



Are public libraries worth their price?

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A contingent valuation study of Norwegian public libraries

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Abstract

Purpose – The paper reports from a valuation study of the Norwegian public libraries, aiming to provide a better understanding of their total value, both use and non-use value, as viewed by the population. An objective was to explore whether or not the citizens found that their benefits outweighed the costs to provide them.

Design/methodology/approach – The study applies the contingent valuation method, developed in economics to value non-market goods. Contingent valuation is based on representative questionnaire surveys and has been used to value several cultural goods, including a few library valuation studies.

Findings – The empirical data based on a representative population sample demonstrates that the value of the Norwegian public libraries decidedly outweigh their costs. Elicitation of the population's awareness of property rights to their local library showed that an overwhelming majority of the population (94 per cent) perceive they have such rights. The valuation result indicates that the benefits from the public libraries are four times their costs.

Research limitations/implications – The method is based on hypothetical markets. More contingent valuation studies of libraries are necessary to refine the measure instruments. The study explores the benefit-cost relation at the national level. Further research is needed for studying the benefit-cost relation at the municipal level.

Practical implications – The findings can be used as one way of documenting the value of public libraries to politicians, local authorities and the general public.

Originality/value – This appears to be the first contingent valuation study of public libraries at a national level, in Norway and internationally.

Keywords Public libraries, Norway, Cost benefit analysis

Paper type Research paper

Introduction

Internationally, public libraries are facing fundamental changes due to the IT development and digitizing of society and to increasing pressure to reduce the size of public sector, of which most libraries are an integrated part. These new challenges for the libraries in the age of information are studied from different angles, varying in both theoretical perspective and methodology.



This paper is based on the author's PhD project, "The value of public libraries in society", which is funded by the Norwegian Research Council and documented in Aabø (2005). A first version of the paper was presented at The 13th BOBCATSSS Symposium 31 January-2 February 2005 in Budapest, Hungary.

Several studies have assessed the value and impact of library services and activities targeted at specific groups of users or currently non-users. Other studies have explored the overall role and impact of the public library today. Important examples are the studies of the UK researchers Linley and Usherwood (1998) and the Australian author Debono (2002) of the social impact of public libraries. They found evidence that can be used to demonstrate the value of public libraries in terms of:

- the social role of the library;
- developing confidence in individuals and communities and decreasing social isolation;
- contribution to community building and a sense of community ownership;
- providing public space;
- the educational role of the library;
- the economic impact of the library;
- reading and literacy;
- health and general information; and
- equity in service delivery.

The author's project sought to elicit the value of the Norwegian public libraries. It can be seen as a supplement to research aiming at exploring the overall role and value of public libraries. This project sought to measure the benefits the public libraries give to citizens. Of the substantial amount of LIS studies assessing public libraries' social impact very few give estimates of the values in monetary terms. As the economic situation in the public sector continues to be restrained and the controversy of how to prioritize public funds hardens, it seems necessary to be able to determine the value of public libraries also in monetary terms. This project was motivated by the need to demonstrate public libraries' economic importance in a time where economic pressure is increasing. The purpose was to provide a better understanding of the total value of public libraries, both their use and non-use values, as viewed by the population.

By surveying a representative sample of the citizens, including both library users and non-users, and aggregating the individual preferences to a social preference, an estimate was reached. This aggregated estimate was defined as the social value of public libraries, expressed in monetary terms in accordance with use of the term in welfare economics. The social value includes the social impact of public libraries in a wide sense, as the individual citizen assesses it. In order to be able to estimate the value of public libraries in monetary terms, it was relevant to turn to methodologies developed in economics.

The concept of economic value is essential. David Throsby from the cultural economic research area, explains that economic value "[...] which is not synonymous with financial or commercial value, although it is ultimately expressible in terms of either a numeraire good or (preferably) money – comprises any direct use value of the cultural good or service in question, plus whatever non-market values it may give rise to" (Throsby, 2003, p. 279)[1]. This economic concept of value has its foundation in the theory of modern welfare economics. It is the economic value of public libraries in this sense that this project sought to explore.

This research project was funded by the Norwegian Research Council and headed by Jon Strand, professor of economics at the University of Oslo, and Ragnar Audunson, professor of library and information science at the Oslo University College. Based on the doctoral dissertation (Aabø, 2005), this paper gives a brief presentation of central empirical results, focusing on the benefit-cost analysis and the methodology chosen to elicit the public libraries' benefits in monetary terms.

