Research Note

Cost-Benefit Analysis Using Economic Surpluses: A Case Study of a Televised Event

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Abstract. Economic impact studies based on short-run spending injections and multipliers lack conceptual ties to measures of economic surplus, fail to capture intangible benefits and generally fail to measure costs. In this case study of the Eurovision Song Contest (ESC) held in Israel in 1999, national benefits from the government-financed televising of the ESC are measured as producer surplus (approximated by private sector incremental profits), consumer surplus (measured as the incremental willingness to pay for an event staged at home) and government surplus (linked to national implicit benefits in the form of promotional advertising cost savings). The opportunity costs of diverting resources to this particular televised event are expressly included as an offset to these gross surplus benefits. Despite the conservative approach, the results show moderate social justification for public support of this high profile televised spectacle and suggest that a cost-benefit approach to cultural events can have wider applications.

Key words: cost-benefit analysis, economic surplus, Eurovision Song Contest, televised events, willingness to pay

1. Introduction

The Eurovision Song Contest (ESC) is Europe's premier popular music song competition. It is an annual event held at revolving locations – usually hosted by the country whose representative won the contest in the previous year. While the event is conducted live in front of an invited audience, its main exposure is through the massive television coverage that it generates. As a co-production of the host country's national broadcasting authority and the European Broadcasting Union (EBU), it reaches audiences in all participating countries (twenty three) and in many other countries who purchase program packages from the EBU. In general, it is estimated that the contest is screened live to 80 million viewers. Hosting the ESC demands a significant injection of public funds in order to provide the suitable facility and broadcasting infrastructure demanded by the EBU. While some support

for staging the contest is provided by the parent organization, the balance has to be found by the broadcasting authority of the host nation who is ultimately responsible for producing the event.

The ESC displays many of the features of a public good. It receives considerable public support and individuals do not pay directly for consuming the good it produces. The cultural product produced by the festival is readily available on national television and does not require any extra payment on the part of the consumer. It meets the criteria of non-rivalry in consumption (one individual's consumption does not deprive another) and non-exclusion in provision (all have equal access to the good).[1] We present a cost-benefit analysis of the ESC to ascertain the social justification for this high profile event. This is conducted from the perspective of Israel (only Israelis have standing) and focuses on the benefits accruing to the Israeli population from the public spending that accompanies staging such an event. In contrast to traditional economic impact studies that focus on the short-run spending injections and multipliers, we define societal benefits as comprising three economic surpluses. The first is the producer surplus, approximated by private sector incremental profits to local producers. It should be noted that this surplus is not identical to profit but relates instead to the broader concept of economic rents which clearly can accrue to other input suppliers beyond firm owners. The use of a profit measure for producer surplus yields a measurable indicator and is conceptually justified given the relatively small size of the event.[2]

The second economic surplus is the consumer surplus, measured as the incremental willingness to pay for an event staged at home. A distinctive feature of the ESC is its wide television coverage. Other televised entertainment goods such as sport events or concerts additionally attract large live audiences who purchase tickets to watch the event. Their consumer utility is approximated, (absent consumer surplus), by the revealed ticket price and expenditures they pay for the event. In contrast, the utility derived from the ESC is not observable, even imperfectly, through the price structure as tickets are not sold for the live performance. Thus some preference schedule based on willingness-to-pay of viewers needs to be estimated in order to estimate the benefits derived from the ESC as a public good.

The third benefit is the government surplus. This is an implicit national benefit, expressed as promotional advertising cost savings. The massive television coverage of the event offers exposure for the promoting country through short image clips screened between the songs. The benefits of this exposure are much more indirect and are realized through increased visitors and total tourism receipts to the host country in the medium to long term.

This paper estimates these three benefits and combines them, along with the costs of producing the ESC, in a cost-benefit framework. We move beyond standard impact analysis in measuring economic surpluses, attempting to capture intangible benefits and accounting for the opportunity costs of diverting public resources to this spectacle. In so doing, we introduce a new insight into the interpretation of willingness to pay (WTP) estimates and their role in estimating net benefits.

2. Valuing the Benefits of Televised Events

The Eurovision song contest is something of an idiosyncratic event. It attracts intense interest and exposure over a very short period solely due to televised coverage. It is thus a (popular) cultural good produced by television and offered to an increasingly global market, beyond the confines of the competing countries. In common with other cultural and sporting spectacles it is a media-generated happening but in contrast to them, economic benefits are rather different. It lacks any of the large infrastructure investments that go with sporting events such as the Olympics (Foley, 1991; Madden and Crowe, 1998) and has little of the substantial visitor expenditure that provides much of the economic injection that accompanies festivals and cultural events (Johnson, 1996; Scottish Tourist Board, 1992). Rather, its singular features are the short-term and intense nature of its media-generated exposure. It is an annual, one-evening, competitive event, held in an enclosed arena or concert hall and not generally open to the public. In this respect it has much in common with other popular sporting and cultural spectacles that are held regularly in front of select audiences and with intense media interest, such as the Oscar awards, the Miss Universe Beauty Pageant and the World Heavyweight Boxing Championships.

