

## **ECONOMIC VALUE OF PUBLIC LIBRARIES - SPECIFIC RESEARCH UNDERTAKEN**

*This file contains Sections 7 - 12 of the summary version of 'Economic value of public libraries', a research project conducted by **Anne Morris, Margaret Hawkins & John Sumsion** for Resource (The Council for Museums, Archives and Libraries), Nov. 1999 - Nov. 2000.*

*Sections 1 - 6 are in pdf file 1. The Full Report's Contents & Summary are listed in pdf file 3.*

The full report, running to 374 pages, is available from the Thesis Service, British Library Document Supply Centre, Boston Spa, Wetherby, LS23 7BQ: Morris, A., M. Hawkins, & J. Sumsion, 2000. The economic value of public libraries. London: Resource (The Council for Museums, Archives and Libraries). ISBN: 1902394518

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## **7. SURVEY: USER PERCEPTIONS OF VALUE**

This survey presents another approach to assessing value, one that is based on the value placed by the user on the books read, in terms of the purpose for which they were borrowed, the benefit obtained and why they were borrowed rather than bought.

To achieve this, a survey was carried out of users returning books to four libraries. The survey was carried out when books were being returned as the borrower would have been unable to judge at any earlier stage what value had been derived from reading them. A total of 557 valid replies was obtained.

### **7.1 The survey**

Three medium-sized libraries, Bedford, Hinckley and Rugby, were chosen for the research, as they were large enough to offer a range of services but not large enough to provide the specialist facilities which can attract an unrepresentative clientele.

By way of a contrast, a small inner-city library was also surveyed: St. Ann's, a part-time library in a deprived area of Nottingham.

Surveying took place for most of the opening hours of one week each in July 2000, including evenings and Saturdays. This pattern was chosen to achieve a representative cross-section of users. In the event, the evenings were quiet and younger people using the library during the day and on Saturdays were often in too great a hurry to take part.

At all libraries, the practice was to interview the first adult borrower who came in to return books. Each interview lasted about five minutes. When that interview was completed, the next available person was asked to participate. No attempt was made to structure the sample by age, sex or any other characteristic.

Each reader was asked to show the books he or she was returning. The questions were asked about one completed adult book, or, if both fiction and non-fiction were being returned, about one of each. Of the 557 readers questioned, 374 returned adult fiction and 219 adult non-fiction, giving a sample of 593 books.

Although the questions were slightly different for fiction and non-fiction, only one question did not apply to both book types. Those returning adult non-fiction were asked what had been their purpose in borrowing the book. Interviewees were asked whether they had enjoyed the book, or found it useful, and what they had gained from it. They were then asked to select from a list of options the price they would have paid to hire/rent the book had this been required. Respondents were also asked to select reasons for borrowing, rather than buying, the book in question. To establish demographic characteristics, respondents were asked to state their age, gender, terminal education age and economic status.

## 7.2 The results

In total, 557 valid questionnaires were completed, as shown below.

**Table 7.1 Respondents by library**

	Library				Total
	Bedford	Hinckley	Rugby	St. Anne's	
No. of Respondents	167	212	143	35	557

When the survey totals are compared with total UK population and all library users (including those who do not borrow books), it is clear that the older age groups are over-represented in the sample. However, the survey is much closer to the PLUS findings, which are also based on one visit: older people are more frequent visitors. Thus, although the sample may not be fully representative of library users as a whole, it is much more representative of any one day's business.

In terms of Terminal Education Age (TEA), the survey appeared to include a greater than average level of people whose education continued until 19, and fewer who left school at 16 or under.

The question on employment was not detailed enough to assign respondents to any social grade, nor was it intended to be. Rather, its aim was to assess the possession of an income on attitudes to value. The survey showed no relation between employment status and the amount respondents were prepared to pay.

The survey first sought to establish how many of the books returned had been completed or of use. Only 8% of fiction and an even smaller percentage of non-fiction was unfinished. Some, 6% of adult fiction and 7% of adult non-fiction, were renewed.

Those returning non-fiction were asked their reasons for borrowing it from a list of options - see Table 7.2.

