

Strategies to Measure the Value of Special Libraries¹

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INTRODUCTION

Library managers of special libraries are frequently under pressure to demonstrate their worth and the value of their library. In an economic downturn, libraries are often forced to reduce staff and curtail spending and even close their libraries. In the case of downsizing of corporations, service units, such as libraries, frequently incur larger reductions in proportion to revenue producing units in the firm. These steep reductions can result from an inability to demonstrate value and to provide proof of effectiveness. The provision of measures related to the value of information is generally perceived as a difficult task. Traditional methods of statistical process reporting have little relevance to the types of figures required by financial managers. However, there are researchers who have attempted various techniques to measure value and these will be discussed in this paper.

Firstly I will present a brief survey of the literature on the topic and then discuss attempts to measure the value of information in monetary terms, the difficulty with making these assessments and the alternative of measuring perceived value in non-monetary terms using the Priority and Performance methodology.

THE VALUE OF SPECIAL LIBRARIES TO THE ORGANISATION: A BRIEF SURVEY OF THE LITERATURE

How to measure the value of special libraries has been a challenge for many researchers. Some researchers have concentrated on the perceived value, largely measured by surveys; others have sought to find a way to measure the monetary

¹ This is an edited version of a paper presented at the 9th Special, Health and Law Libraries Conference, *Rivers of Knowledge*, Melbourne, 26–29 August 2001

value of a library to its parent organisation and then to make various analyses based on the results.

In a landmark study Matarazzo and Prusak examined the attitudes and perceptions of 103 senior managers, with budgetary responsibility for the library facilities of their company, as a way of evaluating the performance of the corporate library and of gauging its perceived value as a resource to the organisation² This was a follow up study to the research conducted five years earlier by Matarazzo, Prusak and Gauthier.³ These two reports form a longitudinal study that illustrate a number of trends:

- the expansion of online information,
- increase in personal use of electronic databases directly servicing end users, and
- massive corporate downsizing and re-engineering.

Both studies revealed that many companies have no formal procedures for measuring the value of the library and are unfamiliar with the role they play in determining the success of the company. While one third of managers saw the role of the library in providing information as having significant impact on the decision-making process, it is clear from both studies that its role is neither clearly defined, nor easily understood, and often undervalued.

In 1997 the Australian Library and Information Association (ALIA) embarked on an exploratory study to identify the perceived value of libraries and information professionals to Australia's top 100 companies. Impressed with the work done by Matarazzo and colleagues, the ALIA project committee adapted questions from these studies, and also drew methodology from the work done by Broadbent and Lofgren.⁴ Walsh and Greenshields reported on the findings.⁵ They initially

² Matarazzo, J. and Prusak, J. 1995, *The value of corporate libraries: findings from a 1995 survey of senior management*, Special Libraries Association, Washington, D.C.

³ Matarazzo, J., Prusak, L. and Gauthier, K. 1991, *Valuing corporate libraries: a survey of senior managers*, Special Libraries Association, Washington, D.C.

⁴ Broadbent, M. & Lofgren, H. 1991, *Priorities, performance and benefits: an exploratory study of library and information units*, Circit & ACLIS, Melbourne.

⁵ Walsh, V. and Greenshields, S. 1998, 'The value of libraries and library professionals to Australia's top 100 companies: draft report of the study conducted by the Australian Library and Information Association', *Australian Special Libraries*, vol. 31, no. 3, pp 59-100.

conducted a literature review, and commented that there was a plethora of theoretical and methodological studies seeking to evaluate library and information services but few that examined the value of library services or library professionals empirically.

The ALIA study included the following sample of questions:

- What competencies of the library staff are most valued by management?
- Which services provided by the corporate library are valuable to the organisation?
- What additional services does the corporate library provide to the organisation, other than storage, acquisition and retrieval?
- Which services they would like to see offered in the future?
- Which services are missing?
- How does the library contribute to the strategy of the company?
- Perceived value of the library at the policy level?
- Probability of allocating funding to new corporate libraries?
- Methods of evaluating corporate libraries?

The authors concluded, as did Matarazzo, that a major threat to Australian corporate libraries (and presumably government sector special libraries), is the ignorance of their role in the corporate structure and the contribution they make towards the achievement of company goals.

Frank Portugal surveyed large American companies and interviewed librarians and administrators on their efforts to measure the value of their library or information centre operations.⁶ He was particularly interested in monetary measurements of value, the measurement of intangibles. In addition to the interview Portugal surveyed the literature using terms such as intangible asset valuation, knowledge management and intellectual capital development. He reports that methods for valuing libraries and information centres in corporate and

⁶ Portugal, F. 2000, *Valuating information intangibles: measuring the bottom line contribution of librarians and information professionals*, Special Libraries Association, Washington, D C.

non-profit organisations were scarce, a finding made by the Australian researchers, Walsh and Greenshields.