While economic impact analyses of cultural and entertainment events have looked at their short-run, expenditure-induced effects, less work has been done on the social benefits and costs arising from high profile contests, especially those emanating from exposure, publicity and promotion. Most studies prefer to concentrate on the economic effects in those areas more readily quantifiable such as investments and expenditures (Frey, 1994; Uysal and Gitelson, 1994). While the economic benefits arising from cultural or entertainment goods, where prices do not exist, are generally estimated using the contingent valuation method (CVM) (Bille Hansen, 1997; Thompson et al., 1983), estimation of benefits arising from exposure and image creation is generally rarer. This is rather surprising given the fact that many places look to promoting cultural and entertainment spectacles as an active strategy in image-building (Kotler, Haider and Rein, 1993).

When this kind of analysis is undertaken, it is often commissioned by local authorities with a vested interest in the event. The objectivity of the results can thus be questionable. For example, a study of the "Miss America" Beauty Pageant commissioned by the New Jersey Tourist Authority, estimated that this annual event generated economic impacts of more than $30 m in the regional economy (Robinson, 1994). This was a very satisfactory return on a public investment of $0.5 m. Thirty-eight percent of this impact (more than $11 m) was attributed to the exposure factor that the contest generated for the local economy. However, the method used for estimating the value of local exposure on television during the competition and the value of "image-pieces" in the national and regional press, left much to be desired.[3]

When the economic benefits of an event are, in the main, TV-generated, estimating the willingness-to-pay for the televised event becomes a major component in any analysis. As publicly-funded television is a public, non-market commodity, CVM is most often used to simulate a hypothetical market for this good and elicit willingness-to-pay estimates for television as a good. Additionally, television is a public good with substitutes that have market prices (video, movies, internet etc.) with which the viewing public are familiar. Thus, it is not surprising that the body of work most closely related to the evaluation of televised events relates to willingness-to-pay (WTP) studies for public broadcasting (Bohm, 1972; Ehrenberg and Mills, 1990; Schwer and Daneshvary, 1995; Papandrea, 1999). All of these studies however deal with public benefits derived from the existence of nationally-funded television channels or networks such as PBS stations in the U.S. (Schwer and Daneshvary, 1995), BBC1 and BBC2 in the U.K. (Ehrenberg and Mills, 1990) and Swedish Public TV (Bohm, 1972). There is also some work suggesting that the economic benefits of televised events lie in the social network externalities that they generate (Boardman and Hargreaves-Heap, 1999). Popular televised spectacles generate social capital, bonding people together by offering them the chance of a common televised experience that can be used to generate conversation and ultimately longer-lasting relationships. This is a unique form of social or consumer surplus that is not generally considered as a benefit arising from televised events.

Finally the accuracy of values given to televised goods are sometimes called into question (Ehrenberg and Mills, 1990). However, comparing willingness-to-pay estimates for public broadcasting with those for other public goods, shows the former to be relatively realistic. A study of WTP estimates across a wide range of public goods has shown that the deviation between mean willingness-to-pay for public broadcasting and the mean actual public outlay (though tax payments) for this commodity, is very small (Throsby and Withers, 1994). This would suggest that WTP estimates for public broadcasting are reasonably well informed.

3. Outlining the Benefits

The context of the present study is the Eurovision song contest that was held in Jerusalem in May 1999. Israel hosted the competition by virtue of gaining first place in the previous year's competition held in Birmingham, U.K. The overall budget for staging the contest was $7.10 m of which $3.02 m (43 per cent) was provided by the EBU with the balance being the responsibility of the host country (Ha'aretz, 1999a). This sum, ($4.08 m), was funded in the main by public subsidy (75 per cent) with the remaining 25 per cent covered by sponsorship. Thus, the Israeli Broadcasting Authority (IBA) had to allocate nearly $3 m from its 1999 annual budget in order to host the competition.

When estimating the public returns to this investment, the cost-side estimations arising from the ESC are reasonably straightforward. More attention, however,

needs to be directed to outlining the benefits. As noted above, the ESC generates benefits in three forms of economic surplus. These can be defined as:

1. producer surplus, represented here by private sector incremental profits. The starting point for the derivation of this surplus is producer revenues. They are part of a balance of payment surplus generated by those who provide goods and services to the ESC visitors.

2. consumer surplus derived from the ESC as a public good. This is appropriated by viewers who derive utility from watching the televised contest as a home event. These intangible benefits have to be approximated using some form of viewer-derived preferences.

