The aim of this survey, based on material held in the Aslib Library, was to produce a list of items dealing with cost and costings in library services, for use within the Aslib Research Department. Attention has been concentrated on material published since 1960, although a few items prior to this date have been included. Items which are considered to be particularly helpful have been marked with an asterisk. During the course of the search, references were found to material on related measurements, e.g., times, and it appeared useful that these also be included. However, no exhaustive search was made for such items; hence these sections are appended not as comprehensive lists, but rather as suggested readings. (Author)
A Selective Bibliography on Measurement in Library and Information Services

compiled by Rose Reynolds
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Introduction

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April 1970

Sources Consulted

American Documentation  
Annual Review of Information Science and Technology  
Aslib Handbook of special librarianship and information work  
Aslib Library Catalogue  
Aslib Proceedings  
Bourne, C.P. Methods of information handling. 1963  
College and Research Libraries  
Defense Documentation Center. A DDC bibliography on cost/benefits of technical information services and technology transfer.  

Alexandria, Virginia, July, 1968. (AD 672 500)  
Journal of Chemical Documentation  
Journal of Documentation  
Library Resources and Technical Services  
Library Science Abstracts  
O & M Bulletin  
Progress in Library Science  
Special Libraries  
Arrangement of Entries

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D. Planning Measures
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- Dimensions
- Economics
- Evaluation
- Library surveys
- Planning principles and measurements
- Prices
- Recommendations and specifications
- Standards
- Standards – British Standards

E. Author Index
Section A — Cost

Cost accounting

1. Brutcher, Constance, and others

2. Holmkamp, John G.

3. Nitecki, Andre
   Cost accounting forms designed by the Cost Accounting Study Committee of the Library Administration and Technical Services Section [of the Michigan Library Association]. Michigan Libr., December 1963, v.29, no.4, p.19–21. (Specimen forms designed to aid the libraries to determine the unit cost of technical services of a library).

Cost analysis

4. Bourne, Charles P. and Fox, D. F.
   Cost analysis and simulation procedures for the evaluation of large information systems. Amer. Docum., April 1964, v.15., no.2, p.142–149. (A computer program has been written and used which simulates the several-year operation of an information system, and computes estimates of the expected operating costs.).

   Cost analysis study: a project on technical processes seminar; under the direction of B.S. Wymar and H.R. Malinowsky.
   Denver, Col., 1965. (Report of a cost analysis study (1960-1) of the Acquisitions, Cataloguing, Marking and Binding Units of the University of Denver Libraries. Contains some costs and descriptions of work activities).

Cost benefit analysis

6. "Wooster, H.
   Post mortems can be fun: the cost analysis of information systems. Libr. J., July 1965, v.90, no.13, p.2968–73. (Discussion of general principles, with examples).


Costing

8. Keller, John E.

9. Herner, Saul
   System design, evaluation and costing. Spec. Libr., October 1967, v.58, no.8, p.576–581. (Two basic principles that are discussed and emphasised are the need to define what the program should... and should not be doing, and the need and means for determining real as opposed to apparent costs in the design process.).

10. Lister, Winston C.
    Least cost decision rules for the selection of library materials for compact storage. Lafayette, Indiana, Purdue University, 1967. (Suggests models for establishing costs).
Costing continued

11. Welch, Helen M.

Costs

12. Bloomfield, Masse
Cost characteristics of library service. Spec. Libr., December 1967, v.58, no.10, p.686–691. (Reports on a 1966 survey of nine aerospace libraries, gathering data on circulation, library staff, patrons served, library space. "...Total operating costs of each aerospace library were estimated by using a fixed dollar amount spent per library staff member.")

13. Dougherty, Richard M. and Heinritz, Fred J.


15. *Williams, Gordon, and others
Library cost models: owning vs borrowing serial publications. Washington, DC, NSF, 1968. (A study of four university libraries. Costs studied were: acquisitions; subscriptions; cataloguing; binding; marking; administration; training. Contains tables of cost data).

Costs – abstracting

16. *Boodson, K.

17. Mohlman, J. W.

Costs – acquisition

18. Franklin, Robert D.

19. Gipson, John S.
"Total cost of acquisitions in a community college. Coll. Res. Libr., July 1967, v.28, no.4, p.273–276. ("The purpose of this analysis is to show a methodology for determining the total cost associated with library operations."")