A survey by Diprose in 1997 of senior managers and professional staff in an Australian organisation examined the gap between the cost of information and judgements as to its value.⁷ In the discussion, the author makes some interesting comments on the significance of information 'richness' in organisations, the disposable nature of information and the effect technology has had on the perception of information. Diprose made the following observations:

- information is an individual responsibility rather than a corporate resource,
- lack of standards or procedures for information dissemination or use leads to reliance on personal networks,
- information is recognised as a valuable commodity,
- a great deal of use is made of internal and external information to accomplish tasks,
- there is frequent use of technology to manipulate, access and store information,
- corporate culture does not encourage information use that is not motivated by practical needs,
- the value of information resides in the actions promoted by seeking profit, and
- creativity in information is not expected nor especially valued

It is clear from this study that information is important to decision-making, but it is doubtful that the library was the primary provider of that information.

In a Canadian study the author has provided evidence that the products and services of the corporate library have an impact on its clients.⁸ Nearly four hundred executives in five firms indicated that the information supplied to them by the library staff made an impact on

- decision-making

⁷ Diprose, K. 1997, 'Pricing the invaluable: putting a value on information in the corporate context', *Australian Library Journal*, vol. 46, no. 4, pp 386-393

⁸ Marshall, J. 1993, *The Impact of the Special Library on Corporate Decision-Making*, Special Libraries Association, Washington, D C.

- exploiting a new business opportunity
- deciding a course of action, and
- improved client relations.

In addition, these senior staff members ranked the library highly as a source of information. Marshall recommends the need to perform at a consistently high level with each and every request and the requirement to market the library continuously to ensure a critical mass of users. Marshall comments that library staff are best at providing specifically requested documents but less skilled with open-ended questions as a result of lack of industry knowledge

Miller used a different approach to measure value.⁹ Rather than survey senior managers, she developed a qualitative scale to measure clients' perceptions and compared this with Cloyes' measure of value.¹⁰ Her research was an attempt to show that client satisfaction is an equivalent measure of value to that based on the cost-benefit ratio, a theory first tested by Gallagher.¹¹ Miller surveyed small samples of clients at various levels across three offices in one government agency, the Australian Taxation Office. She found a small significant positive correlation between satisfaction and monetary value and concluded that the instrument she developed has some predictive ability and would be useful in the determination of what services need to be better marketed and to whom.

MEASURING THE INTANGIBLE NATURE OF INFORMATION

Information, as a product of libraries, is an ambiguous phenomenon to define. It is difficult to find a unit that allows information to be quantified. However, when information is produced in exchange for revenue, as in the case of commercial information brokers, the value of the commodity is determined by the market forces, like any other tangible services or products in the market place.

⁹ Miller, L. 1995, 'Measuring the value of library services: a comparison of two measures', *Synergy in Sydney*, proceedings of the 6th Asian Pacific Specials, Health and Law Librarians' Conference, Sydney, pp 303-310.

¹⁰ Cloyes, K. 1991, 'Corporate value of library services', *Special Libraries*, vol 82, no. 3, pp 206-213.

¹¹ Gallagher, C. 1974, 'Perception of value of management information system', *Academy of Management Journal*, vol. 17, no. 1, pp. 46-55.

The difficulty with measuring value that librarians and information professionals provide to an organisation resides in the intangible nature of the assets created.¹² As is often stated in the literature, it is easier to measure the cost of a library than measure the profit or benefits they help generate to a company or organisation. However, as Portugal states, the values of other intangibles are constantly measured in a quantitative manner in the corporate world. Intangibles such as copyrights, patents, customer relationships, electronic databases, goodwill, human capital, location and proprietary processes and knowledge, are all concepts that are regularly valued in monetary terms in the business world.

As a result of his interviews and literature search, Portugal outlines four methodologies for measuring the value of information:

1. Return on investment and cost benefit analysis
2. Knowledge value added
3. Intranet team forums
4. Intellectual capital valuation

With the exception of return on investment, a traditional financial ratio emphasising tangible assets, these methodologies concentrate on estimating the intangible value of libraries and information centres. Each methodology is broken down into six subsections; scope, assumption, benefits of the approach, what this method does not do, who can use and methodology steps. The author claims that the methodologies are flexible enough to account for both traditional and non-traditional activities of librarians and information professionals and applicable in diverse environments such as corporate and non-profit organisations. However, the models he provides all require substantive effort to gather and process the data required.

Two major researchers in the field of measuring the value of libraries and library services in terms of dollar values are Jose-Marie Griffiths and Donald King¹³ Their concept of assessing the monetary value of a special library or information centre is from three perspectives, namely:

¹² Portugal, F. 2000.

