

Using economic data to demonstrate the value of the library

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Abstract: Libraries have always collected data from the number of books to the number of web page views. These statistics do not give a complete accounting of the library's value. To fully demonstrate the value of libraries, and justify budgets, librarians have increasingly turned to economic valuations. Yet, economic valuations are challenging for non-profit, cultural and educational institutions. This paper reviews the positive and negative aspects of economic valuation for libraries.

Keywords: economic valuation; return on investment; cost benefit analysis

1. Introduction

Traditionally librarians have counted the numbers of book circulations visitors, or reference questions; while more recently librarians count the number of website page views, articles downloaded and digital collections accessed. Librarians use these simple to gather and easy to understand statistics to assist with collection development decisions, to determine library hours or to enhance the library's website. These statistics do not fully represent the value of the library, the success of its services or impact on the community.

In order to justify their budgets and communicate the strength of their services many librarians have turned to economic valuations. Conventional statistics such as webpage counts, book circulations and visitor counts are relatively meaningless to administrators or taxpayers. The monetary value of services, however, is evocative; everyone understands the value of money.

Placing economic or monetary value on libraries, or library services, is challenging, since goods are not bought and sold and most users have never considered the library in financial terms. This paper reviews common economic valuation methods to determine if these methods can be meaningfully employed as tools for communication.

2. Libraries and value

Essentially, library services are evaluated for three main objectives: to recommend improvements; to inform decision-making; to communicate to stakeholders. Traditionally gathered statistics such as visitor counts, book

circulations, or collection size have now been augmented with statistics on the numbers of webpage hits, downloaded articles, or chat reference requests. All of these statistics are useful internal measurements to inform decision-making and to recommend improvements. None of these conventional measures truly communicates the value of the library to its users and stakeholders.

It is important for librarians to be able to demonstrate the value of their services to the community in order to maintain funding, support new projects or to develop and expand services. Additionally, digital services have been added to the library's more established offerings and users increasingly expect online materials and online assistance. While, to the user, digitized archival collections or access to databases of journal articles appear to be free, libraries pay handsomely for access to commercial databases or to scan and disseminate historical materials. Thus, a good portion of the library's budget is allocated for services that appear cost-free to users.

The library is also experiencing competition from search engines, whose services are essentially free, with the users acceptance of advertisements. Anecdotal evidence and research points to the fact that users are turning first to Internet search engines for information seeking rather than the library. (Kortekaas 2012) The ubiquitous and seamless nature of online services only increases the need for the library to demonstrate and communicate value.

In an effort to convey the library's value to the larger institution or community, librarians have utilized both qualitative and quantitative measurements. Qualitative methods include focus groups, user surveys, and interviews to elicit feedback about the users' interactions with the library. These methods ask users for personal responses and experiences. Good interviews and surveys require careful consideration to develop meaningful questions and they take time to conduct. They are therefore relatively expensive to implement. Although qualitative measurements are flexible and can provide constructive data, they are often considered unfocused and inexact. (Powell 2006)

While qualitative methods tell the story through user experiences and perceptions, quantitative methods provide numerical data to evidence the value of the library. Quantitative methods collect numerical data, or data analyzed in such a way that the results can be represented numerically. Collection size, user visits, and web page hits are quantitative data, which do little to evidence the value of the library. Administrators, budget managers and granting agencies, accustomed to quantitative data as well as citizens, concerned about taxes, understand the value of money. Therefore, it behooves librarians to communicate to these stakeholders in terms they will comprehend: financial or economic. While assessing the library in monetary terms may appear incongruous, economic valuations can clearly demonstrate the impact of the library on the larger community. In an effort to communicate the value of library services, to external stakeholders, librarians have turned to several methods of monetary valuation.

3. Economic valuation

Two of the most commonly employed economic valuations in libraries are cost-benefit analysis (CBA) and return-on-investment (ROI). CBA asks whether the expenditures incurred will be outweighed by positive outcomes. Costs include inputs such as hardware, software, and human resources. Benefits are outputs or results. In business the benefits are tangible and usually take the form of profits. For libraries benefits are less tangible and may include saving the travel time of the user or increasing productivity by providing information efficiently. CBA is often used at the start of a project to help demonstrate financial viability. (Cervone 2010). A form of CBA, ROI is, at the most basic level, the ratio of expenditure to income. ROI is commonly calculated at the end of a project or phase to analyze the resulting benefits in comparison to the expenditures. (Kim 2011) Recent ROI studies include examples from many types of libraries, for instance public libraries in Texas (Bureau of Business Research 2012) and academic libraries (Kingma and McClure 2014). The library literature abounds with articles on ROI and CBA.

As mentioned above, in a for-profit enterprise the return or benefit is the profit realized through the investments. Libraries, however, do not generally produce income through the sale of goods or services, thus the benefits or returns will be contributions to the quality of life in the community or the success of the larger institution. Tangible assets that can be bought or sold lend themselves to numeric valuations; societal benefits much less so. Yet, some benefits to the community and institution are more tangible and more readily quantified. For instance, academic libraries have conducted studies on the contributions of the library to successful grant proposals. (Luther 2008; Kingma and McClure 2014) Public libraries have conducted studies on the cost savings to the user for services provided through the library that would have otherwise been purchased by the user. (Imholz and Arns, 2007) These efforts demonstrate that libraries have contributed to income generating activities and had a positive impact on the local economy. (Tenopir 2013)

The more difficult issue is measuring intangibles: the quality of life, the public good, or the library's contribution to the larger organization's success. Inserting intangible benefits into economic models such as CBA and ROI is arguably the most difficult problem for librarians in using economic methods. (Linn 2009) Kim (2011) notes the difficulty of assembling appropriate equivalent market prices for services or developing suitable methods to estimate the value of library services. Librarians and other non-profit organizations have turned to contingent valuation models (CV) to ascertain a price for a non-market good which can then be inserted into a CBA or ROI equation. CV can take several forms but all essentially ask the respondent how much she would be willing to pay for the service or how much she should be compensated for the loss of the service. A number of librarians have applied CV methods to everything from electronic services (Melo and Pires 2011) to full library evaluations (Imholz and Arns 2007).