3. government surplus arising from the promotional effect that the ESC generates. The exposure factor of the ESC needs to be estimated. Of all the factors, this has the longest term effect in that future flows of tourists may be indirectly attributable to ESC-generated exposure.

Estimating the producer benefits arising from the ESC involves calculating the marginal profits to local producers arising from hosting it. The consumer benefits derived from the ESC as a public good are a result of the wide television coverage that the contest generates and its popularity amongst viewers. Assuming viewers are willing to pay for the utility derived from the Eurovision broadcast and assuming that Israeli viewers received additional utility from the fact that the contest was broadcast from Israel, then this economic benefit needs to be considered. In fact, the 1999 contest recorded very high ratings figures, as measured by the Israel Audience Research Board (IARB, 2000). As can be seen from Table I, the contest from Jerusalem was watched by 71 per cent of households nationally and recorded an average viewer rating of 43.9%. This was 270 per cent higher than a comparable televised 'mega production' – the Miss Universe pageant – that was broadcast 10 days earlier. It was also the highest-ever rating average recorded since the inception of the ratings system in 1998 (Ha'aretz, 1999b). An indication of the utility Israeli viewers attributed to local staging of the event is evident from comparing the average viewer ratings for the 1999 contest with those of the Eurovision broadcast from Sweden a year later. When the event was held in Jerusalem it attracted over 80 per cent more local viewers. Comparing the 1999 Eurovision with the European Basketball Championships in 2000 (an extremely popular sporting event locally, which featured Israeli finalists), further underscores the popularity of the former. In this instance, the contest from Jerusalem still registered viewer ratings over 60 per cent greater than the basketball finals.

Measuring the consumer benefits from the televised production of the ESC means eliciting willingness-to-pay responses from viewers with CVM (Carson et al., 1996; Bille Hansen, 1997; Chambers et al., 1998; Papandrea, 1999). The method is grounded in consumer price theory where willingness-to-pay (WTP) for a good equates the value of additional utility one receives from the use or the existence of the good. A questionnaire is used in order to elicit this willingness-to-

Table I. Average viewer ratings by household, for selected televised events

Televised events	Date	Duration (mins)	Average viewer rating [a] (%)	% households
Miss Universe Beauty Pageant 1999	19 May 1999	127	26.8	46
European Basketball Finals 2000	20 April 2000	100	26.9	47
Eurovision Song Contest 2000	13 May 2000	180	24.3	45
Eurovision Song Contest 1999	**29 May 1999**	**196**	**43.9**	**71**

Source: Israel Audience Research Board.

[a] The Israel Audience Research Board monitors viewing levels for Israel's main television channels using a "peoplemeter" system. This involves monitoring the actual viewing patterns of a representative panel of nearly 400 households (representing over 1,300 people). "Peoplemeters" are installed in the homes of those selected for the sample. The sample is derived from a sampling frame of over 6,000 families who, are selected on the basis of detailed survey work. Average viewer ratings are calculated on the basis of programs with at least 20 minutes of consecutive viewing.

pay. Respondents are presented with a description of the public good and are asked to state their willingness to pay for it.

Finally, estimating the economic benefits of the promotional effect of the ESC on the host country is a problematic issue. The ESC 1999 was broadcast to over 30 countries world-wide. The audiences in these countries were exposed to promotional image clips, screened between the songs that subtly market the host country at prime viewing time. This indirect advertising can have long-run and cumulative effects leading to an increase in tourism and visitors into the future. The most direct way of capturing this impact would be a survey of foreign tourists with a view to ascertaining whether ESC-generated exposure played a part in their decision to visit Israel. However, the costs, accuracy and representativeness of such a survey are likely to call this approach into question. Assigning motivation to visit Israel on such a basis is unreliable. An alternative approach, adopted here, is to use the alternative cost. We assume that the net social benefit is the saving in public sector promotional and marketing expenditure that would have occurred in the absence of the Eurovision-generated exposure. We estimate the alternative cost of prime-time promotional broadcasting on European TV in order to estimate this savings.

4. Empirical Estimates

4.1. PRODUCER SURPLUS

By using producer revenues as the staring point for deriving producer surplus, we are linking this category of benefits to the traditional economic impact concept of spending injections. Visitor expenditure generates revenues streams for local and national service providers in the hotel, food, retail trade and transportation sectors (Gazel and Schwer, 1997). This is an important component of the net positive balance of payments injection into Israel arising from the ESC.

