

Assessing the Public Service Element of Irish Public Broadcasting – The Validity of the Contingent Valuation Method

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1. Introduction

The contingent valuation method (CVM) has been extensively used to assess the use and non-use value of environmental amenities, and continues to be developed as a tool for this purpose. This paper assesses the possible use of CVM in the analysis of a complex cultural public good – Public Service Broadcasting.

There have been a number of applications of CVM to the valuation of cultural public goods. Recent studies have assessed the Royal Theatre in Copenhagen (Bille-Hansen, 1997), historical sites in Napoli (Santagata and Signorello, 1998) and public libraries in Norway (Aabø and Strand, 2000). CVM has also been used in the analysis of broadcasting. Ehrenberg and Mills (1990) asked respondents for their willingness to pay a subscription charge for BBC services, if the licence fee was abolished. They found that the propensity to pay a subscription charge similar to the level of the licence fee was high, across different scenarios and different respondent characteristics. Also, WTP was found insensitive to price with many respondents willing to purchase BBC services at a charge three times the licence fee. Papandrea (1997) used contingent valuation to ascertain whether viewers value domestic programming content in Australian television, the provision of which was the result of a quota specifying minimum amounts of domestic programming on commercial free-to-air channels. Respondents were asked a valuation question that referred to the estimated cost per household of providing the programming, and followed this with an open-ended question to elicit maximum willingness to pay. The resulting average willingness to pay was only slightly below the average cost, and the median vote was at average cost, which might suggest an anchoring effect.

Free-riding is a problem inherent in the provision of public service broadcasting, which is particularly evident when contribution to the service is voluntary, as in the United States. Schwer and Daneshvary (1995) examined willingness to pay for PBS amongst residents of Las Vegas, finding that a large

proportion of their sample (39%) was unwilling to make any contribution. The fact that individuals can easily free-ride when paying for public service broadcasting causes difficulties valuing PSB by contingent valuation. However, a high proportion of individuals unwilling to pay any positive amount for a PSB good may be a reflection of the free-rider issue inherent to provision, rather than an effect induced by the contingent valuation method. A high incidence of zero-bidders has been observed in several WTP studies for less broadly used cultural public goods such as museums and theatres. The central issue is whether the CVM instrument increases the propensity to bid zero.

In this study, we examine the Irish public service broadcaster (PSB), Radio Telefís Éireann (RTÉ). A survey was carried out on residents of County Dublin, to test the applicability of CVM in the valuation of the PSB service. We estimate willingness to pay for the public service element of RTÉ, and investigate determinants of variations in WTP as well as WTP over variations in respondent characteristics. The particular remit of the survey was to elicit a very wide range of attitudes and characteristics, in order to assess the nature of the valuations submitted and thereby test the validity of CVM.

2. Rationale

RTÉ is a statutory corporation that provides broadcasting services to the Irish public. Its primary activities include a wide range of television and radio products, as well as the sponsorship of performing groups including two orchestras. The corporation receives public funds through a broadcasting charge, the licence fee, which is currently IR£84.50. However, this income constitutes only approximately one third of total revenue, a proportion that is well below the EU average for PSBs. RTÉ is therefore in direct competition with commercial broadcasting providers for advertising income and sponsorship, which provides the balance of funding. In the last decade in particular, this competition has increased, both from within the Irish market as well as from abroad over satellite and cable. A central problem for RTÉ is that the licence fee is not subject to regular review, and the process itself is a difficult one. As a result, the real value of the licence fee has fallen strongly over time, increasing the reliance on commercial income. Changes in the dynamics of the broadcasting industry and the struggle for adequate state funding have arguably reduced RTÉ's salience as a provider of a public service. Its audience share has dropped, particularly with multi-channel audiences. Its programming mix has been criticised in the media as not adequately fulfilling the public service remit. TV3, the only commercial television broadcaster in Ireland, continually questions the provision of public funds to a broadcaster that competes in the markets for advertising revenue and popular programming content. The criticism of RTÉ and its output are largely based on anecdote and rhetoric. However, at the same time RTÉ and other European PSBs have been unwilling and/or unable to make fully transparent their use of public funds. Neither have they proven that their output differs from that of private broadcasters – they maintain that their entire output fulfils the public service remit. The European Commission has so far accepted that revenues from compulsory charges are used to compensate for 'non-commercial' undertakings in broadcasting. However, a review of this policy could force PSBs to explain how they spend the public money, or even justify receiving it at all.

