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CULTURE, MEDIA & FILM | RESEARCH ARTICLE

Looking for determinants of willingness-to-pay for Sibelius Hall, Lahti

Timo Tohmo^{1*}

Abstract: The aim of this paper is to determine the factors affecting the willingness-to-pay for a local concert hall, namely Sibelius Hall in Lahti. Our study argues that a high income, the use of cultural services and a positive attitude towards culture were connected to a high willingness-to-pay for Sibelius Hall. Our study revealed that “I do not know” answers can be partly explained by the character of cultural preferences being an acquired taste. As a consequence, the users and respondents exhibiting a positive attitude towards culture may choose the “I do not know” option instead of making a zero bid.

Subjects: Art & Visual Culture; Popular Music; Music & The Arts

Keywords: factors of willingness-to-pay; DC-method; the Sibelius Hall; concert hall

1. Background and purpose of the study

Mourato and Mazzanti (2002) state that the way institutions and services are organised and provided as well as how resources are allocated affect the well-being of the people (and city residents). Thus, it affects their attitudes towards culture, too. For example, the positive impact of cultural goods has become one of the most important arguments for public support of culture. In our study, we estimate the willingness-to-pay for a specific cultural asset, namely Sibelius Hall in Lahti.

The purpose of this study was to measure the factors affecting the willingness-to-pay to maintain the Sibelius Hall concert and congress centre by the residents of Lahti through discrete choice method. Our aim is to clarify the willingness-to-pay to maintain the Sibelius Hall by persons 18 years of age and older who reside in Lahti and the factors that affect this willingness in the light of the NOAA

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PUBLIC INTEREST STATEMENT

Generally, the research on arts and culture puts a lot of resources on studies where public support to arts and culture is legitimated. Furthermore, positive impact of cultural goods has become one of the most important arguments for public support of arts and culture. These externalities have, however, only seldom been measured by empirical studies, by the CV method. In our study, we estimate the willingness-to-pay for a specific cultural asset, namely Sibelius Hall in Lahti. The purpose of this study is to clarify the economic value and measure the factors affecting the willingness-to-pay to maintain the Sibelius Hall concert and congress centre. In order to find out the value of the Sibelius Hall to the inhabitants of Lahti (Finland), they are asked how willing they are to pay to keep the music hall in existence and analysed with a CV method.

Panel (Arrow et al., 1993) guidelines¹ for applications of the contingent valuation method. These guidelines for CV² surveys concern, among other things, the design of the study and the format used to elicit willingness-to-pay. Lahti residents were asked how much were they willing to pay in taxes (for increased municipal spending) to keep Sibelius Hall in existence.

The contingent valuation method (CV method) was first proposed by Ciriacy-Wantrup (1947), and the essentials of the CV-method have been discussed in Cummings, Brookshire, and Schulze (1986) and Mitchell and Carson (1989). A major issue in the development of CV is that until the mid-1980s, most CV surveys used some version of an open-ended question (Hanemann, 1994). However, in markets, similar to voting, people face discrete choices: “This good costs 10 €; do you want to buy it?” Bishop and Heberlein (1979) were the first to use this binary choice technique.³

The CV method has been applied, for the most part, to the valuation of environmental goods and only occasionally to cultural goods. The bibliography by Carson, Wright, Carson, Alberini, and Flores (1994) lists 1,600 studies worldwide on topics such as the environment, health and arts. The bibliography by Noonan (2002) lists only 53 CV studies on the arts and culture. Culture-related CV studies include, e.g. Throsby and Withers (1983), Morrison and Westi (1986), Bille Hansen (1996, 1997), Martin (1994), Mazzanti (2001), and Frey and Pommerehne (1989). The main purpose of the present study is to identify the factors that promote the willingness-to-pay for a local concert hall, Sibelius Hall in Lahti. We have not found any other CV studies that address concerts or concert halls.

We restrict the survey to Lahti taxpayers aged 18 years old or older, even though Finnish citizens other than the residents of Lahti and foreign tourists or other foreigners may be willing to pay for the maintenance of Sibelius Hall. However, they do not pay their taxes to Lahti, and local funding is a very significant source of income for Sibelius Hall.

2. The Sibelius Hall concert and congress centre

The Sibelius Hall concert and congress centre opened to the public in 2000. The Sibelius Hall has acted as home to the Symphony Lahti since 2000 (<http://www.sinfonia-lahti.fi/orkesteri/>). Sibelius Hall (<http://www.sibeliustalo.fi/en>) is owned by the City of Lahti. Sibelius Hall hosts classical and other music concerts. Airamo (2008) argues that the building of Sibelius Hall costs 123 million Finnish marks, which was equivalent to 26.65 million euros.