**Table 7.2 Reasons for borrowing adult non-fiction**

	Respondents	
	No.	%
Education/course of study	63	29
Hobby	58	26
Personal growth/personal learning	65	30
Practical information	92	42
Job	22	10
Pleasure	72	33
Other	1	1
Total	373	171

For both fiction and non-fiction, respondents were asked "*If books were hired out, like CDs and videos, how much would you pay to rent this book?*" The question was intended to elicit some idea of the value placed upon the loan. The question was

asked only of a book that had been enjoyed or was useful, on the grounds that one which had shown neither of these characteristics would have had no value to the reader. Approximately one tenth of respondents said they either had not enjoyed their novel (34) or that the non-fiction book had not met their needs (24 respondents). The amounts respondents would have paid are shown in Table 7.3.

**Table 7.3 Amount respondent would have paid to hire**

Amount	Adult Fiction		Adult Non-fiction	
	No.	%	No.	%
0	20	5.9	12	6.1
5-25p	85	25.1	41	20.7
30-50p	98	29.0	56	28.3
55-75p	37	10.9	21	10.6
80p-£1.00	58	17.2	45	22.7
£1.05-£2.00	24	7.1	13	6.6
£2.05-£3.00	10	3.0	6	3.0
>£3.00	6	1.8	4	2.0
Total Respondents	338	100.1	198	100.0

Some of those surveyed stated that they would pay nothing to borrow the book they had read, in spite of its not being given as an option. The reasons for this were not probed. It is not possible to say, therefore, whether this was because:

- although value was gained, it was felt to have no monetary worth;
- respondents are unaccustomed to paying to borrow books;
- they objected in principle;  
or some other reason.

The survey demonstrated no dramatic links between purpose and the price a borrower would be prepared to pay.

Young respondents were prepared to pay more for adult fiction than older ones. More than half of those aged between 15 and 34 were prepared to pay at least 85p to borrow a novel and 15% of 15-24 year olds would pay more than £2. The results indicate that the amount borrowers would expect to pay decreases with age. For example, 60% of those aged 65 or over in this sample said they would pay no more than 50p.

The issue is not as clear cut for non-fiction, with amounts being more evenly spread across the age range. It would appear that there is a weak tendency for young people to be prepared to pay more. The age group quoting highest figures was found to be 25-34 year olds; 10% of them were prepared to pay £2.05-£3.00, although none was prepared to pay more than £3.00.

No identifiable association was found in the preparedness to pay by gender, or by terminal education age. For sums above £1, willingness to pay declined markedly in respect of all characteristics.

Respondents were asked why they had borrowed, rather than bought, the book in question (see Table 7.4). As they were allowed to state as many reasons as applied, the percentages do not add up to 100%.

**Table 7.4 Reasons for borrowing rather than buying**

	Respondents citing			
	Adult Fiction		Adult Non-fiction	
	No.	%	No.	%
Expensive to buy	195	52.1	92	42.0
Will read only once	178	47.6	107	48.9
Not sure I would enjoy	57	15.2	NA	
Not sure it would be useful	NA	-	48	21.9
No room to keep	69	18.4	28	12.8
I never buy books	57	15.2	10	4.6
Out of print	6	1.6	14	6.4
I need large print	18	4.8	NA	
Other	198	16.6	76	16.9
Total	778	171.5	283	153.5

## 8. OPTIMISATION MODEL

Most stock control models start with the decision on the size of the Book Fund and deal with mechanisms to optimise spending on different categories, etc. within that overall limit. This model attempts to indicate the level at which the overall budget should be set – to achieve best value or the most economic result – as between book buying and book lending. It looks, by implication, at the longer term question how far libraries should compete with bookshops by allocating funds to present an attractive display of books on the shelves and so to expand their lending operation.

The basis of this model is that it considers the number of book 'reads' rather than 'purchases' or 'loans'. Buying transactions and borrowing transactions are not comparable. The 'read' activity, however, is common to book reading - whether the book is bought privately or borrowed from a library.

### 8.1 The preliminary model

The simplest case is where users wish to read a book once only. What economic costs are involved (a) when an additional book is bought from the bookshop and (b) when it is borrowed from the library?

- (a) The cost of books bought from the bookshop is the price of the book, say £6 for the typical paperback. Each reader buys one book and reads it once. For 10 reads it is the price of 10 books.
- (b) The cost of getting 10 reads through the library consists of two elements. There is the acquisition cost of one additional book, say £6 to acquire a paperback, plus £3 extra for acquisition, book processing, and reinforcing. Then there are the circulation costs of storing and lending the book to 10 borrowers. Following the analysis in Chapter 10, these lending costs are calculated as 70 per cent of Total Library Net Costs: 70 % of £1.40 = £1.00

The marginal costs of additional book reads can now be calculated. This is done for six reads.