Of the 1,100 foreign delegates and journalists to the ESC 1998, some 800 were handled by a special tour operator and the rest made independent arrangements. According to data provided by the tour operator, the visitors arrived one week prior to the contest for rehearsals and media coverage and left the day following the competition. Average stay in Israel was six days. In order to estimate their expenditures, we used data from Ministry of Tourism surveys of in-bound foreign visitors that have been conducted over the last five years. According to this source, daily expenditure per foreign visitor arriving for the purpose of conducting business or participating in a conference is estimated at $121 (Ministry of Tourism, 2000). Thus the 1,100 visitors generated over $0.8 m in direct revenues.

4.2. CONSUMER SURPLUS

As the ESC is a public good for which viewers do not pay directly, a contingent valuation method needs to be used in order to elicit the value of the benefits the public receives from viewing the televised event. The 1999 contest generated further utility for the Israeli viewing population due to fact that the event was staged locally. This effect alongside the high viewing figures the event recorded, needs to be captured on the basis of a viewer's stated preference schedule.

CVM has been increasingly used in these circumstances (Ehrenberg and Mills, 1990; Schwer and Daneshvary, 1995; Papandrea, 1999). It should be noted that this method is somewhat contentious as it is based on subjective answers and it is questionable whether survey-based responses are adequate for eliciting the true value of the willingness to pay. Even if the true value is known the answers can reflect strategic behavior (Mitchell and Carson, 1989). In some cases the value given is pitched too high as respondents want to politically enhance the issue at stake. In other cases, although the respondents derive utility from a public good they declare zero willingness to pay. These 'protest bidders' consider the issue important but object to paying, thereby registering a zero value as a protest (Brouwer and Slangen, 1998).

In the present study, willingness-to-pay responses were collected on the basis of a telephone survey of a representative national sample of 500 Israeli adults. The survey was conducted on the two days following the contest. Respondents were asked whether they watched the ESC and their attitudes towards the competition.
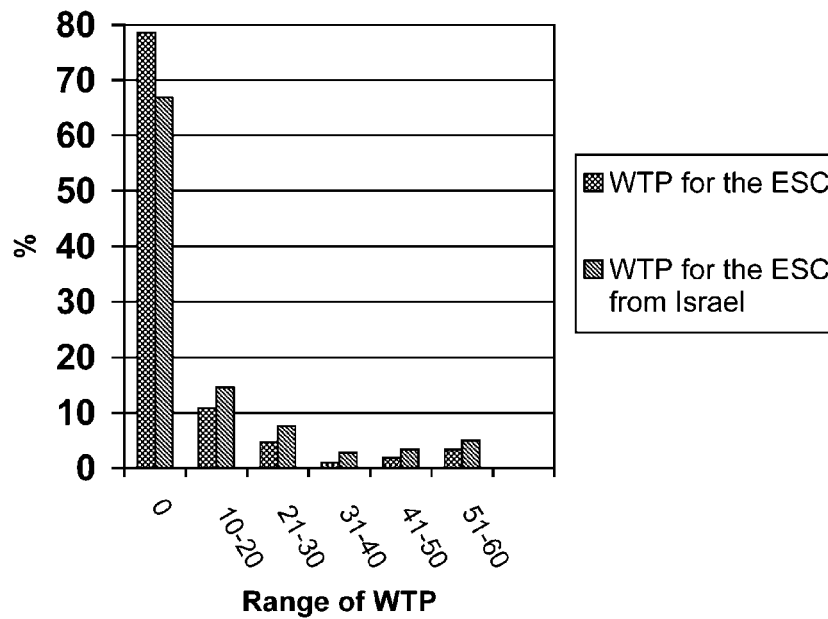
Figure 1. Distribution of willingness to pay.

They were presented with a hypothetical case of the Israel Broadcasting Authority demanding payment for the costs incurred in staging the Eurovision Song Contest (through an increase in the television license tax). Respondents were requested to indicate how much they would be willing to pay in increased licensing fees in order to receive the ESC broadcast in Israel and how much more they were willing to pay in order to have Israel host the contest. They were asked to choose from a series of pre-determined WTP values. While there is an on-going debate in the literature about the method of presentation of the hypothetical question (Bohm, 1972; Mitchell and Carson, 1989; Portney, 1994), we opted for a pre-selected range rather than iterative bidding. This was felt to be justified as it avoids "starting point bias" and because of the familiarity of the Israeli public with the nature of the event being investigated.

As can be seen in Figure 1, the distribution of the bid range does not decrease uniformly. While most of the respondents are not willing to pay anything at all, respondents willing to pay concentrate in the extreme ranges, both high and low. Overall, a higher percentage of respondents is prepared to bid for the ESC to be broadcast from Israel. In order to calculate the average bid, we used the mid-point of the distribution. The average bid for the ESC in general is $1.45 (standard deviation = $3.4) while the average additional bid for the ESC to be broadcast from Israel is $2.35 (standard deviation = $4.1).