The turnover of Sibelius Hall in 2006 was 1.96 million euros. As an incremental revenue, Sibelius Hall received approximately 790 000 € from the budget of the community for the concert hall's expenses (rents) in 2006 (on average, yearly rent support is 575,115 €/year). The revenue of Sibelius Hall comes from its entertainment music concerts (40%), its meetings and congresses (30%), the rents of the Symphony Lahti (26%) and restaurants (12%). At the time the inquiry was made, Sibelius Hall had approximately 20 regular employees (Uusi Lahti, 2008). In 2007, 119 concerts (51 by Lahti Symphony Orchestra) were held in Sibelius Hall. The number of visitors to the concerts has been around 100,000 yearly.⁴

In April 2008, we sent a postal inquiry to randomly selected 18-year-old Lahti residents. Our survey contained questions concerning the residents' attitudes towards Sibelius Hall and culture in general. We also asked about the respondents' backgrounds, e.g. age, income, education, etc. When the sampling was finished, there were approximately 76,518 18-year-old Lahti residents surveyed in total. The dichotomous choice scenario included yearly paid taxes to the municipality. Different sets of proposed sums of extra taxes (from 2 to 28 €) were sent to the residents. As a consequence, we sent 100 questionnaires to each of the 18-year-old Lahti residents in each of the groups with the different proposed willingness-to-pay values. The response rates for 2, 4, 6, 7.5, 9, 11, 13, 18, 23 and 28 € proposed bids were 45, 43, 38, 44, 32, 41, 36, 41, 45 and 38%, respectively, which can be considered a good result for mail inquiries. In Spring 2008, when the surveys were collected, the concerts of the Symphony Lahti (http://www.sinfonia-lahti.fi/ajankohtaista/fi_FI/sinfonisesti_lentolehtinen/) held in Sibelius Hall were by Beethoven (Coriolan-overture and Egmont), Richard Strauss (Macbeth) and Shostakovich (Hamlet).

3. Results

3.1. Variables used in the multinomial logit models

We employ a multinomial logit model to analyse the factors of willingness-to-pay for Sibelius Hall. The dependent variable in the analysis has three outcomes for a question of willingness-to-pay: Are you willing to pay X euros in taxes for the maintenance of Sibelius Hall? (1) No, (2) Yes, (3) I do not know. The independent variables considered in our study are presented in Table 1. The variables and their expected effects are described in brief below. Our data consist of variables characterising Lahti citizens as well as their habits in consuming cultural goods and their attitudes towards culture.

Gender is a very common variable in cultural studies, and it is often found that gender consistently explains willingness-to-pay for cultural goods. Bille Hansen (1996) found that women have a higher willingness-to-pay for the Royal Theatre in Copenhagen than men. This is probably because women typically use cultural services more often, which in turn may influence their motivation for paying for cultural use and willingness-to-pay to maintain cultural goods.

Age is supposed to act as an explanatory variable for willingness-to-pay for cultural goods. Kirchberg (1996) found that 30–45 year olds are typical users of natural history and science museums. One explanation for audiences of, for example, performing arts being older is that preferences for culture are acquired tastes (see Bille & Schulze, 2006; Stigler & Becker, 1977), e.g. the consumption cultural capital is built over time. Older people are thought to have more often acquired cultural tastes, and as a consequence, age is believed to affect the willingness-to-pay for maintaining Sibelius Hall.

The variables characterising households include their size and income. Kirchberg (1996) argues that in Germany, visitors of natural history and science museums more frequently come from households with many people. Bille Hansen (1996) found high income to promote high willingness-to-pay for a cultural good, namely the Royal Theatre. Additionally, Last (2010) found that higher income in Lueneburg, Germany correlates positively with high willingness-to-pay for the cultural supply of the municipality of Lueneburg. Thus, income and household size are expected to be connected with the willingness-to-pay to maintain the Sibelius Hall.

Education levels are generally linked with greater use of cultural services. Bille and Schulze (2006) state that highly educated visitors are overrepresented in performing arts audiences. Moreover, Mourato and Mazzanti (2002) argue that the connection between education, income and cultural benefits has been found in cultural valuation studies. This has been interpreted to mean that the value of cultural heritage conservation grows as education rises. Thus, the connection between education and income may, in general, promote a positive willingness-to-pay for cultural goods and services. As a consequence, education is expected to affect the willingness-to-pay for Sibelius Hall.

The use of cultural services (or goods) is expected to promote willingness-to-pay to maintain Sibelius Hall. Bille Hansen (1996) argues that attending or participating in many cultural activities increases willingness-to-pay to keep the Royal Theatre in existence. This can be partly explained with the essence of the preferences for culture being an acquired taste. As a consequence, the use of cultural goods is expected to affect the willingness-to-pay for Sibelius Hall.

Sibelius Hall does benefit Lahti city, neighbouring towns and the provincial economy and is one of the explanatory variables related to the cultural attitudes of the respondents. We expect responses to be divided, with residents who have experienced Sibelius Hall to think it has a positive impact on the regional economy and development. On the contrary, a share of residents might be of the opinion that Sibelius Hall does not influence the local economy positively by, for example, attracting investment and migrants.

Table 1. Descriptive statistics, whole sample, variable definitions (control group in brackets)

