focus on economic and business development is recommended.

Post Script

This report was in final review when the Americans for Libraries Council (ALC) released its report *Worth Their Weight: An Assessment of the Evolving Field of Library Valuation*. The present report stands up well in light of *Worth Their Weight* and the valuation studies that it chronicles. It's worth noting that an important guidepost for the present study, *The Role of Public Libraries in Local Economic Development* (Glass et al. 2000), was not mentioned in *Worth Their Weight*, perhaps because the Glass study emphasized economic development rather than estimating direct benefits. The present study not only measured direct economic benefits but also assessed the impact libraries can have on economic development.

The *Worth Their Weight* report pursued three general goals:

- Characterize public library valuation research and its tools and methods.
- Identify opportunities to expand and accelerate valuation research using techniques developed in the business and nonprofit sectors.
- Suggest a public policy agenda for linking valuation research and the needs of public library advocates.

The strength of the ALC report lies in achieving the second and third goals. Finding methods to systematically catalogue and measure non-economic values for the presence of libraries is of critical importance, especially considering that it is difficult to put a market price on something like "social capital." The ALC report achieved the first goal, but the goal itself was limited. The first goal did not include moving the field of valuation to the next level. The report chronicles many valuation studies, but makes no bold statement about how to conduct a rigorous and comprehensive economic valuation study. The report does cite several websites that offer "library use valuation calculators," but these calculators leave the difficult and politically charged business of imputing a price for specific library services to someone who may not be well-versed in economic theory and who may be very interested in inflating benefits. *Worth Their Weight* left the thorny issue of assigning prices to

library services unresolved. On the other hand, that left to the present study the opportunity to propose a valuation methodology that is defensible to economists and persuasive to a state appropriations committee to this study.

References

- Barron, Daniel D., Robert V. Williams, Stephen Bajjaly, Jennifer Arns, and Steven Wilson. 2005. The Economic Impact of Public Libraries on South Carolina. A study prepared for the University of South Carolina.
- Bateman, I. J., and K. N. Willis, eds. 1999. *Valuing environmental preferences: Theory and practice of the contingent valuation method in the US, EU, and developing countries*. Oxford: Oxford University Press.
- Bogart, Dave, ed. *The Bowker Annual Library and Book Trade Almanac, 51st Edition*. New Providence, NJ: R.R. Bowker, 2006.
- Bogart, W. T., and B. A. Cromwell. 1997. How much more is a good school district worth? *National Tax Journal* 70 (2), 3–29.
- . 2000. How much is a neighborhood school worth? *Journal of Urban Economics* 47: 280–305.
- Brekke, K. A. 1997. The numéraire matters in cost–benefit analysis. *Journal of Public Economics* 64: 117–123.
- Carson, R. T., N. E. Flores, and R. C. Mitchell. 1999. The theory and measurement of passive-use value. In I. J. Bateman, and K. G. Willis, eds. *Valuing environmental preferences* (pp. 97–130). Oxford: Oxford University Press.
- Cummings, R. G., and G. W. Harrison. 1995. The measurement and decomposition of non-use values: A critical review. *Environmental and Resource Economics* 5: 225–247.
- Ellis, K. B. 1994. The challenge of measuring the economic impact of public library services. *North Carolina Libraries* 52 (2), 52–55.
- Fitch, L., J. Warner. 1998. Dividends: The Value of Public Libraries in Canada. *The Bottom Line: Managing Library Finances*. 11(4).
- Fraser, B. T., T. W. Nelson, and C. R. McClure. 2002. Describing the economic impacts and benefits of Florida public libraries: Findings and methodological applications for future work. *Library and Information Science Research* 24: 211–233.
- Glass, Robert H., Norman Clifford, Brian Harris and Carol Rose. 2000. The Role of Public Libraries in Local Economic Development. Report No. 260 prepared for The Kansas State Library by the Policy Research Institute, The University of Kansas.
- Griffiths, Jose-Marie, Donald King, Julie Harrington, Thomas Lynch, and Christinger Tomer. 2004. State of Florida Taxpayer Return on Investment in Public Libraries. Prepared for the State Library and Archives of Florida. Available from <http://dhis.dos.state.fl.us/bld/roi/publications.cfm>.

- Harless, D. W., and F. R. Allen. 1999. Using the contingent valuation method to measure patron benefits of reference desk service in an academic library. *College and Research Libraries* 60: 56–69.
- Holt, Glen E., Elliott, Donald and Moore, Amonia. 1999. Placing a value of public library services. *Public Libraries* 38: 98–108.
- Holt, G. E., D. Elliot, and C. Dussold. 1996. A framework for evaluating public investment in urban libraries. *The Bottom Line: Managing Library Finances* 9 (4), 1–11.
- Imholz, Susan and Jennifer Weil Arms. 2007. Worth Their Weight: An Assessment of the Evolving Field of Library Valuation. A study prepared for the Americans for Libraries Council. New York. Available from <http://www.actforlibraries.org/pdf/WorthTheirWeight.pdf>
- Indiana State Library. Statistics of Indiana Public Libraries 2005. Available from <http://www.statelib.lib.in.us/www/isl/ldo/statsmenu05.html>. (Accessed March 28, 2007).
- Kopp, R. J., W. W. Pommerehne, and N. Schwarz, eds. 1997. *Determining the value of non-marketed goods: Economic, psychological, and policy relevant aspects of contingent valuation methods*. Boston: Kluwer.
- McClure, C. R., B. T. Fraser, T.W. Nelson, and J.B. Robbins. 2001. *Economic benefits and impacts from public libraries in the State of Florida*. Tallahassee, FL: Information Use Management and Policy Institute, School of Information Studies. Available from <http://dlis.dos.state.fl.us/bld/finalreport/> (accessed March 12, 2007).
- McClure, C. R., and J.C. Bertot, 2000. Public library use in Pennsylvania: Identifying uses, benefits, and impacts. Harrisburg, PA: Office of Commonwealth Libraries.
- Morris, A., J. Sumsion, and M. Hawkins. 2002. Economic Value of Public Libraries in the UK. *Libri Journal* 52: 78-87.
- Niewijk, Robert K. 1994, Misleading Quantification: The Contingent Valuation of Environmental Quality, *Regulation* 60(1), 60–71. Available from <http://www.cato.org/pubs/regulation/reg17n1-niewijk.html> (accessed May 10, 2007).
- Orr, R. H. 1973. Measuring the goodness of library services: A general framework for considering quantitative measures. *Journal of Documentation* 29: 315–332.
- Putnam, Robert D. 2000. *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon & Schuster.
- Sawyer, R. 1996. The economic and job creation benefits of Ontario public libraries. *The Bottom Line: Managing Library Finances* 9 (4): 14–26.
- Siegfried, John R., Allen R. Sanderson and Peter McHenry. 2006. The Economic Impact of Colleges and Universities. Working Paper No. 06-W12. Vanderbilt University. Available from <http://www.vanderbilt.edu/econ/wparchive/working06.html>