Table II describes the attitudes, willingness to pay and socio-economic characteristics of viewers according to their revealed behavior (viewers versus non-viewers) and their WTP for staging the event in Israel. As can be seen, 74%

declared that they viewed the contest in 1999. In 1998, when the ESC was broadcast from the U.K., the corresponding proportion was 56 per cent. Even a greater percentage (81%) considered as important the fact that the event was broadcast from Israel. This means that even non-viewers considered this important.

However, the percentage of respondents willing to pay for viewing the ESC (whatever the venue) is of a much smaller magnitude (21%). When Israel is presented as the venue, this figure rises to 33 per cent. This may be an indication of protest bidding whereby respondents watch the contest and attribute to it some importance but declare zero willingness to pay.

When stratifying the descriptive variables by viewing behavior and willingness-to-pay, significant statistical differences across mean values are found to exist. As expected, viewers of the contest have a more positive attitude towards it and are willing to pay more. The average difference between viewers and non-viewers is smallest with respect to willingness to pay for the event when broadcast from Israel (48 versus 36 per cent) (Table II). This may suggest that staging the event locally generates a greater non-use value (i.e., the value attached to the public good by non-users) than when the event is staged elsewhere.

When looking at attitudes, behavior and socio-economic characteristics by declared willingness-to-pay, again those willing to pay for local broadcasting of the event have significantly higher viewer rates, more positive attitudes towards the event and greater willingness to pay for the ESC, whatever the broadcasting venue. About half of those willing to pay for the local staging of the ESC are also prepared to pay for the event wherever it is hosted. Not surprisingly however, only 6 per cent of those unwilling to pay for the local broadcast prepared to pay for watching the competition when it is broadcast from a foreign venue (Table II). Socio-economic characteristics such as gender, age, education, income and religious observance are consistently insignificant, no matter how the data are stratified. This indicates that the actual viewing behavior and attitudes towards the ESC are likely to be more important than socio-economic attributes in determining WTP.

The average WTP value is calculated by taking the midpoints of the different ranges. Total WTP is estimated by multiplying the average by 1.9 million, the relevant adult population of Israel. The large difference between the percentage of respondents willing to pay and the percentage attributing importance to the staging of the ESC in Israel suggests the existence of protest bidders in the sample.

Two methods are therefore employed to estimate the WTP. In the first (Method A) we estimate the average WTP as declared by the respondents, including zero values in the calculation. In the second (Method B) we try to identify the protest bidders and exclude them. Following Mitchell and Carson (1989) we attempt to elicit responses from zero bidders as to why they did not want to pay for the good. Respondents declaring that they "did not want to pay in principle" (35% of respondents refusing to pay for the ESC and 40% respondents refusing to pay for the ESC from Israel) were identified as protest bidders who received utility but did not want to pay for it. All other responses (such as "the ESC does not interest

Table II. Variable descriptions and summary statistics: Viewing behavior and willing-ness-to-pay

Variable	Total sample	Viewers	Non-viewers	Willing to pay: Broadcast from Israel	Unwilling to pay: Broadcast from Israel
Viewer [a]	0.74 (0.43)	–	–	0.87* (0.3)	0.67* (0.46)
Importance [b]	0.81 (0.39)	0.88* (0.32)	0.61* (0.48)	0.92* (0.26)	0.75* (0.42)
WTP for the ESC [c]	0.21 (0.41)	0.26* (0.43)	0.08* (0.27)	0.53* (0.5)	0.06* (0.23)
WTP for the ESC from Israel [c]	0.33 (0.47)	0.48* (0.02)	0.36* (0.03)	–	–
Gender [d]	0.5 (0.5)	0.57 (0.49)	0.48 (0.5)	0.46 (0.5)	0.52 (0.5)
Age [e]	38.6 (16.25)	39.1 (16.4)	37.2 (15.8)	37.5 (17.5)	39.1 (17.5)
Education [f]	2.6 (0.94)	2.6 (0.94)	2.6 (0.95)	2.56 (0.86)	2.65 (0.97)
Religious observance [g]	1.42 (0.65)	1.42 (0.63)	1.42 (0.7)	1.43 (0.59)	1.42 (0.68)
Income [h]	3.11 (0.98)	3.1 (0.97)	3.0 (0.99)	3.18 (1.04)	3.08 (0.95)
Observations	506	376	130	167	339

Standard deviation in parentheses.
An asterisk indicates that the means are significantly different at the 1% significant level.
Variable Definitions:
[a] 1 = watched ESC 1999; 0 = otherwise.
[b] 1 = respondent completely agreed or agreed with the statement that it was important to broadcast the ESC from Israel; 0 = otherwise.
[c] 1 = willing to pay; 0 = otherwise.
[d] 1 = male; 0 = female.
[e] Age in years.
[f] 1 = elementary school or less; 2 = high school; 3 = post high school; 4 = university graduate and above.
[g] 1 = non-religious; 2 = traditional; 3 = religious.
[h] 1 = significantly below average; 2 = below average; 3 = average; 4 = above average; 5 = significantly above average.