What is lacking in the Irish case is a measure of the value RTÉ provides for the licence fee. One avenue of research is the analysis of broadcasting schedules, using a variety of measures of diversity and innovation. Although such results are useful, one might argue that the categorisation of programming is too subjective, and that diversity measures do not adequately capture quality of programming, and therefore do not translate into accurate measures of welfare. As an alternative, one could attempt to derive the utility provided by RTÉ from revealed preferences, the payment of the licence fee being one possibility. However, such an undertaking would be both complicated and imprecise, as the decision to pay the licence fee is clearly influenced by a number of other factors. Foremost amongst these is the fact that households currently pay the licence fee to watch any television. The enjoyment they receive from commercial broadcasting will influence their willingness to pay the licence fee, and this would therefore have to be estimated. In addition, receiving broadcasting signals while evading the licence fee is an offence. Individuals will weigh the probability of detection and the severity of the punishment against the cost of the licence fee, and will act differently based on how risk-averse they are.

CVM has the potential to circumvent the above problems and elicit a direct measurement of utility provided by PSB, free of such noise. One could characterise the good in a scenario that respondents are then asked to value. The resulting average WTP could form the basis of a valuation of the PSB services that could be used to assess further PSB provision, based on a form of cost-benefit analysis. In addition, a standardised valuation procedure could be used over time, for instance in panel interviews, to aid decisions on future broadcasting policy, particularly the review of the licence fee. However, it is not sufficient to simply provide a valuation – of equal importance is an understanding of why individuals are willing to pay a particular amount for public service broadcasting.

3. Definition of the Good

In the context of a dual-funded broadcaster such as RTÉ, CVM loses some of its natural simplicity. The good we are attempting to value is the public service that RTÉ provides for the licence fee revenue. We cannot ask the survey respondents to value the broadcaster in its entirety, as it is not completely funded through public money. Such an approach would clearly overvalue the contribution of the licence fee to welfare, as individuals ‘pay’ for the commercial element of RTÉ through higher prices on advertised goods. We cannot therefore completely divorce ourselves of the problem of defining what element of the PSB is funded by public money. However, the CVM technique does allow us to circumvent the problem somewhat, as the discussion of the survey instrument will show. First, we define what precisely we are attempting to measure in the Irish context.

Utility is a function of market prices, income, and non-market goods. A change in the amount of one of the non-market goods z (in this case provision of public service broadcasting content by RTÉ) will change utility. Consider a change in z so that $z^1 > z^0$. It follows that, if the element of z changed is considered a ‘good’ by the individual, that is provides positive benefit, then in terms of indirect utility functions $V(\mathbf{p}, \mathbf{z}, y)$:

$$U^1 = V(\mathbf{p}, \mathbf{z}^1, y) > U^0 = V(\mathbf{p}, \mathbf{z}^0, y) \quad (1)$$

Therefore the compensating variation (C) of the utility change can be expressed in terms of the indirect utility function as follows:

$$V(\mathbf{p}, \mathbf{z}^1, y - C) = V(\mathbf{p}, \mathbf{z}^0, y) \quad (2)$$

In (2), C represents the amount of money loss the individual could incur after a change in z and still be as well off as before the change. It is the maximum willingness to pay for a certain level of provision of a public good. This assumes that the individual experiences no decrease in utility due to the change from \mathbf{z}^0 to \mathbf{z}^1 so that $\Delta U \equiv U^1 - U^0 \geq 0$.

We wish to simulate the removal of public broadcasting in Ireland to explain the two states \mathbf{z}^0 and \mathbf{z}^1 . Private television and radio would continue to operate, more than likely taking some of the market share freed up by the demise of the PSB. Irish viewers would also continue to receive channels from abroad. In addition, it is feasible that if RTÉ disappeared, new free-to-air channels could take the place of its services. This may be a commercial broadcaster on the basis of current RTÉ operations, or an entirely new entity. For the purposes of this study, it was stated in the valuation scenario that RTÉ would continue to exist, but as a commercial broadcasting company that would not fulfil the public service function currently expected of it. In the pilot survey, which was confined to postgraduate students, respondents were asked what they would be willing to pay to avoid the loss of RTÉ if the licence fee were removed. This scenario proved problematic as several respondents perceived the payment vehicle as being the same as the licence fee. Also, individuals perceived the vote as being on the circumstances of provision rather than the good itself. Due to the problems highlighted in the pilot survey, the scenario adopted in the study proposed that the government had already abolished the licence fee and made RTÉ a private broadcaster. The respondent's contribution is intended to fund RTÉ's public service remit. The advantage of this scenario was that it more clearly took the RTÉ service out of the current context of provision, possibly distracting from questions regarding the payment vehicle. In this case, \mathbf{z}^0 is a base scenario without the public broadcaster, which has been "privatised" by the removal of the licence fee. The CVM payment is for \mathbf{z}^1 , where the public broadcasting services are reinstated through direct contributions.