Appendix I: Profile of Indiana Public Libraries

Libraries exist in most nations of the world, although public libraries are a uniquely American institution hearkening back to the early days of our founders. Libraries are considered essential to an educated and civilized community. The majority of Indiana’s citizens are served by a public library that makes learning, knowledge and creative entertainment freely available in many forms throughout the year. Like other essential forms of infrastructure in Indiana, they are supported through property taxes and, to a smaller extent, federal and state distributions.

Table 34. Public Library Employment and Expenditure Data, 2005

2005 Public Library Employment Data	Staffing Levels	Percent
Total Employment	6,898	100%
Master's Degree Staff	957	14%
Other Staff	5,941	86%

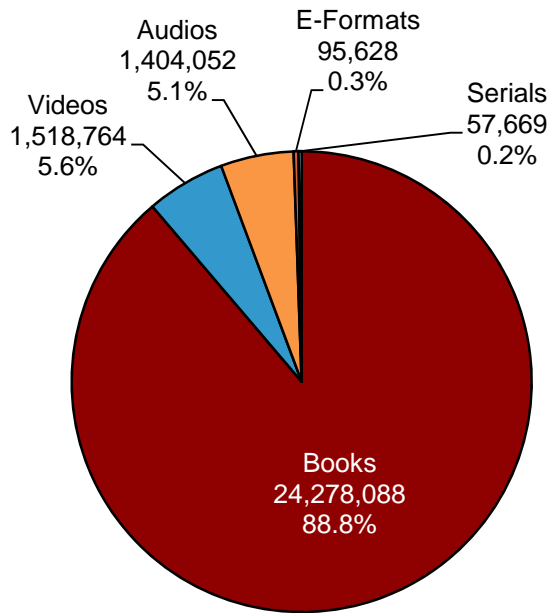
2005 Public Library Expenditure Data	Expenditures	Percent
Personal Services	\$163,446,407	62%
Supplies	6,745,567	3%
Services	52,968,588	20%
Capital Expenditures	41,913,522	16%
Total Operating Expenditures	\$265,074,083	100%

Source: IBRC, using Indiana State Library data

The average wage per library job in Indiana was \$18,783 in 2005, just 53 percent of the state average for all payroll jobs (\$36,602). Notably, a significant proportion of library employment is part-time or for non-professionals.

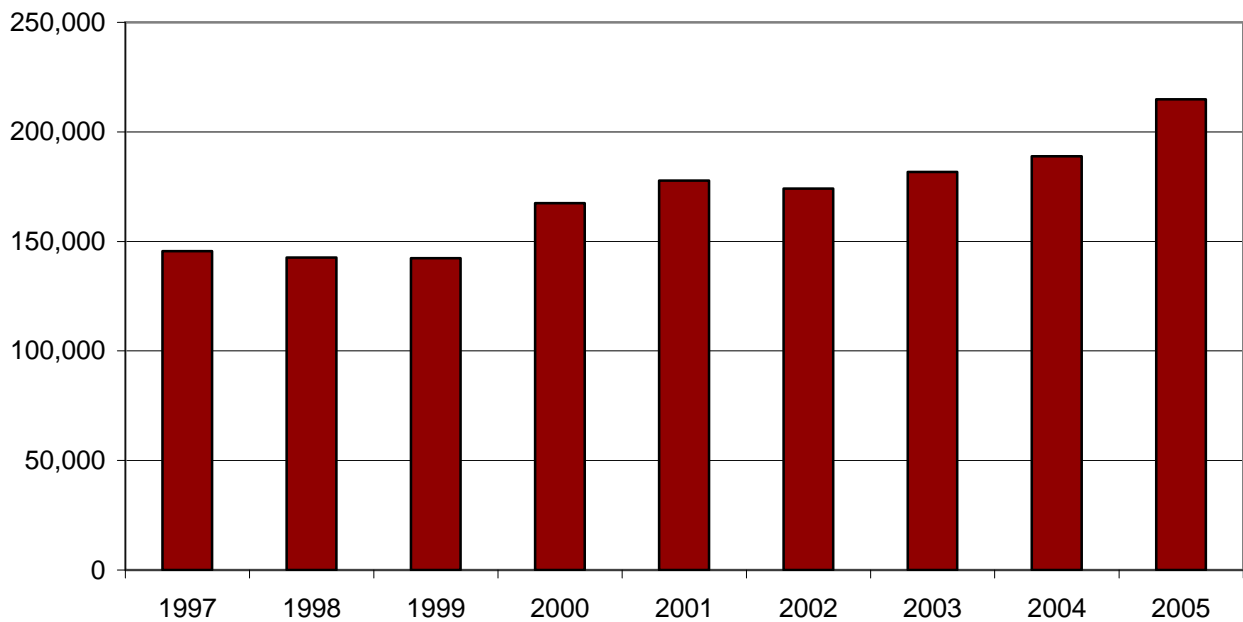
Indiana’s commitment to public libraries continues through the increasing use of those community services. A record 70 million books and other materials were circulated in 2005, an increase of 2 million over 2004 and a 26 percent increase since 1997. A breakout of public library material holdings appears in Figure 5.

Figure 5. Public Library Material Holdings, 2005



Indiana’s library users can take advantage of the materials available in virtually any of the libraries in the state, since the majority of libraries share their resources through a networking system called interlibrary loan. Such loans have grown from 150,000 transactions in 1997 to more than 200,000 in 2005 (see Figure 6). This type of leveraging will likely become more important in coming decades due to budget pressures but also because of the efficiencies allowed by technology to encourage such sharing, which makes the holdings of libraries more and more transparent to the ultimate user.