Table III. Average and total WTP estimates with and without protest bidders

	Average WTP ($)	Total WTP($ m)*
Method A: Average includes protest bidders with bid of 0		
(1) WTP for ESC broadcast from abroad	1.46	2.77
(2) Additional WTP for ESC broadcast from Israel	2.37	4.50
(3) Total WTP for ESC from Israel (1) + (2)	3.83	7.28
Method B: Average excludes protest bidders		
(4) WTP for ESC broadcast from abroad	1.64	3.12
(5) Additional WTP for ESC broadcast from Israel	2.63	5.00
(6) Total WTP for ESC from Israel (4) + (5)	4.2	7.99

* Total WTP was calculated by multiplying the average by 1.9 million (the relevant adult population of Israel).

me" and "I can't afford it") were considered as true representations of zero-bidders. The characteristics of the protest bidders were checked against the full sample and no significant differences were found. They were thus excluded from the sample and from the calculation of the sample averages.

Average and total willingness to pay estimates are presented in Table III. As can be seen, respondents are willing to pay more for the event when broadcast from Israel than when broadcast from elsewhere. The average bid for the ESC is $1.46 (or $1.64 depending on the method) versus a $2.37 (or $2.63) additional bid for the ESC when held in Israel. This seems to suggest that "local patriotism" confers some extra utility. The total gross benefit derived from the televised event is the sum of the two bids: the bid for broadcasting the Eurovision and the additional bid for broadcasting the event from Israel. The correction for protest bidders created a small increase in the average bid.

Multiplying the average bid by the relevant adult population, we arrive at estimated benefits worth between $7 m and $8 m. This represents the value of the utility of broadcasting the ESC from Jerusalem to the adult population of Israel. This figure is probably biased downwards as it excludes the population below the age of 18 who, by all reports, are avid viewers of the ESC. They are excluded from the present analysis due to the inherent difficulties of eliciting reliable WTP responses from this population.

4.3. GOVERNMENT SURPLUS

Promotional clips featuring scenes, views and historical landmarks of Israel were screened between the songs of the ESC. These were roughly 30 seconds each in length and in total summed-up to 38 minutes of exposure at prime viewing time

across Europe. These promotional benefits also have to be taken into consideration. Israel's Ministry of Tourism engages in targeted marketing efforts worldwide and the exposure that the country received through hosting the Eurovision contest certainly augmented those efforts.

This form of publicity however is only likely to show returns over the medium to long term. Even if ESC-induced promotion does result in a larger future stream of tourists to Israel, it is also very difficult to estimate the precise extent exposure to advertising is a factor in the tourist's decision to travel abroad, amongst the multitude of other factors. Short of direct surveying of incoming tourists, one way of estimating the ESC's exposure effect is to estimate the alternative cost of advertising Israel abroad. This method was chosen due to the availability of data and due to the fact that the Israeli Ministry of Tourism launches periodic promotion campaigns on European television. We estimate the benefits accruing from the savings in the government budget as a result of ESC-generated exposure and the benefits that accrue to producers of tourism services. It should be noted, that the range of advertising fees is very large and contingent on a variety of factors to do with the advertising campaign. Consequently, we have chosen upper and lower costs reflecting a range, rather than an exact figure.

We estimate the cost of promoting Israel on prime time on the major national television networks in those countries to which the ESC was broadcast. This cost represents the savings to the national tourism authorities in advertising fees. The promotional benefits of the ESC are thus the alternative savings in advertising and promotion abroad. Due to the range of advertising rates in the different countries, we use a maximum and minimum estimate. The maximum estimate is based on rates obtained from a leading local advertising agency that deals with commercial publicity on foreign television networks. Based on $10,000 for a 10-second advertising slide, we arrive at an exposure cost of $2.28 m. As the rate for 38 minutes would probably be more favorable, we take this figure as the maximum estimate. The minimum estimate is derived from CNN advertising rates for the period 8.30–9.00 pm. Their rate of $4,500 per 30-second clip, translates into an exposure cost of $.342 m. This is considered the minimum estimate. The true cost is probably located somewhere between these two extremes.

5. Cost-Benefit Estimates

5.1. THE BALANCE OF PAYMENTS ACCOUNT

Initially, we construct a "balance-of-payments" account for the ESC (Table IV). The event is regarded as 'export' of entertainment services but since in the context of Israel all export also contains an import component, the balance of payments represents net gain in foreign currency to the local economy. This calculation, while tangential to the main cost-benefit test, illustrates a benefit often overlooked in studies of televised events.

