Estimation of the relative value of compositions and performances in popular concerts and festivals based on survey evidence

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1. Introduction and summary

1.1 In 1988 the Copyright Tribunal stated that the music works (i.e. the songs or compositions) at live popular music events are significantly less important than the performance. This statement appears to have been based upon the opinions of the Tribunal members rather than an empirical analysis.

1.2 There is no market data about the prices of concerts with and without these two attributes and so we have used a technique known as choice modelling to infer their relative values.

1.3 Choice modelling is an econometric survey method that simulates consumers' purchasing decisions and allows us to estimate the value that consumers place on the different attributes of a product or service. This approach has been widely used from aiding decision making in the design of optimal pricing policies and the valuation of intellectual property rights, to estimating demand for new services and defining relevant markets.

1.4 The results of the choice modelling allow us to estimate consumers' preferences when attending popular concerts and festivals and, in particular, to assess the relative contribution of the composition/song and the performance to the value of a concert and a festival. The survey also allows us to estimate the relative contribution of the music and other entertainment types to the value of a festival to consumers.

1.5 In August 2014, we commissioned an online survey of consumers who have attended popular music concerts and/or popular music festivals in the UK in the last year. The survey consisted of two parts:

(1) An initial questionnaire on the respondents' socio-demographic characteristics and their recent experience when attending concerts and festivals; and

(2) A series of choice experiments where respondents had to choose their most preferred concert or festival from a choice of events with varying attributes.

1.6 In particular, our survey included three choice exercises incorporating multiple choices to be made by the respondents. In each choice exercise, respondents were presented with a number of concert or festival alternatives, each one defined by a different combination of attributes (such as a festival with the music they like and other entertainment activities, such as, comedy, theatre, cabaret and poetry, and the ticket price). The respondents were then asked to choose their preferred alternative.

1.7   By analysing the responses to the choice exercises, we have calculated the relative value of the composition (measured through the incremental value of the songs) and the performance (measured through the incremental value of the artists' performances) in concerts and festivals. We have also calculated the incremental value of music relative to the incremental value of other entertainment types in festivals.

How to use the results of the choice modelling

1.8   The responses to a choice exercise allow us to calculate consumers' willingness to pay ("**WTP**") for the different attributes that characterise the product. By WTP, we mean the maximum amount that each individual consumer is willing to spend to buy a product or service with certain given attributes. An example of such a characteristic is the type of music at a festival. The incremental WTP for an attribute is the difference between the WTP of the product with and without that particular attribute. We are interested in the WTP for the composition (songs) and the performance (the artists' performance) in concerts and festivals, and the music (the combination of composition and performance) and other entertainment types in festivals.

1.9   The challenge in this case is that it is not possible to make a comparison between a concert or festival with music and a concert of festival without music. We therefore estimate, for instance, the incremental value of the music in a festival, as the difference between the WTP for a festival with the music that respondents like and the WTP for a festival with other music, which act as baselines for where the attribute is not important to the respondent rather than being absent

1.10   We have considered three potential baselines to use in respect of 'other music', being the music/songs/artists' performances that respondents (1) neither like nor dislike, (2) do not know, and (3) dislike. Figure 1-1 below illustrates these benchmarks. We use the first of these benchmarks in our analysis, but our conclusions are not particularly sensitive to the choice of benchmark.

Figure 1-1: Example of the value to a consumer of a festival depending on the type of music
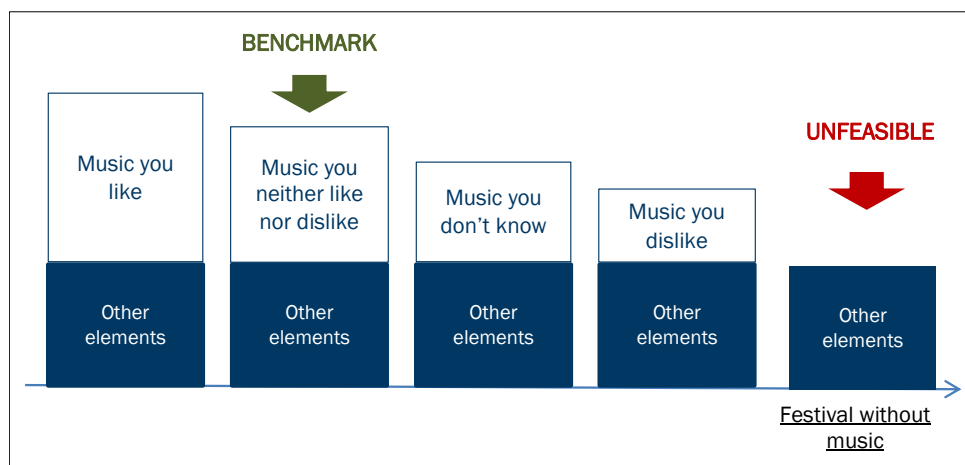
1.11   We estimate two incremental values for both concerts and festivals as follows:

      (1)   the incremental value of the composition in a concert (festival) is the difference between the WTP for a concert (festival) with the "songs you like" and the WTP for a concert (festival) with the "songs you neither like nor dislike"; and

      (2)   the incremental value of the performance in a concert (festival) is the difference between the WTP for a concert (festival) with the "artist's performance you like" and the WTP for a concert (festival) with the "artist's performance you neither like nor dislike".

1.12   We estimate a further two incremental values for festivals only as follows:

      (1)   the incremental value of the music in a festival is the difference between the WTP for a festival with the "music you like" and the WTP for a festival with the "music you neither like nor dislike".

      (2)   the incremental value of other entertainment in a festival, such as, comedy, theatre, cabaret and poetry, is the difference between the WTP for a festival that includes these activities and the WTP for the same festival but without such activities.

Findings

1.13   As we explain in detail in Section 3, our analysis of the survey responses shows that:

      (1)   in the case of a concert, the incremental value of the composition is, on average, 126% of the incremental value of the performance; and

(2)   in the case of a festival, the incremental value of the composition is, on average, around 92% of the incremental value of the performance.

1.14   We also considered the incremental value of music at festivals (including both the value of compositions and the performance) compared to the incremental value of other entertainment. Our analysis of the survey responses shows that the incremental value of music is, on average, 284% of the incremental value of other activities.

1.15   To further understand the value of music at festivals, we included questions in the initial questionnaire where we asked respondents to rank the factors they consider when deciding whether to attend a festival in the UK. The top three responses were:

(1)   The music (51% indicated this as the most important factor);

(2)   Competitive pricing of tickets (15% indicated this as the most important factor); and

(3)   The presence of like-minded people and friends at the festival (10% indicated this as the most important factor).

1.16   We also asked about the most important factors in respondents' decisions to attend the last festival they attended. The top three responses were:

(1)   The music (54% indicated this as the most important factor);

(2)   "Social & Relaxation" reasons (e.g. spend time with friends, escape from normal life, to reminisce) (23% indicated this as the most important factor); and

(3)   To experience something new (8% indicated this as the most important factor).

1.17   Only 4% of respondents said that the most important factor in their decision was the availability of other entertainment activities within the festival, such as, comedy, theatre, cabaret and poetry.

1.18   The questionnaire therefore indicates that consumers consider the music to be by far the most important factor when deciding whether to attend a festival in the UK.

Structure of this report

1.19   The structure of the remainder of this report is as follows:

▪ In Section 2, we explain how a survey can be used to assess the relative values of (1) compositions and performances at concerts and festivals, and (2) music and other types of entertainment at festivals.

▪ In Section 3, we summarise the results of our choice modelling analysis.

▪ In Section 4, we set out the reasons stated by respondents for attending a festival.

About FTI Consulting

1.20   FTI Consulting is a global advisory business of which Compass Lexecon is a wholly owned subsidiary. The FTI Consulting team is led by Greg Harman, Andrew Wynn, Alejandro Requejo and Patricia Lorenzo. Alejandro Requejo specialises in the application of discrete choice models and other econometric techniques to competition policy and strategic problems.

