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It is the paper published as:

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Title: How much are technical services worth? Using the contingent valuation method to estimate the added value of collection management and access

Journal: Library Resources & Technical Services

ISSN: 0024-2527

Year: 2008

Volume: 52

Issue: 4

Pages: 254-262

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CRO Number: 9870

<1>How Much are Technical Services Worth?

<2>Using the Contingent Valuation Method to Estimate the Added Value of Collection Management and Access

How much are Technical Services Worth?

Using Contingent Valuation Methodology to Estimate the Added Value of Collection Management and Access

<Abstract>This paper reports on an application of the contingent valuation method in order to establish a dollar estimate of the value added to a collection by a library's technical services. The overall benefit-cost ratio of the Wagga Wagga City Library, in New South Wales, Australia, was estimated to be 1.33 to one, whereas the benefit-cost ratio of its technical services was found to be much higher, at 2.4 to one, indicating the particular importance of this work. The use of stated preference techniques such as contingent valuation is discussed, with reference to library and technical service contexts.

<Text>Technical services departments are often in the firing line when budget cuts are required. Their work may be valued by library managers, and indirectly by library patrons, but it is often less visible than the work of other departments, and particularly hard to measure in terms of the dollars it adds to a library's worth. This paper reports on an attempt to estimate this added value, in dollar terms, by means on a particular technique, namely, contingent valuation, and discusses how this technique, and related techniques, might be used for further investigation into the contributions made by technical services departments.

<1>Cost-benefit Analyses of Technical Services

While estimating the costs of selecting, acquiring, and processing items is relatively easy, determining the corresponding benefits, in monetary terms, is much less straightforward and has rarely been attempted. Instead, library managers mostly use internal measures such as circulation statistics, cataloging output, and so on, to gauge the performance of technical services departments. These measures enable managers to identify areas for improvement, but they do not indicate whether the technical services department adds as much value as, say, reference services. In order to compare the value of

different library operations, an external unit of measurement is needed, such as the dollar. Cost-benefit analyses of the various library departments can then be performed.

Library operations producing higher benefit-cost ratios are not necessarily the operations that should be assigned more of a budget. This is because an increase in investment might make less difference to operations with higher benefit-cost ratios, and also because benefit-cost ratios are likely to be interdependent to some extent. However, if operations with much lower benefit-cost ratios are expensive, then library managers can reasonably consider reducing their budgets, given a finite, and often decreasing, amount of income. Conversely, **it** would be more difficult for managers to justify a budget cut when **it** was clearly demonstrated that the operation concerned returned a particularly high value for money.

Because technical services are usually not purchased by end-users, their value for money (or benefit-cost ratio) cannot be directly measured through reference to market prices. The same, of course, applies to many other library services. Instead, their monetary value must be estimated either indirectly, for example by surveying end-users' demand for alternative, commercially available services, or directly through what are known as stated preference (SP) techniques. While indirect measurement may sometimes be feasible for library services as a whole, or certain types of library service, it is less applicable to technical services work, which is essentially dependent on particular library collections. Thus we turn to SP techniques, which are explained in the next section.

<1>Stated Preference Techniques and Contingent Valuation

There are many situations where goods and services may not be marketed, but where **it** is very useful to know how much (or approximately how much) they are worth, in dollar terms. Economists have developed a range of techniques, including SP techniques, to estimate how much consumers, and potential consumers, would pay for a good or service were it to be available in the market. SP techniques are most commonly employed in environmental economics, where the object is to find out the value to a

population of a particular environmental benefit, such as conserving a forest. Two main types of SP technique are contingent valuation (CV) and choice modeling (CM).[1] In both cases, users and non-users are surveyed and asked to respond to hypothetical scenarios. In CV surveys, individuals are asked how much they would be willing to pay (WTP) for a good or service, or how much money they would accept in order to forgo the good or service (WTA); in CM surveys, individuals are asked to choose between particular combinations of goods or services.[2] Although CM surveys often can produce richer data, the CV technique was used in this study, as it was considered easier to apply in the context of library use (and non-use).