Six reads of books bought cost	$6 \times £6 = £36$
Six reads of books borrowed cost:	
Acquisition	£ 9
Circulation	$6 \times £1 = £ 6$
Total	£15

The Net gain in the borrowing process for an equal number of user reads is:

$$£ 36 - 15 = £ 21$$

When such calculations are made across a range of situations, the results are as shown in Table 8.1.

**Table 8.1 Optimisation model: preliminary formulation**

					£s
<b>Number of Reads (R)</b>	3	6	12	18	30
<b>Buying Costs:</b>					
R x £6	18	36	72	108	180
<b>Borrowing Costs:</b>					
Acquisition	9	9	9	9	9
Circulation R x £1.00	3	6	12	18	30
TOTAL	12	15	21	27	39
<b>Net Gain (Loss) in Borrowing</b>	6	21	51	81	141

## 8.2 The realistic model

It is common experience that many books are passed on by their original owner to friends or relatives for them to read. Some are sold and get read by second hand purchasers. It is also common experience that, once read, many books stay undisturbed on their owner's bookshelf for years before consignment to the waste bin. How often books bought are read by a second or third reader is a key variable in this model and there appears to be no research directly on this. In the absence of more direct evidence this has led to the assumption in all remaining presentations of the model of an average of **three reads for every two books bought**, i.e. a figure of 1.5 reads per purchased book.

A similar question arises in relation to library book issues. Is the Issue count a realistic estimate of the number of reads of those books? There are several features suggesting that book issues overstates book reads.

First there are renewals. Renewing a book's loan counts as an additional issue in the statistics. Secondly, evidence that some books are borrowed and not read comes from the increasing numbers of books taken out on one visit. Borrowers selecting books do not have to back their choice with their wallet. The estimate for this variable has therefore been set by assuming that **for every four issues recorded there are three book reads**, i.e. a rate of 0.75 reads per book borrowed.

The preliminary model can now be modified to incorporate these assumptions, and the revised result is shown in Table 8.2.

**Table 8.2 Optimisation model: realistic formulation, paperbacks.**

	£s				
<b>Number of Reads (R)</b>	3	6	12	18	30
<b>Buying Costs:</b>					
$2R/3 \times \text{£}6$	12	24	48	72	120
<b>Borrowing Costs:</b>					
Acquisition: one copy	9	9	9	9	9
Circulation $4R/3 \times \text{£}1.00$	4	8	16	24	40
TOTAL	13	17	23	33	49
<b>Net Gain (Loss) in Borrowing</b>	(1)	7	23	39	71

Assumptions: - Three actual reads of every two books bought;  
 - Three reads of every four books borrowed.

If £15 hardbacks were substituted for paperbacks, then the results would be much more favourable to the borrowing option. Clearly the gains through lending hardback books are of a much larger order than in the paperback situation.

### 8.3 Economic equilibrium

The model in this form applies to books that are for reading through (most books that are borrowed are in this category), but Reference books are another story. The model does not assume that options exist for all people or for all books. Consumers' indifference curves will vary where some buy exclusively and some borrow exclusively, or to a great extent. As shown elsewhere, some types of book are particularly suitable for lending, others for purchase. Nor does the model make any assumptions about quality or educational value – that is left to the consumer to decide.

What the model does is to show the conditions in which one option is more economic – provided that customers can be attracted to choose that option. The customer must decide between the buying and borrowing routes, basing his or her decision on a number of factors:

- The perceived benefits from reading different types of books;
- The value of the benefit in relation to the price of the book;
- The convenience of buying and borrowing.

Equilibrium is reached when there is no gain in total economic wealth as measured by the costs of each option.

Taking a first example from the standard formulation for paperbacks with the results for 6 reads: the buying option costs £24; the borrowing option costs £17. So the borrowing option would, in comparison with the buying option, release £7 for spending on other goods and services. It is relatively efficient or economic by this amount. At 20 reads: the buying option costs £72; the borrowing option costs £33. So the borrowing option, in comparison with buying, would release £39 for

spending on other goods and services - the indication of its relative efficiency or economy.

