



Cost-Benefit-Analysis Of Subscribing Indian Periodicals With Special Reference To & Punjab Agriculture University (PAU) And Guru Angad Dev Veterinary And Animal Sciences University (GADVASU), Ludhiana, Punjab

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Abstract

The paper discusses the cost-benefit analysis of subscribing Indian periodicals by Mohindar Singh Randhawa Library, Punjab Agriculture University (PAU) and Central Library, Guru Angad Dev Veterinary and Animal Sciences University (GADVASU). The objectives of the study are evaluated and measuring the cost of Journals/ Periodicals by the use of frequency of purchased Indian periodicals by the library members (i.e. faculty members, research scholars). A questionnaire-based survey was conducted among the Librarians for library budget and it's utilized for journals subscription and second questionnaire for users of the libraries. The study also focuses on whether the journals being bought in Library are fully utilized or not and also use journals properly by the library members and properly utilize the budget for journals. For this aim, the total number of 150 and 70 questionnaires was randomly circulated among the Research Scholars (RS) and Faculty Members (FS) of PAU and GADVASU. The result state that the Cost-benefit Ratio (CBR) is 1:2.9 & 1:4.5 and Return on Investment (RIO) is 192.98% and 352.04%

Keywords: Cost-Benefit Analysis, Cost Analysis, PAU, GADVASU, Journals, Periodicals, Cost-benefit Analysis (CBA), Return on Investment (ROI), Economic value, Contingent Valuation Method (CVM), Journal collections.

1- INTRODUCTION

The terms, Cost, Cost-Benefit, Cost Benefit Analysis, Periodicals, Journals, Agricultural Library, Indian Periodicals, are define individually as follow: According to thebusinessdictionary.com "An amount that has to be paid or given up in order to get something. In business, cost is usually a monetary valuation of (1) effort, (2) material, (3) resources, (4) time and utilities consumed, (5) risks incurred, and (6) opportunity forgone in production and delivery of a good or service. All expenses are costs, but not all costs (such as those incurred in acquisition of an income-generating asset) are expenses. (business dictionary.com,2019). According to The Economics Times "Cost Benefit Analysis can be explained as a procedure for estimating all costs involved and

possible profits to be derived from a business opportunity or proposal". (Times, 2019)

2- LIBRARY PROFILE

2.1- PAU Library

Mohindar Singh Randhawa Library, Punjab Agricultural University Library was established with a meager collection of 200 books in 1959 in College of Agriculture. However, at present this temple of learning with its beautiful five storey building with covered area of 93,320 sq. ft., centrally air-conditioned and surrounded by lush green lawns, dotted with beautiful ornamental trees and pollution free environment has grown into one of the best libraries of the region - a place of pilgrimage for scholars and faculty members from all over the country. This library has 760 seating capacity in its

Five Reading Halls. The aim of the library is to provide rich knowledge to its users and to extend it further through information technology, automation and networking.

2.2- GAVASU Library

The University library has modern facility to collect evaluates and organizes information resources that adequately support the curricula of the colleges, the research programmes and the general informational needs of the university. The library is computerized and automated of its operations. The library allows open access to its collection and provides services to its users. The Campus Wide Local Area Network has been developed and a lease line of 100 Mbps with 24 hours connectivity provided under NKN Project. The State of art IT services has been used/ utilized to provide a single point online access to various digital resources and other library services to its users. The library provides access to about 3900 journals in the broad spectrum of Agricultural Sciences including Veterinary Sciences, Animal Husbandry, Livestock Management & Poultry Sciences, Fisheries and Aquaculture, Dairy Technology, Biotechnology, Animal Nutrition and allied subjects through the Consortium for electronic Resources in Agriculture (CeRA). Library has perpetual access to 190 e-books in addition to 1174 e-books accessible through CeRA for the academic community of GADVASU. The university library has subscribed to 10 Print Journals, One Online Journal and IndianJournals.com (Access to 25 Journals). Access has been provided to KrishiKosh, a database of Master and Doctoral dissertations and theses submitted to Agricultural Universities in India. In addition links have also been given to various open access electronic information resources. The Library provides the facility of Online Public Access Catalogue (OPAC) of Library resources.