Variable	Effective WTP 6–9 €	Low WTP 2–4 €	High WTP 11–28 €
	Mean	Mean	Mean
Yes			
Gender	0.52	0.53	0.63
Age (below 40 years old)	0.30	0.33	0.22
40–59 years old	0.43	0.39	0.33
60 years old or older	0.28	0.29	0.46
Household size (couples and families with children)			
Single	0.27	0.21	0.26
Couples	0.45	0.54	0.45
Families with children	0.28	0.25	0.29
Education (lower than secondary education level)	0.21	0.25	0.28
Secondary education level	0.39	0.20	0.26
Higher education	0.39	0.55	0.46
Income (low income level, below 20,000 €/year)	0.29	0.33	0.32
High income (over 30,000 €/year)	0.31	0.44	0.46
Average income level (20,000–29,000 €/year)	0.41	0.23	0.22
Old-fashioned boring place factor	0.30	0.13	0.24
Cultural and social factor	0.34	0.36	0.34
Reluctance factor	–0.32	–0.28	–0.55
Image factor	0.49	0.24	0.52
Sibelius Hall will benefit the economies of Lahti, neighbouring towns and the province (no benefit)	0.03	0.08	0.16
High benefit	0.55	0.48	0.58
Average benefit	0.26	0.20	0.14
Low benefit	0.16	0.24	0.12
Use of cultural services			
No visits during the past year	0.18	0.10	0.10
1–4 visits	0.31	0.44	0.30
5–9 visits	0.27	0.24	0.22
10 visits or more	0.24	0.22	0.38
<i>I do not know</i>			
Gender	0.88	0.59	0.78
Age (below 40 years old)	0.40	0.24	0.11
40–59 years old	0.07	0.18	0.36
60 years old or older	0.53	0.59	0.53
Household size (couples and families with children)			
Single	0.36	0.24	0.29
Couples	0.36	0.71	0.50
Families with children	0.29	0.06	0.21
Education (lower than secondary education level)	0.50	0.24	0.36

(Continued)

Table 1. (Continued)

Variable	Effective WTP 6–9 €	Low WTP 2–4 €	High WTP 11–28 €
	Mean	Mean	Mean
Secondary education level	0.19	0.53	0.33
Higher education	0.31	0.24	0.31
Income (low income level, below 20,000 €/year)	0.87	0.73	0.39
High income (over 30,000 €/year)	0.07	0.13	0.15
Average income level (20,000–29,000 €/year)	0.07	0.13	0.45
Old-fashioned boring place factor	-0.19	-0.15	0.17
Cultural and social factor	-0.03	-0.14	0.32
Reluctance factor	-0.00	0.13	-0.18
Image factor	-0.04	-0.09	0.45
Sibelius Hall will benefit the economies of Lahti, neighbouring towns and the province (no benefit)	0.24	0.28	0.10
High benefit	0.35	0.17	0.28
Average benefit	0.18	0.28	0.33
Low benefit	0.24	0.28	0.28
Use of cultural services			
No visits during the past year	0.41	0.22	0.21
1–4 visits	0.29	0.33	0.46
5–9 visits	0.12	0.28	0.23
10 visits or more	0.18	0.17	0.10

We also create four factors that might promote the willingness-to-pay to maintain Sibelius Hall through taxation. To analyse respondent’s preferences and intentions, we formed the following factors. The Image-factor included claims that characterised attitudes towards Sibelius Hall’s image effects. High loadings were found in claims such as the following: *Sibelius Hall increases housing cosiness in Lahti*; *Sibelius Hall increases the attractiveness of Lahti as a business location*; *Sibelius Hall improves Lahti awareness internationally*; *Sibelius Hall improves Finland’s image abroad*; *Sibelius Hall strengthens the identities of Lahti residents as members of the municipality*; *Sibelius Hall makes Lahti a more attractive place to live*; *Sibelius Hall is the workhorse of the economy of Lahti*; *Sibelius Hall is the pride of Lahti*; *Sibelius Hall is the main concert hall in Finland*; and *Sibelius Hall and its surroundings have become Lahti’s “living room”*.

Figure 1. Distribution of users and non-users willingness-to-pay bids.

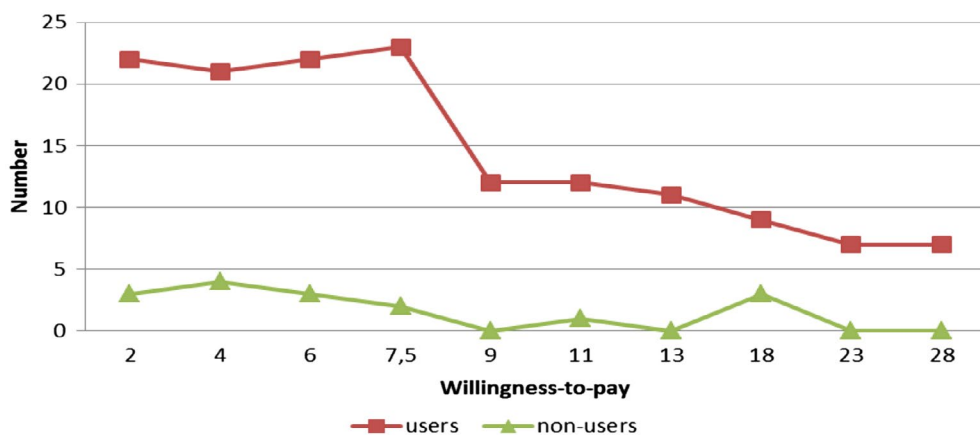


Table 2. Effective willingness-to-pay (6, 7.5, 9 €); multinomial logit model, coefficients, t-values, relative risk ratios (rrr), base outcome is effective WTP = no

