CONTINGENT VALUATION AT THE FARM GATE

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Abstract

Today we are moving into a world of economic justification, optimal resource allocation and public opinion recognition. A world where there is a rationale to further explore and develop the contingent valuation method (CVM) for valuing quasi-private goods.

In this paper, the traditional CVM is adapted to value agricultural information services provided free of direct charges by private and government sources, in the high rainfall, sheep producing region of Western Australia. The study is designed to ensure the survey sample and the questionnaire itself do not introduce significant biases. The traditional CVM terminology, "willingness to pay" is replaced by "maximum price" and "maximum value". Valuation questions used in the survey are based on hypothetical scenarios however, a payment vehicle is not used. To assess these changes the validity of the adapted CVM is discussed.

Introduction

Agricultural information is supplied free of *direct* charges either to groups or individual farmers by the Western Australian Department of Agriculture (WADA). Private bodies which include stock firms and fertilizer and chemical companies, also provide information free of *direct* charges and in this paper will be termed *free private information*. The worth of agricultural information will be determined in terms of the maximum price and value farmers place on the information they currently receive.

So what are maximum price and value and how are they applied in this situation? This paper will attempt to answer this question by describing the contingent valuation method (CVM) and how it has been adapted to account for the maximum price and value farmers put on the major "free" agricultural information services provided in Western Australia.

Market Vs Non-Market Good

The price of a market good can be determined in a market through the interaction of supply and demand (Goodwin and Drummond, 1982). Alternatively, a non-market good is so defined because its price cannot be determined by the use of a market (Goodwin and Drummond, 1982). Such goods are defined as public goods and may be either pure public or quasi-private with some body, e.g. the Government, usually being responsible for the quantity made available.

Agricultural information provided by WADA and *free* private organisations can not be readily classified as a pure public good because potential consumers can be excluded and there can be individual property rights. That is, although everybody is entitled to the good they may not have access to that good because supply may be subject to budget and/or other constraints. In addition, one person utilising the good may affect the use by another person. Similarly, information cannot be classed as a pure private good because it is not freely traded in competitive markets. However, given the properties for provision of this information, it could be classified as quasi-private as defined by Mitchell and Carson (1989). They state that a quasi-private good is one similar to a private good except that it is not freely traded in an organised market.

The Contingent Valuation Method (CVM)

Contingent valuation may be defined as a method aimed at valuing a commodity by relying on individual responses to contingent circumstances inferred in an artificially structured market (Seller, Stoll and Chavas, 1985). The first economist to suggest valuation of a non-market environmental resource by asking people directly about their values was Ciriacy-Wantrup in 1952 (Mitchell and Carson, 1989). However it was not until the early 1960's that contingent valuation was first used by Robert K. Davis who used questionnaires to estimate the benefits of outdoor recreation (Mitchell and Carson, 1989). Since then published theoretical work has been completed by Brookshire *et. al.*, 1982; Hanemann, 1984, 1991; and Mitchell and Carson, 1989. Research using CVM has included valuing wildlife (Boyle and Bishop, 1987), the environment (Schulze *et. al.*, 1981; Cummings *et. al.*, 1986; Bergstrom *et. al.*, 1990), agricultural conservation (Sinden *et. al.*, 1987) and the Agriculture Protection Board in Western Australia (Hector, *et. al.*, 1990; Syme, *et. al.*, 1990).

The aim of the CVM is to employ surveys to directly find how people would value a change in the provision of a good or service. Such a hypothetical market is described to the respondent using a scenario explaining who will provide the service or good

and its change in provision. Contingent to this hypothetical situation, respondents are asked how much they would be willing-to-pay (WTP) or willing-to-accept (WTA) to avoid this change. In addition, to help explain the valuation answers and determine sincerity, survey participants may be asked about their attitudes, and opinions concerning the service or good. An advantage of CVM is that the method is suited to measuring the values of quasi-private and pure public goods, while other methods may not be appropriate for valuing quasi-private goods (Mitchell and Carson, 1989).

Controversy Surrounding WTP and WTA in CVM

It appears some researchers simply use the above CVM definition on any valuation problem, expecting it to produce accurate results. However, a major concern is with WTP and WTA procedures. Knetsch (1990) has found that WTA values are mostly larger than WTP values. From this finding he has stated that "it is likely that, among other implications, losses are understated, standards are set at inappropriate levels, policy selections are biased, too many environmentally degrading activities are encouraged and too few mitigation efforts are undertaken". While this may be true for some projects already completed, statements such as this should reflect on researchers not using appropriate valuing methods, rather than on CVM.