2.   How a survey can be used to assess relative value

Introduction

2.1   In this section, we explain how we have used the economic tool of choice modelling to estimate:

(1)   the relative value that consumers place upon the compositions at concerts and festivals as compared to the artist's performance; and

(2)   the relative value that consumers place upon the music at festivals as compared to the provision of other types of entertainment.

Choice modelling

2.2   In order to determine the relative values above, we estimated the WTP (willingness to pay) of UK consumers to attend concerts and festivals with different attributes. To do this, we used a stated preference ("**SP**") method.

2.3   The SP methods allow us to estimate the WTP for goods that are not available in the market. Within the SP family we used the discrete choice experiment ("**DCE**") a choice modelling method. Choice modelling is a popular and economically sound tool and has been widely used from aiding decision making in the design of optimal pricing policies and valuing intellectual property rights, to estimating demand for new services and defining relevant markets.

2.4   To perform choice modelling, a sample of respondents are presented with a number of alternatives, each one described by a different combination of attributes, and asked to choose their preferred alternative. The choices made by the respondents can be used to understand trade-offs and to calculate each individual's WTP for a single characteristic of a product or service. In our case, we were able to use the results of the survey to estimate the demand for concerts and festivals with different attributes.

2.5   We base our calculations upon survey data collected online between 15 and 18 August 2014. The survey invite was randomly sent to a nationally representative cross-section of the UK population, which is representative of the target population in terms of age, gender and place of residence. 811 respondents took part in our survey. Of these, 780 respondents had attended at least one concert in the last 12 months and 402 respondents had attended at least one festival in the same period. Each of these respondents completed multiple choice exercises.

2.6   We asked respondents to make four choices in each choice exercise. Therefore, we have over 3,000 responses for the choice exercise on concerts and over 1,500 responses for the choice exercises on festivals.

2.7   The survey consisted of two parts: (1) an initial questionnaire on the respondents' socio-demographic characteristics and their attendance at concerts and festivals, and (2) a series of choice experiments where respondents had to choose their most preferred product from a choice of hypothetical concerts/festivals with varying attributes. We asked each respondent to complete three choice modelling exercises of four questions each.

First exercise: relative value of compositions and performances at concerts

2.8   The first choice exercise was shown to the respondents that had attended at least one concert in the last 12 months in the UK.

2.9   In this exercise we asked respondents to assume that they had decided to attend a concert at a medium-sized indoor concert venue where there will be a headline performer and a support act. Respondents were presented with four options: three different concerts and the possibility of not choosing any of these options. Each concert was characterised by the songs performed, the artist's live performance and the ticket price.

2.10   In the case of the songs performed and the artist's performance, these attributes were described as those the respondent (1) likes, (2) neither likes nor dislikes, (3) dislikes, or (4) does not know.

2.11   Figure 2-1 shows an example choice card from this exercise. Each respondent was shown four cards from 100 potential cards. Given that there were 780 respondents who have attended at least one concert we have over 3,000 responses for this choice exercise.

2.12   The prices shown in this and the following example exercises do not cover the full range of prices included in our choice exercises. The full range of levels for each attribute is set out in Appendix 3.

Figure 2-1: Example of an experiment of the first choice exercise

	Concerts			NONE OF THESE
	Alternative 1	*Alternative 2*	*Alternative 3*	*Alternative 4*
The songs being performed	Songs you neither like nor dislike	Songs you dislike	Songs you like	I would not choose any of these alternatives
The artist	An artist you neither like nor dislike	An artist you like	An artist you like	
The ticket price	£ 30	£ 10	£ 80	

2.13 We estimate:

(1) the incremental value of compositions as the additional amount that respondents will pay to attend a concert with songs that they like as compared to those that they neither like nor dislike; and

(2) the incremental value of the performance as the additional amount that respondents will pay attend a concert with an artist whose performance they like as compared to one whose performance they neither like nor dislike.

2.14 The ratio of these values represents the relative value that consumers ascribe to compositions and to performances at a concert.

Second exercise: relative value of compositions and performances at festivals

2.15 The second choice exercise was broadly similar to the first except that it related to festivals rather than concerts. We asked respondents to assume that they had decided to attend a three day festival at a large outdoor space where there is a large main stage and several smaller stages that will feature music for ten hours per day. It was shown to all respondents that have attended at least one festival in the last 12 months in the UK.

2.16 Figure 2-2 shows an example choice from this exercise. Each respondent was shown four cards from 100 potential cards. Given that there were 402 respondents who have attended at least one concert we have over 1,500 responses for this.

Figure 2-2: Example of an experiment of the second choice exercise

| | **Festivals** | | | **NONE OF THESE** |
	Alternative 1	**Alternative 2**	**Alternative 3**	**Alternative 4**
The songs being performed	Songs you don't know	Songs you neither like nor dislike	Songs you like	I would not choose any of these alternatives
The artists	Artists you neither like nor dislike	Artists you like	Artists you neither like nor dislike	
The ticket price	£ 35	£ 100	£ 65	

2.17   Following the same approach as with the first exercise, we calculate the relative value that consumers ascribe to compositions and to performances at a festival.

Third exercise: relative value of music and other entertainment at festivals

2.18   The third choice exercise was shown to the respondents that had attended at least one festival in the last 12 months in the UK.

2.19   We asked respondents again to assume that they had decided to attend a three day festival. The options available to them differed in the type of music performed (meaning songs and performances together), whether or not other types of entertainment were available and the ticket price.

2.20   Figure 2-3 shows an example choice from this exercise. Each respondent was shown four cards from 100 potential cards. Given that there were 402 respondents who have attended at least one concert we have over 1,500 responses for this.

Figure 2-3: Example of an experiment of the third choice exercise

| | Festivals | | | NONE OF THESE |
	Alternative 1	Alternative 2	Alternative 3	Alternative 4
The music (both performance and songs being performed)	Music you dislike	Music you like	Music you dislike	I would not choose any of these alternatives
Other entertainment (Comedy, Theatre, Cabaret, Poetry, Healing and a Children's Area)	Yes	Yes	No	
The ticket price	£ 100	£ 130	£ 35	

2.21   This exercise was designed to calculate UK consumers' WTP to attend festivals with music that they like to varying extents with and without other types of entertainment.

2.22   We estimate:

(1)   the incremental value of music as the additional amount that respondents will pay to attend a festival with music that they like as compared to music that they neither like nor dislike; and

(2)   the incremental value of other entertainment as the additional amount that respondents will pay to attend a festival with such entertainment as opposed to one without it.

2.23   The ratio of these incremental values represents the relative value that consumers ascribe to the music performed at a festival as compared to the other types of entertainment available.

Supporting appendices

2.24   The appendices to this report set out further information about our survey:

▪ In Appendix 1, we provide further information about the econometric techniques we use to analyse the results of the choice modelling exercises.

▪ In Appendix 2, we provide further information about the survey sample and design.

▪ In Appendix 3, we set out the survey questions and choice modelling instructions provided to respondents.

3.   Choice modelling results

Introduction

3.1   In this section, we summarise our choice modelling results.

Relative value of composition and performance

3.2   Consumers are willing to pay on average:

(1)   £65.31 more to attend a **concert** with the songs they like than the same concert where the songs being played are songs they neither like nor dislike, and;

(2)   £51.65 more to attend a **concert** with an artist's performance they like than the same concert where they neither like nor dislike the artist's performance.

3.3   Consumers' preferences therefore show that the incremental value of the composition in a concert is larger than the incremental value of the performance. In particular, the incremental value of the composition is approximately 126% of the incremental value of the performance.

3.4   Consumers are willing to pay on average:

(1)   £168.00 more to attend a **festival** with the songs they like than the same festival where the songs being played are songs they neither like nor dislike, and;

(2)   £181.70 more to attend a **festival** with the artists' performances they like than the same festival where they neither like nor dislike the artists' performances.

3.5   Consumers' preferences therefore show that the incremental value of the composition in a festival is lower than the incremental value of the performance. In particular, the incremental value of the composition is approximately 92% of the incremental value of the performance.