Variable, effective WTP (6; 7.5; 9 €)	Coefficient	t-statistic	rrr
Yes			
Gender	-1.202	-1.08	-0.300
Age (below 40 years old)			
40-59 years old	-1.531	-1.23	0.216
60 years old or older	-1.261	-0.95	0.283
Household size (couples and families with children)			
Single	-1.143	-1.07	0.319
Education (lower than secondary education level)			
Secondary education level	-1.730	-1.16	0.177
Higher education	-1.718	-1.01	0.179
Income (low income level, below 20,000 €/year)			
High income (over 30,000 €/year)	0.759	0.50	2.135
Average income level (20,000-29,000 €/year)	1.570	1.36	4.808
Old-fashioned boring place factor	-0.286	-0.38	0.751
Cultural and social factor	0.047	0.06	1.048
Reluctance factor	-0.929	-1.23	0.395
Image factor	3.065**	2.68	21.439
Sibelius Hall will benefit the economies of Lahti, neighbouring towns and the province (no benefit)			
High benefit	0.238	0.14	1.269
Average benefit	-0.144	-0.09	0.866
Low benefit	1.442	0.82	4.230
Use of cultural services (5 or more visits)			
No visits during the year	-0.650	-0.38	0.522
1-4 visits	-1.407	-1.15	0.245
Constant	4.156*	1.74	
I do not know			
Gender	3.087	0.88	21.912
Age (below 40 years old)			
40-59 years old	-22.853*	-1.92	0.0000000012
60 years old or older	-12.719	-0.94	0.00000299
Household size (couples and families with children)			
Single	-1.174	-0.67	0.309
Education (lower than secondary education level)			
Secondary education level	-9.299	-0.72	0.00009
Higher education	3.964	0.31	52.673
Income (low income level, below 20,000 €/year)			
High income (over 30,000 €/year)	-16.404*	-1.75	0.000000075
Average income level (20,000-29,000 €/year)	-3.525	-1.24	0.029
Old-fashioned boring place factor	-9.889*	-1.78	0.00005
Cultural and social factor	-5.987	-1.55	0.0025
Reluctance factor	-6.737	-1.54	0.0012
Image factor	7.557*	1.90	1913.99

(Continued)

Table 2. (Continued)

Variable, effective WTP (6; 7.5; 9 €)	Coefficient	t-statistic	rrr
Sibelius Hall will benefit the economies of Lahti, neighbouring towns and the province (no benefit)			
High benefit	2.356	0.66	10.544
Average benefit	5.079	1.22	160.667
Low benefit	-6.944	-1.26	0.00096
Use of cultural services (5 or more visits)			
No visits during the year	7.394	1.29	1625.99
1-4 visits	2.906	1.05	18.287
Constant	0.386	0.03	

Notes: $N = 85$; LR $\chi^2(34) = 89.05$; Log likelihood = -33.279804 ; Prob. $\chi^2 = 0.0000$, $R^2 = 0.5723$.

*Significant at 10% level.

**Significant at 1% level.

Lahti residents may have objected to the building of Sibelius Hall in the first place. Our second dimension, the *reluctance-factor*, emphasises that Sibelius Hall was a bad decision and its focus on placement “for better people”. Likert claims with high loadings included the following: *The building of Sibelius Hall cost too much; The funds used for Sibelius Hall construction should have been used for some other purposes; The building of Sibelius Hall was right; Sibelius Hall is intended “for better people”*; and *Sibelius Hall is worthless other than for culture-oriented visitors*.

“Sibelius Hall offers a wide range of cultural experiences and may act as a place for spending time with one’s family or friends” loaded strongly to one-factor dimension. This dimension is called the *cultural and social-factor*; it describes the cultural and social dimension of the Music Hall. Finally, we created a factor describing the music hall as an *old-fashioned and boring place*. This included claims such as the following: *The services provided by Sibelius Hall are old-fashioned for modern-day visitors and Sibelius Hall is mostly a boring place*. These claims loaded strongly negatively on this dimension. Additionally, the claim “*Sibelius Hall interferes with the services of the nearby municipalities*” loaded on this factor.

4. Factors affecting the willingness-to-pay to maintain Sibelius Hall

Approximately 18% ($n = 73$) of the respondents had never visited Sibelius Hall. However, four-fifths had visited Sibelius Hall, of which over one fourth had visited the music hall 10 times or more. As expected, users are more willing to pay for the maintenance of Sibelius Hall, and the number of “yes” statements for users was much greater (Figure 1) for all willingness-to-pay proposals than for non-users. Bille Hansen (1997) also found users to have a considerably larger willingness-to-pay for the Royal Theatre than non-users. However, she found that the willingness-to-pay of non-users accounted for approximately 82% of the total willingness-to-pay for the Royal Theatre. Moreover, Andersson, Armbrecht, and Lundberg (2012) found that in the music festival WOW (three days festival in Gothenburg), with approximately 32,000 visitors, users accounted for approximately 70% of the total value of the festival (measured with contingent value method) and non-users’ represented the remaining 30%. In Germany, Last (2010) found a significant impact of non-users on willingness-to-pay for Lueneburg municipal cultural goods.

In our study, we use a multinomial logit model to analyse the factors that may promote the willingness-to-pay to maintain Sibelius Hall. The idea of a multinomial logit model is to determine how independent factors affect the probability of different outcomes. Relative risk ratios express the probability of the present option for certain respondents (persons who meet the condition under consideration) compared to similar persons who do not fulfil the condition (Greene, 1997).