Benefit-cost analysis

Benefit-cost analysis intends to measure and compare public libraries' total costs and benefits to the population. The costs are relatively easy to measure, but the benefits are far more complex both to define and measure. This is because the impacts of the wide range of public library activities are complicated to identify accurately and because many of the services are not marketable. One objective of this project was, nevertheless, to determine if public libraries have positive and social value, if the gains or benefits from libraries outweigh their costs. An implication was then that a method able of capturing indirect benefits in addition to the direct benefits must be used.

Policy choices about cultural and educational institutions, such as public libraries, are made in a political context. Politicians and other decision-makers generally have objectives apart from economic efficiency and net economic value when they decide the level of funding. Before deciding the activity level of public libraries, it is important to consider their impact on cultural and civic development, distributional effects and equity considerations, and effects of importance for future generations. In addition, benefit-cost estimates also provide important information. The restricted economic situation in the municipalities causes local authorities to propose cuts in the funding of public services, including public library services. To ascertain the net effect of such a proposed policy change on social well-being, a way of measuring the gains and losses of this change must be found. A central principle of benefit-cost analysis is that "[...] the effects of a policy change on society are no more or no less than the aggregate of the effects on the individuals who comprise society" (Portney, 1993, p. 3). This suggests that society should make changes in library allocations only if the results are worth more in terms of individuals' welfare than what is given up by diverting resources and inputs from other uses (Freeman, 1993, p. 7).

In the Norwegian project, the aim was to measure the total benefits accruing to the population from public libraries, at today's activity and service levels. The value of public libraries' benefits could then be compared with the costs of providing them, thus exploring whether they have a net value. The average annual library costs per household were known from national library statistics. They were 420 NOK[2] at the time of the study. The challenge was to find ways to elicit the public library benefits in monetary terms, as seen from the citizens' perspective. Public library services are not exchanged in markets as private goods and have no market prices, therefore methods for valuing non-market goods developed in economics seemed suitable.

Methodology

In economics, several methods for valuation of non-market goods have been developed during the last 40 years due to the need in society to assess values of non-market goods in several sectors. These methods make it possible to achieve estimates of how the

citizens value such goods. By being able to monetize the non-market benefits of public libraries, these benefits can be balanced against the costs.

Two main groups of methods for valuing public goods can be distinguished. Indirect methods rely on observations of behaviour in markets, from which value can be inferred via economic models explaining the relationship between the respective behaviour and the value of the non-market goods. Indirect methods are called revealed preferences (RP) approaches. By contrast, direct methods elicit or find value directly, through questioning of samples or representatives of individuals. Direct methods are called stated preferences (SP) approaches. SP approaches include hypothetical methods for direct valuation. Quantity and price dimensions and compensated demands can be investigated directly, without the need to rely on consumption of complements or substitutes or indirect pricing.

SP methods have the property of being able, in principle, to capture the total value of a public good, i.e. both its use and non-use values, whereas RP approaches capture only the use values. This is important for valuation of public libraries because it has been shown that an essential part of the value placed on public libraries is related to non-use. In a valuation study of St Louis Public Library, Holt *et al.* (1999, p. 106) found that non-use values were important reasons for respondents to refuse to close down the library. In a Norwegian study investigating the population's most important justifications for using limited public funds on public libraries, Audunson (2001) found that more than 40 per cent pointed to non-use values, i.e. the libraries' role in literary and knowledge promotion and their role in sustaining democracy and diminishing the new social divisions of information "haves" and "have-nots". In cost-benefit analyses of public libraries, non-use values must, therefore, be included to avoid an underestimation of their overall value to society.

SP approaches include expert decisions panels, choice methods and contingent valuation (CV), whereof the last is by far the most used. The CV method is based on representative questionnaire surveys about valuation of public goods. Respondents are presented with a description of the good to be valued and an estimated change in its quantity or quality, as well as the payment vehicle[3]. In interviews, the respondent is asked to state his/her value in a hypothetical market. The respondent is asked to assess thoroughly the described change and then state his/her maximum WTP for the improvement or her minimum WTA compensation for the worsening that this change implies for him/her.

There is a strong theoretical background for constructing such hypothetical markets. Research has made use of knowledge from the areas of social sciences, sociology, psychology, survey research, experimental design and marketing, as well as from economics. A typical aspect of a hypothetical market is that the market situation is initially unfamiliar to its participants. The CV method and other approaches based on constructed markets are difficult to implement as they rely on expressed intent and hypothetical and not real behaviour. There are, therefore, strict requirements as to how such surveys should be carried out. The design should ensure that key sources of error of CV be minimised. Economic experts[4] summed these up as inconsistency with regard to rational behaviour, lack of a meaningful budget restriction, exact understanding of what is being valued, acceptance of the scenario, the extent of the market and the "warm glow" effect[5] (Arrow *et al.*, 1993).