Based on existing evidence, CVM is a "best available procedure" when applied properly to situations in which conventional protocols are used to ensure people understand what has been asked of them (Smith, 1992). For this reason CVM should not be disregarded as a trend of the 70's and 80's. Rather problems should be identified and solutions for them sought.

Hanemann (1991) deals with some of the problems. He empirically explains why WTP and WTA are not equivalent all of the time. In short, he rationalises that the relationship between two goods depends on a substitution effect as well as an income effect. That is, if substitution of one good for another is easily achieved, then there should be little reason for WTP and WTA values to differ. However, if there is little or no substitution between goods, WTA values could certainly be larger than WTP because a person is likely to expect a significant amount of compensation for a good that will be difficult to replace. On the other hand, a person's WTP for a good, no matter how common, will be based on budget constraints.

Another basic explanation for a difference between WTP and WTA is that obtaining a good may have taken some time and effort, reflecting an indirect cost. Consequently purchasers may be inclined to reduce their WTP value by the amount of the indirect cost. On the other hand, when purchasers are deciding on a WTA value they may add this cost into their value.

WTA questions aim to determine the maximum amount required for a person to forgo a good. Logically speaking, where compensation (WTA values) is concerned, respondents will attempt to procure as much as they can through restitution. Therefore if WTA methodology is appropriate, any such problems should be identified and resolved.

Asking WTP questions gives the value of goods, subject to budget constraints. Therefore, if the question is to find whether goods should be paid for by the user, then carefully constructed WTP questions can be asked. The problem with WTP methodology is that "free-loaders" can get mixed up with "sceptics" (Syme *et. al.*, 1990). That is, "free-loaders" may identify a low value or zero because they do not want to pay for the service even though they value it, or they may view the good as one that benefits all so should be paid for by all (Syme *et. al.*, 1990). On the other

hand, "sceptics" are those who give a low or zero value because they don't want to pay because they consider the good is not worth the money (Syme *et. al.*, 1990). Therefore, if respondents give zero value answers, reasons for these answers should be noted.

Mitchell and Carson (1989) mention that the estimate obtained from a CVM study may not necessarily correspond to the relevant measures of social value, e.g., the community may hold a high value for clean air but express a low WTP to reduce air pollution because they believe the industries causing the pollution should pay for pollution abatement. Their solution for this problem is to collect attitudinal data and to use CVM values as estimates only for the provision of public goods.

What Right do People have to Answer CVM Questions?

This is certainly a question of morals. Some may say anyone who pays taxes should have a right to say what happens to public monies. Others believe all people should have the right to express an opinion. Then there are those who believe only people who have appropriate knowledge and interest should make decisions regarding public expenditure.

Perhaps a misuse of CVM is asking people to value a good about which they have no interest and or little knowledge. Market researchers would not choose a boys' school to find out how much people would be willing to pay for new baby formula. They are more likely to go to a mothers' nursing clinic or the like. Gregory *et. al.* (1991), question the validity of WTP based on an experiment asking mostly students to value 27 items from additional bike lanes to endangered eagle species. They used open-ended and rating scales to find WTP and found a difference between the two methods. Apart from the fact they were comparing medians and means could this difference also be because the students didn't really think about the values because some of the subjects were of little interest to them? More work concerning this topic is certainly warranted.

Other Doubts

Kahneman and Knetsch (1992), are concerned about the validity of CVM studies being interpreted as economic values when embedding and moral satisfaction derived from contributing towards a public good are prevalent in many CVM studies. Embedding results from people not valuing a good independently of similar goods, or when they do not understand the time-frame for which their valuation is valid. For example, people may derive a value for Cottesloe beach by adding their specific value for that beach and their value for beaches in general. Therefore if this value is aggregated for all beaches, the final value is over-inflated. Similar problems occur when respondents believe the value they are giving a good is appropriate for a ten year period where in fact it should be for an annual period. Likewise over-inflated values will result. The likelihood of embedding occurring in this project is minimal because the exact values for individual services over a defined time period are well documented.