Introduction

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 Mohindar Singh (MS) Randhawa Library, Punjab Agricultural University (PAU), and Central Library, Guru Angad Dev Veterinary and Animal Sciences University (GADVASU), Ludhiana.

3- COST-BENEFIT ANALYSIS

CBA is defining as "The methodical comparison among the cost of carrying out a service or activity and the significance of the service or activity, quantified as for as workable, all cost and benefit (direct and indirect, financial and social) being taken part into account". It is also defined as "The measurement of the positive effect on an operation that can be attributed to a particular cost 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).

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.

4- NEED AND PURPOSE

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 present economic crisis, Cost-benefit Analysis method is used by the examiner for proving the value

of Journals subscription. With the help of Cost-benefit analysis, the value, as well as reason of the expenditure of the Journals subscriptions in the both Libraries can be calculated. The purpose of this study is to assess the Cost and Benefits of Journals subscribed in the 'Mohindar Singh (MS) Randhawa Library, Punjab Agricultural University, and Central Library, Guru Angad Dev Veterinary and Animal Sciences University (GADVASU), Ludhiana.

5- METHODOLOGY

The researcher used the "Contingent Valuation Method (CVM)" for deriving the 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 "consent to pay" (CTP) and "consent to accept" (CTA) 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) analyzed the technique and supports its reliability (Arrow, 1993).

6- DATA COLLECTION

The researcher has prepared two questionnaires one for the University Librarian of PAU and GADVASU. Second are 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.

7- SAMPLE AND POPULATION

The population from which a sample was drawn included only Faculty Members and Research Scholars enrolled in Punjab Agricultural University (PAU) and Guru Angad Dev Veterinary and Animal Sciences University (GADVASU). The

Random sampling technique was used for the compilation of respondents for the study.

8- DATA ANALYSIS

The pilot study was conducted for both the questionnaires prepared for Librarian and Users enrolled 2015-16. The one questionnaire for Librarian was distributed to the Librarian of PAU and GADVASU library and a casual meeting was conducted. The second questionnaire for users was distributed to 220 users of University Library.

This part contains the analysis of responses received from the Librarian of PAU and GADVASU Library and the users of Journals (Faculty Members and Research Scholars) through the questionnaires. The analysis has been separated into two 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.

Distribution of sample in both Libraries

S. No.	University	Questionnaire Distributed	
		Research Scholar	Faculty
1.	PAU	150	70
2.	GADVASU	150	70

Part I – Analysis Library Budget

A questionnaire was set by the surveyor to know the various costs associated with journals, Total Budget of Journals subscription.

i. Total Subscribed Journals in both Libraries

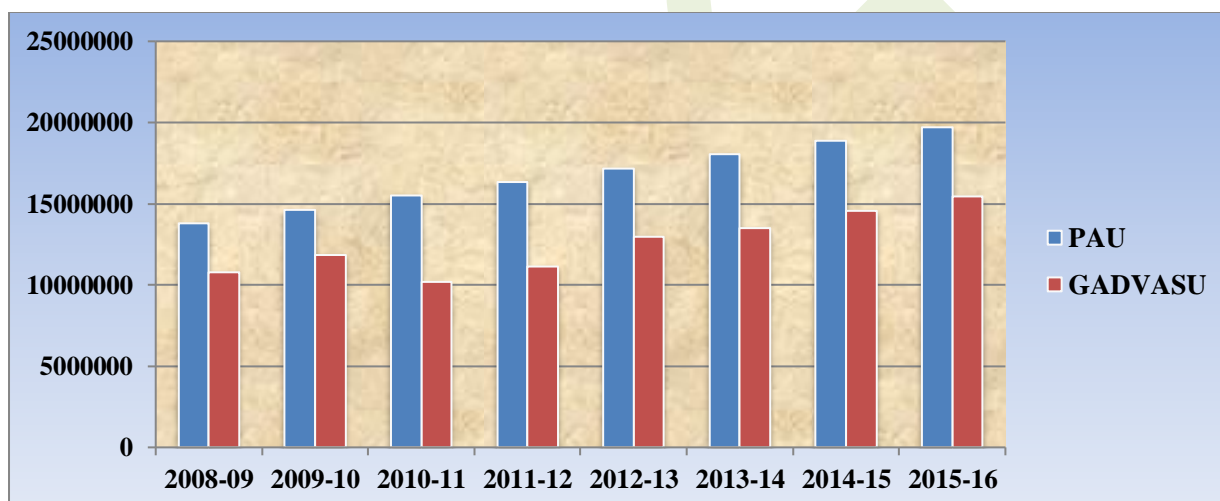
M.S. Randawa Library, PAU has subscribed 379 Journals and Central Library, GADVASU has subscribed 248 journals. Although the library is a member of CeRA e-Journals, AgriCat, Krishi Prabha, Open Access Resources, IndiaStat.com, Britannica Online Academic Edition, etc. and Several CD-ROM databases – CABI Abstracts, AGRICOLA, Biological Abstracts, AGRIS, etc. are subscribed every year.