4. The Surveys

1. Pilot survey

The pilot survey was carried out in June/July 2001 attracting 80 valid responses. The results led to a number of important changes to the main survey. As noted above, many respondents perceived the scenario as being no different from their real situation, due both to the perspective as well as the payment vehicle, a yearly charge to paid as a part of utility bills. As a result, many respondents focussed on issues extraneous to the theoretical construct. Linear regression analysis showed that both views on the usefulness of public service broadcasting in

general as well as attitude towards the licence fee affected WTP bids systematically, although perception of quality of RTÉ services versus those of commercial providers also proved a significant factor in bidding.

As a test of the effect of different valuation question approaches, the sample was split into two – half the group received a valuation question based on a payment card, whereas the other half received a payment principle question, which elicited whether were willing/unwilling to pay any positive amount to fund RTÉ, and was followed by an open-ended valuation question. The propensity of respondents to bid zero was correlated with the respondent's having being asked the payment principle question. Nine of the ten zero-bidders were from the split sample that were asked the payment principle question. The payment principle question could simply be attributed a direct effect on some respondents, prompting them to bid zero. However, a more sophisticated explanation is that the payment principle question acted as a catalyst, channelling any negative feelings into a zero bid rather than just a low bid.

4.2. Dublin Survey

The sample for the survey was drawn from the electoral registers published by the four local administration authorities that make up the Dublin area. The survey was conceived as a test for a larger scale survey, and therefore received quite limited resources. This limited the sample size to 196 potential respondents. Respondents were drawn from the four authorities to approximate their proportion of the Dublin population, as shown in the table below. The design of the electoral register and the practicalities of sampling for interviewing meant that there was not an equal probability of a given household being selected. The register is organised in polling districts, and within the districts lists individuals by street and house number, in that order. Polling districts were selected from the index of each register using a list of randomly generated numbers. Groups of two or three individuals were then drawn from a street within the district, and became a 'respondent group'. No more than two respondent groups were drawn from one polling district. Within each respondent group the interviewer was required to contact only one of these three individuals, with the first individual successfully interviewed becoming the 'respondent'. A non-response or non-contact was only recorded if all individuals either refused interview or were not contacted. The sample was divided amongst three interviewers, and all interviews were completed in the period from mid-September to mid-October 2001.

Table 1 Dublin sample by local authority

	Population (approx.), 1996 census (Percentage of total in parentheses)	Number of Respondents in Survey Sample (Percentage of total in parentheses)	Valid responses (District response rate in parentheses)	Percentage of valid responses, Survey Sample
Dublin Corporation	481,854 (46%)	96 (49%)	77 (83%)	55.00%
Fingal County				

Council	168,000 (16%)	32 (16%)	31 (97%)	22.14%
South Dublin County Council	218,400 / 20%	31 (16%)	24 (77%)	5.71%
Dun Laoghaire – Rathdown County Council	189,999 / 18%	37 (19%)	8 (22%)	17.14%
Total	1,058,264 / 100%	196 (100%)	140 (71%)	100.00%

Source (population statistics): Local authority websites, listed at <http://www.environ.ie/localindex.html>

The percentage of valid responses in Dublin Corporation, Fingal County Council and South Dublin County Council are close to the percentage of the total survey sample each of them constituted. The overall response rate of 71% was considered satisfactory. However, the response rate for Dun Laoghaire-Rathdown is less so, with virtually all of the missing respondents non-contacts. After consultation with the interviewer this seems to have been due to unfortunate timing of visits in the affluent suburban residential areas that made up much of this group. Due to lack of resources, we were not able to follow up these households to determine whether they were substantially different from respondents in other administrative areas of Dublin. The final number of 140 valid responses limited the analysis we were able to perform. However, we believe that even with so few observations we were able to infer some very definite results, as detailed below.

4.3. Survey Design

The difficulties facing CVM researchers attempting to elicit true preferences are well documented (see for instance Mitchell and Carson, 1989; Arrow *et al*, 1993; Hausman (ed.), 1993). Of particular interest for our survey were the problems of strategic response and cognitive difficulties in CVM, both of which seem to have been present in the pilot study. In the case of RTÉ, we faced a specific factor that compounded these difficulties. The fact that RTÉ draws roughly two thirds of its total finance from commercial sources meant that we could not define RTÉ as a wholly public good. A realistic alternative scenario after the removal of the licence fee therefore became more complicated and vague.