Relative value of music and other entertainment

3.6   Consumers are willing to pay on average:

(1)   £287.11 more to attend a **festival** with the music they like than the same festival where the music being played is the music they neither like nor dislike, and;

(2)   £101.08 more to attend a **festival** with other entertainment activities than the same festival where these activities are not offered.

3.7   Consumers' preferences therefore show that the incremental value of the music at festivals (including both the value of compositions and the performance) is larger than the incremental value of other entertainment activities. In particular, the incremental value of the music is approximately 284% of the incremental value of other activities.

Choice of baseline

3.8   In the analysis above, we estimate the incremental value of songs, performances and music by considering the WTP of songs/performances/artists that respondents like as compared to those that they neither like nor dislike. The baseline for our assessment is therefore songs/performances/artists that respondents neither like nor dislike. We adopt this baseline because it is not feasible to consider a concert or festival with no songs/performance/artist. However, there are other baselines that we could have selected. These include:

(1)   songs/performances/music that respondents do not know; and

(2)   songs/performances/music that respondents dislike.

3.9   We have also performed our analysis using those baselines for which we have a positive valuation.[1] We determined that our conclusions are not sensitive to our choice of baseline.[2] We set out the results of adopting alternative approaches in Table 3-1 (relative value of compositions and performance) and Table 3-2 (relative value of music and other entertainment) below.

3.10   Each row in Table 3-1 provides the incremental value of the songs and the performance computed as the difference between the songs and performance you like and the relevant baseline scenario. For instance, the incremental value of the songs when the baseline is "neither like nor dislike" is the difference between the value of the songs you like and the songs you neither line nor dislike. The incremental value of the songs will depend on the type of performance considered and, similarly, the incremental value of the performance will depend on the type of artist considered.

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[1]   A negative valuation implies that respondents are not willing to pay for attending the concert or festival and, therefore, they are not willing to attend the concert or festival unless they are paid for it. These situations cannot be used as baselines for our analysis

[2]   See Appendix 5 for further details.

3.11 Each column indicates the type of attribute we have set for the other attribute when computing the incremental values. That is, the type of performance when computing the incremental value of the songs and the type of songs when computing the incremental value of the performance. For instance, the incremental value of the songs in a concert, computed as the difference between the songs you like and the songs you neither line nor dislike ("Baseline: Neither like nor dislike"), is £65.31 when the artist is the one the respondent neither likes nor dislikes, and £103.00 when the artist is the one they like. Similarly, the incremental value of the performance in a concert, computed as the difference between the performance you like and the performance you neither line nor dislike ("Baseline: Neither like nor dislike"), is £51.65 when the songs are the ones they neither like nor dislike, and £89.35 when the songs are the ones they like.

3.12 The shaded entries indicate the baselines that we have adopted in our primary analysis.

Table 3-1: Relative value of songs and performances

	Type of the other attribute				
	Concerts		Festivals		
	Neither like nor dislike	Like	Neither like nor dislike	Don't know	Like
Baseline: Neither like nor dislike					
Incremental value of songs	£65.31	£103.00	£168.00	£266.77	£208.62
Incremental value of performances	£51.65	£89.35	£181.70	£283.54	£222.31
Relative value (songs/performances)	126%	115%	92%	94%	94%
Baseline: Do not know					
Incremental value of songs	n.a.	£99.31	n.a.	n.a.	£165.85
Incremental value of performances	n.a.	£94.19	n.a.	n.a.	£182.62
Relative value (songs/performances)	n.a.	105%	n.a.	n.a.	91%
Baseline: Dislike					
Incremental value of songs	n.a.	n.a.	n.a.	n.a.	£411.69
Incremental value of performances	n.a.	n.a.	n.a.	n.a.	£413.54
Relative value (songs/performances)	n.a.	n.a.	n.a.	n.a.	100%

3.13   Each row in Table 3-2 provides the incremental value of the music and other types of entertainment. In the case of the music, the incremental value is computed as the difference between the music you like and the baseline scenario.[3] In particular, the incremental value of the music when the baseline is "neither like nor dislike and no other entertainment" is the difference between the value of the music you like without other entertainment activities and the value of the music you neither like nor dislike again without other entertainment activities.

3.14   In the case of other entertainment, the incremental value is computed as the difference between the value of a festival with the music you neither like nor dislike with and without those activities.

Table 3-2: Relative value of music and other entertainment

	Baseline: "Music you neither like nor dislike & No other entertainment"
Incremental value of music	£287.11
Incremental value of other entertainment	£101.08
Relative value (music/other entertainment)	284%

Supporting appendices

3.15   The appendices to this report set out further information about our analysis:

- In Appendix 4, we set out our calculation of the coefficients we estimate using the choice modelling responses. These coefficients provide the basis for all the results in this section.

- In Appendix 5, we set out our relative value calculation using the coefficients set out in Appendix 4.

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[3]   The baseline scenario cannot include other entertainment activities. Otherwise the incremental value of the other enterntainment activities relative to the baseline would be zero.

4. Reasons for attending a festival

4.1 In addition to the choice exercises included in the survey, we asked respondents about the factors they take into account when attending a festival.

Factors considered in general

4.2 We asked respondents to rank those factors that influence their decision as to whether or not to attend a music festival in the UK in general. Figure 4-1 below shows the proportion of respondents that ranked each factor as most important.

4.3 The music was given the highest ranking by 51% of respondents, followed by the fact that the festival has competitively priced tickets (15%) and by the presence of like-minded people and friends at the festival (10%).

4.4 3% of respondents referred to the presence of types of entertainment other than music, such as comedy, theatre, cabaret and poetry.

Figure 4-1: Factors affecting the decision of attending a festival in the UK

Base: 402 respondents
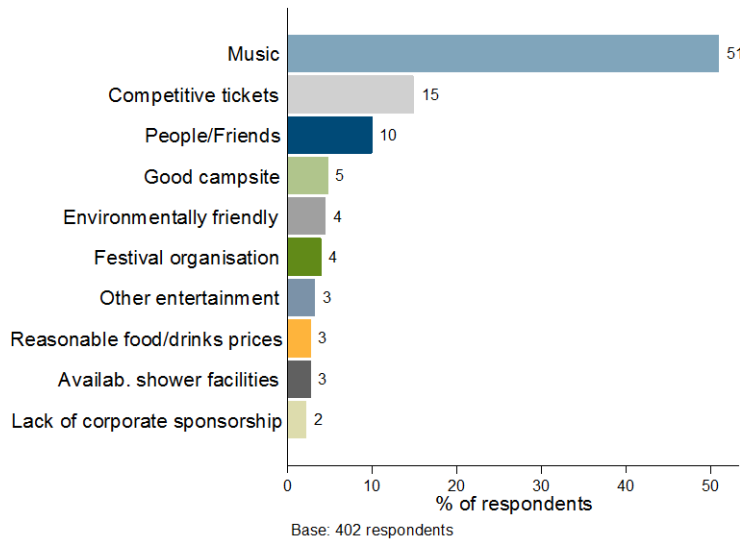
Factors considered at the last festival attended

4.5 We also asked respondents to rank those factors that influenced their decision to attend the last festival that they attended. Figure 4-2 below shows the proportion of respondents that ranked each factor as most important.

4.6   As in the previous case, we find that more than half of respondents indicated that the music was the most important factor in their decision (54%). The second most important factor was a "Social & Relaxation" component (e.g. spend time with friends, escape from normal life, to reminiscence), but only 23% of respondents indicated it as important. The third most important factor was to "Experience something new" (8%).

4.7   4% of respondents referred to the presence of types of entertainment other than music.