On these assumptions all options - above untypically low levels - show borrowing as preferable in terms of total economic cost. In all options the advantages of borrowing increase with volume (or popularity). If a book is acquired for the library and is then not borrowed, the option is obviously not effective. If going to borrow books from the library is so inconvenient and unsuccessful - relative to a bookshop purchase - then the inconvenience costs will outweigh the monetary and social benefit. The social gain is the sum of all the individual gains.

In the above example, it would be in the general economic interest to set a target of 6 reads (9 issues) per book and to expand the lending operation at all levels above that minimum. (When worked out in more detail the break even point would be nearer 4 reads.) Not to expand borrowing to this level would produce a result that is inefficient economically in social and in individual terms. Lower levels of public library lending would, in economic terms, be anti-social management.

In principle, this result holds whether or not loans are charged or are free to the user. Insofar as libraries do not expand to this level the total result is more costly to society and there are fewer resources freed up for other goods and services.

## 8.4 Variations to the model

As explained above key assumptions need to be made on (1) how much books are read only by the original buyer and how far their use is spread among several readers, (2) the average number of books taken out from the library that never get read and the level of renewals, and (3) the library lending cost per loan.

The model is capable of much manipulation through challenging the assumptions for different circumstances and by applying it to different types of book at different price levels. Examples worked through in the full report are:

- Hardback (more expensive) books
- Books frequently consulted
- Lower library costs.

In these, the relative advantage of borrowing to buying will be altered.

Mathematically, there is no end to the number of permutations that can be explored. Regardless of the *precision* of calculations, the model will be of value in demonstrating what happens when the key variables are changed.

## 8.5 Policy conclusions; how much does the model explain?

The examples worked through tend to corroborate what library managers know from experience. Most users cannot afford to buy expensive hardbacks. Some, but not all, can afford paperback prices. They show that the relative advantage of borrowing library hardbacks over buying them is particularly strong where the book is only available in hardback.

The difference in the results for books read through, read once only and for books that the user needs to consult on many occasions, frequently over time, is not simply a feature of the particular book; it is also a feature of reader behaviour.

For many types of book it is demonstrated that society's economic interest is met by expanding the lending operation to the limit of consumer demand. The major factors in the model's equation are:

- The cost of buying the book;
- Whether the book falls into the 'once only read' category or the 'frequently consulted';
- How far bought books are read by more than one person.

Less important factors are:

- Number of reads per loan issue;
- Libraries' cost per loan.

The model does not, however, cover the whole story. Despite the cost benefits of borrowing displayed in the model there are increasing quantities of books, particularly paperback fiction, sold in bookshops. The explanation for this is to be found in factors external to the Optimisation Model:

- Inconvenience costs of going to the library rather than a bookshop;
- The probability of finding what is required, or an acceptable surrogate: in its negative form the expectation of a frustrated quest;
- The most up to date edition may be available in the bookshop but not in the library;
- Attractiveness of the place to visit and adjacent opportunities. This includes other library services available to use on the same visit;
- Personal features: the collector instinct;  
bias against handling books already used;  
slow readers.

## 9. STOCK ON LOAN MODEL

Until the 1980s it was common for books to be lent out for 2 or 3 weeks and for the number allowed to be 2, 3 or 4 per ticket. During the 1980s and 1990s there has been a marked relaxation so that it is now common for the loan period to be 3 or 4 weeks and for the allowance to be 8, 10, 15 books - or even an unlimited number. Paradoxically this relaxation has taken place in a period when there were declining book funds - so that there were both fewer books available and also a smaller proportion of them actually on the shelves. This may have contributed substantially to the appearance of fewer (popular) books on the shelves - the complaint that tops the list in virtually every user survey. CIPFA *PLUS* data suggests that more than a quarter of borrowers take home five or more books on a visit.

### 9.1 Economic Model

A good level of books on the shelves has always been regarded as the principal objective of good stock management in making the library attractive to borrowers. A poor selection on the shelves has a deterrent effect on users, particularly the most discriminating.

The more books that are on loan the poorer the selection is left on the shelves.

The more books that are on loan the less shelf space is required in the library.

Reducing the number of books that can be borrowed would therefore have the effect of either (a) improving borrower choice or (b) requiring less stock for the same quality of choice.

Varying the loan period will have a similar effect. This can be achieved either for the whole lending collection or for particular categories within it. In theory it will be economic to specify shorter loan periods for books that are in great demand and longer loan periods for books not in great demand but which are required for individual users' research purposes.