Kahneman and Knetsch (1992) claims that WTP reflects the amount people are WTP for moral satisfaction of contributing and not their economic value for a good. This problem is similar to strategic bias and can be suppressed if respondents understand why they are answering CVM questions. As a test of this understanding respondents should be asked to justify their values and answer attitudinal and behavioural questions.

CVM and Quasi-Private Goods

Most work done in valuing public sector organisations has been by social indicator research showing relative rather than absolute values of an organisation (Syme, *et. al.*, 1990). However, Mitchell and Carson (1989) roughly describe how a quasi-private good can be valued using CVM. They propose using WTP methodology because the consumer is already paying for the good on a regular basis through e.g., taxes. Therefore, the Hicksian compensating surplus[1] in this situation is the amount the consumer is WTP to forgo a reduction in the quantity level of the good and still be as well off as before (Mitchell and Carson, 1989). It should be noted that WTA questions are not appropriate because they are inconsistent with the non-transferable character of this property right (Mitchell and Carson (1989).

Mitchell and Carson (1989) explain that respondents would be informed that they are already making annual payments (e.g., taxes) to provide the current level of a good. They would then be asked to state the maximum payment (i.e., present payment) that they are willing to make to preserve this quality level before they would rather a quality reduction. Mitchell and Carson (1989) admit that by informing respondents that their current payments would no longer be required because they would be contributing their WTP value, could create problems because they may be hesitant to give a higher WTP amount for the good than the current value, even if their compensating surplus for the good was much larger (Mitchell and Carson, 1989). However, they conclude that there may not be a problem if respondents were told they would get back whatever WTP value they suggested and both the current payment and WTP value were small relative to income. As biases may create major problems with this suggestion, the CVM methodology needs to be appropriately adapted.

Personal communication with people working in the field has revealed no theoretical literature specifically dealing with CVM for valuing public services (Appendix I). However, the general thought is that application to determine WTP for farm advisory services should present no new or different problems - except for the free rider difficulty.

Adapting CVM

When valuing any public goods and especially quasi-private ones, it is important to find what value is sought. Is it WTP or is it the value given their are no constraints attached?

Providing a good can be paid for by the user, constraints, such as budget, should be considered. For example, it could be argued that agricultural information currently provided free of charge to farmers in Western Australia should be paid for by the user. To determine this, a revised version of WTP, which excludes the use of a payment vehicle, will be used in this project and will be termed maximum price (MP). That is, MP will refer to the amount one would be willing to pay to have a good or service maintained at the current level.

It should be stressed that the MP given by an individual will be interpreted as the price that would be paid for the service as is. If WADA or private companies decided to charge for services they may need to change the structure of their services to meet the demand and assess how the change would affect society as a whole, as well as individuals.

[1] The Hicksian compensating surplus infers that a person is entitled to his/her current level of utility, or alternatively his/her status quo endowment of property rights (Mitchell and Carson, 1989).

It could be argued in the case of a quasi-private good that if one is prepared to pay for it then it may not be necessary for governments or other bodies to intervene in the supply of the good. On the other hand, one may not be willing and/or able to pay any amount but may still value the service being provided by some body. In addition some people argue that research work is paid mostly by industry funding so information from this work should be provided free of direct costs. Also as agricultural revenue makes up a fair proportion of export dollars, the Government, believes it is in society's best interest to provide agricultural information to farmers so they all have the chance to produce as well as each other. In the case of private companies, it is in their best interest to ensure farmers use their products as they should. Therefore by providing their information free of charge, farmers are less likely to misuse their products. In each of these cases MP may be an underestimation of the true value farmers place on information services, resulting in less information being provided than is demanded.

The above discussion justifies that MP is an inappropriate measure of value for a good for which people are not expected or able to pay. However, the maximum value people place on good needs to be determined to give suppliers some idea of how much of the good to provide. This maximum value (MV) can simply be found by using the same method as is used for asking MP values, but with personal constraints such as income, removed. The text shown in Appendix II was used in this project to explain to farmers the difference between MP and MV and why it is important to express their answers as accurately as possible. As with MP questions, every effort should be made to reduce possible biases with emphasis on strategic and hypothetical bias. If respondents understand that the project will be a waste of their time and resources if they express a false value, several problems associated with CVM may be diminished

A Note Regarding Biases

Beside WTP versus WTA contentions, CVM also has problems related to biases. Several biases have been cited in the literature including, compliance, strategic, hypothetical and information bias. In a CVM study, every measure should be taken to exclude as many as possible.