In the last decade, the CV method has been used to value various cultural goods, such as museums, theatres, national television programming, historic monuments and cultural heritage (Noonan, 2003). Also for libraries, there are now a few previous CV studies. Harless and Allen (1999) valued a single library service (the reference desk service) in a specific university library (James Branch Cabell Library at Virginia Commonwealth University, Richmond). The survey population consisted of a random sample of students and instructional faculty from the academic campus, both library users and non-users. They found that the value of the current hours of reference desk service exceeded the cost by a ratio of 3.5:1. In their study of St Louis Public Library, Holt *et al.* (1999) used three cost-benefit analyses techniques: consumer surplus, cost of time, and contingent valuation. Their final estimate, based on a collected evaluation of all the three methods, shows a cost-benefit ratio of 1:4.

In 2004, two new and important library valuation studies were conducted. A comprehensive study on taxpayer return on investment in Florida's public libraries, commissioned by the Florida Department of State, State Library and Archives of Florida, used several methods of which CV was one. One central finding of this study was that overall Florida's public libraries return \$6.54 US for every \$1.00 invested (Florida, 2004). In the study of the British Library, the CV method was used to assess both direct and indirect benefits from the library's services. This study demonstrates a benefit-cost ratio of 4.4:1, "[. . .] the results indicate that each year the British Library generates value around 4.4 times the level of its public funding, revealing that investment in the British Library pays huge dividends to UK plc, and that the Library represents value for money for the British taxpayer" (British Library, 2004).

The Norwegian valuation study of public libraries

The author's project sought to establish whether or not the citizens found the public libraries worth their price. One objective of the CV study of public libraries in Norway was to determine how the population, including both library users and non-users, valued them. Note that long-term impact of library activities may exist that are difficult for the general public to capture and, therefore, should be assessed by professionals or politicians, but these values are not included in this CV study. Another objective of this study was to explore whether non-use values were important and, if so, to try to elicit the motivations for these values.

This study is national and apparently the first CV study valuing public libraries at a national level, in Norway or internationally. From Norway's population of about 4.5 million inhabitants in about two million households, the sample was drawn following a stratified three-step design, generally used for omnibus surveys in Norway:

- (1) municipalities were randomly drawn from clusters based on economic and industrial structure, demographic structure and geography;
- (2) starting addresses in the municipalities were randomly pulled from the national telephone directory database; and
- (3) the individual to be interviewed as representative of the household was the person above 15 years of age with the most recent birthday.

The sample was then made largely representative with respect to age, gender, occupation, economy, geography, and degree of urbanity (a measure on the urban/rural spectrum). A total of 999 persons were interviewed in their homes as representatives of

their household by a professional opinion company, ACNielsen Norway AS, as part of their bimonthly omnibus survey.

By law all municipalities are obliged to have a public library (Public Library Act, 1985, §4). Norway has 434 municipalities, more than half of which (56 per cent) has fewer than 5,000 inhabitants. Local democracy is based on the municipalities and the citizens are well aware of the public services at that level. The range of library services and activities differs widely in both quality and quantity, depending on a variety of factors, e.g. the municipality's size and demands, the level of funding, and which roles the different public libraries undertake. An intention of this study was to capture the value of public libraries that the citizens assess they have today, at the present service level and at the present informational level of its services and their outcomes and impact. Therefore, each respondent was asked to evaluate the public library in her or his municipality.

The measure instrument included in the questionnaire was developed by the research team[6]. It was constructed, tested and refined based on experiences from two pilot studies. Two separate elicitation formats were applied to correct for elicitation method effects. They are recent developments in environmental economics, which is at the fore in CV technique development, and were specifically designed to correct for possible overestimating of value of the good in question. We chose to use these two formats on a split sample. The scenarios described a pressed economic situation where the local politicians discussed reallocation of the funding of several public services, including the public library. One half of the respondents were asked to state their maximum willingness to pay (WTP) to continue to have their local public library at today's activity and service levels. The other half were asked to state their minimum willingness to accept (WTA) compensation if their local library was closed down. The research design produced four subsamples to which the respondents were randomly distributed, belonging to only one. All respondents were faced with two valuation questions. The first was asked in one of the two elicitation formats, while the second was open-ended. The first valuation question differed between the four subsamples, while the second had principally the same wording. A look into one subsample that illustrates a central issue of benefit-cost analysis follows.

This research design yielded four independent valuation estimates based on different model variants and made it possible to test the estimates to the first and second valuation question both within each subsample and on the whole sample[6]. From these estimates, a range for the population's valuation of their public libraries can be ascertained. The social value lies within the range of 400-2,000 NOK per household. The lower bound of the range, based on WTP estimates, is close to the average annual library costs per household in Norway and a conservative upper bound, based on WTA estimates is five times higher.