Figure 6. Interlibrary Loan Transactions, 1997-2005



Many Hoosiers recall going to the public library as a child to enjoy story hours. However, many people seem to realize there is more to the library, with adult attendance increasing significantly over the past several years (Figure 7 and Figure 8). Public libraries in Indiana are open days, nights and weekends, and attendance at events sponsored by or held in the library has also continued to climb. In 2005, more than 2.5 million Hoosiers attended a library program. If one were to assign a commercial dollar value to such attendance, that value would likely be substantial.

Figure 7. Attendance at Library Programs in 2005

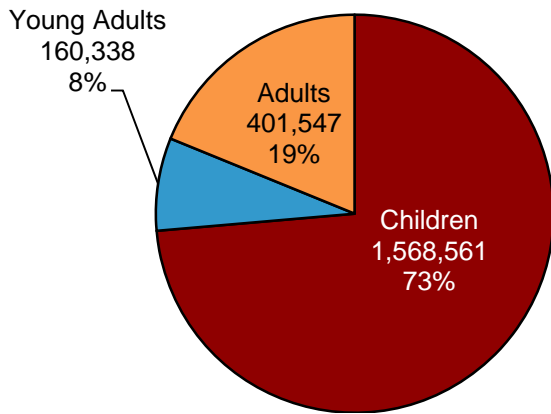
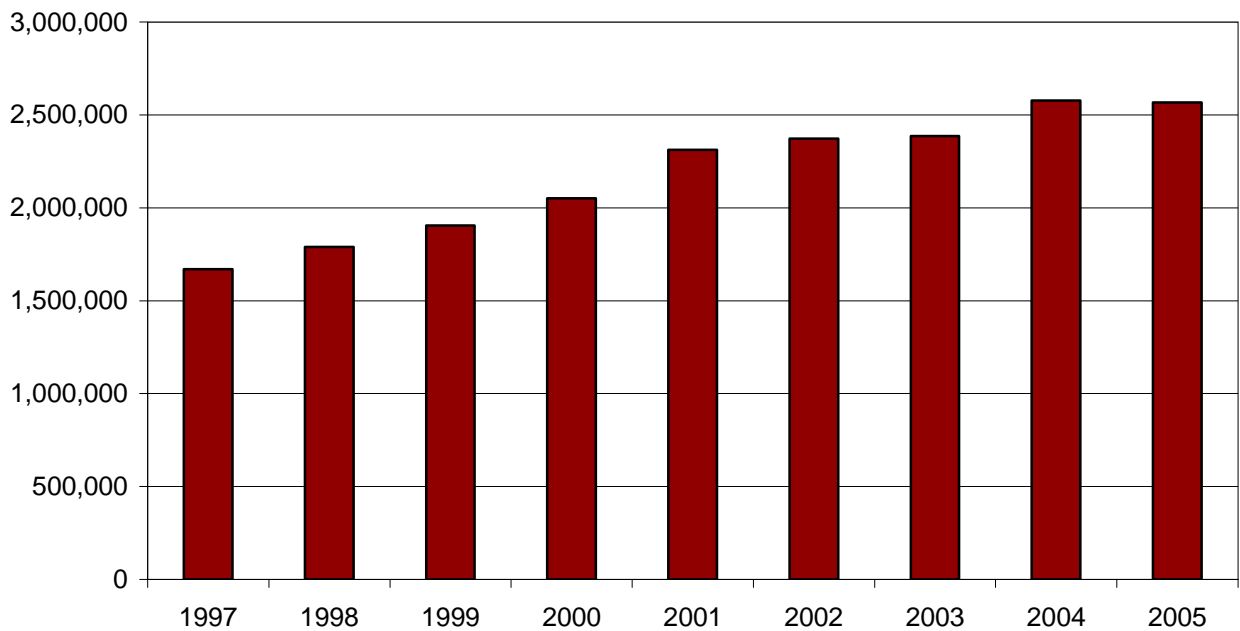


Figure 8. Attendance at Public Library Programs, 1997-2005



Appendix II: Profile of Indiana Academic Libraries

The academic landscape in Indiana is a rich and diverse one, with dozens of public and private colleges and universities granting degrees ranging from associates to doctorates. Indiana’s ranking (16th nationally) on the number of academic libraries is on par with its population share of the nation. Table 35 shows us that our ranking varies considerably depending on the degree-granting level of the institution.

For example, Indiana ranks seventh in the number of academic libraries that are part of institutions granting Master’s degrees, a likely testament to the significant number of private colleges in the state, such as Wabash, Hanover, Earlham and St. Joseph colleges. Indiana’s ranking of libraries in those institutions that are less than four-year is significantly lower, but resource sharing agreements between such institutions and their larger peers may account for not having an institutional library. While not within the scope of this study, it might be appropriate for the Indiana State Library to meet with such colleges to explore options to ensure that such resource sharing can be considered by those not currently doing so.

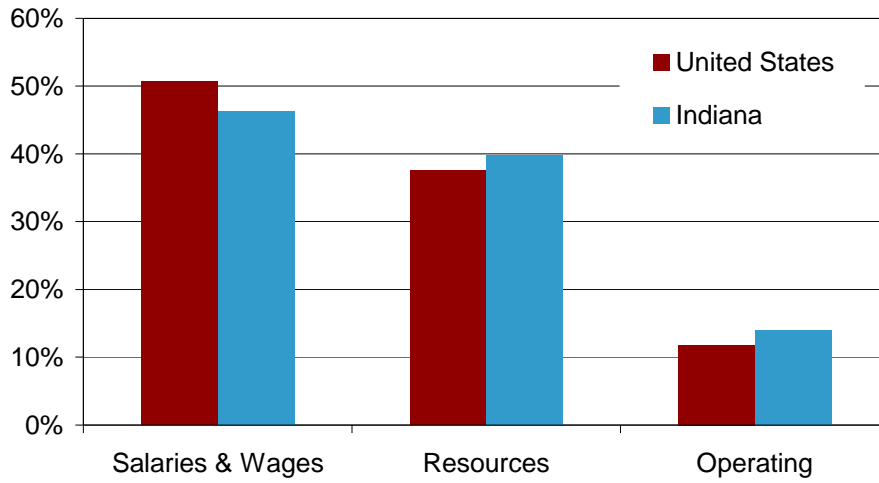
Table 35. Academic Libraries in Indiana

79 Academic Libraries as Counted by NCES	Number by Type	Rank in the U.S.
Four-Year	55	15
Ph.D. Granting	12	17
Master's Granting	32	7
Bachelor's Granting	11	21
Less than Four-Year	24	23
Public	28	24
Private	51	13

Source: IBRC and National Center for Education Statistics

Figure 9 shows the share of total library expenditures represented by personnel costs, library resources and operating expenses. The expenditure shares for Indiana’s academic libraries are quite similar to academic libraries nationally, with salaries and wages representing a slightly lower percentage of expenditures in Indiana; the other two categories’ shares are correspondingly higher.