Figure 4-2: Factors affecting the decision of attending the last festival in the UK

Base: 402 respondents
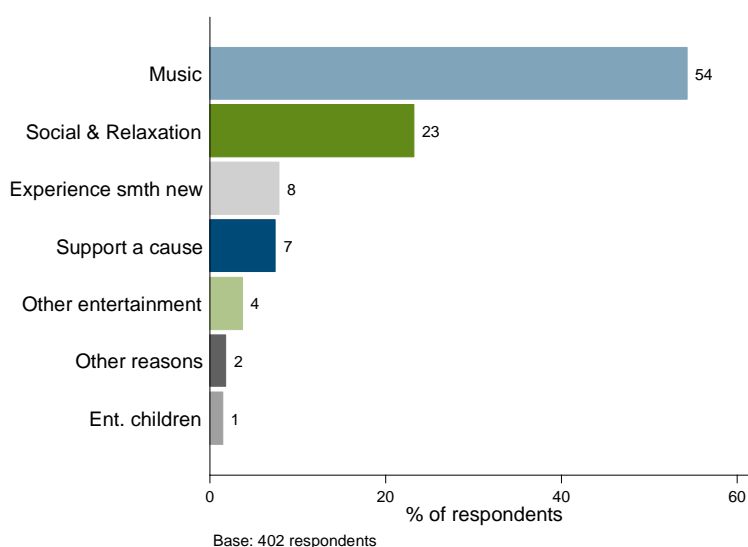
Summary

4.8   The results of the survey indicate that the music is the key factor when attending a festival in the UK, while the availability of other entertainment activities was of limited importance.

Appendix 1
Econometric methodology

Introduction

A1.1   In order to compute the relative contribution of the composition and performance to the value of a concert and festivals, as well as the relative contribution of the music and other entertainment types to the value of a festival, we estimated UK consumers' WTP for attending a concert and a festival using a stated preference (SP) method. Within the SP family, we used a discrete choice experiment (DCE), a choice modelling method. In this section, we provide a general description of DCEs and their application to our work.

Discrete choice experiments

A1.2   According to Louviere et al. (2010), among the different SP methods, DCEs are the most general and consistent with economic demand theory.[4] DCEs are based on random utility theory ("**RUT**"), which provides an explanation of the choice behaviour of individuals. RUT assumes a stochastic decision process in which consumers are assumed to choose one alternative out of a set of discrete alternatives that maximise their utility. We approximate the random utility model using a mixed logit model. Following Train (2009), the utility of person n from alternative j is specified as:[5]

$$U_{nj} = \beta_n x_{nj} + \varepsilon_{nj}$$

Where:

i. x_{nj} are observed variables (e.g. the type of songs, the type of performance, the availability of other entertainment types, etc.) that relate to alternative *j* and decision maker (survey respondent) *n*;

ii. β_n is a vector of coefficients[6] of these variables for person n representing that

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[4]   Louviere, J.J., T.N., Terry and R.T. Carson (2010), Discrete choice experiments are not conjoint analysis, *Journal of Choice Modelling*, 3(3), pp 57-72.

[5]   Train, K. (2009), *Discrete Choice Methods with Simulation*, Cambridge University Press, New York, 2nd edition.

[6]   The coefficient of an attribute in the utility function is also known as the "partworth" of an attribute.

person's tastes; and

    iii. ε_{nj} is a random term that is an independently and identically distributed (iid) extreme value.

A1.3   In a mixed logit model, the coefficients β_n vary over decision makers in the population with density f (β), which is a function of parameters θ that represent, for example, the mean and covariance of the coefficients in the population. Unlike the more standard logit model, mixed logit models provide a flexible specification to represent the distribution of preferences in the population and, thus, to take into account the heterogeneity among respondents' tastes and to allow for unrestricted substitution patterns (i.e. relaxing the independence from irrelevant alternatives assumption). Mixed logit models require the specification of a distribution function for each of the coefficients of the utility function that are assumed to be random.[7] The higher a utility function, the more value a consumer would attribute to a certain product. In most applications, these distributions are normal or lognormal (the latter is useful when the sign of the coefficient is the same for all individuals).[8]

Application to this case

A1.4   The estimation of the logit models requires information on decisions made by individuals and the factors that can influence these decisions. We collect this information through a survey that simulates purchasing decisions made by individuals. Purchasing decisions consist of a choice made from a finite set of alternatives. As explained below, in this particular case, each offering is defined by different attributes such as they type of music being performed. Survey data simulates the choice process ("choice experiment"); respondents are presented with a number of alternatives, each one described by a different combination of attributes, and are asked to choose their preferred alternative. The responses to this type of question allow us to understand consumers' WTP for a single attribute (such as the type of music being performed).

A1.5   In this case we have measured:

    (1)   the incremental value to consumers of compositions by reference to the incremental value that they place upon the songs performed at the concert or festival; and

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[7]   Some of the coefficients can be fixed.

[8]   See, for example, Goett, A. A., K., Hudson and K., Train (2000), "Customers' Choice Among Retail Energy Suppliers: The Willingness-to-Pay for Service Attributes", *The Energy Journal*, 21(4), 1-28.

(2)   the incremental value to consumers of performances by reference to the incremental value that they place upon the artists' performances at the concert and festival.

A1.6   We have estimated two utility functions: one reflects consumers' utility from attending a concert or a festival with different types of songs and artists' performances; and the other reflects consumers' utility from attending a festival with different types of music and other entertainment.

A1.7   In the first case, we have estimated the following utility function:[9]

$$Utility = \alpha * Price +$$

$$\delta_1 * Songs\ Like\ \&\ Artists\ Like +$$
$$\delta_2 * Songs\ Like\ \&\ Artists\ Neither\ Like\ nor\ Dislike +$$
$$\delta_3 * Songs\ Like\ \&\ Artists\ Don't\ know +$$
$$\delta_4 * Songs\ Like\ \&\ Artists\ Dislike +$$
$$\delta_5 * Songs\ Neither\ Like\ nor\ Dislike\ \&\ Artists\ Like +$$
$$\delta_6 * Songs\ Neither\ Like\ nor\ Dislike\ \&\ Artists\ Neither\ Like\ nor\ Dislike +$$
$$\delta_7 * Songs\ Neither\ Like\ nor\ Dislike\ \&\ Artists\ Don't\ know +$$
$$\delta_8 * Songs\ Neither\ Like\ nor\ Dislike\ \&\ Artists\ Dislike +$$
$$\delta_9 * Songs\ Don't\ know\ \&\ Artists\ Like +$$
$$\delta_{10} * Songs\ Don't\ know\ \&\ Artists\ Neither\ Like\ nor\ Dislike +$$
$$\delta_{11} * Songs\ Don't\ know\ \&\ Artists\ Don't\ know +$$
$$\delta_{12} * Songs\ Don't\ know\ \&\ Artists\ Dislike +$$
$$\delta_{13} * Songs\ Dislike\ \&\ Artists\ Like +$$
$$\delta_{14} * Songs\ Dislike\ \&\ Artists\ Neither\ Like\ nor\ Dislike +$$
$$\delta_{15} * Songs\ Dislike\ \&\ Artists\ Don't\ know +$$

$$\beta * None\ of\ these +$$
$$\varepsilon$$

Consumers' preferences for a concert/festival with a particular combination of songs and artists' performances relative to a concert/festival with the songs they dislike and the artists they dislike.

Consumers' preferences for the "outside option" alternative, that is, for not attending a concert/festival relative to attending a concert/festival with the songs they dislike and the artists they dislike.

A1.8   This utility function can be understood as follows.

A1.9 $Price$ is the total amount that respondent will have to pay to attend the concert/festival. The coefficient α measures the consumer's price sensitivity.

A1.10   Each term in the red box is the product of two values. The first of these is denoted δ_i and the second is denoted with words and is referred to as a "dummy variable".

A1.11   The dummy variables are set equal to 1 when the concert or festival considered has the relevant attributes and 0 otherwise. As an example, in the first term, $Songs\ Like\ \&\ Artists\ Like$ equals 1 only if the respondent likes both the songs performed and the artist performing them.

A1.12   The coefficients δ_i represent consumers' preferences for each of these types of concert or festival relative to a concert or festival with songs that the consumer dislikes and artists whose performances they also dislike.

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[9]   We omit the sub index n (individuals) for simplicity of notation.

A1.13   In the grey box, *None of these* equals 1 if the respondent prefers not to select any of the concerts or festivals presented. The coefficient β represents individuals' preferences for this option relative to the other alternatives presented.

