

# Measuring the value: Valuing the measure

Deborah Novotny

**Abstrakt:** This paper will explore the use and value of statistics at the British Library. It will focus on two main areas; 'Measuring our Value', an independent economic study commissioned by the BL to measure the library's indirect value to the UK economy and more specifically a preservation assessment of the library's entire 150M holdings and the use to which Collection Care will interpret and exploit the data.

## Introduction

This paper explores the value of statistics and their application at the British Library and illustrates how statistics are used. It focuses on an independent economic study – 'Measuring our Value' – commissioned by the Library to measure its value to the UK economy. More specifically, it highlights the British Library's three year Preservation Needs Assessment project, which surveyed the Library's entire 150 million holdings, and examines the ways in which Collection Care is interpreting and applying the derived data.

## Measuring the Value

As Bob Dylan so eloquently put it in the 1960s 'the times they are a-changing' and no more so than for libraries in the 21<sup>st</sup> century. The British Library is no exception.

We have been in our flagship building at St Pancras for nearly ten years, and just as we thought the dust had finally settled after the biggest book move in history, the Library began an important and significant modernisation programme. This programme of change began in the year 2000 led by a new Chief Executive and included amongst others things – management structure reorganisation, the implementation of a rigorous strategic agenda, the restructure of the Library's information supply service (document supply at Boston Spa) and moves to obtain legal deposit status for electronic material. Running in parallel to this programme of reform was the desire to optimise efficiency savings.

The Library is almost entirely funded by central government and at today's figures (2006) this equates to approximately £100M or €145.2 per annum – not an inconsequential amount. The government naturally wants to be able to assess the Library's performance against its investment and at a pre-budget meeting in 2002 Gordon Brown, Chancellor of the Exchequer, expressed the view, that 'the public have a right to know that they are getting **value for money** and therefore tough choices and hard decisions have to be made... the something-for-nothing days are over in our public services and there can be no blank cheques'.

The challenge for the Library was how to demonstrate to government evidence of value for money; how to assess the Library's contribution both direct and indirect to the national economy.

This is acutely complex, as one needs to be able not only to determine the working definitions of 'value', but also identify how these definitions might be measured and expressed. For example, 'value added to the national economy' may be economic, cultural, social or intellectual; it will be possible to measure some aspects directly, while others may be much less tangible and more difficult to quantify.

The methodology chosen by the Library was a quantitative evaluation system supported by the Nobel Prize winning economists Kenneth Arrow<sup>1</sup> and Robert Solow. The method, known as **Contingent Valuation**, has been widely used by both national and international organisations. It was on this basis that the Library commissioned a pioneering research study to measure the impact it has across several of the UK's target sectors.

Contingent Valuation works by designing specific questions (usually in the form of a comprehensive survey questionnaire) tailored to elicit, in quantitative terms, how much people value a particular organisation or service. For example, in the case of the British Library's Survey, respondents were asked a range of questions about the cost of using alternatives to St.Pancras and the cost of accessing the Library's services – measured by the time spent travelling to and from the Library, and how much that travel had cost. Data was collected through not one, but three major surveys, to provide a reliable and representative picture of the value of the Library.

NOP, the designated market research company, surveyed a random selection of the following three groups: 200 users of the British Library reading rooms, 100 users of the British Library remote document supply and bibliographic services and 2 000 members of the general public. Specific questions asked were:

**Willingness to pay** – individuals were asked to state the maximum amount they would pay to continue to gain access to the Library's services

**Willingness to accept** – individuals were asked to state the maximum amount they would accept in the form of compensation to forgo the Library's services

**Investment in accessing the services** – individuals were asked the time it took to get to the Library, the length of time spent there and the cost of travel. A value was then placed on the time component to derive a total value invested in gaining access

**The cost of alternatives** – individuals were asked to place a cost on alternatives to the Library if services were withdrawn

**Change in demand in response to a hypothetical price change** – individuals asked how their usage would change if pricing were introduced or existing prices changed.

Answers to these questions gave information about users' hypothetical flexibility of demand for services and provided an approximation of the consumer surplus gained at current levels of pricing.

The results of the survey concluded that each year the Library generates value around 4.4 times the level of its public funding – so for every £1 of public funding the Library receives annually, £4.40 is generated for the UK economy. Furthermore, if the Library did not exist, the UK would lose £280 million of economic value per annum. The study showed conclusively that investment in the Library represented value for money for the British taxpayer. It also clarified the Library's value, not only to users who access the Library's collections and services directly, but also to the general public who reap indirect benefits from the world class scientific research, creativity and innovation that is underpinned by the Library.

The Library hopes to commission further studies to build on this valuable first step. These will investigate and measure changes in value over time, and look at increased understanding of the value of emerging products and services.