### 9.2 Policy

Several policy options are illuminated by this model:

- It must be recognised that a generous allocation of books produces economies for the user in that fewer journeys to the library are necessary and the facility to browse at home is obviously popular. However, this has to be balanced by diseconomies in stock utilisation. To achieve balance between these factors a limit of 4, 5 or 6 books may be the minimum to be considered rather than reverting to the 2 or 3 in previous decades.
- There is scope to achieve similar results by shortening the loan period only for selected categories (and/or titles) that are in great demand.

- To limit the loan period for bestsellers is an option with potential to improve the stock performance without inequitable features. Quick readers would lose nothing: slow readers could have the option of incurring daily overdue fines. One or two weeks would seem the appropriate period for items in very high demand. The rationale is readily understandable - fairer access to books that lots of people want to get hold of. Obviously such limits imply a less generous service so should apply particularly to best sellers in their prime.

## 10. BENEFITS GENERATED MODEL

This model looks at benefit, as manifested by the number of book reads, in relation to public and private expenditure. Since it deals with totals and averages, it treats every read of every book, whether borrowed or purchased, as of equal value.

### 10.1 Reads generated by buying and borrowing

Table 10.1 adds reads generated by books borrowed from public libraries to those generated by books bought and shows the percentage of those reads arising from public library books lent out. It shows public libraries to be responsible for 43% of the reads, with the greatest share (58%) coming from adult fiction.

**Table 10.1 Reads generated by bought and borrowed books**

	Book buying		Book borrowing		Reads	
	Books bought	Reads generated @ 1.5 per book	Books borrowed	Reads generated @ 0.75 per book	Total reads	Percentage generated by libraries
	000	000	000	000	000	%
Total	320,000	480,000	480,500	360,000	840,000	43
AF	90,000	135,000	246,700	185,000	320,000	58
ANF	120,000	180,000	121,700	91,000	271,000	34
Children's	110,000	165,000	112,100	84,000	249,000	34

A straightforward calculation using consumer and public library expenditure on books shows that the average cost of a book 'read' is £3.85 when the book is bought, compared with £1.41 when it is borrowed from the library.

### 10.2 Spending on books

If the reads shown above are broken down by category, the results are as set out in Table 10.2. The total public library spend is small, at 4.7%, although it is higher, at 6.3% for Adult Fiction. Thus it is apparent that the library's 43% of total reads comes from 4.7% of total national expenditure on books.

**Table 10.2 Public library spending as a proportion of book trade revenues**

	Consumer spending	Library spending	Total	Spent by libraries
	£000	£000	£000	%
Total	1,850,000	91,000	1,941,000	4.7
Adult fiction	481,000	32,600	513,600	6.3
Adult non-fiction	570,500	26,800	579,300	4.6
Reference	410,000	15,100	425,100	3.6
Children's	388,500	16,600	405,000	4.1

### 10.3 Libraries' contribution to reads by age and social class

The reads generated can be broken down into age bands and social groups. Data in Table 10.3 show that the percentage of library generated reads is higher at the lower end of the social scale, though less so in the case of Class D, and that library use is therefore redistributive in terms of social class.

Conventionally classes D and E are combined: their separation distinguishes between Class D - unskilled - and Class E - unsalaried, including those retired. The reads of the professional classes (AB) show a particularly high rate generated by purchasing (74%) as against those generated by borrowing (26%).

**Table 10.3 Libraries' contribution to reads - by social class**

	Books Bought	Reads generated @ 0.75 per book	Books borrowed	Reads generated @ 0.75 per book	Total Reads	Reads attributable to borrowing
	000	000	000	000	000	%
Total	320,000	480,000	480,500	360,000	840,000	43
AB	99,000	149,000	67,500	51,000	200,000	26
C1	99,000	149,000	178,000	133,000	282,000	47
C2	57,500	86,500	120,000	90,000	176,000	51
DE	64,000	96,000	115,500	87,000	183,000	48
D	35,000	53,000	48,000	36,000	89,000	40
E	29,000	43,000	67,500	51,000	94,000	54

Library book borrowing is shown to be not only an efficient means of generating book reads, but also to have a significant effect in redistributing income.