20. *Maier, Joan M.
Analyzing acquisitions and cataloguing costs. Libr. Resources Tech. Serv., 1969, v.13, no.1, p.127–135. ("The procedures described were developed as part of a feasibility study to establish a book processing center for the state-supported academic libraries of Colorado." Cost analysis was based on data collected at nine libraries, from which mean times were calculated).

Costs – bibliographic data conversion

21. Simmons, P. A.
An analysis of bibliographic data conversion costs. Libr. Resources Tech. Serv., 1968, v.12, no.3, p.296–311. (Describes studies made by the staff of the Marc Pilots Project to determine costs involved in converting bibliographic data to machine-readable form.)

Costs – book catalogue production

22. Hayes, R. M. and Shoffner, R. M.
Costs - book catalogue production continued
('The economics and procedures of book catalogue publications have been analyzed, general functional relations for the cost and time of different operations have been developed, and these have been applied specifically to the Stanford University Undergraduate Library').

23. *Heinritz, Fred.
   Book versus card catalog costs. Libr.
   Resources Tech. Serv., 1963, v.7, no.3,
   p.229-236. (A comparison of the costs
   of producing both card and book form
   outputs of the Engineering Index.
   Includes comparative cost tables).

Costs - buildings and equipment
24. Metcalfe, Kay D.
   Library building costs. Coll. Res. Libr.,
   ('The principles upon which data con-
   cerning costs of academic library build-
   ings and their furnishings and equipment
   should be determined are enumerated,
   and a sample report form laid out').

Costs - catalogue card production (See also
   entry no.23)
   Library Technology Project. Catalog card
   reproduction: report on a study.....1965,
   81p. LTP Publication No.9. (Includes
   tables of comparative costs for card re-
   production, equipment, materials, staff
   time).

   Cataloguing drive using the Polaroid CU5
   close-up camera. Aust. Libr. J., October
   1968, 17, p.311-320. (National Union
   Catalogue/Library of Congress catalogue
   entries photographed to produce cata-
   logue entries for the University of Syd-
   ney Library. Includes rough costs).

27. *Kilgour, Frederick G.
   Costs of library catalog cards produced by
   computer. J. Libr. Autom., v.1, no.2,
   p.121-127. (Production costs of cata-
   logue cards produced by four variants of
   the Columbia-Harvard-Yale procedure
   are analyzed).

   Note on the economics of catalogue card
   reproduction. J. Docum., June 1965,
   v.21, no.2, p.128-130. (Compares esti-
   mated costs of producing University of
   Lancaster Library's catalogue cards by
   stencil duplicator, offset lithography and
   tape typewriter).

29. Radcliffe, F. W.
   A further note on the economics of cata-
   logue card reproduction. J. Docum.,
   March 1965, v.22, no.1, p.55-58. (Gives
   costs of reducing catalogue cards by
   multilith at University Library of New-
   castle upon Tyne).

Costs - catalogue maintenance
30. *Dolby, J. L., and others
   The cost of maintaining and updating
   library card catalogs. US Dept. of Health,
   Education and Welfare, 1969. (Contains
   "...detailed information concerning com-
   parative estimates of the cost of maintain-
   ing and updating library card catalogs...")

   Library catalogs: their preservation and
   maintenance by photographic and auto-
   mated techniques: a study by the Re-
   search Libraries of the New York Public
   Library under a grant from the Council
   on Library Resources. 1968. (Public cata-
   logue of the Research Libraries is discus-
   sed. Includes some costs).

32. Kountz, John C.
   Cost comparison of computer versus
   manual catalog maintenance. J. Libr.
   Autom., September, 1968, v.1, no.3,
   p.159-177. (Study of the Orange
   County Public Library, Orange,
   California).
Costs — cataloguing (see also entry no.20)

33. Bennett, F.

34. Childers, Thomas, and others

35. Dougherty, Richard M.
Cost analysis studies in libraries: is there a basis for comparison? Libr. Resources Tech. Serv., 1969, v.13, no.1, p.136–141. (University of Colorado Libraries study on centralized processing. Presents results, using a diary technique to produce costs and create standard times for original cataloguing.)

36. Gore, Daniel

37. Gore, Daniel

38. Hendricks, Donald D.
Comparative costs of book processing in a processing center and in five individual libraries. Springfield, Ill., Illinois State Library, May 1966, p.85–86. (Gives some specimen costs for cataloguing and processing books for varying numbers of volumes per day).

