ABSTRACT

This Study is based on analysis of the Cost and benefits of the collection of print journal subscribed by Nehru Library, CCSHAU, Hisar, during the year 2015. This study quantified the benefits of journals acquiring by users (Research Scholars and Faculty Members) into financial circumstances (in Indian Rupees) by the use of Contingent Valuation Method. The benefits of journals are based on calculations of user how many time use of journals. For this aim, the total number of 150 and 70 questionnaires randomly was circulated among the Research Scholars (RS) and Faculty Members (FS) of CCSHAU, out of which 85 and 42 were filled and return back by accused, showing an overall response rate of 91.71% and 88% in order. The outcome evident that Cost-benefit Ratio (CBR) is 1: 2.3 and Return on Investment (ROI) is 128%.

Keywords: Cost-benefit Analysis (CBA), financial value, Economic value, Contingent Valuation Method (CVM), Journal collections, Return on Investment (ROI), etc.

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1. INTRODUCTION

Libraries and knowledge centers have played a central role in the present’s society by rendering impressive and proficient works to the normal user so the research society using their holdings. Managing knowledge, information and diffusing it for proper use is as important as inciting new knowledge and ideas.
As we were aware that knowledge has a dynamic and multi-dimension in nature. The new researchers and thirst for knowledge are the prime part of the proliferation of new research. It is most important that the research and new conclusions should be disseminated widely with the research scholars, scientists, specialists, and others. Order to keep track with the literature, one has to narrow down his field of interests and to be more selective and to give more attention only to the sources, which is most productive, updated justified and reliable information.

The common objective of libraries is to offer reading services to the users so that their intellect or personality is progressive. The purposes are different to various extents in different types of libraries. In case of Agricultural University libraries they have to provide the reading materials particularly in accordance with the curriculum of various disciplines to help the students to take hold of knowledge for examination purposes, also their specific intellectual growth. These aims can be fulfilled only if all useful reading materials e. g. books, periodicals, etc are accessible to the readers/users.

The present scenario all types of libraries are facing the trouble of decreased budget. nowadays, reduced library funds and exceeding demands for accountability, libraries all over the world face the dispute of representing and quantifying their value to their funders. In the situation of Agricultural University library, librarians must show library’s value to the organization in order to secure the financial resources necessary to serve the university and research groups. As librarians and administrators make budgeting decisions, librarians are asked to prioritize their collections and services to focus on the most effective in terms of serving the institutional mission with increased financial challenges. Under such economic crisis, librarians with the help of management tools such as Cost-benefit analysis can prove the cost as well as give cause for the expenditure of library collections and services.

The journals subscribed in the library, are not only the chief medium for disseminating up to date information but also serve as an important part of a library collection. These are helpful in fulfilling both the objectives of teaching and research within an organization. Journals are very costly to subscribe therefore librarians must take decisions judiciously as to which journals to subscribe and which not to. University and Research libraries usually spend more than 70 percent of their total budgets on the subscription of periodicals only. Periodicals, a source of current information have become indispensable these days because the results of research being done in different parts of the world are communicated through them. (Ravat & Kumar, 2002)

Due to the exponential growth of knowledge and information, libraries are trying their best to obtain all the documents available worldwide. But lack of funds lead the librarians to a situation in which she/he has to take decisions judiciously as to which documents to be purchased and which not to be purchased. It is the responsibility of the librarian to convince the higher authorities and prove the value of the library’s collection and services. For this purpose the cost-benefit analysis method is appropriate.

Therefore, the researcher has decided to conduct a study to identify the Cost and Benefits of Journal Collections in the Nehru Library, Chaudhary Charan Singh Haryana Agriculture University (CCSHAU), India.

**Cost-benefit Analysis**

Cost-Benefit Analysis is an important aspect of management and helps in decision making. To study the feasibility of any system, to evaluate it or to choose one system out of several alternatives the policy-making authorities have to conduct a Cost-Benefit Analysis. In this process, the total cost involved in terms of equipment, materials, and manpower have to be taken into account including the value of all the benefits i.e. cost in terms of money, efforts...
and time involved have to be calculated. If the value of benefits is more as compared to the cost involved, the system is suitable and if the results are reverse to this, the system is a misfit. It is, therefore essential to use cost-benefit analysis in the libraries instead of blindly following other techniques.