The Dublin survey instrument consisted of five sections. Section One asked a number of questions regarding leisure activities including television and radio, cable and satellite subscription services, as well as use of cinema and attendance at live sporting events. Section Two focussed on use of and attitudes towards RTÉ services, as well eliciting some more general attitudes towards the issues surrounding public broadcasting. These included a question on whether Ireland should maintain a PSB now and in the future, a question on the general payment obligation for viewers in Ireland, and a question on the licence fee as a payment vehicle. Section Four gathered personal information such as age of respondent, household income, and size of household. Section Five was to be completed by the interviewer after leaving the respondent, and asked some questions on the behaviour of the respondent during the interview. Throughout all sections, the respondents were offered visual aids for the more

complex questions.

Section Three contained the scenario and valuation question. The main challenge in order to minimise strategic and cognitive difficulties was to provide the respondents with an informative, realistic scenario and a valuation question that focussed on the theoretical construct as described. One advantage of the RTÉ service is that it is widely used and therefore well known. However, this high profile has given rise to a politicised and polarised debate on the public broadcaster. RTÉ is often criticised as a badly managed, highly bureaucratic organisation that wastes its public funding, and the licence fee is often seen as an unfair payment. The difficulty therefore lies in keeping the valuation scenario close to the current parameters of provision, while at the same time abstracting sufficiently that respondents will consider the good out of context.

The method of elicitation, delivery and the payment vehicle for the hypothetical scenario are all critical issues. Keeping in mind the many points raised in the literature regarding cognitive problems and incentive-compatibility, and the goal of the valuation exercise, the following points were focussed on in survey design.

- To reduce strategic behaviour, it was considered important to retain the notion of collective provision and emphasise the possibility of collective exclusion (non-provision).
- Respondents had to consider themselves to be liable for payment under the payment vehicle, ideally at their stated amount.
- The scenario had to remain realistic, describe the good clearly, and show the consequences of a payment decision.
- The scenario needed to explicitly ensure that both use and non-use values were included. The status of RTÉ as a public broadcaster for Ireland should therefore ideally be underlined.
- The good to be valued was not the full range of services RTÉ provide, but rather those elements that would be most likely to be affected if there was no more public funding available.

Scenario

The valuation scenario was presented as a situation where there was no public broadcaster in Ireland and the CVM payment was for the reinstatement of RTÉ as the public service broadcaster. Furthermore, the pilot had simply stated: "Many of the RTÉ services you now receive would not be continued in any form". In the Dublin survey the scenario laid out specific effects of removing public funding from broadcasting, including more adverts and sponsorship deals, less own productions, and less special interest and local productions.

The payment vehicle was also described more clearly as a charge for supporting public broadcasting, explicitly stating that it was not the same as the current licence fee. The payment obligation remained, however. It was clearly asserted that if the collective decision were made to continue to pay such a fee, the respondent's household would have to pay if it received broadcasting signals. One problem here was that many households

receive a free licence from the state. It was decided not to offer them a free ride in this scenario, but also not to explicitly state that they as a group had to pay, although it was implicit. It was hoped that this would minimise the strategic or emotional bidding behaviour either statement might induce. Finally, the decision-making mechanism the respondent was supposed to imagine was not mentioned explicitly in the scenario, whereas a hypothetical government referendum had been used for the pilot survey.

Valuation Question

Although the scenario had not, the valuation question did hint at the decision making mechanism, namely that the government would 'ask' the respondent what they would pay, thereby implying some kind of survey or even a referendum, but without explicitly stating this. This strategy was intended to reduce possible strategic behaviour created by the notion of a referendum. Specifically, both the scenario and the valuation question attempted to circumvent the problem of the link between the value given and the final payment obligation – the instrument implied that the amount stated would be the amount paid. The respondents were then asked to state the maximum per year they would pay to support RTÉ.