A1.14   Finally, ε is a random term that is an iid extreme value.

A1.15   In the second case, we have estimated the following utility function:[10]

$$
\begin{aligned}
Utility = {} & \alpha * Price + \\
& \delta_1 * Music\ Like\ \&\ Other\ entertainment + \\
& \delta_2 * Music\ Like\ \&\ No\ Other\ entertainment + \\
& \delta_3 * Music\ Neither\ Like\ nor\ Dislike\ \&\ Other\ entertainment + \\
& \delta_4 * Music\ Neither\ Like\ nor\ Dislike\ \&\ No\ Other\ entertainment + \\
& \delta_5 * Music\ Don't\ know\ \&\ Other\ entertainment + \\
& \delta_6 * Music\ Don't\ know\ \&\ No\ Other\ entertainment + \\
& \delta_7 * Music\ Dislike\ \&\ Other\ entertainment + \\
& \beta * None\ of\ these + \\
& \varepsilon
\end{aligned}
$$

Consumers' preferences for a festival with a particular combination of music and other entertainment activities <u>relative</u> to a festival with the music they dislike and without other activities.

Consumers' preferences for the "outside option" alternatives, that is, for not attending a festival relative to attending a festival with the music they dislike and without other activities.

A1.16   This function can be interpreted in a similar way to the one above.

A1.17   The WTP for a particular variable is calculated as the estimated coefficient of that variable divided by the estimated coefficient of the monetary variable (i.e. the price). We assume that the price coefficient is fixed and, therefore, that the distribution of the WTP has the same form as the distribution of the variable.

Computing the incremental WTP

A1.18   We use the results of estimating the equations above to compute (i) the incremental WTP of the composition in concerts and festivals, (ii) the incremental WTP of the performance in concerts and festivals, (iii) the incremental value of the music in festivals, and (iv) the incremental value of other entertainment types in festivals.

Incremental WTP for the composition in concerts and festivals

A1.19   We estimate the incremental WTP for the composition in a concert or a festival as the difference between the WTP for the songs that respondents like and other types of songs. We can use three potential benchmarks to compute the incremental WTP for the composition: songs you neither like nor dislike, songs you don't know and songs you dislike. We use the first of these benchmarks as base case in our analysis but, as we discuss below, our conclusions are not sensitive to this decision.

---

[10]   We omit the sub index n (individuals) for simplicity of notation.

A1.20   We estimate the incremental WTP for the composition using the estimated coefficients of the utility function described in paragraph A1.7 as follows:

$$Incremental\ WTP\ composition = \frac{\delta_6 - \delta_2}{\alpha}$$

A1.21   We estimate separately the utility function described in paragraph A1.7 for concerts and festivals so that we estimate different incremental WTP for the composition for concerts and festivals.

Incremental WTP for the performance in concerts and festivals

A1.22   We estimate the incremental WTP for the performance in a concert or a festival as the difference between the WTP for the artists' performances that respondents like and other types of artists' performances. In line with our approach for compositions, we use as a base case benchmark the WTP for a concert or festival with artist performances that respondents neither like nor dislike.

A1.23   We estimate the incremental WTP for the performance using the estimated coefficients of the utility function described in paragraph A1.7 as follows:

$$Incremental\ WTP\ performance\ = \frac{\delta_6 - \delta_5}{\alpha}$$

A1.24   We estimate separately the utility function described in paragraph A1.7 for concerts and festivals so that we estimate different incremental WTP for the performances in concerts and festivals.

Incremental WTP for the music in festivals

A1.25   We estimate the incremental WTP for the music at festivals as the difference between the WTP for the music that respondents like and other types of music. In line with our approach for compositions and the performance, we use as a base case benchmark the WTP for a festival with the music that respondents neither like nor dislike.

A1.26   We estimate the incremental WTP for the music using the estimated coefficients of the utility function described in paragraph A1.15 as follows:

$$Incremental\ WTP\ music\ = \frac{\delta_4 - \delta_2}{\alpha}$$

Incremental WTP for other entertainment types in festivals

A1.27   We estimate the incremental WTP for the presence of other entertainment activities such as comedy, theatre, cabaret and poetry, as the difference between the WTP for a festival with the music that respondents neither like nor dislike with other entertainment types and a festival with the same music, but without other entertainment types.

A1.28   We estimate the incremental WTP for other entertainment types using the estimated coefficients of the utility function described in paragraph A1.15 as follows:

$$Incremental\ WTP\ other\ entertainment\ types\ = \frac{\delta_4 - \delta_3}{\alpha}$$

Appendix 2
Survey sample and design

Introduction

A2.1　In this appendix we set out further information about the survey sample and choice exercise design.

Sample description

A2.2　BDRC Continental undertook an online survey between Friday 15 August and Monday 18 August 2014. Responses were collected using an online panel of UK residents aged 16 years and above. The survey invite was randomly sent to a nationally representative cross-section of the UK population, which is representative of the target population in terms of age, gender and place of residence. 811 respondents took part in our survey. Of these, 780 respondents had attended at least one concert in the last 12 months and 402 respondents had attended at least one festival in the same period.

A2.3　Table A2-1 below shows the distribution of the final sample by age and gender across the groups of respondents.

Table A2-1: Gender and age characteristics of the final sample

Criteria	Respondents	%
Gender		
Male	396	49%
Female	415	51%
Total	811	100%
Age		
16-17 years	19	2%
18-24 years	89	11%
25-34 years	155	19%
35-44 years	147	18%
45-54 years	153	19%
55-65 years	137	17%
66 or over	111	14%
Total	811	100%

Choice exercises

A2.4   As mentioned in paragraph 1.5 above, the survey consisted of two parts: an initial questionnaire and a series of choice exercises. In the following subsections, we provide further details of the exercises included in the survey.

First choice exercise

A2.5   In this exercise we asked respondents to assume that they had decided to attend a concert at a medium-sized indoor concert venue where there will be a headline performer and a support act.

A2.6   We also asked them to assume that:

(1)   in total, the event will last for four hours;

(2)   the venue has space for both seating and standing and has good quality sound and stage lighting;

(3)   there is a bar inside the venue, which sells various brands of beer, wine and spirits as well as soft drinks and crisps; and

(4)   the venue is within an hour's travel from their home and there are adequate transport links to and from the venue.

A2.7   Respondents were presented with four options: three different concerts and the possibility not to choose any of these concerts. Each concert was characterised by the following attributes:

(1)   <u>The songs performed</u>: this indicates whether respondents know and like the songs performed. The options respondents may be presented with were (i) songs they like, (ii) songs they neither like nor dislike, (iii) songs they dislike, or (iv) songs they don't know (that is, they haven't listened to these songs before).

(2)   <u>The artist's live performance</u>: this indicates whether respondents know and like how the headline artist performs in a live show. The options respondents may be presented with were (i) an artist's performance they like, (ii) an artist's performance they neither like nor dislike, (iii) an artist's performance they dislike, or (iv) an artist's performance they don't know (that is, they don't know how the headline artist performs in a live show).

(3)   <u>The ticket price</u>: the total price that respondents will have to pay to enter the concert. We set six alternative prices: £5, £10, £20, £30, £50 and £80.

A2.8   In Table A2-2 we summarise the attributes and levels.

Table A2-2: Attributes and levels for the first choice exercise

Attribute	Level
Songs being performed	Songs you Like
	Songs you neither like nor dislike
	Songs you dislike
	Songs you don't know
Artist's performance	Artist you like
	Artist you neither like nor dislike
	Artist you dislike
	Artist you don't know
Ticket price	£5
	£10
	£20
	£30
	£50
	£80

A2.9 In all three of the choice exercises, we designed 100 different choice experiments. Those presented to each respondent were selected randomly.[11]

Second choice exercise

A2.10 In the second exercise we asked respondents to assume that they had decided to attend a three day festival at a large outdoor space where there is a large main stage and several smaller stages that will feature music for ten hours per day.