The CV method is somewhat controversial, even in fields such as environmental economics, but estimations based on the technique have been used by policy makers in a variety of areas, including the funding of public bodies. Murphy and others have shown how the accuracy of the method varies considerably, according to the particular ways in which the CV survey is designed and administered.[x] For instance, responses tend to be higher to WTA questions than to WTP questions; they also tend to be more reliable when questions are delivered in person, and when the sample is more representative of the population at large, covering frequent users, occasional users, and non-users.

The NOAA (National Oceanic and Atmospheric Administration) Panel of experts established a set of benchmarks by which subsequent CV surveys are often judged, and further refinements have been developed in recent years.[3] Examples of what are regarded as best practice are: use of a referendum-style question based on WTP rather than WTA questions; identification and filtering of protest responses (i.e. responses that reject the scenario itself); and testing results by measuring their association with other variables, such as demographic ones. The CV survey used in this research project attempted to adhere to this best practice as closely as possible.

<1>Valuations of Library Services

Missingham, and Imholz and Arns, however, have identified some recent studies which have sought to quantify the benefit of library services in monetary terms.[4-5] In some of these studies, the benefit has been defined primarily in terms of cost savings. An example would be the study conducted by the Graduate School of Library and Information Studies at McGill University, which estimated the savings to Canadian libraries provided by the catalog records from the National Library of Canada.[5] This approach assumes that a particular good or service is required, by one means or another. In other cases, a more open-ended assessment has been attempted, whereby an estimate of the value of a good or service is determined by the end-user. Such studies may occasionally be based on **actual transactions** – in the case of book sales, for instance – but most employ various techniques to estimate the value of non-marketed goods and services.[6]

Only three of the studies cited by Missingham, however, employed SP techniques as either their primary or one of their primary methods.[7] In two of these cases, the library service as a whole was being valued: the British Library used CV surveys to estimate that its key services were worth to the British public more than four times the money that they cost; and Holt, Elliott, and Moore employed a combination of methods, including CV surveys, to estimate the benefit-cost ratio for public libraries in St. Louis, which apparently ranged from 2:1 to 10:1, depending on county.[8-9] In the third case, the subject of study was a national bibliographic database; using a CM survey, the National Library of New Zealand found a 3.5:1 benefit-cost ratio.[10]

Two other SP studies from the library and information science literature are noteworthy. Most recently, Aabø used a CV survey to estimate a 4:1 benefit-cost ratio for the public libraries in Norway.[11] Earlier, Harless and Allen (1999) used the CV method to estimate a benefit-cost ratio of 3.5 to one for the library reference service at Virginia Commonwealth University.[12]

Although these studies demonstrate that SP techniques can be successfully applied to library contexts, librarians' use of them has been quite rare. This project appears to represent the first time the CV method has been used to estimate the dollar value of a library's technical services.

<1>Research Design

The CV survey in this project sought to provide a valuation of a specific public library service as a whole, and of its technical services operations in particular. The public library in question is Wagga Wagga City Library, which is located in the center of Wagga Wagga, a city of 60,000 people. The library's physical collection comprises over 100,000 items, including a wide range of periodicals, audiovisual materials, and reference resources, and a well-stocked children's collection.

The details of the survey's design and administration are presented elsewhere; a summary follows.[13] After piloting, the survey was administered as a printed questionnaire and distributed to households in and around Wagga Wagga. A cluster sampling technique was used with the aim of obtaining a socio-demographically representative sample of households, whereby sixteen Australian Bureau of Statistics (ABS) collection districts were randomly selected for the survey proper (after five other districts had been used for the pilot survey; there are about forty districts in and around Wagga Wagga altogether). Twenty-four survey forms were distributed within each of the 16 districts by visiting homes on adjacent properties and verbally inviting householders to complete and leave the questionnaire out for subsequent collection (when an invitation was accepted, three properties were skipped). Completed forms were exchanged for a \$5 shopping voucher. Of the 384 forms distributed, a total of 336 forms were completed and returned, which was considered both an excellent return rate and a reasonable sample size given a total population of around 18,000 households. Socio-demographic questions were included in the questionnaire so that the sample could be checked against corresponding characteristics of the population according to recent ABS statistics.