The following is a description detailing the elimination of the major biases from this project. Compliance bias is caused by respondents who provide answers to please the interviewer or sponsor of the study. As this study has an independent sponsor, there is no reason to please the interviewer, so this bias should not be prevalent. Likewise, strategic bias, which occurs if respondents provide false answers with the aim of influencing policy or "free-riding", should be minimal. Finding MV and explaining that the purpose of this work is to help information sources become more efficient, reduces hypothetical bias because respondents know their answers may have relevance. However, it is important not to over-correct hypothetical bias and so increase strategic bias. With an appropriate aim and direction to the questions before they are asked both biases should not be a problem. Information bias may take many forms. Relevant to this work is that government provision of information may bias valuations downwards if respondents feel governments generally waste money. This perception is consistently documented in public opinion polls (Mitchell, Cameron and Carson 1989), so care will be taken to appease government sentiments in this project.

In addition demographic, attitudinal and behavioural information should help explain biases.

Existence Value

As pointed out by Mitchell and Carson (1989), existence value is important when valuing public or quasi-private goods. Unless careful attention is paid to capturing this value, often it is neglected resulting in the good being undervalued. Therefore in both MP and MV questions, respondents were asked whether their value or part of, reflected the desire to know the service was there despite being used or not.

The Project

There is some debate as to the best procedure for conducting CVM surveys. Telephone and personal surveys allow interviewers to clarify questions however, they are more expensive than mail surveys (Mitchell and Carson, 1989). It is not possible to use visual aids with telephone surveys which may cause some disadvantages. In addition, participants may answer fewer questions in telephone and mail surveys because they do not have personal assistance. Mail surveys may have some drawbacks when used in CV research due to the complexity of the questions and the fact that respondents must be fully literate. However, Mitchell and Carson (1989) state that methodological advances have greatly improved the technique. In this project both personal and mail surveys were used. It was hypothesized that there would be no difference in valuation answers between the two survey types.

The Pre-Test

A pre-test with six farmers was conducted using a personal survey. With the comments given by the respondents and recognition of their comprehension of the subject matter, the survey questionnaire was changed appropriately. Six additional farmers were then sent mail surveys. Further refinement was made before the survey was deemed suitable for use.

The Survey Sample

Only farmers, who have access to the information sources to be valued, were used in this study. Although not all of these respondents valued information, they should have had enough knowledge to make a valid assessment. Knowledge, attitudinal and behavioural data were collected to verify this assumption.

Choosing the survey area and participants were important if results are to be compared with any consequence. As WADA services are being valued, four departmental regions, Moora, Northam, Narrogin and Katanning, were included in the survey. The shires selected from each of the regions were stratified to have certain stipulations. These being; predominantly wool growing; high rainfall, as specified by WADA; greater than five dry sheep equivalents/hectare pasture; greater than 50% pasture:crop.

Within the shire, people known personally to the interviewer were excluded from the data set. Together with the fact that one interviewer was employed for all of the surveys, this meant interviewer bias was reduced. In addition to exclude hobby farmers, people with less than 100 hectares of land were not retained in the initial data set. From the remaining subjects, 500 were randomly selected to participate in survey one.

Survey One

In this project funding was limited. However, this may not have been a major constraint because efficient methods had to be devised to motivate respondents to participate. As a result, survey one was constructed as a one page, seven question, simple mail survey. The main question was to ask respondents if they would

participate further in this work, and if not, why not. A letter detailing the study and a self addressed and stamped envelope accompanied the questionnaire.

The aim of approaching participants in this manner was to avoid the cost of phone calls asking them to cooperate and to give them time to make a decision to participate. Another major reason was to avoid using the telephone. According to Prof. G. Albaum from the University of Oregan (pers. comm.) it may not be long before "cold calling" people using the telephone is banned in the USA. That is, telephone surveys, selling and the like would be illegal.

On the return of this survey it was found that people who were not very literate or could not see well, had some one else complete the survey form at their instruction asking to participate in a personal survey only. Likewise people who were not available for a personal interview asked to be sent a mail survey.