Collins the Times English Dictionary & Thesaurus defines Cost Benefit study as "signifying or connecting to a technique of evaluating a project that has into account its costs and benefits to the community also the revenues it produces" ("Cost-benefit", 2010).

According to White and Crawford (1998), CBA is a "systematic manner in which all possible profits and harms, through an offer are identified, converted into economy units, and compared on the basis of assessment rules to figure out if the offer is attractive".

This term is rigorously quantitative. CBA as well may be defined as quantifying that assist assess how the profits of a product or service can be compared to that costs. Elliott, Holt, Hayden and Holt (2009) defines Cost-benefit analysis as an economic Instrument that libraries may be used to assess the economic value of the library to the society relative to investment the society has built up in the library either year by year or cumulatively over many years through its investment in collections, equipment, and buildings.

2. NEED AND PURPOSE OF THE STUDY

Journals are the most expensive property or resources to subscribing in the University libraries. Therefore there is a need for additional concern in deciding or selecting the journal titles at the time of subscribing them. In the current economic crisis, Cost-benefit Analysis method is used by the researcher for proving the value of Journals collection. With the help of Cost-benefit analysis, the value or worth, as well as justification of the expenditure of the Journals collection in the Central Library, can be calculated.

The purpose of this study is to assess the Cost and Benefits of Journals subscribed in the ‘Nehru Library’, Chaudhary Charan Singh Haryana Agriculture University (CCSHAU). A comparison will enable to find out the benefits of using journals with the cost of journals in order to check the extent of benefits outweighing costs in the library under study. In addition, the purpose is to assess the economic value of journals used by the Faculty members and Research Scholars in the library in this era of decreasing financial resources.

3. METHODOLOGY

The researcher used the "Contingent Valuation Method" for deriving the financial cost of Journals and then compared this value with the cost of the journals.

“Contingent Valuation Method” (CVM) has been most widely used for estimating through surveys a user’s overall perceived value of all kinds of non-market services. The Contingent Valuation Method (CVM) is used to measure the perceived value of various services offered by the library by assessing the user's "willingness to pay" (WTP) and "willingness to accept" (WTA) alternatives to no library services provided. (Chung, 2007) A panel of economic experts set up by the U.S. National Oceanic and Atmospheric Administration (NOAA) examined the technique and supported its reliability (Arrow et al., 1993). CV technique is supported by the Nobel Prize-winning economists Kenneth Arrow and Robert Solow.
4. METHOD OF DATA COLLECTION
The investigator has designed two questionnaires one for the University Librarian of CCSHAU and another for the users (Faculty Members and Research Scholars) of Library. After that, a pilot study has been conducted to check the feasibility and objectivity of the prepared questionnaires and samples were selected and then questionnaires were distributed for data collection.

5. SAMPLE AND POPULATION OF STUDY
The population from which a sample was drawn included only Faculty Members and Research Scholars enrolled in ‘Chaudhary Charan Singh Haryana Agricultural University’. The Random sampling technique was used for the compilation of respondents for the study.

6. ANALYSIS OF DATA
The pilot study was conducted for both the questionnaires prepared for Librarian and users in 2015. The questionnaire for Librarian was distributed to the Librarian of Nehru Library, Chaudhary Charan Singh Haryana Agricultural University, Hisar (CCSHAU) and a casual meeting was conducted. The questionnaire for users was distributed to 220 users of University Library. Finally, editing and modifications were done of the questionnaires.

This part contains the analysis of responses received from the Librarian of Nehru Library, Chaudhary Charan Singh Haryana Agricultural University (CCSHAU) and the users of Journals (Faculty Members and Research Scholars) through the questionnaires. The analysis has been separated into 2 parts. The first part contains the responses received from the Librarian and the second part consists of the data collected from users. Analysis of the entire questionnaire has been carried out with the help of tables and textual presentations.

7. PART 1 – LIBRARY BUDGET ANALYSIS
A questionnaire was set by the researcher to know the various costs associated with journals, Total Budget of Journals, the total number of existing journals.

Total number of Subscribed existing Print Journals
Nehru Library has subscribed 251 Journals in the printed form. Although the library is a member of CeRA e-Journals, AgriCat, Krishi Prabha, Open Access Resources, IndiaStat.com, Britannica Online Academic Edition, etc. and Several CD-ROM databases – CABI Abstracts, AGRICOLA, Biological Abstracts, AGRIS, etc. are subscribed every year.