Table 3. Low willingness-to-pay (2; 4 €); multinomial logit model, coefficients, t-values, rational risk ratios (rrr), base outcome is low WTP = no

Variable, low WTP (2; 4 €)	Coefficient	t-statistic	rrr
Yes			
Gender	2.669	1.52	14.424
Age (below 40 years old)			
40–59 years old	–3.370	–1.27	0.034
60 years old or older	–4.224*	–1.90	0.015
Household size (couples and families with children)			
Single	2.491	1.24	12.079
Education (lower than secondary education level)			
Secondary education level	–2.956	–1.57	0.052
Higher education	–1.168	–0.45	0.311
Income (low income level, below 20,000 €/year)			
High income (over 30,000 €/year)	2.294	1.10	9.917
Average income level (20,000–29,000 €/year)	7.243**	2.00	1398.925
Old-fashioned boring place factor	–2.741*	–1.84	0.064
Cultural and social factor	1.687	1.63	5.404
Reluctance factor	0.233	0.22	1.263
Image factor	1.651	1.54	5.212
Sibelius Hall will benefit the economies of Lahti, neighbouring towns and the province (no benefit)			
High benefit	4.606*	1.70	100.110
Average benefit	3.867	1.42	47.792
Low benefit	5.809**	2.19	333.293
Use of cultural services (5 or more visits)			
No visits during the past year	–6.861**	–2.38	0.001
1–4 visits	–0.008	–0.00	0.992
Constant	1.204	0.44	
I do not know			
Gender	2.370	1.26	10.697
Age (below 40 years old)			
40–59 years old	–3.739	–1.22	0.024
60 years old or older	–0.432	–0.18	0.649
Household size (couples and families with children)			
Single	1.719	0.84	5.580
Education (lower than secondary education level)			
Secondary education level	–0.062	–0.03	0.940
Higher education	–0.792	–0.26	0.453
Income (low income level, below 20,000 €/year)			
High income (over 30,000 €/year)	1.374	0.60	3.951
Average income level (20,000–29,000 €/year)	4.939	1.38	139.694
Old-fashioned boring place factor	–2.204	–1.43	0.110
Cultural and social factor	0.460	0.40	1.584
Reluctance factor	–0.389	–0.28	0.677
Image factor	1.242	0.99	3.463

(Continued)

Table 3. (Continued)

Variable, low WTP (2; 4 €)	Coefficient	t-statistic	rrr
Sibelius Hall will benefit the economies of Lahti, neighbouring towns and the province (no benefit)			
High benefit	1.640	0.60	5.155
Average benefit	4.074	1.46	58.763
Low benefit	3.499	1.35	33.089
Use of cultural services (5 or more visits)			
No visits during the past year	-6.406**	-2.05	0.002
1-4 visits	-0.578	-0.25	0.561
Constant	-0.647	-0.19	

Notes: $N = 68$; $LR \chi^2(34) = 60.26$; $\text{Log likelihood} = -31.900814$; $\text{Prob. } \chi^2 = 0.0036$, $R^2 = 0.4857$.

*Significant at 10% level.

**Significant at 5% level.

Our study analyses the factors that affect the effective willingness-to-pay (6–9 €), low willingness-to-pay (2–4 €) and high willingness-to-pay (11–28 €) for Sibelius Hall. We also demonstrate the effects of “I do not know” answers in detail. Our data demonstrate that the image dimension of Sibelius Hall is connected to the effective (6–9 €) willingness-to-pay (Table 2). Lahti residents with a strong belief in Sibelius Hall’s positive image are more often willing to pay an effective amount (6–9 €) than to make zero bids.

“I do not know” answers are interesting because the residents and respondents under 40 years of age whose income was below 20,000 € more frequently had zero willingness-to-pay than the 40–59-year-old respondents and the high-income (over 30,000 €) respondents (who answered I do not know). Our study also revealed that the respondents with a strong belief in Sibelius Hall’s positive image more often chose the “I do not know” option than they made zero bids. These results are predictable because people of prime age and those with high income are typically major consumers of culture. Moreover, their attitudes towards cultural services and goods are generally considered to be positive, and favouring zero bids might be rare (this outcome can be partly explained with the idea that if respondents vacillates between a positive answer and a negative answer, they might feel more confident to answer “I do not know” than to favour an answer of a zero bid). The “old-fashioned” factor was negative for “I do not know” answers, meaning that those with high factor scores less often answered “I do not know” than the zero willingness-to-pay respondents. This means that those respondents who consider the Music Hall to be an old-fashioned and boring place or who think that Sibelius Hall is damaging the surrounding areas’ services are more frequently willing to pay zero euros for the maintenance of Sibelius Hall.

Table 3 contains the estimated coefficients and related statistics from the multinomial logit model that predicts positive (low, 2–4 €) willingness-to-pay for Sibelius Hall from a constant and several variables. T-statistics measure the significance of the coefficients of variables. Relative risk ratios are shown for comparison of the probabilities between groups.

Our study reveals that Lahti residents aged below 40 years (compared to those 60 years old or older), those who have visited cultural services 5 times or more during the past 12 months (compared to the respondents with no visits to cultural services during the year) or those with an average income of 20,000–29,000 €/year (compared to an income level of below 20 000 €/year) are more often willing to pay an amount of 2–4 € than to make zero bids for Sibelius Hall. Furthermore, the respondents who are of the opinion that Sibelius Hall does not benefit Lahti, neighbouring cities and the province economy at all (compared to large benefits or little benefits) were not willing to pay

Table 4. High willingness-to-pay (11–28 €); multinomial logit model, coefficients, t-values, relative risk ratios (rrr), base outcome is high WTP = no