39. Linder, L. H.

Costs — charging systems


41. Kimber, Richard T.
The cost of an on-line circulation system. Program, October 1968, v.2, no.3, p.81–94. ('The unit costs are derived from the presently operating manual circulation system at Queen's University [Belfast], and the on-line computer-aided system in process of development. For the period 1971-5, during which the computer system is expected to be fully operational, they are: manual system 8.2 pence per loan; computer system 9.4 pence per loan. The computer system is thus 15% more expensive, but it will effect a 45% reduction in the library staff time devoted to circulation work').

Costs — checking

42. Riddett, R. C.

Costs — classification

43. Gore, Daniel
Costs - classification continued
2291. (Recommends Library of Congress classification scheme as a better, cheaper alternative to the Dewey Decimal Classification)

44. Hitchcock, Jennette E.

45. Line, Maurice B.
The cost of classification: a note. *Cat. Index.*, October 1969, no.16, p.4. (Separates cataloguing from classification times in order to justify centralised classification costs).

Costs - co-ordinate indexing

46. *Baker, K. J.*
Unit concept co-ordinate indexing: the costs of setting up and operating a system. *Northern Aslib Bull.*, Oct/Dec., 1966, v.11, no.4, p.3-27. (Describes the system in use at British Insulated Callender's Cables Ltd. Includes costs).

47. *Bartels, W.*

48. Montague, Barbara A.
Testing, comparison and evaluation of recall, relevance and cost of co-ordinate indexing with links and roles. *Amer. Docum.*, July 1965, v.16, no. 3, p.201-208. (....evaluates the effect of system components.....on recall, relevance and cost of a patent index and compares retrievability and cost of co-ordinate indexing with classification').

49. *Van Djik, Marcel*

Costs - documentation

50. *Hirayama, Kenzo*

51. Landau, Herbert B.
The cost analysis of document surrogation: a literature review. *Amer. Docum.*, October 1969, v.20, no.4, p.302-310. ('A state-of-the-art literature review on the cost of classification, cataloguing, indexing and abstracting, has been conducted. It was found that while some data on specific costs are available, the literature is generally found lacking from the point of view of accuracy, completeness, consistency and availability."

52. MacQuarrie, Catherine

53. *Mathieu, J. and Barlen, S."
Guiding principles for time and cost in documentation work. Germany, TILS, 1959. (Includes times and costs for
Costs — documentation continued
abstracting, classification, proof-reading, duplicating, filing).

Costs — files

54. Hayes, R. M.

Costs — information storage and retrieval

55. Horner, J. K.

56. Mueller, M. W.
Time, cost and value factors in information retrieval: paper presented at the IBM Information Retrieval Systems Conference, Poughkeepsie, NY, September 21–23, 1959. ('Deals with a study conducted by the Operations Research Division of the Lockheed Aircraft Corporation to unearth some of the economic factors behind the library information handling system in a typical engineering organisation').

57. Ramsey, James W.

58. Stevens, Norman D.

Costs — information systems

59. Freeman, Monroe E.

60. *Hanson, C. W.

61. Kennington, D.
The profitable management of information in industry. London, InComTec, 1969. 34p. (The problems and methods of organization of information in industry are outlined and related to the usefulness and cost to the organization).

62. Risk, J.M.S.

63. Sharp, Harold S.

64. Taylor, L.
Costs – mechanization (See also entry no.84)


66. Chapin, Richard E. and Pretzer, Dale H.

67. Culbertson, Don S.

68. Griffin, H. L.
Estimating data processing costs in libraries. Coll. Res. Libr., 1964, v.25, p.400–403, 431. (The constant factors in costs are identified. After discussing the possible role of non-computerised equipment, the author details cost considerations for various types of output in relation to systems design).

69. Marron, Harvey and Snyderman, Martin

70. Matthews, M. and Sherman, J.

71. Rowlands, D. G.
The Unilever research SDI system. Inform. Stor. Retr., 1970, v.6, p.53–71. (Describes the computer system and search programs together with the costs of the operation).

Costs – microfilming

72. *Plumb, Philip W.

Costs – photocopying

73. Macfarlan, G. J.
The Xerox 914 copier: a cost analysis and an appraisal. Aust. Libr. J., October 1962, v.11, no.4, p.206–209. (Gives a summary of costs for volumes of exposures from 1,000 to 100,000 per month).