A2.11 We also asked them to assume that:

(1) the line-up of the festival is already available,

(2) there are also several other areas on the festival site, offering an array of other entertainment, that could include comedy, theatre, cabaret, poetry, spiritual/well-being and a children's area;

(3) there is a wide variety of food on offer to purchase and easy access to various bars;

---

[11] All our choice experiments were designed using the general method for efficient choice designs ("ChoicEff" SAS macro) developed by Zwerina, K., J. Huber, and W.F. Kuhfeld (2005), "A General Method for Constructing Efficient Choice Designs", SAS Technical Papers, available at http://support.sas.com/techsup/technote/mr2010e.pdf.

(4)   respondents will be allocated a pitch for their tent in one of the designated camping areas;

(5)   the camping area has ample temporary toilet facilities, but there are no shower facilities; and

(6)   it will take four hours to travel to the venue.

A2.12   Respondents were presented with four options: three different festivals and the possibility not to choose any of these concerts. Each festival was characterised by the following attributes:

(1)   <u>The songs performed</u>: this indicates whether respondents know and like the songs performed. The options respondents may be presented with were (i) songs they like, (ii) songs they neither like nor dislike, (iii) songs they dislike, or (iv) songs they don't know (that is, they haven't listened to these songs before).

(2)   <u>The artists' live performances</u>: this indicates whether respondents know and like how the artists perform in a live show. The options respondents may be presented with were (i) artists' performances they like, (ii) artists' performances they neither like nor dislike, (iii) artists' performances they dislike, or (iv) artists' performances they don't know (that is, they don't know how the artists perform in a live show).

(3)   <u>The ticket price</u>: the total price that respondents will have to pay to enter the festival including camping. We set six alternative prices: £25, £60, £120, £180, £270 and £400. The largest of these prices were intentionally selected to be high relative to the usual pricing of festival tickets to ensure that there is sufficient variability in the prices so that we could observe respondents' price sensitivity in their responses.

A2.13   In Table A2-3 we summarise the attributes and levels.

Table A2-3: Attributes and levels for the second choice exercise

Attribute	Level
Songs performed	Songs you Like
	Songs you neither like nor dislike
	Songs you dislike
	Songs you don't know
Artists' performances	Artists you like
	Artists you neither like nor dislike
	Artists you dislike
	Artists you don't know
Ticket price	£25
	£60
	£120
	£180
	£270
	£400

Third choice exercise

A2.14 In the third exercise we asked respondents again to assume that they had decided to attend a three day festival at a large outdoor space where there is a large main stage and several smaller stages that will feature music for ten hours per day.

A2.15 We also asked respondents to assume that:

(1) the line-up of the festival is already available;

(2) there is a wide variety of food on offer to purchase and easy access to various bars;

(3) respondents will be allocated a pitch for their tent in one of the designated camping areas;

(4) the camping area has ample temporary toilet facilities, but there are no shower facilities; and

(5) it will take four hours to travel to the venue.

A2.16   Respondents were given a choice of four different options: three different festivals and the possibility not to choose any of these concerts. Each festival was characterised by the following attributes:

(1)   <u>The music performed</u>: this indicates whether respondents know and like the music performed (the music being the combination of the artists' live performance and the songs being performed). The options respondents may be presented with were (i) music they like, (ii) music they neither like nor dislike, (iii) music they dislike, or (iv) music they don't know (that is, they haven't listened to these music before).

(2)   <u>Other entertainment types</u>: this indicates whether there are also several other areas on the festival site, offering an array of other entertainment, such as, comedy, theatre, cabaret, poetry, spiritual/wellbeing or a children's area.

(3)   <u>The ticket price</u>: the total price that respondents will have to pay to enter the festival including camping. We set six alternative prices: £25, £60, £120, £180, £270 and £400.

A2.17   In Table A2-4 we summarise the attributes and levels.

Table A2-4: Attributes and levels for the third choice exercise

Attribute	Level
Music	Music you Like
	Music you neither like nor dislike
	Music you dislike
	Music you don't know
Other entertainment	Yes
	No
Ticket price	£25
	£60
	£120
	£180
	£270
	£400

Appendix 3
Survey questions

A3.1 This appendix contains the script and questions used for the survey. The words shown in coloured text are instructions to the survey company. The choice exercises are ordered differently to how we have reported them in this report. "Exercise 1 – Festivals" corresponds to Exercise 2 in this report. "Exercise 2 – Festivals" corresponds to Exercise 3 in this report. "Exercise 1 – Concerts" corresponds to Exercise 1 in this report.

We are undertaking a survey on consumers' preferences for live music concerts and festivals that include music in the UK. This includes any genre of live music, except for classical music.

We would like to ask you about the features that are important to you when choosing to attend these types of music events.

Please answer the questions so that they accurately reflect what you would choose in a real situation.

Thank you for your help.

Screening Questions

ASK ALL

1. Are you a UK resident?

    a. Yes

    b. No   → *TERMINATE*

ASK ALL

2. Do you or any member of your family work for any of the following types of industries?

    a. Market Research …………………………………… 1   → TERMINATE

    b. Advertising ………………………………………… 2   → TERMINATE

    c. Music industry (e.g. record label, music publishing, live music, music retail, etc.) …………………………………………… 3   → TERMINATE

    d. None of the above ……………………………… 4   → CONTINUE

3.   Are you?

    a.   Male 1

    b.   Female 2

4.   Please select your age group.

    a.   Under 16 years old....................................... 1   → TERMINATE

    b.   16 to 17 years old 2

    c.   18 to 24 years old 3

    d.   25 to 34 years old 4

    e.   35 to 44 years old 5

    f.   45 to 54 years old 6

    g.   55 to 65 years old 7

    h.   Over 65 years old 8

5.   How many live music concerts of any genre, except classical music, have you attended in the last 12 months in the UK? Only include concerts where you paid for the ticket yourself. Do not include any concerts that were part of another event such as a festival. Also, do not include those concerts that were a present or provided as part of a hospitality package.

    _____

    None

6.   How many festivals that include music of any genre, except classical music, have you attended in the last 12 months in the UK? By festivals we mean events that lasted at least one day, featured multiple headliners and that may have featured other types of entertainment as well. Only include festivals where you paid for the ticket yourself. Do not include those festivals that were a present or provided as part of a hospitality package.

    _____

    None

We are now going to ask you some questions about the festivals you have attended over the past 12 months in the UK. When talking about "music festival" we refer to any festival at which live music is performed but there may also be other entertainment. We remind you that we are talking about any genre of live music, except for classical music.

7. Of the <Insert number from Q6 e.g. 5> music festival(s) you have attended over the past 12 months in the UK, in how many cases did you buy your ticket from the primary ticketing market?

    By primary ticketing market we mean getting the tickets directly from the organiser - either directly or through a sales platform. This does not include tickets purchased on the secondary market from people or organisations (such as, Getmein.com, Viagogo.co.uk, Seatwave.com, Stubhub.co.uk, etc.) that sell tickets originally obtained from the primary market.

    a. 5
    b. 4
    c. 3
    d. 2
    e. 1
    f. Did not buy any tickets through the primary ticketing market
    g. Don't know

8. Thinking about the <Insert number from Q7 e.g. 5> festivals for which you bought tickets on the primary ticketing market, in how many cases did you pay a booking fee in addition to the face value of your ticket?

    a. 5
    b. 4
    c. 3
    d. 2
    e. 1
    f. No cases
    g. Don't know

9.   Thinking about the most recent festival tickets you bought on the primary ticketing market, what was the booking fee (in £)?