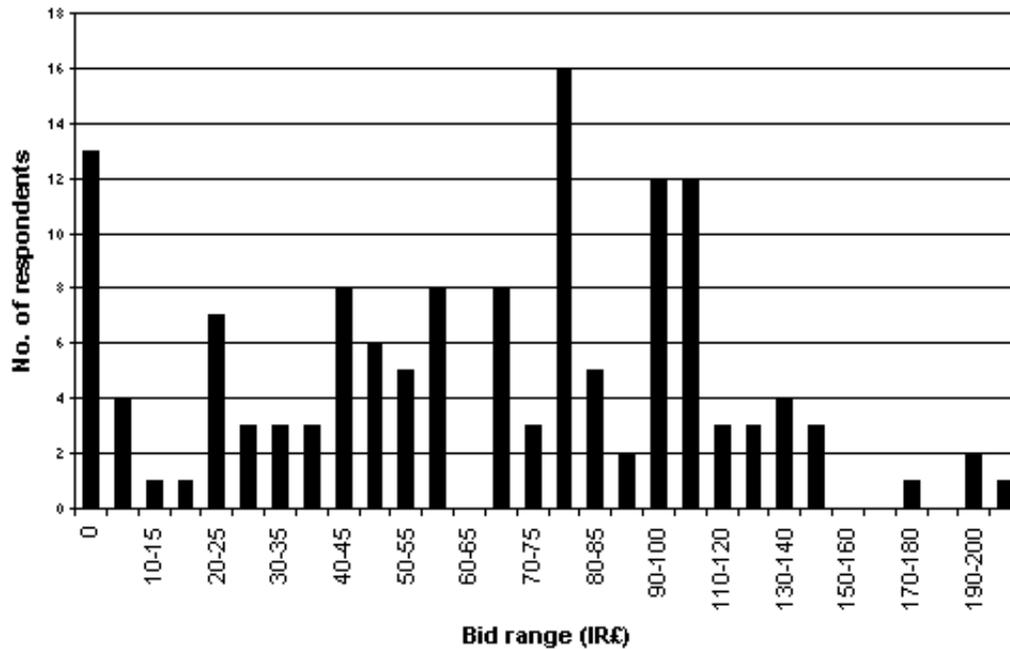
The payment card method was adopted for the Dublin survey since it had performed well in the pilot. The dichotomous choice approach or applications of bidding games were not considered an option with our limited sample size. The payment card in the Dublin survey used small, overlapping intervals, thereby theoretically allowing the respondent to bid precise WTP rather than the closest amount. An interesting aspect of the card is that a zero value was not included, whereas it had been in the pilot. Rather, the lowest value on the card is "Less than £10", with a follow-up question offering the choice of a zero bid. The rationale for this was to lower the propensity to record a zero-bid as a strategically safe option, which the payment principle question had seemed to encourage.

5. Results

5.1. WTP Bids

One issue often raised with regard to payment card methods is range bias, which is present if the range of bids on the card is felt to have influenced the bidding behaviour. Graph 1 shows the distribution of bids offered by respondents to the Dublin survey. The pattern of bids is evidence that the maximum bid on the payment card was not restrictive for most respondents. It is recognised that the card offered could have suggested to respondents that these represented fair amounts, and prompted them to conform to that range. However, this risk was accepted in order to use the payment card, as it was felt this would improve the item response rate and reduce the risk of protest zeros.

Graph 1 WTP Bids



5.2. OLS Regression

A simple linear model was used to investigate what factors affect people's willingness to pay for a broadcasting service. To reduce the complexity of the model and facilitate model estimation with relatively few observations, the midpoints of respondent's bounded intervals of WTP were used as the dependent variable. There is no obvious reason why this assumption should unduly bias any conclusions drawn from the estimated model. The model explaining WTP is

$$WTP_i = \beta X_i + \varepsilon_i \quad (3)$$

where X_i is a vector of exogenous explanatory variables, β is the parameter vector to be estimated and ε is the residual error, assumed distributed $N(0, \sigma^2)$.

The questionnaire elicited a large amount of information on attitudes towards RTÉ services, public broadcasting provision, usage patterns and socio-economic and demographic characteristics. The responses to these questions were used as explanatory variables (i.e. X_j) in the regression analysis. Descriptions and descriptive statistics from the data set used in the paper are presented in Table 2.

Table 2 Independent Variables

Variable	Description	Mean	Maximum	Minimum	Standard deviation
TVSATIS	Indicated general satisfaction with RTÉ's television services. ¹	0.825	1.000	0.000	0.382
Medium Income	Household income between £15,000 and £50,000.	0.650	1.000	0.000	0.479
High Income	Household income greater than £50,000.	0.142	1.000	0.000	0.350
3 rd level education	3 rd level education completed at undergraduate level or above.	0.300	1.000	0.000	0.460
High Quality	Indicated that RTÉ services were considered 'much better' or 'somewhat better' than other services received by the respondent.	0.592	1.000	0.000	0.494
RTEHIGH	Indicated that the respondent used RTÉ services to a high level. ²	0.583	1.000	0.000	0.495
FUNDSTNG	Indicated that the respondent had chosen 'strongly agree' with the statement that all viewers should contribute financially to the support of a PSB in Ireland.	0.283	1.000	0.000	0.453
PSBGOOD	Indicated that the respondent had chosen 'agree' or 'strongly agree' with the statement that Ireland should maintain a public service broadcaster.	0.900	1.000	0.000	0.301

Notes: 1 – TVSATIS was generated by combining the respondents answers on satisfaction or dissatisfaction with the three main RTÉ television services. 2 – Respondents were asked to indicate their use of all major RTÉ services in a grid. 2 indicated frequent use, 1 occasional use and 0 no usage. RTEHIGH was applicable if the sum of all usage was greater than 8.