## 11. ESTIMATED TOTAL VALUE OF PUBLIC LIBRARY BENEFITS

The estimates in this section represent a preliminary approach using data that is more complete in some areas than overall. While there is no question of scientific proof, the weight of circumstantial evidence described in this project supports these calculations. The calculations could, of course, be done using alternative values, either higher or lower: the process is completely transparent.

### 11.1 Total estimate

The total estimate of value is accumulated as in Table 11.1:

**Table 11.1 Value and cost totals** (rounded)

Book lending	£630,000,000
Inter Library Loans	£ 1,557,000
Audio-visual	NIL
Information	£118,629,000
Other services	£ 72,400,000
TOTAL VALUE	£822,586,000
TOTAL COSTS	£724,000,000

**Net gain** On these calculations the Library Service is shown to produce £98,600,000 or 13.6% more value than it costs. This, however, is before taking credit for those multiple benefits to society identified in the course of this project under the heads 'Externalities', 'Merit goods' and income redistribution effects. Other organisations benefit from public library activities, and the host of social and community benefits are over and above what has been calculated here.

Table 11.2 gives the next level of detail in the calculations.

**Table 11.2 Summary of value calculations**

	<b>Transactions</b>	<b>Benefits (reads, inf'n*)</b>	<b>Value per item</b>	<b>Total value</b>
	000s	000s	£	£000s
Book lending	480,000	360,000	1.73	630,000
Inter Library Loans	450	450	3.46	1,557
Audio-visual	37,391			
Mediated Information*:	43,819	41,819	2.00	83,638
Self found Information*	34,851	26,309	1.33	34,991
Other services				72,400
<b>TOTAL</b>	<b>596,511</b>	<b>428,578</b>		<b>822,586</b>

The manner in which these estimates have been compiled is all important. The arguments and calculations are given here in outline only.

## 11.2 Book lending

The concept of relating the value of a book loan to the price of the book is sound and has been adopted here. The following evidence has been collected:

- Newhouse & Alexander \*\* suggested 10% of published price.
- The analysis of Boots Subscription Library subscription rates suggested 7-13% of published price.
- Survey results for this project suggested 7-8% of published price.
- New Zealand's *LIANZA* \*\* assessments average 25.3%.

Clearly the value placed on an average book read has to be considered in the light of all these arguments and evidence: the hardback/paperback change since the 1960s, changes in the standard of living, the survey, and the New Zealand study. When account is taken of these arguments and of the many features of extra value offered by books in public libraries, this leads to the hypothesis that the average value of a book read, when borrowed from the modern public library and relative to the mix of books in the public library lending stock, should be put at 20 per cent of the price paid by libraries.

The value of the average read used in the calculations that follow is therefore 20% of the average £8.65 price paid by libraries, i.e. £1.73. (This average covers adult fiction, adult non-fiction and children's books.)

The other variable to be estimated is the number of book reads; this is derived from the book issue statistic. The ratio of three reads from every four issues, or 0.75 issues:reads, established in the Optimisation Model, has been used. So

$$75\% \text{ of } 480 \text{ million book issues} = 360 \text{ million book reads.}$$

Using these estimates, the value of public library reading can therefore be calculated as:

$$360,000,000 \times \text{£}1.73 = \text{£}630,000,000$$

and the cost of providing the library lending service is:

$$70\% \text{ of } \text{£}724,000,000 = \text{£}507,000,000$$

On these calculations the value received by borrowers exceeds the cost by £123,000,000 - or by 24.3 per cent. Put another way, the average value of a book read is estimated at £1.73 and the cost of delivering it at £1.41.

**\*\* References:**

**Newhouse, J. P. & A. J. Alexander**, 1972. *An economic analysis of public library services*. Santa Monica: Rand.

**Library & Information Association of New Zealand Aotearoa (LIANZA)**, 2000. *Manukau Libraries: trial of the V<sup>+</sup>LM Value Added Library Methodology*. Trial Report, 12 October 2000. [pre-publication draft] New Zealand, LIANZA, at URL: <http://www.lianza.org.nz>.

### 11.3 Audio-visual lending

In the absence of cost estimates for the delivery of the Audio-visual service, it is assumed that the value of audio-visual lending is equal to the charges levied on users and that this matches the total cost of provision.