_____£
Don't know

10.   A) Thinking about the last festival in the UK for which you bought the tickets on the secondary ticketing market, did you pay more or less than face value for the tickets?

   a.   Paid more than face value

   b.   Paid face value exactly

   c.   Paid less than face value

   d.   Don't know

10.   B) How much <online script to insert 'more' or 'less' from Q10a> than face value were the tickets?

   a.   10% 'more' or 'less'

   b.   20% 'more' or 'less'

   c.   30% 'more' or 'less'

   d.   40% 'more' or 'less'

   e.   50% 'more' or 'less'

   f.   60% 'more' or 'less'

   g.   70% 'more' or 'less'

   h.   80% 'more' or 'less'

   i.   90% 'more' or 'less'

   j.   Twice (100%) more' / >90% less but not free

   k.   More than twice (100%) more please specify what percent more

   l.   Don't know

11. On top of what you paid for the ticket, what proportion of your total expenditure was spent on:

   a. Accommodation (camping/hostel/etc.) .... ___

   b. Food .... ___

   c. Drinks .... ___

   d. Transport to the festival .... ___

   e. Other: Please specify... ___

   Total expenditure: £_____

12. Thinking back to the last music festival you attended in the UK, please select the factors that were important to you in your decision to attend:

   Multi-code

Factor	Important
Support a cause e.g. charity festival	
Social & Relaxation (e.g. spend time with friends, escape normal life, to reminisce)	
The Music (to see and hear the artists and their music)	
The availability of other entertainment included in the festival (e.g. comedy, theatre, cabaret, poetry, spiritual/wellbeing)	
To experience something new	
To entertain the children	
Other (please state)	

13. Please state which was the most important factor in your decision to attend the festival.

   <Show only those responses selected at Q12>

   Single code
   Don't know

14.   In the table below we have listed some factors that influence people's decision of whether or not to attend a music festival in the UK.

Please rank them in order of importance to you, with 1 being the Most Important and 10 being the Least Important.

Factor	Ranking
Like-minded people & friends will be there	
Effectiveness of overall festival organisation	
The Music (to see and hear the artists and their music)	
Good campsite organisation	
Competitively priced tickets	
It is environmentally friendly	
Availability of shower facilities	
Reasonable food and drinks prices	
Lack of corporate sponsorship	
The availability of other entertainment included in the festival (e.g. comedy, theatre, cabaret, poetry, spiritual/well-being and children's area)	

<online scripting – FESTIVAL respondents (Q6 = 1+) will now see the two conjoint exercises>

Exercise 1 - Festivals

We are going to show you a number of different scenarios that describe different festivals. For each scenario, we are going to ask you to consider the events shown and to choose your preferred one.

For the purposes of these exercises, please, assume that:

▪ You are going to attend a three day festival at a large outdoor space.

▪ There is a large main stage and several smaller stages. Each of the stages will feature music for ten hours per day, throughout the event. The line-up of the festival is already available.

- There are also several other areas on the festival site, offering an array of other entertainment. These would include: Comedy, Theatre, Cabaret, Poetry, Spiritual/Well-being and a Children's Area.

- There is a wide variety of food on offer to purchase and easy access to various bars.

- You will be allocated a pitch for your tent in one of the designated camping areas. There are ample temporary toilet facilities, but there are no shower facilities.

- It will take you four hours to travel to the venue.

- The options shown are the only ones available to you.

- When making your choice, please consider what choice you would make if you were spending your own money; do not choose an option if you would not choose it in reality.

The options shown in each exercise will be characterised by:

- **The songs being performed**: this indicates whether you know and like the songs being performed. In particular, whether (i) you like the songs, or (ii) you neither like nor dislike them, or (iii) you dislike them or (iv) you just don't know them (that is, you haven't listened to these songs before).

- **The artists' live performance**: this indicates whether you know and like how the artists perform in a live show. In particular, whether (i) you like their live performance, or (ii) you neither like nor dislike their live performance, or (iii) you dislike their live performance or (iv) you just don't know how the artists perform in a live show.

- **The ticket price**: the total price that you will have to pay to enter the festival including camping.

In these exercises, the options shown are the only ones available so that if you want to go to a festival you have to choose one of the alternatives shown.

You will always have an option called "None of these". If you select this option you are indicating that you would prefer not to attend a festival on any of the terms offered.

Exercise 2 - Festivals

We want you once again to assume that you are going to attend a three day festival at a large outdoor space. As in the previous case, we want you to assume that:

- There is a large main stage and several smaller stages. Each of the stages will feature music for ten hours per day, throughout the event. The line-up of the festival is already available.

- There is a wide variety of food on offer to purchase and easy access to various bars.

- You will be allocated a pitch for your tent in one of the designated camping areas. There are ample temporary toilet facilities, but there are no shower facilities.

- It will take you four hours to travel to the venue.

- The options shown are the only ones available to you.

- When making your choice, please consider what choice you would make if you were spending your own money; do not choose an option if you would not choose it in reality.

Unlike the previous case, unless indicated in the scenario, there are no other entertainment activities.

The options shown in each exercise will be characterised by:

- **The music:** this indicates whether you know and like the music (being the combination of both the artists' live performance and the songs being performed). In particular, whether (i) you like the music, or (ii) you neither like nor dislike it, or (iii) you dislike it or (iv) you just don't know it.

- **Other entertainment activities**: this indicates whether there are also several other areas on the festival site, offering an array of other entertainment, such as, comedy, theatre, cabaret, poetry, spiritual/wellbeing and a children's area.

- **The ticket price**: the total price that you will have to pay to enter the festival including camping.

In these exercises, the options shown are the only ones available so that if you want to go to a festival you have to choose one of the alternatives shown.

You will always have an option called "None of these". If you select this option you are indicating that you would prefer not to attend a festival on any of the terms offered.

Questions on concerts

ASK ALL (Q5 = AT LEAST ONE CONCERT)

We are now going to ask you some questions about the concerts you have attended over the past 12 months in the UK. We remind you that we are talking about any genre of live music, except for classical music.

15. Of the <Insert number from Q5 e.g. 5> concert(s) you have attended over the past 12 months in the UK, in how many cases did you buy your ticket from the primary ticketing market?

By primary ticketing market we mean getting the tickets directly from the organiser - either directly or through a sales platform. This does not include tickets purchased on the secondary market from people or organisations (such as, Getmein.com, Viagogo.co.uk, Seatwave.com, Stubhub.co.uk, etc.) that sell tickets originally obtained from the primary market.

a. 5
b. 4
c. 3
d. 2
e. 1
f. Did not buy any tickets through the primary ticketing market
g. Don't know

16. Thinking about the <Insert number from Q15 e.g. 5> concert(s) for which you bought tickets on the primary ticketing market, in what proportion of cases did you pay a booking fee in addition to the face value of your ticket?

<Script to show number of concerts attended at Q5, example below>

a. 5
b. 4
c. 3
d. 2
e. 1
f. No cases
g. Don't know

17. Thinking about the most recent concert tickets you bought on the primary ticketing market, what was the booking fee (in £)?

_____£
Don't know

18. A) Thinking about the last concert in the UK for which you bought the tickets on the secondary ticketing market, did you pay more or less than face value for the tickets?

    a. Paid more than face value

    b. Paid face value exactly

    c. Paid less than face value

    d. Don't know

18. B) How much <online script to insert 'more' or 'less' from Q19a> than face value were the tickets?

    a. 10% 'more' or 'less'

    b. 20% 'more' or 'less'

    c. 30% 'more' or 'less'

    d. 40% 'more' or 'less'

    e. 50% 'more' or 'less'

    f. 60% 'more' or 'less'

    g. 70% 'more' or 'less'

    h. 80% 'more' or 'less'

    i. 90% 'more' or 'less'

    j. Twice (100%) more' / >90% less but not free

    k. More than twice (100%) more please specify what percent more

    l. Don't know

<online scripting – CONCERT respondents (Q5 = 1+) will now see the one conjoint exercise>

Exercise 1 - Concerts

We are going to show you a number of different scenarios that describe different concerts of any type other than classical music. For each scenario, we are going to ask you to consider the events shown and to choose your preferred one.

For the purposes of these exercises, please, assume that:

▪ You are going to attend a concert at a medium sized, indoor concert venue.

▪ There will be a headline performer and one support act. In total, the event will last for four hours.

- The venue has space for both seating and standing and has good quality sound and stage lighting. There is a bar inside the venue, which sells various brands of beer, wine and spirits as well as soft drinks and crisps.