Of the 500 people sent survey one, 301 people (62%) returned the survey. In addition 14 surveys were returned to sender as unknown or moved addresses. From the returned surveys, 215 people (44%) were prepared to participate further, while 86 people (18%) did not want to be included in the next survey. Of the respondents who did not wish to participate, 14% gave no reason why, 34% said they would be too busy, 17% said they did not like this type of research and 35% gave other reasons, (e.g., they would be away or they were too old). Of the total respondents, 91% had sheep as their major source of income.

Part of this high response rate may be due to the topic being relevant to most people. Nevertheless, the technique is encouraging for recruitment of people for surveys in the future.

Survey Two

Survey two was developed both as a mail and personal survey and included a detailed description of the specific WADA services being valued and the hypothetical circumstances under which they will be made available to the respondent. There were two stipulations for participants, farmers had to be willing to participate in survey two and had to have sheep as a major source of income. From those farmers, 60 were randomly selected. The remaining 155 people were sent mail surveys. According to Dr. R. John, (pers. comm.), these samples are statistically adequate because they were initially randomly selected from a stratified sample.

Open-ended questioning is perhaps the most appropriate valuation format for both personal and mail surveys. When asked open-ended questions, respondents devise their maximum values without the aid of additional information, bidding or other processes and therefore biases in the answers are reduced. Cummings, Brookshire and Schulze (1986), believe this technique may not provide sufficient stimuli and information to help people value a public good. However, as long as the description preceding the valuation question provides enough instruction as to how to value the good, there should not be any problems with this technique. In addition an "anchored" payment card was used in this project to provide some assistance to respondents. Such a card can be used where relevant subjects are placed along side the appropriate values. It is thought that this anchoring may provide some bias. However, Mitchell and Carson (1981; 1987) and Syme *et. al.* (1990) have found that no bias exists. Care must be taken when designing the card to ensure respondents' values will not be lower or higher than those displayed and the gap between the values is small enough to ensure respondents are able to chose a figure close to their value.

In traditional CVM studies, a scenario for payment called the "payment vehicle" is specified as part of CVM questions. For example, for the control of car exhaust pollution, respondents may be asked how much extra they would be prepared to pay for fuel to aid control. Mitchell and Carson (1987) have suggested that realism and neutrality should be two criteria when choosing a payment vehicle. However, when it comes to valuing a quasi-private good, such as information, neutrality is difficult to achieve. Respondents are already paying for the good and therefore are unlikely to choose to pay again. In this case it is more appropriate to forgo a payment vehicle and directly explain to respondents that either it is their MP or MV that is required.

To check consistency and for information bias in the open-ended questions, a close-ended question was included at the end of the questionnaire. That is, five appropriate values were randomly allocated to the questionnaires resulting in just over 40 people in this project answering yes or no to the same value. This method is probably the easiest valuing technique to use. However, a larger sample size (to provide enough replicates) than was used in this study is normally required if the method is to be used alone. The quandary as to whether the sample was of an appropriate size will be answered by determining if there is a significant difference between the open and closed-ended techniques.

In addition, questions concerning respondents' characteristics (e.g., age and education), their attitudes towards information services and their current use of the service were collected. This information was elicited throughout the survey and will be used in regression equations to estimate a valuation function for the information services.

Preliminary Results

To date only preliminary results have been extracted from the data and significance tests have not been conducted. However, the following results for WADA specific and general information[1], and two major private information sources (CSPB fertilizer distributor and chemical companies in general) are presented to show the difference between MP and MV. The maximum revenue farmers expected from using agricultural information was also collected to help determine whether biases, especially stragetic and hypothetical, were present in MV answers.

Each of Tables 1 to 4 show much the same patterns with MP being lower than MV. This means that people may be willing to pay an amount however, their value of the good is more than this amount. That is, there is a positive indication that farmers benefit from this information being provided free of charge.

The maximum revenue generated from access to the information specified in Tables 1 to 4, was generally greater than the MV. This provides some evidence that MVs were not randomly "pulled from the air" or subject to biases, but were based on a realistic indicator. Farmers who gave MVs greater than their maximum revenue values may also hold some existence value for the presence of the good. As questions pertaining to this matter were asked, analysis are planned to determine if this is the case.

Although it may not be significant, there appears to be a difference between some values given for the mail and personal surveys. This may be due to a few very high or low values, created by biases, abnormally pushing the mean up or down respectively. This factor will also be looked at in future analyses.

[1] General information refers to that provided to groups of farmers at field days, seminars and the like. Specific information concerns that provided to specific farmers about a specific topic, e.g., identification of a weed species in their pasture.