Variable, high WTP (11; 13; 18; 23; 28 €)	Coefficient	t-statistic	rrr
Yes			
Gender	-0.502	-0.72	0.606
Age (below 40 years old)			
40–59 years old	-0.677	-0.86	0.508
60 years old or older	0.345	0.40	1.412
Household size (couples and families with children)			
Single	-0.113	-0.18	0.894
Education (lower than secondary education level)			
Secondary education level	-0.045	-0.05	0.956
Higher education	-0.950	-1.09	0.387
Income (low income level, below 20,000 €/year)			
High income (over 30,000 €/year)	2.210**	2.56	9.118
Average income level (20,000–29,000 €/year)	1.951**	2.36	7.033
Old-fashioned boring place factor	-0.335	-0.73	0.715
Cultural and social factor	0.292	0.55	1.339
Reluctance factor	-0.768	-1.52	0.464
Image factor	1.242**	2.38	3.463
Sibelius Hall will benefit the economies of Lahti, neighbouring towns and the province (no benefit)			
High benefit	-0.995	-0.98	0.370
Average benefit	-0.038	-0.03	0.963
Low benefit	1.205	1.15	3.336
Use of cultural services (5 or more visits)			
No visits during the past 12 months	-2.708**	-2.12	0.067
1–4 visits	-0.460	-0.71	0.632
Constant	-0.784	-0.55	
I do not know			
Gender	-0.250	-0.29	0.779
Age (below 40 years old)			
40–59 years old	-0.152	-0.14	0.859
60 years old or older	0.961	0.88	2.613
Household size (couples and families with children)			
Single	-1.801*	-1.97	0.165
Education (lower than secondary education level)			
Secondary education level	0.852	0.89	2.343
Higher education	-0.895	-0.84	0.408
Income (low income level, below 20,000 €/year)			
High income (over 30,000 €/year)	1.258	1.14	3.517
Average income level (20,000–29,000 €/year)	3.008***	3.09	20.239
Old-fashioned boring place factor	0.181	0.33	1.199
Cultural and social factor	0.371	0.65	1.450
Reluctance factor	-0.278	-0.54	0.758
Image factor	1.765***	2.74	5.844

(Continued)

Table 4. (Continued)

Variable, high WTP (11; 13; 18; 23; 28 €)	Coefficient	t-statistic	rrr
Sibelius Hall will benefit the economies of Lahti, neighbouring towns and the province (no benefit)			
High benefit	-1.005	-0.73	0.366
Average benefit	0.822	0.53	2.274
Low benefit	2.127*	1.70	8.386
Use of cultural services (5 or more visits)			
No visits during the past 12 months	-1.223	-0.84	0.294
1-4 visits	1.403*	1.77	4.069
Constant	-3.464*	-1.85	

Notes: $N = 128$; LR $\chi^2(34) = 87.53$; Log likelihood = 80.704207; Prob. $\chi^2 = 0.0000$, $R^2 = 0.3516$.

*Significant at 10% level.

**Significant at 5% level.

***Significant at 1% level.

anything for the maintenance of Sibelius Hall, compared to low willingness-to-pay. The “old fashioned” factor was negative for low willingness-to-pay, meaning that those with high factor scores less often exhibited a willingness-to-pay of 2–4 € than a zero willingness-to-pay. This means that those respondents who consider the Music Hall an old-fashioned and boring place or think that Sibelius Hall is damaging the surrounding areas’ services are more frequently willing to pay zero euros to maintain Sibelius Hall (compared to low, 2–4 € willingness-to-pay).

Considering “I do not know” answers, we found that the respondents who have not availed themselves of cultural services for a year (compared to residents who paid 5 or more visits to cultural service venues in the past 12 months) more often had zero willingness-to-pay for Sibelius Hall. The use of more cultural services is correlated with respondents avoiding zero bids, comparing “I do not know” answers with zero bids.

Table 4 contains the estimated coefficients and related statistics from the multinomial logit model that predicts high (11–28 €) willingness-to-pay for Sibelius Hall. Relative risk ratios are shown for comparison of the probabilities between groups. The relative risk ratio 2 indicates that the considered group has two times the risk of that of a non-considered group. As a consequence, when $rrr > 1$, the comparison outcome is more likely, and when $rrr < 1$, the outcome in question is more likely found in the reference group.

We analysed the factors that affect high willingness-to-pay for Sibelius Hall. Our study reveals that Lahti residents with high (over 30,000 €/year) and average (20,000–29,000 €/year) income (compared to low income level, below 20 000 €/year) or who have visited cultural service venues 5 times or more during the past 12 months (compared to the respondents with no visits to cultural service venues during the past year) are more often highly willing-to-pay (compared to zero bids) for the maintenance of Sibelius Hall. Furthermore, the respondents who strongly believe that the image dimension of the Sibelius Hall is important are more often willing to pay high amounts (11–28 €) than to make zero bids.

Our study also analyses “I do not know” answers. The single respondents (compared to the couples and the families with children) and the respondents with income below 20,000 € income (compared to an average income level of 20,000–29,000 €/year) more often have no willingness-to-pay for Sibelius Hall at all than to give “I do not know” answers. This outcome can be partly explained by the fact that couples and families with children and people with average income levels may have

tight budgets. As a consequence, their attitudes towards cultural services and goods may be positive and their economic situation makes them favour “I do not know” answer instead of high or zero bids.

Our data also reveal that the image dimension of Sibelius Hall is connected to “I do not know” answers. Residents of Lahti with strong opinions on Sibelius Hall’s positive image more often gave “I do not know” answers than they responded with a zero willingness-to-pay.