¹³ Griffiths, J and King, D. 1993, *Special Libraries. Increasing the information edge*, Special Libraries Association, Washington, DC

- what users are prepared to pay,
- how much more it will cost users to get information if the library services are unavailable, and
- the extent to which the services achieve cost saving for the users.

Key to their approach is the concept that the main factors in valuing a library are not the cost of materials, computers, database searches, or even library staff, but in fact is the users' time in acquiring information. The results of the many studies done by Griffiths and King consistently demonstrate that information obtained from an organisation-sponsored special library is always cheaper than alternative sources of information and the magnitude of the potential savings in professional time saved alone is substantial.

In the Australian survey conducted by Diprose (1997) to examine the gap between the cost of information and judgments as to its value, the author identifies the following broad categories for measurement:

- willingness to pay,
- amount of use made of an item or products,
- analysis of impacts,
- cost savings from using the services, and
- client satisfaction.¹⁴

There are different approaches for these measures, but most fall within the spectrum of cost-benefit analysis and the effort put into information production and dissemination is based on value-in-use.

Keyes evaluates techniques for determining the monetary value of special libraries and describes valuation by

- time-saved methods,
- relationships to productivity, and
- cost-benefit analyses.¹⁵

¹⁴ Diprose, K. 1997

¹⁵ Keyes, A. 1995, 'The value of the special library: review and analysis', *Special Libraries*, vol. 18, no. 3, pp. 172-187

In conclusion to his literature review Keyes stated that

all the studies reviewed here can demonstrate a positive cost-benefit ratio, yet there remains a great deal of variance in the results, frequently due to the working with the information users' best estimates of costs saved or costs avoided.

Despite these reservations, Keyes recommends a four-step approach to valuing a special library which includes collecting cost information, user estimates of value, recording evidence of impact and determining cost-benefit ratios.

Koenig examined many studies that demonstrate correlation between expenses on library or information related services and corporate productivity. Three methods of calculating cost-benefit ratios are cited. With each method, the estimated benefits are those given by the users of information or library services.¹⁶

CHALLENGES TO MEASURING VALUE IN MONETARY TERMS

- Fluctuating time scales from incurring costs to reaping benefits,
- information as an intangible entity,
- soft benefits hard to quantify,
- easier to quantify negatives than positives,
- lack of measures to translate data into dollars,
- lack of confidence in data gathered,
- lack of belief in the impact of data collected will have on day to day operations, and
- users don't relate value of information to work practices.

PERCEIVED VALUE

Whereas Portugal believes that it is possible to measure the intangible value of information, Broadbent and Lofgren claimed that the problem of how to measure

¹⁶ Koenig, M. 1992, 'The importance of information services and productivity "unrecognised and under-invested"', *Special Libraries*, vol. 86, no. 4, pp. 199-210

information had neither been solved at the macro level (economy as a whole) or at the micro level (within the organisation).¹⁷ An exception to this is where information products are produced in exchange for revenue, but for most libraries, at least in the public sector, this is uncommon. The question of value in the sense of impact or benefit remains problematic. Therefore these authors believed that quantitative indicators such as revenue or profit are of little relevance when seeking to assess either market value or value-in-use of information. Presumably however, the continued funding of special libraries is based on the value of the information services provided.

Value accordingly is entirely dependent on context: it 'is related to who uses it, when it is used and in what situation it is used'.¹⁸ Repo also recommends examining the value-in-use of the information derived from library-based services and products and its impact on the quality of organisational performance.¹⁹ Similarly, Miller states that assessment of the value of library services to the clients depends on the information use of the client as well as the characteristics of the output of the services.²⁰ However, in practice, the value-in-use of information cannot be determined with any accuracy of certainty as there is likely to be a gap between actual value and assessment of that value, suggesting the cost of gaining and storing information cannot reliably be equated with the benefits to the organisation. Maguire in an address to a seminar on library statistics also makes the following observation:

value implies the exercise of judgement, the comparison of evidence with established criteria ... because valuing is a comparative process, the resulting judgements can be arranged according to priorities, according to the extent to which the items or activities valued measure up to whatever criteria are applied.²¹

¹⁷ Broadbent, M. & Lofgren, H. 1991.

¹⁸ Ahituv, N. & Neumann, S. 1987, 'Decision-making and the value of information', in R.D. Galliers (ed.), *Information analysis: selected readings*, Addison Wesley, Sydney, p 28

¹⁹ Repo, A. 1987, 'Economics of information', *Annual Review of Information Science and Technology*, vol 22, pp 3-35.

²⁰ Miller, L. 1995.