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<sup>1</sup> Economic Impact Assessment – further information see [www.bl.uk/pdf/measuring.pdf](http://www.bl.uk/pdf/measuring.pdf)

## **Valuing the Measure**

The Preservation Assessment Survey (PAS) is a tool for assessing the preservation needs of any library or archive collection with the overriding aim of producing an objective picture of the state of collections, both locally and nationally.

PAS is a practical, workable and useful way of measuring the condition of a collection and establishing the highest preservation priorities. The intrinsic value of the measure lies in the fact that data derived can not only be used as a basis for preservation to address specific areas of identified need, but can also aid and act as drivers for strategic bodies such as government, grant-making organisations and others involved in national planning and strategy.

The survey methodology was developed by the National Preservation Office (NPO) and originally funded by the British Library Research and Innovation Centre (BLRIC)<sup>2</sup> and validated statistically by Loughborough University.

A representative sample population of approximately 400 items is selected from a collection and each item assessed against specific criteria namely access, use, condition, accommodation and value. The statistical validation carried out by Loughborough ensures that the sample size is an accurate representation of any collection, within + or - 5%. The criteria are applied as a series of scored questions in a standard questionnaire and the total scored by each item is translated into comparative priorities of preservation need. This enables items to be grouped into five preservation priority bands: band 1 contains the lowest scoring items which are therefore of low priority, while band 5 contains the highest scoring items of very high priority.

The NPO has coordinated to date over 97 surveys across the UK in public libraries, academic libraries etc. and has used the data to build up a national picture of preservation need in the UK. The 97 surveys, excluding the six copyright libraries, incorporate over 43 000 separate items (books, documents, photographs, etc.), representing an estimated minimum total of 28 million items. The UK Preservation Needs Assessment report<sup>3</sup> **‘Knowing the Need’**, first published February 2006, identifies the areas requiring most improvement as: environmental monitoring, storage, disaster preparedness and cleaning.

As a direct result of these findings, the National Preservation Office organises regular training seminars for collections managers and staff to address these issues – such as **‘Preservation for Access’** and **‘How clean are your books?’**

Further analysis of the surveys reveals that 87% of the UK collections are **‘stable’** and 13% unstable. Only 3% of material has significantly brittle paper, and 18% slightly brittle, while 70% of all material surveyed shows some sort of damage. Across all surveys, some form of damage was recorded in 80% of newspapers, in 79% of parchment and vellum items and in 70% of manuscripts.

## **The British Library Survey**

Having been involved in the design and testing of PAS the British Library is committed to using the tool to give an objective picture of the condition of all its collections. The Library’s programme of surveys started in 2000 with an initial broad experimental pilot of the Library collections as a whole, followed by

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<sup>2</sup> **‘A model for assessing Preservation Needs in Libraries’** by Paul Eden. BLR&I report (grant no. G/380) ISBN 0712397256

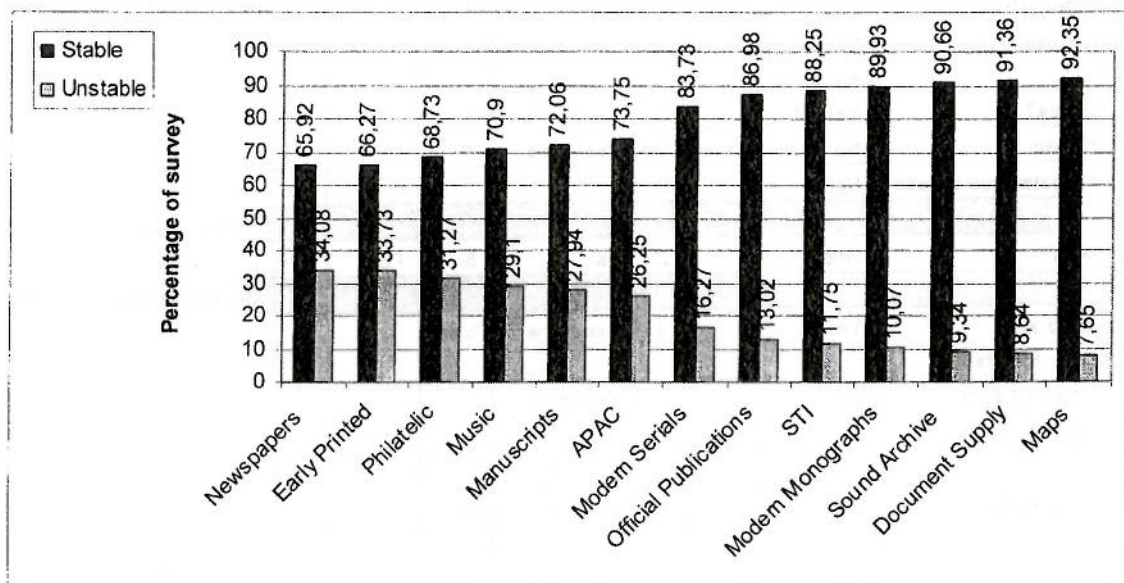
<sup>3</sup> **‘Knowing the Need’** by Alison Walker & Julia Foster. ISBN 0712349308. For more information on National Preservation Office – <http://www.bl.uk/services/npo/publicationsconf.html>

individual surveys (13 in all) of all of the Library's collection areas (*see figure 1*). This programme of second level surveys took over three years to complete and resulted in a comprehensive assessment of the entire Library holdings of over 150 million items. The headline figures do not greatly differ from the national picture in as much as 86% of the Library's material is in stable condition.