Figure 9. Academic Library Expenditures by Type (as a Percent of Total)



Source: IBRC and National Center for Education Statistics

Case Study Community Perceptions of Local Schools, School Libraries and Public School Performance

For an extensive tabulation of Indiana case study communities regarding their public schools, please visit www.stats.indiana.edu/topic/libraries.asp.

Appendix III: Survey Instruments

Surveys were used to assess the current capacity of the state's public libraries to serve the informational needs of the business community and the extent to which businesses and other economic entities currently make use of public library facilities. In addition, they explored public libraries' perceptions of their role in serving the business community and where such service fits into their overall priorities. Finally, the surveys solicited the attitudes of the business community and economic development agencies about the use of the public library for business purposes and possible changes that would allow libraries to better serve the needs of the business community.

The IBRC used four different survey instruments to target library directors, library staff, library patrons and community and business leaders; these appear on the following pages.

Survey of Library Directors

Thank you for participating in this study of the economic benefits of public libraries in the state of Indiana. The study is being conducted for the Indiana State Library by the Indiana Business Research Center at Indiana University's Kelley School of Business. The survey will take approximately 15 minutes of your time.

Library Characteristics and Contact Information

1. Library Name _____ Library code _____
2. Address _____
3. Director's Name _____ Phone _____ E-Mail _____
4. Population of Service Area for your library system: _____
5. Total staff of your library system (full-time equivalent positions at all locations): _____ FTE positions
6. This year's total operating budget for your library system: \$ _____
7. Number of hours per week your main library location is open to the public: _____ hours per week
8. Does your library participate in programs with other libraries or systems for interlibrary loans, reciprocal privileges for card-holders, or similar arrangements? _____ (circle answer) 1 YES / 2 NO

Economic Benefits and Impacts on the Community

9. Please rate how beneficial to business and economic growth in your community you consider the following library services or resources to be. (Circle your answers. If a particular item is not available at or from your library, leave it blank.)	not beneficial	slightly beneficial	moderately beneficial	very beneficial
Small-business tax information	1	2	3	4
Local job postings	1	2	3	4
Directories of businesses (local, state or national)	1	2	3	4
Economic and/or demographic data and statistics	1	2	3	4
Other specific business-related databases	1	2	3	4
Legal information or resources	1	2	3	4
Information on patents and/or trademarks	1	2	3	4
Space and facilities for holding business meetings	1	2	3	4
Business-related programs or workshops	1	2	3	4
High-speed Internet access for public use	1	2	3	4
Resources for real-estate related research	1	2	3	4
Resources for non-profit planning	1	2	3	4
Government documents and/or databases	1	2	3	4
Business periodicals	1	2	3	4
Books or other information on starting or managing a business	1	2	3	4

10. Please rate how the following library services have contributed to your users' personal financial well-being. (Circle your answers. If a particular item is not available at or from your library, leave it blank.)	not contributed	contributed slightly	contributed moderately	contributed greatly
Job or career planning resources	1	2	3	4
Salary statistics to support a pay raise	1	2	3	4
Information on investments or business ventures	1	2	3	4
Information on income-tax preparation	1	2	3	4
Information for accessing government agencies or resources	1	2	3	4
Resources for college planning	1	2	3	4
Legal information and resources	1	2	3	4
Health information and resources	1	2	3	4
Consumer information to help with purchase decisions	1	2	3	4
Bookmobile	1	2	3	4

11. As a percentage of your library's total budget over the past three years, has spending to meet the needs of businesses and economic development been **increasing** or **decreasing**? (Circle the appropriate answer)
 1 Increasing / 2 Decreasing

12. If your budget share increased, please explain what accounts for the increase by indicating all reasons that apply. (If your share has decreased, please skip to the next question)

- increased demand from the business community
- greater overall revenues permit meeting needs unmet in the past
- higher priority needs have already been met
- the cost of business materials has been rising more rapidly than others
- other (explain): _____

13. If your budget share decreased, please explain what accounts for the decrease by indicating all reasons that apply. (If your share increased, please skip to the next question)

- decreased demand from the business community
- reduction in overall library revenues
- other library needs now have higher priority
- the cost of business materials has been rising less rapidly than others
- other (explain): _____

14. To what extent do you agree or disagree that your library receives robust community support (e.g., funding, in-kind, political, volunteer services, etc.) from each of the following:	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
School administrators or school librarians/media center directors	1	2	3	4	5
The local/community foundation	1	2	3	4	5
Local elected officials	1	2	3	4	5
Your state Representative or state Senator	1	2	3	4	5
Representatives of local media	1	2	3	4	5
Local economic development organizations	1	2	3	4	5
Civic or service organizations in your community	1	2	3	4	5
Parent-teacher organization or association	1	2	3	4	5
Chamber of commerce	1	2	3	4	5

15. How strongly do you agree or disagree that the presence of your library in the community :	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
Significantly contributes to local economic prosperity	1	2	3	4	5
Significantly improves the local quality of life	1	2	3	4	5
Plays a vital role in helping <i>existing</i> local businesses grow	1	2	3	4	5
Attracts new businesses to the community	1	2	3	4	5
Plays a vital role in helping individuals find employment	1	2	3	4	5
Increases local residential property values	1	2	3	4	5

16. Please rate how many times per year (on average) your library provides services or information that: (Circle the best choice for each item. If a particular item does not apply to your library, leave it blank.)	never	Less than once a month	Several times per month	Several times a week	About once a day	Several times a day
Helps users search for or obtain a new job	0	1	2	3	4	5
Helps users with career decisions	0	1	2	3	4	5
Makes users more productive in their jobs	0	1	2	3	4	5
Supports starting a new business	0	1	2	3	4	5
Helps improve an existing business	0	1	2	3	4	5
Helps a business research its markets	0	1	2	3	4	5
Helps with the business incorporation process	0	1	2	3	4	5
Helps a business obtain other needed information	0	1	2	3	4	5