A sample copy of the questionnaire may be accessed at: <http://athene.csu.edu.au/~phider/cvquestionnaire.doc>. The questions in the survey from which dollar valuations could be estimated were based on hypothetical scenarios involving a change to the way in which the City Council charged its rates. The three questions have been extracted from the questionnaire and included in Appendix A. For these questions, instead of the Council charging each household a single

levy covering all its services, respondents were asked to imagine that the Council now charged for its various services separately, including its library service. (Most of the City Library's funding comes from the Council; a small fraction comes from the State Government.) In the first scenario, the Council then held a referendum and asked its citizens to vote on a particular monthly levy for the library, which was deemed to represent the cost of the service at its present level. The survey made clear that if the vote was not carried, then the library would be closed. Six versions of the questionnaire were distributed, featuring six different monthly levies – the relationship between price and willingness to pay could then be expressed as a statistical function.

Respondents were asked two further WTP questions, based on similar scenarios. This time, however, the level of library service was reduced. In the second scenario, the library was converted into a self-service library, which consisted solely of the collection, maintained at its present level, and supporting access tools, such as the catalog. In the third scenario, the self-service library consisted solely of the collection, without a catalog. The monthly levies, on which respondents were asked to vote in the second and third scenarios, were scaled down according to the lower costs that would be involved in running the library and according to the responses in the pilot survey.

Two alternatives to referendum-based WTP questions are open-ended WTP questions, in which respondents are asked to name their maximum price, and WTA questions, in which respondents are asked about the minimum compensation they would accept in return for the service closing down. However, both these alternatives are considered to produce less accurate results, often exaggerating the actual demand. Further, both present difficulties in constructing realistic scenarios around in the context of public library funding. Although Harless and Allen employed an open-ended WTP question for their reference service with the assistance of a payment card (on which respondents were asked to indicate their maximum WTP), such a question works less well for more abstract services, like technical services, and for services which are considered essentially public, that is, ones that cannot really be privatised.[14] Similarly, WTA questions about library services in general, or about technical services specifically,

would likely be unrealistic. It is highly improbable that a Council would sell off its library and pay a refund to its citizens, and inconceivable that a library would abandon all management of its collection.

Because technical services, in some form or other, are an integral part of a library's service, painting a scenario in which these services are paid for separately is unrealistic. Instead, scenarios were constructed, as described above, in which the other parts of the library service are dropped – something that is also unlikely, but feasible; indeed, the self-service library concept has been implemented on occasion. In order to compare the technical services' benefit-cost ratio with that of the library's overall ratio, a status-quo scenario, based on the present level of service, was also required.

It was important that the three scenarios and their corresponding WTP questions were considered independently by the respondents, otherwise the order in which the questions were asked might affect results. To encourage this, the preamble to the three questions emphasised that they should first be read as a whole, but then considered separately: this has been shown to reduce any sequencing effect.[15] Theoretically, the questions should be ordered randomly in each questionnaire to counter any sequencing effect, but this was impractical in this case, because describing the reduced-service scenarios before the status-quo scenario could confuse the respondent and would be harder to comprehend.

The three WTP questions were formatted in a way that attempted to increase the accuracy of the responses by providing response options that allowed people to express support for a service or good without committing dollars to it.[16] One of the response options also allowed for protest votes to be identified, with respondents being invited to state other reasons why they voted against the proposal, including reasons reflecting their rejection of the system on which the scenario was based.

In case respondents did not know what they were being asked to value, a brief overview of the library and its services was included in the preamble to the WTP questions. The questionnaire also included various secondary questions about respondents' use of the library's services and collection, and about their demographic characteristics.

<1>Results

The survey was administered between May and July 2007.. The demographic profile of the sample corresponded quite closely with recent figures from the Australian Bureau of Statistics for Wagga Wagga, with the exception of sex, where women were overrepresented amongst respondents. This bias was corrected for in the analysis. The number of protest votes, as identified by reasons given in one of the “No” response options, was reasonably low – 3.3 per cent for the present-level scenario, 3.9 per cent and 5.4 per cent for the two self-service scenarios. Any atypical demand on the part of protest voters would therefore not significantly affect the results.