Table IV. Balance of payment account for the ESC

Receipts	$ Th.	Costs	$ Th.
Transfer from the European Broadcasting Union (EBU)[a]	3,026	Rental of technical equipment from abroad[a]	1,173
Expenditures of the delegations in Israel[b]	800	The import component (25%) in ESC costs[c]	1,481
Alternative cost of promotion:		The import component (25%) in expenditures of ESC delegations	200
1. Minimum	170		
2. Maximum	1,140		
Total: Using min. estimate	3,996	Total	2,854
Using max. estimate	4,966		
Net gain:			
Min. estimate	1,142		
Max. estimate	2,112		

[a] Based on ESC budget data.
[b] See Section 4.1 above.
[c] ESC costs are $5.93 m; based on ESC budget data.

Receipts from staging the ESC as a televised event ("export" of entertainment services) include a transfer payment from the EBU to the Israeli Broadcasting Authority for staging the spectacle ($3.026 m) and the expenditures of the foreign delegations in Israel ($0.8 m). Additional receipts relate to the alternative cost of promotion. These are not actual receipts but can be considered as payment in kind. Since the national tourism authorities do not actually spend these sums in advertising and promotion and since the exposure effect of the ESC is not via direct advertising but rather a by-product of staging the event, we adjust this receipt downwards receipt by 50 per cent.[4] The resultant minimum and maximum estimates are $0.17 m and $1.14 m respectively.

On the cost side, the total budget for the ESC in 1991 was $7.1 m. Of this, $1.173 m was used to purchase technical equipment from abroad (such as a special mobile broadcast studio imported from Belgium) and the rest ($5.93 m), was used to purchase goods and services in the local economy. Local spending however has an import component, taken here as 25% (the share of imports, excluding defense imports, from total consumption expenditures is around one quarter (CBS, 1999)). Therefore, for each dollar received from the EBU and spent in Israel, 25 cents returned abroad to cover the import component of these expenditures. This results in an import component of ESC costs of $1.481 m and of $0.2 m for delegation expenditures. In sum, the net gain in foreign currency to the local economy is

estimated at between $1.1 m and $2.1 m (depending on the level of promotional benefits).

5.2. BENEFITS TO PRODUCERS, GOVERNMENT AND CONSUMERS

Producer benefits are taken here as emanating from two sources: the marginal profits to Israeli suppliers of goods and services to the ESC and profits arising from delegation expenditures. As noted earlier, the revenue to suppliers of goods and services to the ESC is $5.9 m. The profit margin or return to capital in the sectors servicing the ESC is around 10% (CBS, 2000). Most of the revenues accruing from the expenditure of the delegations (estimated above as $0.8 m) are in the hotel and restaurants sectors. While marginal costs in these businesses are negligible and are estimated in some studies as 10% (Bull, 1995), here we assume a highly competitive market and use a conservative profit margin of 15%. Total benefits from delegations expenditures are thus $0.71 m (first two lines in Table V). The government surplus is represented by the cost saving in promotional advertising, which as noted above, is considered a transfer in kind, estimated at minimum and maximum levels. Analyzing the consumer surplus derived from the ESC means estimating the benefits of the event as the utility derived from staging the contest plus the extra utility derived from staging it in Israel.

The cost in this instance is the foregone utility that could have been derived from an alternative televised event produced with the same level of public support. The Israel Broadcasting Authority reallocated $2.9 m from its budget to the production of the ESC. The net benefits of the ESC as a public good are therefore the estimated benefits in Table III minus the benefits that could be derived from alternative programming that would have cost $2.9 m. It is reasonable to assume that in order to produce the ESC, the IBA in fact forfeited other alternative programming that would have been aired at the prime time slot allocated to the ESC. Obtaining information on the costs of alternative programs, however, is a problematic issue. On the one hand, the Israel Broadcasting Authority, along with some 30 other national public broadcasting agencies, is a member of the EBU to whom it pays membership and, in lieu, receives license to broadcast a package of programs. It is hard to estimate the relative weight of the costs of the ESC in this fee. On the other hand, it is very difficult to obtain accurate estimates of the utility of programs forfeited due to the production of the ESC.