This same methodology was applied to each of the collection areas within the Library. Generally, for the purpose of the surveys, a sample figure in excess of 400 was desirable, in order to absorb possible 'misses' – selected items that were not on the shelf for whatever reason such as being conserved or being used by readers – while still maintaining statistical integrity.

In summary, the Map collection is the most stable and the Newspaper collection is the most unstable. This correlates with the national picture, where 80% of all newspapers surveyed showed some degree of damage. The data allows us to use and interpret the results in many ways, for example, to establish key performance indicators (KPI) or to establish a baseline figure of condition and to make informed preservation funding decisions.

One immediate application of the data derived from the surveys is to permit us, amongst other things, to prioritise the Library's preservation resource. The survey results for the Newspaper collection are a good example of where the statistical evidence is used actively to benefit the material. The survey of this collection showed that 34% of the material is unstable with 19% in poor condition which soon may need to be withdrawn from use. This, along with other external factors, has informed recent decisions to prioritise the preservation of this collection, principally through an enhanced copying and reformatting programme.



(Figure 1) – Second level survey illustrating stability of collections

## Key Performance Indicator

A major aim of the survey programme was to establish an objective statistic which would capture the percentage of the Library's collections in stable condition. A **key performance indicator (KPI)** helps an organisation or business **measure** progress toward its goals and in her keynote speech to the 'NPO Annual Conference in 2000, Helen Shenton, Head of Collection Care, stressed the Library's commitment to providing a quantitative KPI for the condition of the collections.

The measurements to achieve this were derived from Question 11 of the survey form, which summarises the physical condition of the item surveyed. Each item is assigned to one of 4 ratings: Good, Fair, Poor or Unusable. Good and Fair are deemed to be stable, Poor and Unusable are deemed to be unstable.

By March 2004, sufficient information had been collected to determine the required KPI and establish a benchmark figure for the condition of the Library's collections as a whole. This was achieved by aggregating the condition ratings for all the surveys, with adjustments for the population base of each survey. The KPI established that 86% of the Library's collections are in stable condition.

## Preservation Planning and Priority-setting

Such is the value of the survey tool as a measure that the Library has further adapted it to help in the allocation of its preservation resource to specific collection departments, which bid on an annual basis for a share of it.

1 = low – 30 = high

### SCORING GRID

Factor Questions	Non Critical Answers					Critical Answers		
Surrogates?	Yes All	0	Yes some	3		No	6	
Catalogued	No	0	Yes some	1		Yes All	3	
Remote catalogue access	No	0				Yes All	1	
						Access Factor	10	
Condition?	Good	2	Fair	8	Poor	24	Unusable	30
						Condition Factor	30	
(protected and) Protection is suitable?	Yes	0	Yes some	5		No	10*	
(not protected and) Protection required?	No	0	Yes some	5		Yes	10*	
Level of use/demand?	Low	5	Medium	15		High	30	
Items unique?	No	0				Yes	12	
Part of NPA?	No	0				Yes	8	
						Value Factor	20	
						Total critical score	100	
						= total factor value	0	

\* Only one answer applies

(Figure 2) – Scoring matrix for priority-setting

<sup>4</sup> 'Caring for Collections' 2000 NPO Conference, London. Full text available: <http://www.bl.uk/services/publicationsconf.html>

The preservation bidding cycle starts in October when collection departments are asked for their requirements for the forthcoming year. The information is collated and scored using weighted criteria similar to the PAS criteria (*see figure 2*), and the resultant scores are used to aid the decision making process in prioritising the allocation of the available resources to those areas that need it most. Newspapers, for example, have been allocated for 06/07 one third of the entire preservation budget – over £900 000 or €1.3M for preservation surrogacy programmes, whereas Maps have been awarded £18 000 or €26 000.

Additionally, the PAS survey was designed in such a way that when interrogated it can take into account 'what if' scenarios. For example, if we improved the shelving of a collection or provided better protection (boxes) or enhanced the environment what impact would that have on the longevity of material. Our initial analysis confirms that of all of the measures considered, 'better environment' would influence stability and longevity the most. Ultimately, the Library's survey work will feed into the national framework and strategy. The data will inform a wide range of potential measures, from a shared mass de-acidification facility to collaborative storage or collective conservation and preservation programmes.

Gathering statistics can be a very time-consuming and tedious business, but their value in informing all sorts of strategy, policy and initiatives is not to be underestimated.

*Deborah Novotny*  
*British Library*  
*deborah.novotny@bl.uk*