Disregarding the protest votes, the acceptance rates for each bid in the three scenarios are shown in tables 1-3. All dollar values given in this article are in the Australian currency. While voting was sensitive to price in the case of the first and second scenarios, it was not so in the case of the third scenario, which proposed a self-service library with no catalog. Although a demand function involving various demographic variables could still be derived from the responses to the third scenario’s WTP question, and an overall value estimated, this was not considered a valid result, because the function did not involve an inverse relationship between demand and price. The six bids for the third question may have been set too low to bring out the demand curve, or **there** may have been a large sequencing effect on the third question, whereby respondents were influenced by the first two scenarios, even though they were asked to respond to the three scenarios independently.

[tables 1-3 to be inserted here]

The first two WTP questions yielded results that were deemed to be valid, by virtue of the fact that they produced a demand model involving both price, in a strong inverse relationship, and certain demographic variables, demonstrating that the responses were not random. The optimal demand model was derived through binary logistic regression, a statistical technique commonly used in the CV method to analyse the relationship between demand and possible factors, where demand is represented by the

binary variable of acceptance or rejection of the proposed levy (i.e. the yes/no vote). The covariates tested for inclusion in the demand model were price (i.e. the proposed levy), age, sex, parenthood, education, and income – as indicated by the survey responses. The larger factors on demand (such as price) were identified through the Wald statistic (see tables 4-5) – a greater Wald statistic indicates a larger factor. Equations involving the different variables were generated through the regression, with the larger factors being added first. The -2 log likelihood measure was produced for each new equation, its reduction indicating a better fit (i.e. a more optimal model). In the case of the scenario based on the present level of service, the -2 log likelihood was not reduced after the addition of the price, sex, education, and income variables – the optimal model was thus deemed to comprise these four factors. The statistical procedure was repeated using the data based on the self-service library scenario supported by the catalog, resulting in an optimal model involving price, sex, and parenthood.

The equations for the two optimal models were then used to estimate a mean WTP for the two scenarios: the demographic variables' coefficients (in column headed B in tables 4-5) were multiplied by their respective means, and the products were added together, along with the constant (also in tables 4-5), and then divided by the coefficient for price (also in column headed B). The demographic variables' means were based on the sample, except in the case of sex, where a ratio derived from ABS figures was used.

[tables 4 and 5 to be inserted here]

The calculations produced a mean WTP of \$8.27 per month for the present level of service, and \$3.66 for the reduced service (with the catalog). Multiplied by the estimated number of households in the city and its surrounds (17,756), the total value of the library's present services were estimated as \$1,762,105 for the year, whereas a library that offered only a collection (including online resources) supported by technical services operations and output (including a catalog) was valued at \$779,844. These valuations do not cover additional benefits enjoyed by organizations and visitors from outside of Wagga

Wagga, but these are not considered to be that large in comparison with that derived by individual residents, and would probably not differ significantly in relation to the two levels of service.

The benefit-cost ratio of the library's services in general was thus estimated as its total valuation of \$1.76m divided by its total costs, which were based on its 2006-7 budget of \$1,329,422. The budget does not cover accommodation, because this is provided "rent free" by the Council, but this cost would apply to both scenarios in any case. The resulting benefit-cost ratio estimate was a healthy 1.33 to one.

The benefit-cost ratio of the library's collection and the technical services that support it, as represented by the self-service library scenario described in the second WTP question, was estimated as its total valuation of \$779,844 divided by those elements of the library's 2006-7 budget that pertained to the collection, and the collection management and processing operations. These elements included the (spent) acquisitions budget of \$179,229, staffing and other costs involved in technical services (\$207,178), annual license for the OPAC module (\$3,560), other IT costs relating to the provision of the online databases and catalog (\$10,000), and shelving (\$30,000), added up to a total cost of \$429,967. The estimated benefit-cost ratio was thus 1.8 to one.