Social return on investment is a method to quantify social, environmental, or economic impacts. (Lingane and Olsen 2004) SROI uses a

combination of ROI, CBA and CV to measure the effect of the library's activities or services since environmental and social value are not evident in conventional financial accounts. While the library literature on assessment, evaluation, ROI and CBA is extensive, very little has been written about SROI. Still, SROI could be another tool with which to evaluate the library as a whole, or component services of the library.

4. Economic valuation challenges

The caveats in using economic valuation methods are clear and fundamental. The concepts of return and investment can include many variables thus the definitions must be expressed and used consistently within an analysis in order to be accurate and persuasive. (Imholz and Arns, 2007) Because libraries are complex, economic valuations may be better suited to specific library services or activities or to departmental units within the library. (White 2007) Accordingly, Coyle (2006) suggests that, as component parts of the library, technology and digital libraries are likely candidates for economic valuations.

Neal (2011) also cautions that economic valuations require a certain level of precision. Boards of directors, business people and accountants define ROI and CBA strictly, thus equating financial terminology with intangibles may be met with skepticism. Likewise these same stakeholders may be unsure of how to capitalize on the ROI or CBA since their experiences with economic valuations are different. (Matthews 2013)

In addition, CV asks respondents to place a value on a service, yet most people have never thought about library services in terms of money. (Linn 2009) Also, responses will depend on how a contingent valuation question is phrased. Asking the user how much she would be willing to pay for a service will elicit a different response than asking the user how much tax money should be returned to her for the loss of the service. Moreover, the value of the library's services and collections is dependent upon the individual experiences of the stakeholders and will vary over time. For instance, users and non-users can be expected to value the library differently. (Tenopir 2013) As Kelly (2012) notes, the value of intangibles is a personal perception.

Huysmans (2014) refers to another caveat of economic valuations as the "complicated nature of disentangling outcomes." With SROI and methods such as CV it is difficult to ascertain definitively that a specific outcome was the direct result of the library's services. The library is just one part of a complex set of circumstances and events that all contribute to the success of the students or the quality of life of the community.

Lastly, economic valuations are just as difficult to compare among libraries as traditional statistics. Sidorko (2010) reviews the differing ROI values of eight libraries, all using the same formula. The variation in findings can be attributed in part to the differing disciplines of the institutions given that sciences tend to draw more grant funding. Also, the mission and organizational climate of each institution as well as the local environment add to the challenge in comparing economic valuations across or between libraries. (Matthews 2013)

Yet, intangibles such as quality of life or student success are valuable and should be taken into account. Perhaps because tangibles are easier to count they seem to take on a greater importance than intangibles which may be equally or more important. The challenges of quantifying intangibles contribute to, and at the same time exacerbate, a lack of library standards for economic valuations.

In order to fully and appropriately communicate the value of the library, Tenopir (2013) and Wilson (2013) advocate for mixed methods research. A mixed method approach combines data from both qualitative and quantitative measures. Using and presenting more than one method can yield a well rounded view of the library or service, meet the standards and requirements of multiple stakeholder groups, as well as present new alternatives for analysis by combining or comparing related data. (Wilson 2013) The decision on which methods to use depends first, upon the type of data the library wants to obtain and the questions they want to answer; and secondly, on the mission of the organization. Plus, the use of multiple methods increases the confidence that the results will be accurate. (Matthews 2013).

Kingma and McClure (2014) note that no tools will be perfectly precise or valid. The use of multiple measurements provides more data points for analysis and proof of accuracy. They continue by suggesting that librarians present the results of valuations to university stakeholders, such as faculty, or public library stakeholders, such as boards, to obtain their opinions concerning the administration and results of the survey. Future measurement efforts could then be revised and improved with this input. Soliciting input from stakeholders outside of the library will help validate the results.

While the literature is full of library evaluation method articles, very few address how libraries used the data to advocate for the library. Lewin and Passonneau (2012) reviewed Association of Research Libraries members in the United States and noted a lack of reporting and analysis on members' web sites. Matthews (2103) also noted a lack of data concerning the use of the results of economic valuations and whether the data had any effect. Further research is needed to determine if librarians have successfully used the data to effect change, whether in funding or policy.

5. Conclusions

Evaluation and assessment are becoming commonplace as libraries compete for resources and compete with other information providers. While traditional statistics can and do contribute to planning and improvements, librarians must also articulate to stakeholders how the library contributes to the work and success of the larger organization and how the library contributes to the quality of life and work in the community. Monetizing social, economic and environmental benefits influenced or aided by the library is a form of advocacy libraries should utilize. Further research on how librarians used economic valuations to promote the library or how these valuations influenced change will be the next step in determining the effectiveness of the methods and developing best-practices and standards.

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