The issue of property rights has implications for whether the WTP or the WTA measures are to be given most weight. If the citizens appear to have an inherent right to the valued good, WTP measures will understate welfare impacts (MacDonald and Bowker, 1994, p. 547). In this study, the respondents' attitudes and awareness of property rights to their local library were elicited. A solid conclusion is that an overwhelming majority of the Norwegian population (94 per cent) perceives they have such rights. It is, therefore, reasonable to assume that the population's "true" value is

considerably higher than the lower bound of the valuation range – demonstrating a cost-benefit ratio of approximately 1:4. The results indicate that the Norwegian public libraries generate value approximately four times the level of their public funding.

Based on empirical data it is concluded that Norwegian public libraries are, overall, worth their price as viewed from the population’s perspective. At the national level, their benefits decidedly outweigh their costs. A central reasoning of benefit-cost analysis, as related above, is that society should change the library allocations only if alternative use of the saved money is valued higher by the citizens. The results indicate that using resources on public libraries is worth more in terms of individuals’ welfare than alternative use of resources.

The formulation of the first valuation question in one of the four subsamples illustrates this point. The respondents ($N = 241$) were here first presented for a scenario describing the municipality’s pressed economy and the well-known situation of needs for further efforts in several fields, including enterprises for elderly care and for the school sector.

They were then (see Table I) asked to imagine a situation in which the council of their municipality considered two alternatives:

- (1) closing down of the library to use the saved budget funds to increase the efforts on other municipality tasks that would benefit their households; or
- (2) maintaining the library and also other municipality tasks on today’s level of activity.

To answer this question the respondents could choose between three statements – whether they supported:

- (1) maintaining the local library if the alternative was to close down the library and transfer a specific money amount (varying randomly between 100, 300, 500 and

Which one of the statements 1-3 best expresses your answer?	Frequencies	Percentage
1. I <i>support maintaining</i> the local public library if the alternative is to close down the library and transfer ... NOK ^a in saved budget funds to other municipality tasks that will benefit my household	94	39
2. I <i>support maintaining</i> the local library if the alternative is to close down the library, independent of the amount of saved budget funds that then can be transferred to other municipality tasks that will benefit my and other households	123	51
3. I <i>support closing down</i> the local library if it involves that ... NOK ^a is transferred to other municipality tasks that will benefit my household	8	3
Missing	16	7
Total	241	100

Note: ^aThe money amounts varied randomly between 100, 300, 500 and 1,000 NOK

Table I.
Formulation of valuation question 1 in one subsample

1,000 NOK) in saved budget funds to other municipality tasks benefiting the household;

- (2) maintaining the local library if the alternative was to close down the library independent of the amount saved to alternative use; or
- (3) closing down the library if it involved that a specific money amount was transferred to other municipality tasks benefiting the household.

In this way, the respondents were asked to consider whether or not it would enhance their welfare to close down the library to use the saved budget funds to increase the municipal efforts on other public services that benefited their households. The responses are shown in Table I. Ninety per cent (statement 1 = 39 per cent and statement 2 = 51 per cent) supported maintaining the local library in this situation, indicating that alternative use of the library funding was less worth to them. Only a small minority, 3 per cent, responded positively to the proposal of closing down the library if the saved, specified money amount instead was used on other municipality tasks, i.e. statement 3.

At a national level, suggestions to lower the level of library funding to spend the saved resources on alternative uses to heighten the welfare of the population do not seem to find support in the empirical data of this study. In Norway, decisions of local public libraries are taken at both a national (the Public Library Act) and municipal level (the funding). Further research is a needed to explore the benefit-cost relation of public libraries at the municipal level.

Notes

1. A numeraire is a unit in which value is measured. The term is often used to describe the function of money as a measure of value.
2. 1 Euro is about 8 NOK.
3. For a thorough introduction to the method, see Mitchell and Carson (1989).
4. A Contingent Valuation Panel of experts within the field of economics was in 1993 appointed by The National Oceanic and Atmospheric Administration, under the US Department, to evaluate the use of CV in connection with quantification of non-use values. The Nobel Prize winners Kenneth Arrow and Robert Solow chaired the panel. The conclusion in the panel's final report is that CV is suitable for this purpose, given that the application fulfils specific criteria. The report contains a systematic presentation of possible sources of error, as well as guidelines on how to perform CV studies.
5. A "warm glow" effect means that the respondent overstates his/her willingness to pay because it feels right or popular to pay to "good," "superior" purposes, such as charity and environment and often, as well, to the arts, literature and culture.
6. For a thorough presentation of the CV study, see Aabø (2005).

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