A benefit-cost ratio specifically for the library's technical services was calculated by first deriving an estimate of the value that they add to the collections – assuming that the market value of the collections is similar to the amount required by the library to purchase them, the value the technical services add to the collections is the value of the self-service library (\$779,844) minus the (spent) acquisitions budget (\$179,229). This value (\$600,615) was divided by all the costs incurred by technical services (\$250,738) to produce a benefit-cost ratio of 2.4 to one. This compares very favourably with the library's overall benefit-cost ratio of 1.33:1.

The importance of the collection and its supporting services was also borne out by responses to other questions in the survey. Respondents were particularly interested in improvements to the collections, and were especially critical of them, in comparison with other services the library offered.

<1>Conclusions

Results from the CV survey indicated that Wagga Wagga City Library provides good value for money, and that its technical services provide especially good value. Given that the library is often visited for its collection (particularly its physical collection), the importance of the technical services operations might not come as a great surprise, but **it** is worth emphasizing the extent to which these operations add value to the collection, making it worth much more than if it comprised a randomly purchased, and randomly arranged, set of items.

The technical services' benefit-cost ratio might be a little overstated as the market value of the collection may be a little higher than what the library paid for it (the library may enjoy special deals with suppliers, etc.), and so the value added would be a little less than calculated. However, **it** is also the case that the valuations produced by the survey are likely to be conservative, at least in comparison with what might have been produced by other types of CV question and valuation techniques.

While current investment in technical services at the City Library would thus appear to be very worthwhile, a few points should be noted when drawing conclusions. First, these results paint with a very broad brush, and do not indicate which particular aspects of technical services add the most value. The results also do not mean that technical services operations, as a whole, could not provide even better value by improving in certain ways, nor that costs could not be cut through certain efficiencies.

Furthermore, the results do not mean that the library should be transformed into a self-service library, even though the benefit-cost ratio for the latter was higher. A smaller ratio may still yield a greater return, if the investment is much larger. The comparison only works if the larger ratio holds with the same amount of investment, and this is unlikely to be the case here – two self-service libraries, for example, are not necessarily twice as beneficial as one self-service library.

The value of the collection (and to some extent its supporting services) is also understated because the CV method does not take into account any latent, i.e. future, values. Certain items in the library's collections may become of historical significance to later scholars, for instance.

Nevertheless, even if it is only an estimate, the CV method allows for a dollar value to be attributed to services whose impact on users is particularly hard to gauge.

<1>Discussion

Important methodological issues need to be considered when applying stated preference techniques in library contexts. Some key points, discussed in more detail elsewhere [17], are:

- Comparisons between parts of a library service, or between libraries, or between libraries and other types of service, need a level playing field. That is, the same type of SP question needs to be asked – for instance, a closed, referendum-based WTP question with the same response choice. Other studies have shown different question types can lead to very different valuations.
- Second, comparison may not be fair if the populations that the services serve are different. Socioeconomic factors may well affect results, for instance (wealthier communities may be prepared to pay more; some communities may have higher expectations given different cultural and educational backgrounds).
- Services with lower benefit-cost ratios are not necessarily the ones to be targeted for budget cuts. Services with higher benefit-cost ratios may be less affected by cuts; further, the benefit and cost of a service may well be affected by reduction in other services.- When a set of services is analyzed using SP techniques, responses are not always perfectly sensitive to scope. That is, the aggregate of the values assigned to the individual services may be greater the value assigned to the overall benefit. For example, the WTP values assigned to individual databases may total more than the value assigned to the library's online databases as a whole.
- The scenarios on which the SP questions are based need to be realistic. A scenario in which a public library, for example, starts charging for standard book loans may be requiring too great a suspension of disbelief.

- Questions should be designed to take account – as far as possible – of over- and under-statement. Even closed questions based on referenda tend to provide over-statements of WTP, but these can be mitigated through ‘correction mechanisms’, for example, by allowing respondents to express support for a service without having to pay the proposed levy, or by reiterating the importance on an honest response. On the other hand, respondents may sometimes understate their WTP for strategic reasons – for instance, in an attempt to gain a lower price or the continuation of a ‘free’ service. Such attempts need to be identified through appropriate response options and/or follow-up questions.
- The more specific the service being valued, the greater the possibility that respondents do not really know what they are being asked to value. It may be reasonable to assume that most members of the public will have some idea of their public library’s services, but much less reasonable to assume that most will know much or anything about, for example, the library catalog’s authority file. This issue can be partly addressed by careful description and explanation, but **there** may be limits to what respondents can comprehend in a survey context, where there is limited time (typically a few minutes) and material (typically one or two pages about the product or service, perhaps with one or two pictures).