Table.1. The Mean Values of WADA Specific Information From Both Mail and Personal Surveys

Value	Mail	Personal
MP	414	142
MV	1244	1343
Revenue	2425	1566

Table 2. The Mean Values of WADA General Information From Both Mail and Personal Surveys

Value	Mail	Personal
MP	315	137
MV	1153	1129
Revenue	2463	1035

Table 3. The Mean Values of CSBP's Information From Both Mail and Personal Surveys

Value	Mail	Personal
MP	233	127
MV	1291	1311
Revenue	3383	2472

Table 4. The Mean Values of Chemical Companies' Information From Both Mail and Personal Surveys

Value	Mail	Personal
MP	244	139
MV	1975	850
Revenue	3462	1763

Conclusion and Future Work

Despite the doubts some researchers have about CVM, it is still the only direct method to value a non-market good. This discussion paper concentrated on CVM background and methodological problems. In addition procedures to accommodate quasi-private goods were explained.

Preliminary results from survey two indicate that MP is lower than MV and there are not major differences between mail and personal surveys.

Further analyses of the results from survey two will add another dimension as to whether this adapted form of CVM is suitable for valuing a quasi-private good. In addition, more research is to be done as to whether MP and MV are more appropriate to use than WTP. Also the effect people's knowledge and interest concerning a subject has on MP and MV will be studied. In addition simulation models will be constructed to test the validity of this modified CVM.

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Appendix I

The following people were approached to determine whether CVM has been previously used to value quasi-private goods.

Prof. R.G. Cummings	(University of New Mexico)
Dr R. Fraser	(University of Western Australia)
Dr. Robin Gregory	(Decision Research, Oregon)
Prof. J. Knetsch	(Simon Fraser University, Canada)
Dr. J. Loomis	(University of California, Davis)
Dr. P. McLeod	(University of Western Australia)
Prof. S. Reiling	(University of Maine)
Mr J. Roberts	(State Development, Western Australia)
Dr. John Stoll	(Texas A&M University)
Prof. J. Sinden	(University of New England, Australia)
Prof. V.K. Smith	(North Carolina State University)
Dr. G. Syme	(CSIRO, Western Australia)
Prof. E. van Ravenswaay	(Michigan State University,)
Dr. Leanne Wilks	(Resource Assessment Commission, Australia)

Appendix II

One of the main aims of my research is to find out if *you value* agricultural information and if so the monetary value you place on it. This will help me determine *how* satisfied you are with the information you receive. For simplicity's sake, I have divided information into general and specific AG DEPT information, and charged and free private information. *(See the blue card)*[1]

In this context what is meant by *value*? There are two ways to look at it. Firstly, value can be interpreted as the ***maximum price*** you can afford to pay for something. The other meaning of value is the ***maximum value*** you would place on something, given you do not have any budgetary constraints. An example of this concept may be that you are only willing to pay $1000 for a new wool press because that is the ***maximum price*** you can afford. However, if you did not have to worry about whether you could afford the press, you may think that $3000 would be its ***maximum value***. That is, ***maximum price*** refers to the amount that comes out of your pocket while ***maximum value*** is the maximum amount you think something is worth given you do not have to worry about paying for it. Of course, sometimes your ***maximum price*** and ***maximum value*** may be the same.

A wool press was used in the above example and because it can be bought at a price, its value is fairly easy to determine. However, today I am asking you to value some AG DEPT and private information services that previously you may not have had to think of in terms of their monetary value to you.

There are many other examples of things that you may value but have difficulty placing a monetary value on. For example, radio reception; although you may have to buy the radio, you do not pay for the radio waves.

In each of questions 7 to 9 you will find *hypothetical* scenarios asking you to make some sort of valuation. The questions are written *hypothetically* so you will not be tempted to give *$0* responses because you are worried your answers will become reality. They will not - This study is ***not*** a market analysis but designed only to find *how* satisfied you are with the services you currently receive. However, if you decide to give a *$0* answer for other reasons (e.g. you don't want the information), please note it down on Page 13 so I can explain your decision in my results.

Please, note that it is essential that you give your true values so that this project will not be a waste of time and money. *N.B. the following questions are NOT easy but please persevere with them as best you can.*

[1] The blue card contained definitions of the information services to be valued so that all respondents valued the same services.