²¹ Maguire, C. 1990, 'An Australian perspective on the value of information', in Exon, F. C. A. and Smith, K. (eds), *National Think Tank on Library Statistics*, Australian Library and Information Council, Perth, p 5.

Broadbent & Lofgren abandoned the focus of value of information and instead became more concerned with evaluation based on client benefits rather than with the value of information as a product. It is a reasonable assumption that user perception of information as beneficial to an individual and organisational performance should be accepted as evidence that the library is a contributor of value, even though this can not necessarily be measured in monetary terms.

The perceived value approach is based on the subjective evaluation by users and presumes that users can recognise the benefits derived from information services and express their assessment either in monetary terms or more commonly on a ranking scale.²²

Perceived value is measured through research techniques such as survey or interview and does not attempt to make an objective assessment of value. While the real impact of the library and its services cannot be measured accurately, perceived value can serve as a proxy.

One such way of measuring perceived value is through priority and performance analysis, an evaluation technique developed from the critical success factors approach. The principal aims of a priority and performance analysis are:

- to measure library success,
- to identify areas of strength and shortcomings, and
- to facilitate decision-making through ranking of result areas for attention and action.

The priority and performance methodology focuses on the interrelationship between the library and its organisational and user environment. The technique is well described by Broadbent and Lofgren with step-by-step procedures outlining survey design, implementation and analysis of results. This evaluation method was undertaken at the Royal Rehabilitation Centre Sydney in May 2001 as part of Library Week, which was also perfect timing for the business planning cycle. The response rate was excellent, the results encouraging and enlightening and the

²² Broadbent, M & Lofgren, H 1991, p. 98.

analysis revealing. It will be conducted annually to allow trends to be identified and performance to be measured over time.

CONCLUSION

Librarians in special libraries today are mostly seen as internal consultants to their clients when information is required. They understand and know how to use a vast variety of reference tools and online databases and, by holding the key to using these sources, they have maintained their professional security. This professional niche will be increasingly challenged by clients searching for themselves as end-users at their desks. Surveys of library clients in the US in 1990, then in 1995, found that 80%, then 48% respectively, cited electronic database searching as the most important service provided by the library.²³ In a similar study conducted in Australian in 1997, only 26% nominated electronic database services as valuable, despite being the most valuable nominated service provided by the library. Presumably, clients are increasingly bypassing the library and fulfilling their own information requests and their information needs are being satisfied instantly and electronically. Matarazzo states that there is a widespread misconception that every man and woman is a knowledge worker and all one needs to access the knowledge of the world is a computer and a modem.²⁴ Not surprisingly then libraries are struggling to preserve their distinctive value in the new electronic world. There is a great deal of pressure for librarians to continuously justify their activities and budgets in terms of business value, without a universally acknowledged method, as these surveys have shown.

Fortunately, when looking at management literature, there is growing awareness of the value of organisational knowledge as a key asset, that is, what they own is less important than what they know. Librarians need to learn to focus more on internal expertise and knowledge, also referred to as knowledge management.

²³ Matarazzo, J., Prusak, L. and Gauthier, M. 1991; Matarazzo, J. & Prusak, J. 1995

²⁴ Matarazzo, J. & Connolly, S. (eds) 1999, *Knowledge and special libraries*, Butterworth-Heinemann, Woburn, MA

Knowledge management

is a form of expertise-centred management which draws out tacit knowledge making it accessible for specific purposes to improve the performance of organisations. Successful application of knowledge management practices involves understanding and constructively utilising organisational learning and the information politics of an organisation.²⁵

The methods for placing a dollar value on organisational knowledge, as described by Portugal, are heading in this direction.²⁶ Diprose notes that for libraries and librarians to be

perceived as a provider of highly valuable information the service needs to be linked with and within personal networks. It needs to use rich communication media that enable high levels of feedback and immediate clarification of any information provided. They need to be located physically within reach of decision-makers and be able to contribute significantly to debate and consequent subjective arguments.²⁷

Intranet forums may be a useful technique to be linked to internal communication within an organisation.²⁸ In the case of health libraries, the emergence of evidence-based health care has led to increased literature-based research activity and consequently increased use of libraries and information services.

In conclusion while libraries lack formal measurements such as labour/management ratios, productivity measures or sales volumes to easily determine monetary value, there are strategies they can use to measure perceived value, such as those described by Broadbent & Lofgren. Combined with an understanding of organisational knowledge, an appreciation of the information needs of their clients and a clear understanding of management expectations, such strategies should ensure the viability of any special library.

²⁵ Broadbent, M 1997, 'The emerging phenomenon of knowledge management', *Australian Library Journal*, vol. 46, no 1, p. 6-24.

²⁶ Portugal, F 2000

²⁷ Diprose, K 1997.

²⁸ Portugal, F 2000