The last point is of particular note if more detailed valuations and cost-benefit analyses of technical services are to be undertaken. Research may have to focus on use rather than non-use, and employ more extensive interviews so as to be sure that respondents make properly informed choices. Given the complex nature of modern technical service provision, the CM method may usefully supplement the CV method, ensuring that the various facets of a particular service or product (such as a library catalog) have been considered. The CM method also tends to produce richer data that allows for more analysis of what makes a service or product of value, and which facets might need further improvement. The CM study that examined the value of the National Library of New Zealand’s bibliographic database suggests that the method could be successfully applied to various other technical service outputs, including the regular

library catalog.[18] A study that aims to examine the value a library OPAC adds to its collection is being planned.

The relative invisibility of technical services does not make them of less value. However, in a world of finite budgets, their value needs to be clarified. A list of intangibles may persuade some, but not all. What may persuade others is analysis based on a unit of measurement everyone understands – the dollar. By careful application of stated preference techniques, librarians can demonstrate very concretely just how valuable to users technical services are.

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<1>Appendix A

<2>Extract from the Questionnaire

Questions 7-9

Your valuation of the City Library Services

The following three questions, 7-9, are based on different **hypothetical** scenarios that are **not** actually being proposed, but that we are using in order to estimate how much the City Library Services are worth to the community. Please read the brief summary below of what Wagga City Library has to offer, and then read through all three scenarios, before voting in the three referenda. Please try to imagine that each scenario was for real. It's also important that you treat each scenario separately.

Wagga's City Library is funded by the City Council. The library provides access to over 100,000 books, magazines, newspapers, CDs, videos and online information resources. Its collections include a wide range of reference materials, resources for family history and local studies, music, fiction, audio books, children and youth sections. Members may borrow up to 10 items at a time. The Library other services include: an information desk, inter-library loans, Internet and email, word processing, photocopying, storytime sessions for children, delivery services for home-bound residents.

Question 7: Scenario A

Suppose that Wagga City Council changed the way it charges its rates and broke them up into several separate charges, one of which was for the funding of the city library. This means that you would no longer pay the rates you currently pay, but instead pay several separate amounts, e.g. an amount for refuse collection, another amount for roads management, etc. Suppose that at council elections you had the opportunity to vote on the council's proposal of \$2 as the new monthly charge for the City Library, to be paid by each household. This amount is what was calculated to maintain the present level of library services.

If the vote is carried, then this would be confirmed as the monthly charge for the library. Please note that you would not have to pay any rates for the library in addition to this charge.

If the vote is not carried, then Council would close the library and no charge would be levied.

Which of the following five options would you choose in the ballot? *Tick one box.*

Please vote as if this is the only option available.

Voting Slip

Proposal: Wagga Wagga City Council levies a monthly library charge of **\$2** per household.

Please choose ONE of the following options:

- I would vote YES to \$2 as the monthly charge per household for the library.
- I would like to see the library stay open, but can't afford the \$2 monthly charge and so would vote NO to the proposal.
- I would like to see the library stay open, but would prefer to spend my money on other things and so would vote NO to the proposal.
- I would like to see the library stay open, but would vote NO for the following reason:

- I would vote NO to \$2 as the monthly charge per household for the library, as I would not mind if the library closed.

Question 8: Scenario B

Suppose again that Wagga City Council changed the way it charges its rates and broke them up into several separate charges, one of which was for the funding of the city library. Suppose also that the council planned to reduce costs by transforming the library into a self-service library. The library's current collections and online materials would still be maintained and could still be borrowed, but no professional staff would be available to assist members, and machines would be installed so that members would check out items themselves. The physical collection would continue to be arranged on the shelves in the current fashion, and the library's online catalogue would still be available. However, no other services would be offered, such as the information desk, inter-library loans, or terminals with Internet access.