17. To what extent do you agree or disagree that your local schools' libraries or media centers significantly help prepare students to:	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
Succeed in college level studies	1	2	3	4	5
Be valuable contributors in the workforce	1	2	3	4	5

18. Please rate the overall quality of your local school system's libraries or media center facilities at each level:	poor	fair	good	very good	excellent
Elementary school	1	2	3	4	5
Middle school	1	2	3	4	5
High school	1	2	3	4	5
Private / parochial schools	1	2	3	4	5

19. What business and economic-development related resources and services do you provide? (check all that apply)

- Meeting Rooms for free
- Meeting Rooms with a user charge
- Programs on finding employment
- Programs on career planning
- Programs to promote economic development
- Technology education and computer literacy programs
- A reference librarian trained in business-related subjects
- A reference section devoted to business and economic development
- Access to databases for business and/or economic statistics, either on-line or CD-ROMs
- Almanacs on Business, e.g., *Almanac of Business and Industrial Financial Ratios*
- Volumes of statistics and demographic data from government and/or private sources
- Encyclopedia of Business and Information Sources* and/or *Encyclopedia of Associations*
- Directories of trade and professional associations
- Guides for starting a business and/or writing a business plan
- U.S. industry profiles and/or country economic reports
- Directories for non-profits to use to apply for grants, e.g., The Foundation Center database
- Other (describe) _____

20. Please share any additional comments you may have concerning your library's role in the economic and business life of your community. (continue on back if desired)

Thank you for sharing your time and thoughts!

Survey of Library Staff

Thank you for participating in this study of the economic benefits of public libraries in the state of Indiana. The study is being conducted for the Indiana State Library by the Indiana Business Research Center at Indiana University's Kelley School of Business. The survey will take approximately 15 minutes of your time.

Library Characteristics and Contact Information

1. Library Name _____ Library code _____
2. County_Township_ _____
3. Population of Service Area for your library system: _____
4. Number of hours per week your library location is open to the public: _____ hours per week
5. Does your library participate in programs with other libraries or systems for interlibrary loans, reciprocal privileges for card-holders, or similar arrangements? (circle answer) 1 YES / 2 NO

Economic Benefits and Impacts on the Community

6. Please rate how beneficial to business and economic growth in your community you consider the following library services or resources to be. (Circle your answers. If a particular item is not available at or from your library, leave it blank.)	not beneficial	slightly beneficial	moderately beneficial	very beneficial
Small-business tax information	1	2	3	4
Local job postings	1	2	3	4
Directories of businesses (local, state or national)	1	2	3	4
Economic and/or demographic data and statistics	1	2	3	4
Other specific business-related databases	1	2	3	4
Legal information or resources	1	2	3	4
Information on patents and/or trademarks	1	2	3	4
Space and facilities for holding business meetings	1	2	3	4
Business-related programs or workshops	1	2	3	4
High-speed Internet access for public use	1	2	3	4
Resources for real-estate related research	1	2	3	4
Resources for non-profit planning	1	2	3	4
Government documents and/or databases	1	2	3	4
Business periodicals	1	2	3	4
Books or other information on starting or managing a business	1	2	3	4

7. Please rate how the following library services have contributed to your users' personal financial well-being. (Circle your answers. If a particular item is not available at or from your library, leave it blank.)	not contributed	contributed slightly	contributed moderately	contributed greatly
Job or career planning resources	1	2	3	4
Salary statistics to support a pay raise	1	2	3	4
Information on investments or business ventures	1	2	3	4
Information on income-tax preparation	1	2	3	4
Information for accessing government agencies or resources	1	2	3	4
Resources for college planning	1	2	3	4
Legal information and resources	1	2	3	4
Health information and resources	1	2	3	4
Consumer information to help with purchase decisions	1	2	3	4
Bookmobile	1	2	3	4

8. To what extent do you agree or disagree that your library receives robust community support (e.g., funding, in-kind, political, volunteer services, etc.) from each of the following:	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
School administrators or school librarians/media center directors	1	2	3	4	5
The local/community foundation	1	2	3	4	5
Local elected officials	1	2	3	4	5
Your state Representative or state Senator	1	2	3	4	5
Representatives of local media	1	2	3	4	5
Local economic development organizations	1	2	3	4	5
Civic or service organizations in your community	1	2	3	4	5
Parent-teacher organization or association	1	2	3	4	5
Chamber of commerce	1	2	3	4	5

9. How strongly do you agree or disagree that the presence of your library in the community:	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
Significantly contributes to local economic prosperity	1	2	3	4	5
Significantly improves the local quality of life	1	2	3	4	5
Plays a vital role in helping <i>existing</i> local businesses grow	1	2	3	4	5
Attracts new businesses to the community	1	2	3	4	5
Plays a vital role in helping individuals find employment	1	2	3	4	5
Increases local residential property values	1	2	3	4	5

10. Please rate how many times per year (on average) your library provides services or information that: (Circle the best choice for each item. If a particular item does not apply to your library, leave it blank.)	never	Less than once a month	Several times per month	Several times per week	About once a day	Several times a day
Helps users search for or obtain a new job	0	1	2	3	4	5
Helps users with career decisions	0	1	2	3	4	5
Makes users more productive in their jobs	0	1	2	3	4	5
Supports starting a new business	0	1	2	3	4	5
Helps improve an existing business	0	1	2	3	4	5
Helps a business research its markets	0	1	2	3	4	5
Helps with the business incorporation process	0	1	2	3	4	5
Helps a business obtain other needed information	0	1	2	3	4	5

11. To what extent do you agree or disagree that your local schools' libraries or media centers significantly help prepare students to:	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
Succeed in college level studies	1	2	3	4	5
Be valuable contributors in the workforce	1	2	3	4	5

12. Please rate the overall quality of your local school system's libraries or media center facilities at each level:	poor	fair	good	very good	excellent
Elementary school	1	2	3	4	5
Middle school	1	2	3	4	5
High school	1	2	3	4	5
Private and Parochial Schools	1	2	3	4	5