Summary annual statistics are:

Loan issues	37,391,000
Acquisitions costs	£ 13,961,000
Income received	£ 16,453,000

## 11.4 Information provision

The following data are available for the UK. (These are the number of activities/transactions, not money value, and are taken from the *CIPFA PLUS* Survey results as being more reliable and objective than the *CIPFA Actuals* Enquiry Count.)

Information seeking activities - total p.a. ( <i>CIPFA PLUS</i> )	=	78,670,000
<i>Of these:</i>		
Proportion of self help activities @ 44.3 % ( <i>CIPFA PLUS</i> )	=	34,851,000
Information enquiries p.a. (= <i>balance</i> )	=	43,819,000

Value is only derived when the required information is obtained. Therefore, totally unsatisfied enquiries must be subtracted before the value of the information function is calculated.

Percentage totally unsatisfied activities 13.4% ( <i>CIPFA PLUS</i> )		
Therefore, total unsatisfied enquiries = 13.4 x 78,670,000	=	10,542,000
<i>Of these:</i>		
19% consulted staff	=	2,000,000
81% did not consult staff	=	8,542,000
Total satisfied enquiries = 43,819,000 - 2,000,000	=	41,819,000
Total satisfied self-help information = 34,851,000 less 8,542,000	=	26,309,000

To convert these data into money estimates it is necessary to hypothesize an average value for each. The values of £2.00 and £1.33 used are broadly in line with the value of the enquirer's time - at average earnings - as a proxy estimate but give a higher value to the mediated enquiry than to self help. Taking average hourly earnings (1998) at £10.03 and a notional 8 minutes time given up by the user per enquiry the result is £1.33. Adding 50% for mediated service gives £2.00.

On these assumptions the total value of Information received is calculated as follows:

Information enquiries (mediated) 41,819,000 @ £2.00	=	£83,638,000
Information found by the user 26,309,000 @ £1.33	=	£34,991,000
Total estimated value of information supplied	=	£118,629,000

## 11.5 Other services

This area is even more difficult to estimate, even hypothetically. Here, in the absence of any data to compute a value estimate, the expenditure is taken as a surrogate. This is only satisfactory in the very short term. In order to complete the picture it seems reasonable, from the data presented in Chapter 10, to assume that 10% of library net total expenditure goes here. This is likely to prove conservative when the value of in-house use (terminals, study/reading places, magazines, etc.) is taken into account. Thus:

$$10\% \text{ of } \pounds 724,000,000 \qquad = \pounds 72,400,000$$

## 12. NEW PERFORMANCE INDICATORS FOR BOOK LENDING

The calculations in section 11.2 are derived from two variables - first, the volume of lending and second, the average value of books acquired for the library. Constants are included to arrive at the final estimate using reasoning based on various historical features and other data. The result can however be simplified in the form of this equation:

$$V = (0.75 I) \times (0.2 P) \quad \text{or} \quad V = 0.15 \times I \times P$$

Where V = value of book lending

I = book loan issues

P = average price of book acquisitions

0.75 = ratio of book loans to book reads

& 0.2 = average value of a read as % of purchase price

The opportunity arises to develop this as a performance indicator to show the value achieved by the library in its lending operation.

It has a number of positive features:

- The higher the number of loans the higher the indicator result;
- Books acquired that do not get borrowed depress the indicator result;
- More expensive books have a greater impact on the indicator result (this accords with the benefit to the user as shown in the Optimisation Model and is an improvement on the straight Issue count);
- Paperbacks count realistically: the indicator would show the same result for 10 issues each of 3 paperback copies at £6 as for 10 issues of a £18 hardback.

The value of lending can be pushed up both by increasing issues and also by lending high price material. Stocking books that no-one borrows yields nothing: but lending a wide range of books would count for much more than simply boosting issues of popular bestsellers. The indicator would certainly overcome some of the weaknesses of the straight issue count and give credit to the more 'serious' books as compared to multiple copies of the most popular.

The main negative feature is that, on its own, the indicator would show a higher result if books were acquired at high prices and would give no credit for tightly managed selection and purchasing. To improve performance by paying over the odds would be a ludicrous result! That would have to be controlled - or reflected - in a second 'paired' indicator. This could well be the ratio between costs of acquisition and publishers' list prices. Publishers' prices are available on computer database files, and this in itself could be an interesting and important performance indicator to reflect the economy librarians achieve in the selection and acquisition process.

The application of these performance measures could have important benefits. It is recognised that further study of the principles and feasibility is required.