Amount Spent on allocated for existing Journals
Further, a question was asked by the Librarian to know the Annual library budget allocated to the acquisition of present journals. It is showing from Table-01 that in the year 2015 the total budget for journals was Rs. 74,40,850 and there is no divide budget for e-journals. The whole amount was used for purchasing 251 Print Journals and e-journals also. Therefore the researcher has taken the whole budget of the year 2015 as a subscription cost of the journals.

It is evident from table-1 that Annual library budget allocated to the purchase of current journals is either stable or decreasing from the year 2008 to 2015. Which is not a good sign for library and research groups?
Cost-benefit Analysis of Journals subscription at Nehru Library, CCSHAU, Hisar, Haryana

Table-1

| Sl. No. | Year     | CCSHAU Total Amount of Journals |
|---------|----------|---------------------------------|
| 1.      | 2008-09  | 1,38,56,596                     |
| 2.      | 2009-10  | 1,21,85,527                     |
| 3.      | 2010-11  | 1,45,40,193                     |
| 4.      | 2011-12  | 84,76,865                       |
| 5.      | 2012-13  | 95,73,680                       |
| 6.      | 2013-14  | 76,32,668                       |
| 7.      | 2014-15  | 75,30,900                       |
| 8.      | 2015-16  | 74,40,850                       |
| Average |          | 1,01,54,660                     |

Graph 1 Amount Spent on allocated for existing Journals

8. PART 2 - USER ANALYSIS

For measuring the benefits of the Journals received by Research Scholars and Faculty Members, a questionnaire for users is prepared. The distribution of the sample size for the total population of users in the library is presented below in table-04. Especially, the investigator has selected a sample of 18% of the total population. This sample was randomly selected.

Table-2 Response Rate

| Users                | Distributed Questionnaires | Received Questionnaires | Analyzed Questionnaires |
|----------------------|---------------------------|-------------------------|------------------------|
| Research Scholars (RS)| 150 (17.69%)              | 85 (56.67%)             | 82 (54.67%)            |
| Faculty Members (FM) | 70 (3.53%)                | 42 (60.00%)             | 39 (55.71%)            |
| Total                | 220 (7.77%)               | 127 (57.73%)            | 121 (55.00%)           |

This part of analysis covers the responses received from the users (Faculty Members as well as Research Scholars) of CCSHAU about the perceived economic value of Journals (Print as well as Electronic).

The investigator has distributed 150 (17.69%) questionnaires to the Research Scholars and 70 (3.53%) questionnaires to Faculty Members randomly. 85 (56.67%) questionnaires from

http://www.iaeme.com/JOM/index.asp  editor@iaeme.com

Electronic copy available at: https://ssrn.com/abstract=3526085
Research Scholars and 42 (60.00%) questionnaires from Faculty Members were duly filled and returned back. Thus the investigator considered 82 (54.67%) & 39 (55.71%) questionnaires for analysis. The response rate of Research Scholars is 54.67 per% and 55.71 per% of Faculty Members in CCSHAU respectively. Analysis of the questionnaires is given below. It is found from Table-03 that the Total number of users (Faculty Members and Research Scholars) is 2830 in CCSHAU.

| S. No. | Users of Journals   |
|--------|---------------------|
| 1.     | Total number of Faculty Members | N=150 |
| 2.     | Total number of Research Scholars | N=70 |
| 3.     | Total number of users | N=220 |

**Table-3 Total number of users, using library per day**

**Cause for consulting research journals from the library rather than purchasing Journals**

A question was asked to users (Faculty members and Research scholars) to know the reasons for consulting journals from the library rather than purchasing. It is showing from Table-4 that out of 220 respondents 133 (86.67%) users revealed that journals are payable to purchase. 84 (16.03%) users revealed that journals read only one time. 44 (20.00%) users are not sure that journals would be helpful and 7 (3.18%) showing that there is no room to preserve (space problem).