13. What business and economic-development related **resources and services** do you provide? (check all that apply)

- Meeting Rooms for free
- Meeting Rooms with a user charge
- Programs on finding employment
- Programs on career planning
- Programs to promote economic development
- Technology education and computer literacy programs
- A reference librarian trained in business-related subjects
- A reference section devoted to business and economic development
- Access to databases for business and/or economic statistics, either on-line or CD-ROMs
- Almanacs on Business, e.g., *Almanac of Business and Industrial Financial Ratios*
- Volumes of statistics and demographic data from government and/or private sources
- Encyclopedia of Business and Information Sources* and/or *Encyclopedia of Associations*
- Directories of trade and professional associations
- Guides for starting a business and/or writing a business plan
- U.S. industry profiles and/or country economic reports
- Directories for non-profits to use to apply for grants, e.g., The Foundation Center database
- Other (describe) _____

14. Do you have any special competencies, qualifications or training in the following areas? (check all that apply)

- Children's literature
- Career counseling and planning
- Reference resources
- Audio-visual media
- Technology and computer literacy
- Academic research
- Business resources
- Sign language or Braille
- Foreign languages
- Genealogy and historical research
- Science or technical resources

15. Please state your highest level of academic achievement.

- High school diploma
- Associates degree
- Bachelor's degree
- Master's degree
- Other advanced degree

16. Please share any additional **comments** you may have concerning your library's role in the economic and business life of your community. (continue on back if desired)

Thank you for sharing your time and thoughts!

Survey of Library Patrons

Thank you for participating in this study of Indiana's public libraries. The study is being conducted for the Indiana State Library by the Indiana Business Research Center at Indiana University's Kelley School of Business. The survey will take approximately 5 minutes of your time. All information is confidential.

1. Library Code _____
2. Please circle the **three** library services that you use most frequently:
 - a. Borrowing books
 - b. Borrowing CD/DVD media
 - c. Reference materials
 - d. Consult with reference librarian
 - e. Study and work
 - f. Use the photocopier
 - g. Read newspapers or magazines
 - h. Use meeting facilities
 - i. Special programs (e.g., children's story time)
 - j. Use computer software
 - k. Use the Internet
 - l. Use online databases or CD-ROMs
3. What is your highest level of education?
 - a. Less than high school
 - b. High school diploma
 - c. Some college, no degree
 - d. Associate degree
 - e. Bachelor's degree
 - f. Advanced degree
4. Have you ever used your local library to: (circle all that apply)
 - a. Look for employment
 - b. Learn how to be more productive at work
 - c. Get information about starting a business
 - d. Learn how to improve or expand a business
 - e. Get scientific or technical information
 - f. Gain technical or computer skills
 - g. Get legal information
 - h. Research your ancestry
 - i. Attend a children's program (e.g., story time)
 - j. Attend an adult program (e.g., book club)
5. How often do you use your local library?
 - a. More than once a week
 - b. More than once a month
 - c. About once a month
 - d. Between 3 and 10 times a year
 - e. Once or twice a year
 - f. Less than once a year
6. Please circle the category that best matches your occupation:
 - a. Full-time homemaker
 - b. Retired
 - c. Student
 - d. Educator
 - e. Business owner or manager
 - f. Scientific or technical worker
 - g. Licensed Professional
 - h. Manufacturing worker
 - i. Transportation or warehousing worker
 - j. Retail, hotel or restaurant worker
 - k. Skilled laborer or tradesman
 - l. Other: _____

7. Please circle your age range.
- a. 18 to 24
 - b. 25 to 34
 - c. 35 to 44
 - d. 45 to 64
 - e. 65 to 84
 - f. 85 plus

8. How strongly do you agree or disagree that the presence of the public library in the community: (circle your choices)	strongly agree	agree	neutral	disagree	strongly disagree
Significantly contributes to local economic prosperity	1	2	3	4	5
Significantly improves the local quality of life	1	2	3	4	5
Plays a vital role in helping <i>existing</i> local businesses grow	1	2	3	4	5
Attracts <i>new</i> businesses to the community	1	2	3	4	5
Plays a vital role in helping individuals find employment	1	2	3	4	5
Increases local residential property values	1	2	3	4	5

Survey of Community and Business Leaders

Thank you for participating in this study of the economic benefits of public libraries in the state of Indiana. The study is being conducted for the Indiana State Library by the Indiana Business Research Center at Indiana University's Kelley School of Business. The survey will take approximately 15-20 minutes of your time.

Community and Business Leader Contact Information

1. Name _____
2. E-mail _____
3. Title _____
4. Phone _____
5. Org. Name _____
6. County _____
7. Address _____
8. Township _____
9. Type of Organization:
- | | |
|--|---|
| <input type="checkbox"/> Business | <input type="checkbox"/> Chamber of Commerce |
| <input type="checkbox"/> Community Foundation | <input type="checkbox"/> Political Official |
| <input type="checkbox"/> Small Business Development Center | <input type="checkbox"/> LEDO |
| <input type="checkbox"/> School District Official | <input type="checkbox"/> Other community leader |

Economic Benefits and Impacts of Your Public Library on the Community

10. Please rate how beneficial to business and economic growth in your community you consider the following library services or resources to be. (Circle your answers. If a particular item is not available at or from your library, leave it blank.)

	not beneficial	slightly beneficial	moderately beneficial	very beneficial
Small-business tax information	1	2	3	4
Local job postings	1	2	3	4
Directories of businesses (local, state or national)	1	2	3	4
Economic and/or demographic data and statistics	1	2	3	4
Other specific business-related databases	1	2	3	4
Legal information or resources	1	2	3	4
Information on patents and/or trademarks	1	2	3	4
Space and facilities for holding business meetings	1	2	3	4
Business-related programs or workshops	1	2	3	4
High-speed Internet access for public use	1	2	3	4
Resources for real-estate related research	1	2	3	4
Resources for non-profit planning	1	2	3	4
Government documents and/or databases	1	2	3	4
Business periodicals	1	2	3	4
Books or other information on starting or managing a business	1	2	3	4

11. Please rate how the following library services have contributed to your community's economic well-being. (Circle your answers. If a particular item is not available at or from your library, leave it blank.)	not contributed	contributed slightly	contributed moderately	contributed greatly
Job or career planning resources	1	2	3	4
Salary statistics to support a pay raise	1	2	3	4
Information on investments or business ventures	1	2	3	4
Information on income-tax preparation	1	2	3	4
Information for accessing government agencies or resources	1	2	3	4
Resources for college planning	1	2	3	4
Legal information and resources	1	2	3	4
Health information and resources	1	2	3	4
Consumer information to help with purchase decisions	1	2	3	4
Bookmobile	1	2	3	4