Table 3 presents the parameter estimates from the linear specification of the WTP function. Of the 140 valid responses, 120 were used in the estimation. Three respondents did not enter a valid bid and could therefore not be used. A further seventeen individuals were discounted as they had stated that they received a free licence, and it was felt that since they currently did not contribute to provision, there was a considerable possibility that this might be the overriding factor in their bids and distort the results. Zero bidders on the other hand were included in estimation, although four also received free licences and were therefore dropped. Although the pilot survey had suggested that motivations for a zero bid might be questionable, these motivations were also manifold. A zero bid is the result of a decision, whereas receipt of a free licence is a characteristic of a respondent. Examination of zero bidders' explanations for their responses suggested that they were voicing some degree of

protest. However, a logit regression showed that the variables that made a zero bid more likely were in fact mostly non-protest.

Several combinations of the explanatory variables, including interactive dummies, were included in estimation before the estimates presented were chosen as those best explaining WTP. For example, prior to estimation it had been anticipated that factors such as age and residential location, as a proxy for social class, might affect the level of WTP. These variables were found to have no explanatory power in the specifications estimated. A modified Bruesch-Pagan test was used to rule out heteroscedasticity in the estimated residuals.

Table 3 Parameter estimates for the OLS regression for WTP

Observations	120		
Rbar-squared	0.245	RSS	149460.465
Durbin-Watson	1.774	F(7,112)	6.523
Variable	Coefficient	Standard error	
CONSTANT	11.517	11.044	
TVSATIS	22.110	10.534 **	
Medium Income	15.759	8.515 *	
High Income	25.007	12.356 **	
3 rd level education	16.726	7.778 **	
High Quality	19.867	8.041 **	
RTEHIGH	15.562	7.002 **	
FUNDSTNG	11.183	7.798	

* Significance at 10% level.

** Significance at 5% level.

Higher income has a positive effect on WTP. Medium and high-income individuals are willing to pay significantly more for the PSB service than low-income individuals. Although the difference in coefficient estimates between medium and high income is almost £10, the coefficients are not significantly different – the real difference is between low-income individuals and others. Those with higher levels of education are also likely to pay more for

a public service broadcasting service, a result that is in line with the findings of other studies of WTP for cultural goods (see for instance Bravi *et al*, 1998).

The results that are most revealing from the regression analysis come from the significance of the TVSATIS and QUALHI variables. The TVSATIS variable measured whether the survey respondent was satisfied with the quality of the full range of services offered by RTÉ. Such respondents are willing to pay more for a PSB service than respondents unsatisfied. This is a logical and rational result but an important one in terms of the usefulness of the method. A central issue in the discussion of the applicability of CVM to value public and cultural goods is that the methodology can realistically isolate how preferences, in terms of WTP, are decided.

The significant parameter estimate on the QUALHI variable has important policy implications for the provision of PSB. The positive valued coefficient indicates that individuals who considered that RTÉ services to be ‘much better’ than a commercial alternative are willing to pay more for provision of that PSB service.

The analysis also examined whether a respondent’s WTP was affected by their views on the importance of maintaining a public broadcasting service. The inclusion of a variable that measured respondents’ agreement with a statement that a public broadcasting service was important for Ireland did not improve explanatory power. It appears that people are willing to pay positive amounts for a public broadcasting service but that payment is conditional on receiving a quality product. People expect value for their money and are not freely willing to pay for a broadcasting service that cannot be distinguished from freely available commercial alternatives.

Conditional estimates of WTP

The parameter estimates of the regression reveal how WTP is affected by a variety of individual characteristics and preferences. More revealing and instructive is to calculate WTP conditional on particular characteristics and preferences based on the parameter estimates and also estimate the variance of these WTP estimates. Based on the mean values of the explanatory variables, mean WTP is £72.6. An estimate of the variance of estimated WTP is calculated by the ‘delta method’, which calculates the asymptotic variances of a function that depends on the parameter estimates and their covariances, using a Taylor series expansion of the variance of the function (See Green (1993), pp. 297). For example, if Ψ is the covariance matrix of β then

$$\text{Var} [f(\hat{\beta})] \cong \left[\frac{\partial f(\hat{\beta})}{\partial \beta} \right]' \Psi \left[\frac{\partial f(\hat{\beta})}{\partial \beta} \right] \quad (4)$$

The point estimate of mean WTP of £72.6 has a standard error of £3.3. A 90% confidence interval for mean

WTP lies in the interval 67.1 and 78.1. The small size of the absolute error is indication that survey respondents had a clear understanding of the CVM good that they were asked to value – a result that supports the validity of CVM in valuing the PSB good.