Suppose that at council elections you had the opportunity to vote on the council's proposal for the monthly library charge of **\$1**, to be paid by each household, for this self-service library.

If the vote is carried, then this would be confirmed as the monthly charge and the library would be transformed into a self-service library. Please note that you would not have to pay any rates for the library in addition to this charge.

If the vote is not carried, then the city library would be closed and no library would replace it; consequently, no charge would be levied.

Which of the following five options would you choose in the ballot? *Tick one box.*

Please vote as if this is the only option available.

Voting Slip

Proposal: Wagga Wagga City Council levies a monthly library charge of **\$1** per household.

Please choose ONE of the following options:

- I would vote YES to \$1 as the monthly charge per household for the library.
- I would like to see the library stay open, but can't afford the \$1 monthly charge and so would vote NO to the proposal.
- I would like to see the library stay open, but would prefer to spend my money on other things and so would vote NO to the proposal.
- I would like to see the library stay open, but would vote NO for the following reason:

- I would vote NO to \$1 as the monthly charge per household for the library, as I would not mind if the library closed.
-

Question 9: Scenario C

Suppose again that Wagga City Council changed the way it charges its rates and broke them up into several separate charges, one of which was for the funding of the city library. Suppose also that the council planned to reduce costs by transforming the library into a self-service library. In this scenario, the council planned exactly the same self-service library as in the previous scenario, except that in this case there would also be no library catalogue, although the collections would continue to be maintained and arranged on the shelves as they are now, and the online materials would continue to be accessible through the library's website. As in the previous scenario, the materials could still be borrowed, but no professional staff would be available to assist members, and machines would be installed so that members would check out items themselves, and no other services would be offered, such as the information desk, inter-library loans, or terminals with Internet access. *So the only difference is that in this plan, the self-service library would not have an online catalogue.*

Suppose that at council elections you had the opportunity to vote on the council's proposal for the monthly library charge of **\$0.50**, to be paid by each household, for this self-service library.

If the vote is carried, then this would be confirmed as the monthly charge and the library would be transformed into the self-service library outlined above. Please note that you would not have to pay any rates for the library in addition to this charge.

If the vote is not carried, then the city library would be closed and no library would replace it; consequently, no charge would be levied.

Which of the following five options would you choose in the ballot? *Tick one box.*
Please vote as if this is the only option available.

Voting Slip

Proposal: Wagga City Council levies a monthly library charge of **\$0.50** per household.
Please choose ONE of the following options:

- I would vote YES to \$0.50 as the monthly charge per household for the library.
 - I want to see the library stay open, but can't afford the \$0.50 monthly charge and so would vote NO to the proposal.
 - I want to see the library stay open, but would prefer to spend my money on other things and so would vote NO to the proposal.
 - I want to see the library stay open, but would vote NO for the following reason:

 - I would vote NO to \$0.50 as the monthly charge per household for the library, as I would not mind if the library closed.
-

Table 1. Acceptance rates for bids in scenario based on present level of service

Bids (\$)	2	4	8	10	12	20
Acceptance (%)	69.0	56.6	35.1	53.4	31.1	16.7

Table 2. Acceptance rates for bids in scenario proposing self-service library with catalog

Bids (\$)	1	2	4	5	6	10
Acceptance (%)	57.1	45.1	30.4	57.6	41.3	32.7

Table 3. Acceptance rates for bids in scenario proposing self-service library without catalog

Bids (\$)	0.5	1	2	2.5	3	5
Acceptance (%)	58.9	47.1	45.5	65.0	50.0	53.8

Table 4. Variables in the equation for present-level scenario

	B	Wald
Price	-.129	25.132
Sex	.548	3.419
Education	.359	8.192
Income	.090	3.781
Constant	-1.622	6.063

Table 5. Variables in the equation for self-service scenario

	B	Wald
Price	-.083	4.360
Sex	.705	7.103
Parenthood	-.066	.078
Constant	-.002	.000