12. Please rate your agreement with the assertion that your public library system receives robust community support (e.g., funding, in-kind, political, volunteer services, etc.) from each of the following:	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
School administrators or school librarians/media center directors	1	2	3	4	5
The local/community foundation	1	2	3	4	5
Local elected officials	1	2	3	4	5
Your state Representative or state Senator	1	2	3	4	5
Representatives of local media	1	2	3	4	5
Local economic development organizations	1	2	3	4	5
Civic or service organizations in your community	1	2	3	4	5
Parent-teacher organization or association	1	2	3	4	5
Chamber of commerce	1	2	3	4	5

13. How strongly do you agree or disagree that the presence of the public library in your community:	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
Significantly contributes to local economic prosperity	1	2	3	4	5
Significantly improves the local quality of life	1	2	3	4	5
Plays a vital role in helping <i>existing</i> local businesses grow	1	2	3	4	5
Attracts new businesses to the community	1	2	3	4	5
Plays a vital role in helping individuals find employment	1	2	3	4	5
Increases local residential property values	1	2	3	4	5

14. Please rate how frequently you use the following library materials or services: (Circle the best choice for each item. If a particular item does not apply to your library, please leave it blank.)	never	Less than once a year	Several times a year	About once a month	A few times a month	More than once a week
Meeting rooms	0	1	2	3	4	5
Attending programs focused on economic development	0	1	2	3	4	5
Business-related reference materials	0	1	2	3	4	5
Business-related periodicals and trade journals	0	1	2	3	4	5
Business reference librarian	0	1	2	3	4	5
Resources to improve an existing business	0	1	2	3	4	5
Resources to research business opportunities	0	1	2	3	4	5
Legal or federal/state/local regulatory resources	0	1	2	3	4	5
Internet access	0	1	2	3	4	5
Online database access or CD-ROM databases	0	1	2	3	4	5
Career enhancement materials	0	1	2	3	4	5

15. Please rate the degree to which you are satisfied with the following services or materials at your local library: (Circle your answers. If a particular item is not available at or from your library, leave it blank.)	Extremely unsatisfied	Moderately unsatisfied	Neutral	Moderately satisfied	Extremely satisfied
Business collections, periodicals, databases or other resources	1	2	3	4	5
General services libraries provide business	1	2	3	4	5
Library staff's familiarity with business terminology	1	2	3	4	5
Library staff's familiarity with business resources and materials	1	2	3	4	5
Library staff's training to meet the needs of the business community	1	2	3	4	5
Speed of the response (or turnaround) to business requests	1	2	3	4	5
Equipment and technology available to business patrons	1	2	3	4	5
Electronic accessibility of staff and resources from business offices	1	2	3	4	5
Communication and outreach to business patrons	1	2	3	4	5

16. Please rate your agreement that your local schools' libraries or media centers significantly help prepare students to:	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
Succeed in college level studies	1	2	3	4	5
Be valuable contributors in the workforce	1	2	3	4	5

17. Please rate the overall quality of your local school system's libraries or media center facilities at each level:	poor	fair	good	very good	excellent
Elementary school	1	2	3	4	5
Middle school	1	2	3	4	5
High school	1	2	3	4	5
Private/parochial schools	1	2	3	4	5

18. How much money do you think your county's library system costs each year per county household?

\$_____ per household

19. If you would be willing to spend more to support local library services, please indicate how much of an increase per household you're willing to support. If you wouldn't support an increase, enter zero:

I'd be willing to spend \$_____ more per household annually to support local library services.

20. If you are involved with any civic group or local organization that uses the library on a regular basis, please name the groups:

21. Imagine that you are an advocate for the public library system in your county, how would you justify the expense of a library to the area's taxpayers? How would you characterize the return on investment of the county's library system to the community?

22. How might your local public library improve services and outreach to local business and organizations concerned with economic development?

23. If you are a **school administrator** and/or a **school librarian/media center director**:

a. How often do you meet with the public library director? _____

b. How well does the public library system meet the needs of your students that your library/media center cannot provide? _____

c. If your school district provides outreach programs in conjunction with the public library system, please describe them: _____

d. How many volumes does your school district have in its total collection? _____

e. What is the school district budget for libraries and media centers? \$_____

24. Please share any additional comments you may have concerning your library's role in the economic and business life of your community. (continue on back if desired)

Thank you for sharing your time and thoughts!

Appendix IV: Website Features and Content

Indiana's public, academic and school libraries are an important part of Indiana's knowledge infrastructure, yet easily accessible data about them have generally been hard to come by. Through the state's online information utility *STATS Indiana*, the Indiana Business Research Center will provide and maintain the data about Indiana libraries for others to use in their own explorations of the impacts libraries have on their communities.

Accessible from www.stats.indiana.edu/topic/libraries.asp, the site provides statistical overviews as well as detailed information for individual Hoosier libraries. In addition to library-specific variables, such as holdings, staffing and the like, additional demographic profiles aggregate basic demographic and social indicators from Census 2000 to library district boundaries in order to provide users with a more comprehensive understanding of local challenges and opportunities.

Available Data

Public Library Profiles

- **Geographic Coverage:** Indiana's 239 library districts as of 2006
- **Frequency and Time Span:** Annual data from 1997 to 2005
- **Data Source:** Indiana State Library
- **Staffing Variables**
 - Total employees
 - Librarians
 - Librarians with Master of Library Science (ALA accredited)
 - Other Staff
 - Total Full-Time Equivalency of Staffing
 - Librarians
 - Librarians with Master of Library Science (ALA accredited)
 - Other Staff
 - Total Hours Worked
 - Librarians
 - Librarians with Master of Library Science (ALA accredited)
 - Other Staff
- **Materials and Usage Variables**
 - Materials (physical units)
 - Books
 - Videos
 - Audios
 - Serial publications
 - E-books
 - Databases
 - Circulation of materials

- Children's circulation
- **Income Variables**
 - Total Operating Income
 - Local
 - State
 - Federal
 - Other
 - Income by Selected Sources
 - Property Tax
 - County Adjusted Gross Income Tax
 - County Option Income Tax
 - Fines and Fees
 - Contract Revenue
 - Gifts
 - Grants