Considering “I do not know” answers, we also found that the respondents who seldom visited cultural service venues (1–4 visits to cultural service venues in the past 12 months) compared to residents who paid 5 or more visits to cultural service venues (during the past year) more often gave “I do not know” answers. Moreover, residents who are of the opinion that Sibelius Hall benefits Lahti, neighbouring cities and the provincial economy modestly (compared to no benefit at all responses) more often gave “I do not know” answers than they had a zero willingness-to-pay. This can be partly explained by the respondent’s slight commitment to culture and seldom use of cultural goods. From the cultural point of view, their attitude towards culture services can be considered positive (they did not express zero willingness to pay). However, it might be that their “cultural capital” is not large enough to cause them to advocate making payments to the concert hall and to raise their willingness-to-pay for cultural goods to higher levels.

5. Conclusions

The aim of our study is to analyse the factors affecting Lahti residents’ willingness-to-pay for Sibelius Hall. The basic set consists of 18-year-old or older inhabitants of Lahti, both of concert hall visitors and inhabitants who have never visited Sibelius Hall. As random samples were taken for 10 sets of 100 inhabitants of Lahti whose ages were 18 years or older. The dichotomous choice scenario included different sets of proposed sums of extra taxes (from 2 to 28 €), and inquiries were sent to the residents by mail in April 2008.

We used a multinomial logit model to analyse the high willingness-to pay for Sibelius Hall in Lahti with taxes paid annually. Our study reveals that a high income, a significant number of visits to cultural service venues and a strong opinion about that Sibelius Hall’s positive image are strong indications of high willingness-to-pay to preserve Sibelius Hall. The image dimension of the concert hall is also found among effective bids (6–9 €). Furthermore, users of Sibelius Hall are more willing to pay for the upkeep of Sibelius Hall than are non-users.

Among low bids ($2 \text{ €} \leq \text{Bid} \leq 4 \text{ €}$), factors affecting willingness-to-pay were moderate income, age below 40 years, having visited cultural service venues 5 times or more during the past 12 months, and being of the opinion that Sibelius Hall benefits Lahti city and its surrounding towns. Moreover, the respondents who did not find Sibelius Hall a boring place had a low positive willingness-to-pay for Sibelius Hall compared to zero willingness-to-pay.

Our study analysed “I do not know” answers in detail. For actual willingness-to-pay (6–8 €), the use of cultural goods and services was correlated with the respondents giving non-zero bids, unless they chose the “I do not know” option. We also found that a higher age, higher income and strong opinion on Sibelius Hall’s positive image influenced the respondents to choose the “I do not know” answer instead of zero willingness-to-pay. Additionally, the respondents who did not consider Sibelius Hall a boring place more often picked the “I do not know” option than they gave zero bids.

Among a low (2–4 €) willingness-to-pay and a high (11–28 €) willingness-to-pay, “I do not know” answers are typically connected to commitment (slight or high) to culture as well as the use of culture services (slight or high) in general. The respondents’ acquired taste might not be high enough for a high willingness-to-pay, or their economic situation might not favour high bids. However, they are not willing to choose zero bids and the “I do not know” option is, therefore, favoured.

These outcomes concerning “I do not know” answers can be explained partly with the use and positive attitudes towards culture in general. Bille and Schulze (2006) argue that preferences for culture are an acquired taste. In our study, part of the “I do not know” answers might come from respondents who are developing acquired tastes (which develop along with the use of cultural services) because this group includes respondents with positive attitudes towards culture and users of cultural goods. As a consequence, many of the respondents may feel more confident to select the “I do not know” answer than to make a zero bid.

From the viewpoint of a person’s willingness-to-pay, it would be important to let the inhabitants of Lahti and its surrounding towns’ residents visit the Sibelius Hall and cultural service venues in general. Lahti residents may become acquainted with Sibelius Hall (and also culture more generally) with school visits or other types of special visits to cultural events with free (or cheaper) entrance tickets. Stigler and Becker (1977) argue that visiting cultural events creates positive attitudes towards culture generally and may even create a taste for culture (see also Throsby, 1994; Yaari, 1977). As a consequence, today’s increase in consumption of culture may result in an increase in culture in the future, too.

In this study, we analysed the willingness-to-pay associated with Sibelius Hall. The government can give subsidies to commodities that create economic value and positive willingness-to-pay. Additionally, firms may find it attractive to enter into co-operation with cultural organisations, which provides a positive willingness-to-pay. Moreover, private donors may favour institutions with an association with positive economic and social benefits and residents’ positive willingness-to-pay.

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Notes

1. The principal sources of the biases connected with contingent valuation studies, the conditions that promote their occurrence and the approaches that may be used to minimise their effects are presented in Mitchell and Carson (1989).
2. Mourato and Mazzanti (2002) argue that theoretically, the CV method is based on welfare economics. Stated willingness-to-pay amounts relate to the preferences of respondents (ibid.). Furthermore, Arrow et al. (1993) argue that no method other than the contingent valuation method (CV-method) is capable of providing information on the value of goods satisfaction that is derived from the goods’ mere existence independent of the respondents’ active use of the goods; e.g. the CV-method is capable of estimating non-market values.
3. This methodology is based on the random utility model for individual preferences.
4. The main hall of Sibelius Hall was closed for repairs in January 2007 due to the construction of the organ, and the congress wing was only partially open for use between June and October due to renovations being made. These factors partly explain the 8.4% decrease in total visitors compared to the 2006 figures.