ii. Amount Spent on allocated for Journals in both Libraries

Further, a question was asked by the Librarian to know the Annual library budget allocated to the purchase of journals. It is showing from Table-1 that in the year 2015-16 the total budget for journals was Rs. 10.33 L and Rs. 35.58 L and there is no divide budget for e-journals. The whole amount was used for purchasing 379 and 248 Journals. Therefore the researcher has taken the whole budget of the year 2015-16 as a subscription cost of the journals. It is clear from table-1 that Annual library budget allocated to the purchase of journals is either stable or decreasing from the year 2008-9 to 2015-16.

Table- 1 Total Amount spent on Journals

S. No.	Year	PAU	GADVASU
1.	2008-09	4601625	8221798
2.	2009-10	4883529	8271297
3.	2010-11	5165432	8676160
4.	2011-12	5447336	9081024
5.	2012-13	5729240	9235887
6.	2013-14	6011143	9528250
7.	2014-15	6293047	9933113
8.	2015-16	10337977	35585350
	Average	6058666	12316610

**Graph-1 Amount Spent on Journals****Part II - 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 150 (RS) and 70 (FM) sample size for the total population of users in the library presented below in table-2. This sample was randomly distributed.

Table- 2 Response Rate

Users	Received Questionnaires		Analyzed Questionnaires	
	PAU	GADVASU	PAU	GADVASU
Research Scholars (RS) N=150	128 (58.18%)	115 (76.67%)	125 (83.33%)	110 (73.33%)
Faculty Members (FM) N=70	69 (98.57%)	68 (97.14%)	65 (92.86%)	62 (88.57%)
Total=220	197 (89.55%)	183 (83.18%)	190 (86.36%)	172 (78.18%)

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

The researcher has 150 questionnaires to the Research Scholars and 70 questionnaires to Faculty Members randomly distributed. Received responded form the users (FM & RS) 128 (58.18%) & 69 (98.57%) in PAU Library and 115 (76.67%) & 68 (97.14%) in GADVASU Library users. Thus the researcher analyzed users (FM & RS) 125 (83.33%) & 65 (92.86%) and 110 (73.33%) 62 (88.57%) questionnaires for analysis. The response rate is 86.36% and 78.18% of users in PAU and GADVASU Library respectively. It is found from Table-03 that the Total number of users (Faculty Members and Research Scholars) is 2069, 1242 in PAU and GADVASU.

Table-3 Total number of users, using library per Month

S. No.	Users of Journals		
		PAU	GADVASU
1.	Total number of Faculty Members	910	197
2.	Total number of Research Scholars	1159	1045
3.	Total number of users	2069	1242

iii. Reason 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 form both library users (41.82%) and (57.73%) users revealed that journals are Impayable to purchase. (40.00%) and (28.18%) users revealed that journals read only one time. (13.18%) and (12.73%) users are not sure that journals would be helpful and (5.00%) and (1.36%) 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	PAU			GADVASU		
		RS N=150	FM N=70	Total N=220	RS N=150	FM N=70	Total N=220
1	Impayable to purchase	63 (42.00%)	29 (41.43%)	92 (41.82%)	79 (52.67%)	48 (68.75%)	127 (57.73%)
2	Read only one time	52 (34.67%)	36 (51.43%)	88 (40.00%)	42 (28.00%)	20 (28.57%)	62 (28.18%)
3	Not sure it would be helpful	24 (11.36%)	5 (7.14%)	29 (13.18%)	26 (17.33%)	2 (2.86%)	28 (12.73%)