Estimates of WTP conditional on personal characteristics and preferences and standard error estimates are reported in table 4. Depending on personal characteristics/preferences WTP can vary widely. For instance for high income individuals, with third level education, that are satisfied with the TV output, and believe it to be of a high quality compared to alternative services, estimated WTP is £107.5. Whereas, low income individuals with less than third level education, who do not frequently avail of RTE’s services and additionally consider the quality of RTE’s services no different than RTE’s broadcasting competitors, estimated WTP is just £32.9. An additional point worth noting with respect to the latter category just mentioned is that the estimate of £32.9 is statistically different than zero. Even though individuals in this category have a poor regard for public broadcasting services, they are willing to pay a considerable sum for the service.

Table 4 Willingness to Pay Estimates

	Description ^a	WTP	Standard error
1	Evaluated at mean of all variables	72.6	3.3
2	Satisfied with TV broadcasting service (tvsatis = 1)	76.4	3.8
3	Not satisfied with TV broadcasting service (tvsatis = 0)	54.3	9.3
4	Medium income respondent	74.5	4.1
5	High income respondent	83.8	9.4
6	Has 3 rd level education	84.3	6.4
7	Has less than 3 rd level education	67.6	4.1
8	Considers RTE’s services are of better quality than alternative services (qualhi = 1)	80.7	4.7
9	Does not consider that RTE’s services are of better quality than alternative services (qualhi = 0)	60.8	5.8
10	High frequency user of RTE’s services (rtehi = 1)	79.1	4.4
11	Not high frequency user of RTE’s services (rtehi = 0)	63.5	5.3
12	Fundstng=1	80.6	6.5
13	Fundstng=0	69.4	4.0
14	tvsatis=1, high income, 3rd level, qualhi=1	107.5	10.5
15	tvsatis=0, high income, <3rd level, qualhi=0, rtehi=1, fundstng=0	52.1	13.3
16	Low income, <3 rd level education, qualhi=0, rtehi=0	32.9	9.4

a Variables are evaluated at their mean values except where mentioned otherwise.

6. Conclusions

The study analysed in this paper tested the validity of the application of CVM to a very widely used cultural public good. The nature of this good made the application of CVM a particularly challenging one. The fact that RTÉ is only partially financed by public money meant that the hypothetical scenario ‘without provision’ of the good was particularly difficult to frame, and risked both cognitive difficulties as well as high non-response rates. Furthermore, the payment vehicle and current image of RTÉ as a public broadcaster meant that there was a danger of high incidence of strategic and non-rational bidding.

The results from this survey suggest that CVM is a valid methodology to assess the value of cultural goods, specifically PSB. We were able to find determinants of WTP that were significant and suggested that individuals were displaying rational preferences for the public good, rather than focussing on extraneous details. Amongst the significant variables were income and education, two personal characteristics widely accepted as influencing preferences. More importantly perhaps, there is clear evidence that respondents were able to focus on RTÉ services. Frequency of use of RTÉ services, as well as perceptions of quality and satisfaction with RTÉ services (particularly television) were all significant in regression analysis, and with the expected signs. The conditional estimates of WTP using different respondent characteristics show even more clearly that we can identify distinct groups who are willing to pay varying amounts. The fact that the standard errors are generally low, and therefore confidence intervals are quite narrow, suggests that the survey was able to capture what explains WTP.

In addition to the above conclusions on the validity of the method, the results also suggest something about the nature of the value individuals placed on the PSB in Ireland. In the case of cultural public goods, less ‘conventional’ influences might well be expected to have an effect on the valuation. The study described above tested the value of a somewhat abstract and disputed public service, namely the difference between the output which the PSB provided from the output provided by commercial broadcasters. One might have expected general agreement with the idea of a PSB, or views on the licence fee to systematically affect WTP, as influences that might be considered ‘intangible’. However, these influences did not figure strongly enough to support a claim that respondents’ bids for the provision of a PSB differed from what one would expect of a bid for a market good, say subscription television. What respondents clearly valued was quality of PSB provision versus commercial broadcast service, and satisfaction with the service provided – a result that suggests that individual valuation of a cultural public good was based upon rational use values.

Appendix 1 – Excerpts from Questionnaire: Scenario, Valuation Question (excluding payment card) and follow-up questions.

SECTION 3 – VALUATION SECTION

Please listen to the following scenario before answering the next question.