74. Phelps, Ralph H.

75. Shaw, R. R.
Costs — planning

76. Binns, Joan

77. Chapman, T. S.

Costs — preservation

78. Poole, Frazer G.

Costs — processing (See also entry no.38)

79. *Pasana, Paul J. and Fall, James, E.*

80. Heinritz, Fred J.
Optimum allocation of technical services personnel. *Libr. Resources Tech. Serv.*, 1969, v.13, p.99–101. (*A procedure is given for determining the optimum allocation of available man hours among the various functional subunits of any given technical processing division, so as to minimize the time required for a volume to be processed. Cost implications are also discussed.*).

Costs — searching (See also entry no.49)

81. Lazorick, Gerald J. and Minder, Thomas L.

82. *Overmyer, La Vahn*

Costs — storage

83. Simon, Julian L.
How many books should be stored where? An economic analysis. *Coll. Res. Libr.*, March 1967, v.28, no.2, p.92–103. (*Valid decisions...can only be based upon comparing cost of storage with the value of having the same materials at hand. Considerations for such determinations are raised, and formulae are proposed.*).

Costs — union catalogue production

84. *Meakin, A. O.*
Section B — Time

Times — acquisition processes
85. Dougherty, Richard M. and Boone, Samuel M.

Times — catalogue card production
86. *Thornton, Margaret B.*
   This works for us: the perfect employer. *Spec. Libr.*, March 1967, v.58, no.3, p.187–188. (Short description of the use of magnetic tape-typewriter, for the production of catalogue cards. Table of comparative times for m.t.t., duplimat, manual typing).

Times — cataloguing
87. Friedman, Joan and Jeffreys, Alan

Times — charging systems
See entry no.40.

Times — classification
See entries nos.50, 44, 53 and 87.

Times — documentation
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Times — files
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Times — indexing
88. Jahoda, G.

Times — information storage and retrieval
See entries nos.55 and 56.

Times — procedures
See entries nos.7 and 13

Times — processing
See entry no.79.

'Standard' times — clerical procedures
89. *Voos, Henry*

90. *Voos, Henry*
   Standard times for certain clerical activities in technical processing. Ann Arbor, University Microfilms, 1965. (Discusses typing, lettering, pasting, jacketing, tying, erasing, stamping, supervision).

'Standard' times — library procedures
91. *Leonard, Lawrence E.*
Section C – Staff

Staffing (See also entries nos. 50, 80, 106)

92. Association of Assistant Librarians
   Working conditions in libraries: a survey,
   by Peter Jordan. Library Association,
   1968. (A survey of public, special and
   academic libraries in Britain. Studies
   recruitment, library school, education,
   training, salaries, welfare, working
   conditions).

93. Cohan, Leonard and Craven, Kenneth
   Science information personnel. Modern
   (Discusses education and qualifications
   best suited to specific kinds of informa-
   tion work).

94. Elrod, J. McRee
   Staffing of technical processes. Libr. J.,
   May 1, 1966, v.91, no.9, p.2275–2277.
   (Advocates increased use of clerical staff
   to reduce costs).

95. Haslam, D. D.
   Staffing of industrial libraries. Libr. Ass.

96. *Organisation for European Co-operation
   and Development
   Does your firm need its own information
   service? Paris, OECD, 1962, 48p. (Con-
   tains tables of units of work produced by
   information workers).

97. *Welford, A. J.
   Service routine. In Ashworth, W. ed.
   Handbook of special librarianship and
   information work. 3rd ed. rev. and enl.
   Aslib, 1967, p.365–414. (Suggests rough
   estimates of staff time required for
   circulation of periodicals).

Staffing – salaries

98. Campbell, D. J.
   Remuneration survey, 1965. Institute of

99. Hines, Dr. Theodore Christian
   Salaries and academic training programs
   120. (Current salary trends, availability
   of graduates, and education in science vs.
   information science are discussed).

Section D – Planning Measures

Budgeting (See also entry no. 8)

100. *Kyle, Barbara R. F.
    Administration. In Ashworth, W. ed.
    Handbook of special librarianship and
    information work. 3rd ed. rev. and enl.
    Aslib, 1967, p.12–34. (Gives guidance as
    to percentages of budget to be allocated to
    various items, e.g. staff, materials, stock).