4	No room to preserve	11 (7.33%)	0 (0.00%)	11 (5.00%)	3 (2.00%)	0 (0.00%)	3 (1.36%)
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Thus, it becomes clear from the analysis that the majority of the respondents 41.82% in PAU and 57.73% in GADVASU 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.

iv. Consent to pay to access articles per month by users

Cost-benefit analysis (CBA), it is compulsory 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 consent to pay to access articles per month, including the time, effort, travel, etc. in order to know their consent to pay (CTP) for accessing articles per month and given a range of Rupees from 500-1000 . It is clear from the table-5 that majority of uses in PAU of 48.18% and the majority of users in GADVASU of 44.55% are consent to pay 1000 Rs. per month for accessing articles. Therefore researcher considered 1000 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	PAU			GADVASU		
		RS	FM	Total	RS	FM	Total
1.	0-500	N=150	N=70	N=220	N=150	N=70	N=220
2.	500- 1000	82 (54.67%)	24 (34.29%)	106 (48.18%)	72 (48.00%)	26 (37.14%)	98 (44.55%)
3.	1000-1500	49 (32.67%)	18 (25.71%)	67 (30.45%)	51 (34.00%)	21 (30.00%)	72 (32.73%)
4.	1500-2000	10 (6.67%)	22 (31.43%)	32 (14.55%)	21 (14.00%)	18 (25.71%)	39 (17.73%)
5.	2000- Above	8 (5.33%)	4 (5.71%)	12 (5.45%)	6 (4.00%)	3 (4.29%)	9 (4.09%)

For Research Scholar

Consent to pay (CTP) to articles per month = Rs. **1000**

Consent to pay (CTP) to articles per year = Rs. **12000**

For Faculty Member,

Consent to pay (CTP) to articles per Month = Rs. **1500**

Consent to pay (CTP) to articles per Year = Rs. **18000**

PAU University

Total number of Research Scholars = 1159 = 1159 x 12000 = **13908000**

Total number of Faculty Member = 910 = 910 x 18000 = **16380000**

GADVASU University

Total number of Research Scholars = 1045 = 1045 x 12000 = **12540000**

Total number of Faculty Member = 197 = 197 x 18000 = **3546000**

Table-6: Economic value of Journals in PAU and GADVASU Library

S. No.	Particulars	PAU	GADVASU
		Amount in Rupees	
1.	The total cost of Journals	10337977.00	3558535.00
2.	Total benefits of Journals	30288000.00	16086000.00
3.	Net Benefit	19950023.00	12527465.00
4.	Cost-benefit Ratio(CBR)	1:2.9	1:4.5
5.	Return on Investment(RIO)	192.98	352.04

Cost-benefit Ratio (CBR) = Total Cost: Total Benefit

Cost-benefit Ratio in PAU = 1, 03, 37, 977: 3, 02, 88,000 = **1:2.9**

Cost-benefit Ratio in GADVASU = 35, 58,535: 1, 60, and 86,000 = **1:4.5**

Formula RIO

$RIO = \text{Net Benefit} \times 100 \div \text{Cost}$

ROI in PAU library = $1, 99, 50,023 \times 100 \div 1, 03, 37,977 = 192.98\%$

ROI in GADVASU library = $1, 25, 27,465 \times 100 \div 35, 58,535 = 352.04\%$

Table- 6 shows the Total Net Benefit (Profits) of journals in PAU and GADVASU is Rs. 19950023.00 and 12527465.00. Total Investments of journals is Rs. 10337977.00 and 3558535.00. It is clear that there are significant higher Returns (Profits) than the investment of Journals in PAU & GADVASU libraries.

9- FINDINGS & CONCLUSION

The present condition of library budget decreasing and requests are increasing; librarians are facing the problems of signifying and measure the financial cost of reading materials to their higher authorities. The study state that most of the journals subscribed in the library are very small than the benefits of journals received by users (Faculty members and Research scholars). It is a deep evaluation for increasing the budget value of journals for the benefits of Research groups. The result state that the Cost-benefit Ratio (CBR) is 1:2.9 & 1:4.5 and Return on Investment (RIO) is 192.98% and 352.04%

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