Scenario:

I would like you to consider a situation where there is **no more public broadcaster**. This would mean the following:

- There is no more licence fee. Your household could watch any commercial channels without paying a government charge for watching TV. But: you would still have to pay for your cable or satellite channels if you get them.
- RTÉ, the current public broadcaster, would most likely still produce TV and radio, but would be a private channel like any other, which would mean the following:
 - More adverts and sponsorship in programmes
 - Less own productions
 - Less special interest and local productions, for instance in TV and radio, Irish language, Sports, and the Orchestras.

What I would like you to consider is if you think that RTÉ should be a public broadcaster providing these services rather than just a private company. Consider whether you would support RTÉ with public money to provide the current level of services, if there were no licence fee.

The way this could be done is if households in Ireland agreed to pay a set amount per year. This would not be a charge for watching TV like the licence fee – it would just be used to provide public broadcasting services. However, if the decision were made to charge an amount, your household would have to pay it if you receive broadcasting.

The main points of this scenario are summarized in TABLE A on this card. **[GIVE RESPONDENT CARD 3]** Please take a minute to review them.

[ASK RESPONDENT IF THEY ARE HAPPY WITH THE SCENARIO. IF NOT, ASK THEM WHAT PART THEY WERE UNCLEAR ABOUT, AND EXPLAIN]

Q.3.1. Please think about the situation as I have explained it. Think about if the government were to ask you what you would pay **instead of the licence fee**, to support RTÉ as the public broadcaster for TV and Radio. Please look at TABLE B on the card, and tell me which of those amounts is closest to the **maximum amount per year** your household would be willing to pay to support RTÉ.

Less than £10	£10 - £15	£15-£20	£20-£25	£25-£30	£30-£35
£35-£40	£40-£45	£45-£50	£50-£55	£55-£60	£60-£65
£65-£70	£70-£75	£75-£80	£80-£85	£85-£90	£90-£100

£100-£110	£110-£120	£120-£130	£130-£140	£140-£150	£150-£160
£160-£170	£170-£180	£180-£190	£190-£200	More than £200	

IF RESPONDENT STATES "Less than £10" ° Q.3.2.

IF RESPONDENT GIVES OTHER POSITIVE INTERVAL, CIRCLE IT AND ° Q.3.3.

IF RESPONDENT STATES "ZERO" TICK BOX AND° Q.3.4.

IF RESPONDENT STATES SPECIFIC AMOUNT FILL IN HERE: AND ° Q.3.3.

IF RESPONDENT DOES NOT SEEM ABLE TO DECIDE ON AN AMOUNT, ASK: "Are you unable to specify an amount?". IF YES ° Q.3.5., IF NO WAIT FOR RESPONSE.

Q.3.2.		In the last question you said you were willing to pay less than £10 per year for RTÉ as a public broadcaster. Would you be willing to pay some amount, or are you willing to pay nothing for RTÉ?
1		a. Some amount. ° Q.3.3.
2		• Nothing ° Q.3.4.
0		• Refuse answer ° SECTION 4

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Q.3.3.1		a. My household uses and enjoys the service RTÉ provides.
2		• I think Ireland should have a public broadcaster, even if I don't think RTÉ provides a good service.
3		• Even though my household doesn't use RTÉ services, a lot of people in Ireland do.
4		• Other reason
5		• Don't know
0		• Refuse answer

[ASK RESPONDENT TO RETURN CARD 3] ° GO TO SECTION 4

Q.3.4.		Please look at TABLE C on the card. You have stated that you are not willing to pay anything to support RTÉ services. Which of the reasons on the card best represents the reason for your answer?
1		a. RTÉ services are worth nothing to my household.
2		• I currently don't have to pay the licence fee.
3		• I thought I had to pay the licence fee as well as this charge. [ASK: "Would you like to revise your answer to the question above?" IF YES ° Q.3.1.; IF NO ° SECTION

		4.
4		• I object to a charge for public television.
5		• I don't like the way RTE is running things.
6		• Other reason
7		• Don't know.
0		• Refuse answer.

[ASK RESPONDENT TO RETURN CARD 3] ° GO TO SECTION 4

Q.3.5.		Please look at TABLED on the card. In the above question, you could not state an amount that you would be happy with paying to support RTE services. Which of the reasons best describe your reason for not giving a value?
1		a. RTE services are worth nothing to my household.
2		• I currently don't have to pay the licence fee.
3		• I don't use RTE services enough to form an opinion.
4		• I wasn't clear on the issues involved and therefore decided not to give an amount.
5		• I didn't feel that the survey would work.
6		• Other reason
7		• Don't know.
0		• Refuse answer

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