**Table-4 Reasons for consulting journals from the library rather than purchasing Journals**

| S. No. | Reasons                  | Research Scholars N=150 | Faculty Members N=70 | Total N=220 |
|--------|--------------------------|-------------------------|----------------------|-------------|
| 1.     | Impayable to purchase    | 94 (62.67%)             | 39 (55.71%)          | 133 (86.67%)|
| 2.     | Read only one time       | 26 (17.33%)             | 12 (17.14%)          | 38 (54.29%) |
| 3.     | Not sure it would be helpful | 29 (19.33%)           | 15 (21.43%)          | 44 (20.00%) |
| 4.     | No room to preserve      | 2 (1.33%)               | 5 (7.14%)            | 7 (3.18%)   |

Thus, it becomes clear from the analysis that the majority of the respondents (60.49%) mentioned the cause "Impayable to purchase" i.e. they cannot give to purchase personally from the publisher and shop. So the library is the only place for consulting journals.

**Consent to pay to access articles per month by users**

Cost-benefit analysis (CBA), it is mandatory that both cost and benefit must be measured in the same unit. Cost of the journals is in financial terms i.e. in Rupees, therefore it is essential to have benefits into monetary terms i.e. in Rupees. Contingent Valuation Method is the only method which is used for converting benefits into monetary terms. Therefore a question asked to users that this library would not exist anymore, how much money would you be willing to pay to access articles per month as it exists today, including the time, effort, travel, etc. in order to know their willingness to pay (WTP) for accessing articles per month and given a range of Rupees from 0-500. It is clear from the table-5 that majority of Research Scholars 62 (41.33%) and the majority of Faculty members 26 (37.14%) are willing to pay 500 Rs. per month for accessing articles. Therefore researcher considered 500 Rs. as an amount of consent to pay.
Table-5 Consent to pay to access articles per month by users

| S. No. | Amount of Rupees | Research Scholars N=150 | Faculty Members N=70 | Total N=220 |
|--------|------------------|--------------------------|----------------------|-------------|
| 1      | 0-500            | 62 (41.33%)              | 26 (37.14%)          | 91 (40.00%) |
| 2      | 500-1000         | 38 (25.33%)              | 19 (27.14%)          | 57 (25.91%) |
| 3      | 1000-1500        | 27 (18.00%)              | 14 (20.00%)          | 41 (18.64%) |
| 4      | 1500-2000        | 19 (12.67%)              | 8 (11.43%)           | 27 (12.27%) |
| 5      | 2000- Above      | 4 (2.67%)                | 3 (4.29%)            | 6 (3.18%)   |

Show the table- 5, groups of users 91(40%) are consent to pay to access articles per month i.e. 500 Rs.

Consent to pay to uses articles per month = 500 Rs.
Consent to pay to uses articles per year = 6000 Rs.
Total number of Users (Faculty and Research Scholars) in University = 2830
Total Benefit of journals perceived by users = 6000 x 2830 = 1,69,80,000 Rs.

Table-6 Monetary value of Journals in Nehru Library

| S. No. | Particulars                  | Amount in Rupees |
|--------|------------------------------|------------------|
| 1.     | Total benefits of Journals   | 1,69,80,000.00   |
| 2.     | The total cost of Journals   | 74,40,850.00     |
| 3.     | Net Benefit                 | 95,39,150.00     |
| 4.     | Cost-benefit Ratio(CBR)      | 1: 2.3           |
| 5.     | Return on Investment(RIO)    | 128%             |

Cost - benefit Ratio (CBR) = 74, 40,850.00: 1,69,80,000.00 = 1: 2.3

Formula RIO
RIO = Net Benefit ×100 ÷ Cost
RIO = 95, 39,150× 100 ÷ 74, 40,850.00
RIO = 128%

Table- 6 shows the Total Net Benefit (Profits) of journals is 95,39,150.00 Rs. and Total Investments of journals is 74, 40,850.00 Rs. It is clear that there are significant higher Returns (Profits) than the investment of Journals in CCSHAU.

9. FINDINGS & CONCLUSION
The current situation of library budget decreasing and demands are increasing for accountability; librarians are facing the problems of representing and quantifying the monetary value of collections and services to their higher authorities. The study reveals that most of the current journals subscribed in the library are much lower than the benefits of journals received by users (Faculty members and Research scholars). It is a strong justification for increasing the budget of journals for the benefits of Research groups. The result reveals that the Cost-benefit Ratio (CBR) is 1: 2.3 and Return on Investment (RIO) is 128%.

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