101. McAnally, A. M.
    Budgets by formula. Libr. Q., 1963, v.33,
    p.159–171. (Describes formulae used
    for budgeting purposes in a number of
    American universities and colleges.
    Quotes some unit costs.)

102. McGrath, William E.
    Determining and allocating book funds
    (South Dakota School of Mines and
    Technology, 'A device is outlined to help
    formulate the annual book budget
Budgeting continued

request.... Results are sound estimates of each department's probable current domestic book needs....."

103. Maybury, Catherine

104. Niland, Powell

105. *Randall*, Gordon E.
Budgeting for a company library. *Spec. Libr.*, March 1967, v.58, no.3, p.166–172. (.....discusses methods of arriving at average and practical figures for professional and other library staff salaries, and for literature costs, and arrives at a basic budget for a hypothetical library.)

106. *Rippon*, J. S. and Francis, S.

Economics

108. Batten, W. E.

109. *Sharp*, J. R.

Evaluation (See also entries nos. 4, 9, 14)

110. Fasana, Paul J.
Determining the cost of library automation. *ALA Bull.*, June 1967, v.61, no.6, p.656–661. ('An attempt is made.....to suggest a methodology for quantitatively evaluating automated library systems.....based on analysing both manual and automated library systems and comparing the resultant quantitative data').

111. Henderson, Madeline M.

112. Lancaster, W. F. and Climenson, W. D.

113. Pizer, Irwin H. and Cain, Alexander N.
Objective tests of library performance. *Spec. Libr.*, November 1968, v.59, no.9, p.704–711. (Describes tests which have been developed for evaluating services in the biomedical field, and....."a number of other methodological tools.....useful for planning and managing special libraries").

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127. *Poole, Frazer G. ed.

128. Metcalf, K. D.

129. Mills, Jesse C.

130. Orr, Richard H. and others
Development of methodologic tools for planning and managing library services. Part 1—Part 2: project goals and approach. Bull. Med. Libr., Ass., July 1968, v.56, no.3, p.235-267. (In July 1966, the Institute for Advancement of Medical Communication began work on a project aimed at developing methods for collecting objective data suitable for planning.... This article constitutes an introduction to a series of reports on the methodologic tools that have been developed....).

131. Redmond, D. A.

132. Reed, J. B.

133. Strauss, Lucille J. and others
Scientific and technical libraries: their organisation and administration. Inter-science, 1964.

134. Winter, E.

Prices (See also entry no. 124)

135. *Millard, Patricia
Modern library equipment. Crosby Lockwood Longon, 1966. (Specimen prices).

136. *Veasey, W. I.

137. US Periodicals and Serials Services.

Recommendations and specifications

138. Broadus, Robert N.

139. Illuminating Engineering Society

140. *Library furniture and equipment.

141. McClellan, A. W.

142. Poole, Frazer G. and Trezza, Alphonse F.
eds.
The procurement of library furnishings: specifications, bid documents and evaluation: proceedings of the Library Equipment Institute conducted at New York, NY, July 7-9 1966. sponsored by the
 Recommendations and specifications continued

Standards (See also entries nos. 11 and 78)

143. Education, Ministry of.

144. Federation International de Documentation.

145. Hodgson, James C.
The literature of library standards. NY, SLA, 1960. (Bibliography, classified and indexed. Does not have abstracts).

146. Hudson, Spencer


148. *Library Standards for Microfilm Committee
Microfilm norms: recommended standards for libraries [by] the..... Committee of the American Library Association, 1966. Chairman: Peter R. Scott. ('Its purpose is to make microfilm more useful to libraries by providing standards as a basis for uniform practice."

149. Loman, D.

150. Makett, R. E.

151. Orme, J.
Place of standards in the new technology of information science. Spec. Libr., December 1967, v.58, p.703-706. ('...describes.....the system by which American standards are formulated, reviewed and approved, with special reference to information science').

152. Randall, G. E.

153. Special Libraries Association

Standards: British Standards

British Standards Institution


157. British standard for alphabetical arrange-
Standards: British Standards continued


177. Revised draft BS specification for the presentation of library directories. 1969.


179. Draft BS specification for essential characteristics of 35 mm microfilm readers. 1965. (D65/13689).


183. BS recommendations for the storage of microfilm. 1955. BS 1153:1955.

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