References

- Airamo, R. (2008). *Lahten ankkuri. Rantakaupungin nousu tehtaaraunioista* [Anchor of Lahti. The rise of the lakeside city from factory rubble]. Jyväskylä: Gummerus Kirjapaino Oy.
- Andersson, T. D., Armbricht, J., & Lundberg, E. (2012). Estimating use and non-use values of a music festival. *Scandinavian Journal of Hospitality and Tourism*, 12, 215–231.
<http://dx.doi.org/10.1080/15022250.2012.725276>
- Arrow, K., Solow, R. Portney, P. R., Leamer, E. E., Radner, R., & Schuman, H. (1993). Report of the NOAA Panel on contingent valuation. *Federal Register*, 58, 4601–4614.
- Bille, T., & Schulze, G. (2006). Culture in urban and regional development. In V. A. Ginsburgh, & D. Throsby (Eds.), *Handbook of the economics of art and culture* (Vol. 1, pp. 1051–1099). Amsterdam: Elsevier.
- Bille Hansen, T. (1996, May 8–11). A CV study of the willingness-to-pay for the Royal Theatre in Copenhagen. The Ninth International Conference on Cultural Economics, Boston, MA.
- Bille Hansen, T. (1997). The willingness-to-pay for the Royal Theatre in Copenhagen as a public good. *Journal of Cultural Economics*, 21, 1–28.
<http://dx.doi.org/10.1023/A:1007303016798>
- Bishop, R. C., & Heberlein, T. A. (1979). Measuring values of extramarket goods: Are indirect measures biased?. *American Journal of Agricultural Economics*, 61, 926–930.
<http://dx.doi.org/10.2307/3180348>
- Carson, R. T., Wright, J. L., Carson, N. J., Alberini, A., & Flores, N. E. (1994). *A bibliography of contingent valuation studies and papers*. La Jolla, CA: Natural Resource Damage Assessment.
- Ciriacy-Wantrup, S. V. (1947). Capital returns from soil-conservation practices. *Journal of Farm Economics*, 29, 1181–1196.
<http://dx.doi.org/10.2307/1232747>
- Cummings, R. G., Brookshire, D. S., & Schulze, W. D. (Eds.). (1986). *Valuing environmental goods: An assessment of the contingent valuation method*. Totowa, NJ: Rowman and Allanheld.

- Frey, B. S., & Pommerehne, W. W. (1989). *Muses and markets: Explorations in the economics of the arts*. Oxford: Basil Blackwell.
- Greene, W. H. (1997). *Econometric analysis*. Upper Saddle River, NJ: Prentice Hall.
- Hanemann, W. M. (1994). Valuing the environment through contingent valuation. *Journal of Economic Perspectives*, 8, 19–43.
<http://dx.doi.org/10.1257/jep.8.4.19>
- Kirchberg, V. (1996). Museum visitors and non-visitors in Germany: A representative survey. *Poetics*, 24, 239–258.
[http://dx.doi.org/10.1016/S0304-422X\(96\)00007-1](http://dx.doi.org/10.1016/S0304-422X(96)00007-1)
- Last, A.-K. (2010). *Cultural economics: Empirical applications in the German cultural sector* (Dissertation). von der fakultät wirtschafts-, verhaltens- und rechtswissenschaften der Leupana universität, Lüneburg.
- Martin, F. (1994). Determining the size of museum subsidies. *Journal of Cultural Economics*, 18, 255–270.
<http://dx.doi.org/10.1007/BF01079759>
- Mazzanti, M. (2001). *Discrete choice models and valuation experiments. An application to cultural heritage* (Working Paper). University of Rome, Italy.
- Mitchell, R. C., & Carson, R. T. (1989). *Using surveys to value public goods: The contingent valuation method*. Washington, DC: Resources for the Future.
- Morrison, W. G., & Westi, E. G. (1986). Subsidies for the performing arts: Evidence on voter preference. *Journal of Behavioral Economics*, 15, 57–72.
[http://dx.doi.org/10.1016/0090-5720\(86\)90051-3](http://dx.doi.org/10.1016/0090-5720(86)90051-3)
- Mourato, S., & Mazzanti, M. (2002). Economic valuation of cultural heritage: Evidence and prospects. In M. de la Torre (Ed.), *Assessing the values of cultural heritage* (Reach Report, pp. 51–76). Los Angeles, CA: The Getty Conservation Institute.
- Noonan, D. (2002). *Contingent valuation studies in the arts and culture: An annotated bibliography* (Working Paper). Chicago, IL: The Cultural Policy Center.
- Stigler, G. J., & Becker, G. S. (1977). De gustibus non est disputandum. *The American Economic Review*, 67, 76–90.
- Throsby, D. (1994). The production and consumption of the arts: A view of cultural economics. *Journal of Economic Literature*, XXXII, 1–29.
- Throsby, C. D., & Withers, G. A. (1983). Measuring the demand for the arts as a public good: Theory and empirical results. In W. S. Hendon & J. L. Shanahan (Eds). *Economics of cultural decisions* (pp. 177–191). Cambridge: Abt. Books.
- Uusi Lahti. (2008, May 23). Interview of managing director of the Sibelius Hall Antti Vihinen. *Uusi Lahti*.
- Yaari, M. E. (1977). Endogenous changes in tastes: A philosophical discussion. *Erkenntnis*, 11, 157–196.



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