Demographic Characteristics for Public Library Districts

- **Geographic Coverage:** Indiana and 239 Indiana library districts as of 2006
- **Frequency and Time Span:** Decennial data from Census 2000
- **Data Sources:** U.S. Census Bureau, Census 2000, Summary Files 1 and 3
- **Population Variables**
 - Total population
 - White alone (%)
 - White alone, not Hispanic (%)
 - Black alone (%)
 - Hispanic of any race (%)
 - Age 0 to 4
 - Age 5 to 17
 - Age 18 to 64
 - Age 65 and older
- **Household Variables**
 - Total households
 - Persons in Households
 - Average household size
 - Family households
 - Persons in families
 - Average family size
 - Married couples (%)
 - Married with own children (%)
 - Single mothers (%)
 - Single fathers (%)
 - Non-family households
 - Percent living alone
 - Percent 65 and over
- **Housing Variables**
 - Total housing units

- Occupied housing units
- Percent owner occupied
- Vacant units
- Percent seasonal
- Homeowner vacancy rate
- Rental vacancy rate
- Total housing units
- Single family units
 - Percent of all housing units
- Multi-family units
 - Percent of all housing units
- Housing units built 1939 or before
 - Percent of all housing units
- No vehicle available to housing unit
- No telephone service
- **Labor Force Variables**
 - Population 16 and older (labor force universe)
 - Civilian labor force
 - Employed
 - Unemployed
 - Unemployment Rate
- **Educational Attainment Variables**
 - Population 25 and older (educational attainment universe)
 - Less Than 9th Grade
 - High School But No Diploma
 - High School Graduates
 - Some College Or More
- **Poverty Variables**
 - Persons for whom poverty status is determined
 - Persons living below poverty
 - Percent below poverty

Future Enhancements

The Indiana Business Research Center will maintain, update and enhance the online library databases available on *STATS Indiana*. Planned future developments include:

- **Property Parcel Data By Library District:** This would show how many parcels are in each library district, their assessed value, their type (residential, commercial, etc.), and what portion of the total levy the library represents.
- **County and Regional Aggregation:** Data by library type would be provided in aggregate forms for Indiana counties, metropolitan areas and economic growth regions.
- **County-Level Impact Analysis:** This tool would provide a county-by-county reckoning of the indirect and induced economic effects of library expenditures.

Appendix V: Calculating the Value of Library Services

The Economics of Library Valuation

Economy

A system that produces, distributes, exchanges and consumes goods and services, an economy is typically defined by geographic or political boundaries and modes of production—for example, in terms of a specific country or, in the past few decades, in global terms. Regional and local economies are generally referred to by the geographic area encompassed and are given the name of the city or town, the state, or a metropolitan area or region. Within the past decade, the U.S. economy has been described as the “Knowledge Economy” in an attempt to describe the key factor of production currently, in contrast to production of goods in the past.

Economic impact

An economic impact analysis attempts to measure the change in overall economic activity resulting from the addition or subtraction of an economic entity. The results of such analysis are generally used to determine the economic effects of a particular institution, industry or influx of jobs. It can be used, for example, to estimate the economic effects of adding a manufacturing plant in a local economy by tracing the consumption spending of the workers at businesses that serve those workers and by tracing the spending linkages of businesses that supply the new plant with inputs and services. In a similar but inverse manner, it can be used to estimate the economic effects of closing a plant. The impact region may be the entire state, individual counties or a combination of counties.

Multiplier

If a local business increases or decreases its payroll by one job, the local economy gains or loses more than one job. Because that “one job” buys groceries, goes to the doctor, and eats out at the local diner, those local businesses gain or lose a fraction of a job due to the increase or decrease in business. In short, that “one job” is multiplied through the local economy. Higher paying jobs create more spending and thus have a higher multiplier. Multipliers have both industry and geographical dimensions. Generally, they are referred to as input-output multipliers, as one needs to consider what is going into the economy (e.g., auto plant jobs) and what may come out (income that goes to consumption, savings and taxes).

Benefit-Cost Analysis

This is an economic analysis of projects or programs to determine whether they are economically or financially worthwhile. The approach estimates and sums up the equivalent money value of the benefits and costs of projects and programs for a defined region or population. Typically, public “investments” such as dams and highways or programs for health care are evaluated using benefit-cost analysis to assess the value that project or program returns to the region, state or country. Often, the results of a benefit-cost analysis is framed as a “return-on-investment,” and for capital projects that yield financial benefits over a long period of time, the use of the term return-on-investment is not spurious. However, for programs with annual operating expenditures, and institutions that do not have a well-defined stream of financial returns many years into the future, it is not strictly accurate to use the term return-on-investment.

Library Use Valuation Calculator

Library Service	No. of Service Events per Year	X	Value per Event	= Total Value
Adult Circulation, Excluding Renewals				
Books			\$7.42	
Video media			\$1.00	
Audio media			\$3.00	
Periodicals			\$0.50	
Electronic downloads			\$3.00	
Children's Circulation, Excluding Renewals				
Books			\$4.14	
Video media			\$1.00	
Audio media			\$3.00	
Periodicals			\$0.50	
Electronic downloads			\$3.00	
Additional Resources and Services				
Hours of Patron Computer Use			\$0.50	
Reference Librarian Requests			\$10.00	
Newspaper and Magazines read			\$0.25	
Meeting Room Use (with user fee)			\$250 less user fee	
Meeting Room Use (free)			\$250.00	
Auditorium Use			\$500.00	
Reference materials used			\$0.50	
Home-schooling materials borrowed			\$4.14	
Programs Sponsored by Library				
Adults in attendance			\$5.00	
Children in attendance			\$4.00	
Total Value of Library Services				

The above table uses data that are fairly easy to collect. The calculator can be expanded and refined based upon the available data on use of particular library services. The value per event is based on the lowest cost substitute, as described in the methodology section. This calculator can be tailored to local conditions provided that economic principles are not violated. For example, most, but not all towns have dollar video stores or dollar video kiosks at their local McDonald's. In communities that do not, it would be legitimate to inflate the value of video media borrowing.

An Excel version of the above table is available at www.stats.indiana.edu/topic/libraries.asp