Our approach has therefore been to assume that in the absence of the ESC, the IBA would have allocated funds to alternative programming that would have elicited benefits no greater than those derived from the broadcasting of the ESC from a foreign county. If this is the case, then the net utility derived from the ESC is that marginal benefit derived from the staging of the event in Israel. It should be noted that in our approach the willingness to pay estimates for the ESC broadcast from abroad (2.77 and 3.12, see Table III) are subtracted twice, for very different reasons; in the first instance, as a proxy for the lost consumer surplus benefits

Table V. Cost-benefit account for the ESC

	Maximum estimates	Minimum estimates
Benefits ($ m)		
Profits to suppliers of goods and services to the ESC [a]	0.59	0.59
Profits from delegation expenditures [b]	0.12	0.12
Government surplus [c]	1.14	0.17
Consumer surplus [d]	5.0	4.5
Total	6.85	5.38
Costs ($ m)		
The alternative cost of broadcasting the ESC from Israel	3.1	2.9
Net gain ($ m)	3.75	2.58

[a] Based on return to capital (10%) on revenues to Israeli suppliers of goods and services to $5.9 m.
[b] Based on profit margin (15%) on delegation expenditures of $0.8 m.
[c] Based on Section 5.1 above.
[d] See Table III above.

of alternative programming (Table III) and in the second instance, as an explicit alternative cost of broadcasting the ECS from Israel (Table V).

Total benefits thus range between $2.58 m and $3.75 m. The ESC does seem to pass a cost-benefit test, if not by a wide margin. There would seem to be some social justification for public assistance of a televised event such as this. These estimates should be considered as representing minimum benefits. They do not account for the future stream of benefits likely to accrue to producers as a result of the promotional effects of the ESC and the increased visitor levels that might ensue.

6. Conclusions

Using conservative estimates, some methodological accounting departures and combining intangible benefits into economic surpluses, we have shown how a cost-benefit approach can go beyond traditional short run, expenditure-induced impact studies. It should be noted that this case study has assumed some slack in the economy. Under full employment, increased surplus realized by the ESC would just result in a decrease somewhere else. The economic surpluses estimated here

imply that the ESC generated an increase in productive capacity in the economy that would not have occurred in its absence.

Our study also seems to suggest that a more integrated cost-benefit approach to cultural events can have wider application. While sports competitions, cultural festivals and the like are often touted as having growth effects on regional or even national economies (Kotler et al., 1993), the effect of these are often transient. Short-run effects can be realized through infrastructure investments and visitor spending and these are the impacts most commonly identified and measured. However, longer-term effects relating to image and exposure are rarely noted and, even more infrequently, estimated.

In the case of many high-profile sporting and cultural events, the economic importance of television coverage often overshadows the income and employment multiplier effects arising from the infrastructure investment and consumer spending associated with the event. The impact of the latter is often limited to the city or region in question, while the economic impact of television coverage is not spatially bound.

Events of all scales, from the "mega"-scale (e.g., Olympics and Expos) down to local festivals, look to television exposure as a major economic and promotional instrument (Getz, 1997). This importance does not just lie in the royalties to be received for advertising and sponsorship rights. Additional benefits to be derived from a televised presence, as illustrated here, relate to the utility derived by the local viewer population from an event that takes place locally and the promotional impacts that the event generates. The latter is particularly important as many places use cultural and sporting events as a means for "getting on the map" and up-grading their public profile.

In some ways, however, the ESC is a slightly idiosyncratic event. As hosting the contest is a result of success in the competition the previous year, this kind of entertainment event cannot be used as a strategy for economic growth. The findings presented above do suggest that the opportunity staging the ESC affords can be used as leverage for other economic development efforts. Our results have shown that the non-use value of the televised event is higher when the event is staged locally than when is held elsewhere. This is reflected in the small average differences between viewers and non-viewers in willingness to pay for the Eurovision competition when held in Israel. Combining this public acceptance of the importance of holding high profile entertainment spectacles along with the exposure benefits to be derived from the event suggests that this is not an opportunity to be passed up. Successfully hosting a media-intensive event such as this generates a demonstration effect and opens the door for future events. The justification for public support of the ESC may therefore be broader-based than implied by the benefit-cost results presented here.

Acknowledgements

Notes

1. It should be noted that the ESC may not be a "pure" public good. We are not suggesting, tautologically, that the ESC is a public good because it receives public support. Rather, it exhibits certain characteristics of a public good in that it affords non-depletable benefits to everyone from each unit of entertainment produced. Furthermore, the marginal value of each additional unit of this "good" is determined by its aggregate value to all consumers and not by the highest bidder.

2. It should be noted that these private, producer benefits are appropriated from the public support given to the ESC. Ironically, impact analyses that look simply for the largest multiplier effects in order to justify public support for a project or an event will overlook the fact that these expenditure impacts are "private" benefits.

3. For example, impacts were inflated by considering newspaper articles dealing with the pageant as promotion pieces on Atlantic City and valuing them as full-page newspaper advertisements, by treating the pageant program book as promotion for Atlantic City and by counting pageant telecasts as TV air-time for Atlantic City.

4. The justification for the size of this adjustment is the high discount rate, up to 25%, used for valuing investments in sport and entertainment projects (Blair, 1992). Using this as a benchmark and recognizing the fact that no actual receipts are involved, we double the above figure in order to avoid over-representing this gain.

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