- The venue is within an hour's travel from your home and there are adequate transport links to and from the venue.

- The options shown are the only ones available to you.

- When making your choice, please consider what choice you would make if you were spending your own money; do not choose an option if you would not choose it in reality.

The options shown in each exercise will be characterised by:

- **The songs being performed**: this indicates whether you know and like the songs being performed. In particular, whether (i) you like the songs, or (ii) you neither like nor dislike them, or (iii) you dislike them or (iv) you just don't know them (that is, you haven't listened to these songs before).

- **The artist's live performance**: this indicates whether you know and like how the headline artist performs in a live show. In particular, whether (i) you like their live performance, or (ii) you neither like nor dislike their live performance, or (iii) you dislike their live performance or (iv) you just don't know how the headline artist performs in a live show.

- **The ticket price**: the total price that you will have to pay to enter the concert.

In these exercises, the options shown are the only ones available so that if you want to go to a concert you have to choose one of the alternatives shown.

You will always have an option called "None of these". If you select this option you are indicating that you would prefer not to attend a concert on any of the terms offered.

Socio-demographic questions

19.   Which region do you live in?

   a.   Channel Islands

   b.   East

   c.   East Midlands

   d.   London

   e.   North East

   f.   North West

   g.   Northern Ireland

   h.   Scotland

   i.   South East

   j.   South West

   k.   Wales

   l.   West Midlands

   m.   Yorkshire & Humberside

20.   What is your current working status?

   a.   Paid employment (30+ hours a week)

   b.   Paid employment (8-29 hours a week)

   c.   Paid employment (less than 8 hours a week)

   d.   Self-employed

   e.   Retired

   f.   Studying full time

   g.   Look after the house

   h.   Unemployed

   i.   Other

   j.   Prefer not to say

21. In which of the following income bands does your gross annual household income fall?

    a. Up to £5,000

    b. £5,000-£9,999

    c. £10,000-£14,999

    d. £15,000-£19,999

    e. £20,000-£24,999

    f. £25,000-£29,999

    g. £30,000-£34,999

    h. £35,000-£39,999

    i. £40,000-£49,999

    j. £50,000-£74,999

    k. £75,000 and above

    l. Prefer not to say

**Appendix 4
Estimation results**

First exercise: relative value of compositions and performances at concerts

A4.1   In Table A4-1 we set out the estimated coefficients of the equation described in paragraph A1.7 based on the responses to the first choice exercise using a mixed logit model. The mixed logit model results have been obtained by assuming that some coefficients are normally distributed in the population. In particular, we assume that all non-price coefficients of the utility function are normally distributed.[12] The price coefficient is assumed to be fixed rather than varying over respondents. Under this specification, the distribution of the WTP for an attribute has the same form as the distribution of the attribute's coefficient, which varies over respondents.[13]

A4.2   In the table below we show the mean and the standard deviation of the estimated distribution for those coefficients that are assumed to be normally distributed and the point estimate for the coefficient that is assumed to be fixed ("Ticket price"). The stars next to each coefficient indicate that the coefficient is statistically significant, i.e., that it is statistically different from zero. A mean coefficient that is not statistically significant is said to be on average statistically equal to the omitted combination (in this case "Songs you dislike" and "Artist you dislike"). A standard deviation coefficient that is not statistically significant implies that all consumers derive the same utility from this attribute, i.e. that the utility does not change across respondents.

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[12]   Assuming that the coefficient of a particular attribute is normally distributed implies that some individuals place a positive value on that attribute while other individuals place a negative value on it.

[13]   For further discussion see Goett et al. (2000) and Sonnier, G. and K., Train (2005), "Mixed Logit with Bounded Distributions of Correlated Partworths", Ch. 7, pp. 117-134, in *Applications of Simulation Methods in Environmental Resource Economics*, A. Alberini and R. Scarpa, eds., Springer Publisher: Dordrecht, The Netherlands.

A4.3   The results in Table A4-1 show that the estimated mean of almost all coefficients are statistically different from zero and show the expected sign. In particular, consumers always prefer a concert with the "songs you like" to a concert with any other type of songs, given the same type of other attributes (all else equal). For instance, the estimated mean coefficient for the "songs you like" and "artist you like" (5.733) is larger than the estimated coefficient for the "songs you neither like nor dislike" and "artist you like" (3.055). Consumers tend to prefer a concert with the "songs you neither like nor dislike" than a concert with the "songs you don't know", and a concert with these two types of songs than a concert with "songs you dislike", all else equal.

A4.4   We find similar results for the artist's performance. The most preferred attribute is "an artist you like", followed by "an artist you neither like nor dislike" or "an artist you don't know", all else equal.

A4.5   As expected the estimated coefficient for the "Ticket Price" is found to be negative since a higher price results in lower demand.

A4.6   The mixed logit model presented below fits the data better than the standard conditional logit model that assumes that all coefficients are fixed. There are two reasons for that:

(1)   The standard deviations are statistically significant for all the coefficients that were assumed to be normally distributed, such that the hypothesis of zero variance can be rejected.

(2)   The likelihood ratio index rises substantially when parameters are allowed to vary, indicating that the explanatory power of the mixed logit is considerably greater than with standard logit.[14]

Table A4-1: Mixed logit model: First choice exercise

Variable	Parameter	Estimate	Std. Error
Songs you like & Artist you like	Mean	5.733***	[0.372]
	St dev	2.106***	[0.463]
Songs you like & Artist you neither like nor dislike	Mean	3.410***	[0.256]
	St dev	0.482	[0.382]
Songs you like & Artist you don't know	Mean	3.284***	[0.251]
	St dev	0.663	[0.731]

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14   In this case the test statistic of standard logit versus mixed logit equals 2(3158 – 2926) = 464. This test statistic is distributed chi-squared with degrees of freedom equal to the number of random parameters (16). The value of the test (464) exceeds the critical value of the of chi-squared with 16 degrees of freedom (26.3) and, therefore, the test rejects standard logit relative to mixed logit.

Variable	Parameter	Estimate	Std. Error
Songs you like & Artist you dislike	Mean	1.099***	[0.379]
	St dev	1.218**	[0.508]
Songs you neither like nor dislike & Artist you like	Mean	3.055***	[0.265]
	St dev	1.260***	[0.296]
Songs you neither like nor dislike & Artist you neither like nor dislike	Mean	1.712***	[0.257]
	St dev	-0.287	[0.387]
Songs you neither like nor dislike & Artist you don't know	Mean	1.133***	[0.265]
	St dev	0.021	[0.457]
Songs you neither like nor dislike & Artist you dislike	Mean	0.431	[0.336]
	St dev	-0.427	[0.660]
Songs you don't know & Artist you like	Mean	3.151***	[0.262]
	St dev	-1.219***	[0.320]
Songs you don't know & Artist you neither like nor dislike	Mean	1.105***	[0.279]
	St dev	0.47	[0.363]
Songs you don't know & Artist you don't know	Mean	0.927***	[0.296]
	St dev	0.663**	[0.337]
Songs you don't know & Artist you dislike	Mean	-1.957**	[0.975]
	St dev	3.095***	[0.718]
Songs you dislike & Artist you like	Mean	0.809**	[0.350]
	St dev	1.662***	[0.390]
Songs you dislike & Artist you neither like nor dislike	Mean	-0.104	[0.423]
	St dev	1.019**	[0.461]
Songs you dislike & Artist you don't know	Mean	0.027	[0.316]
	St dev	-0.219	[0.647]
None of these	Mean	1.409***	[0.242]
	St dev	2.190***	[0.144]
Ticket price	Value	-0.026***	[0.002]
N			12,480
Log-Likelihood			-2,926

Notes: * significant at 10%; ** significant at 5%; *** significant at 1%. The sign of the estimated coefficient for the St. dev. is irrelevant. Although in practice the estimates may be negative, interpret them as being positive.

Second exercise: relative value of compositions and performances at festivals

A4.7   In Table A4-2 we set out the estimated coefficients of the equation described in paragraph A1.7 based on the responses to the second choice exercise using a mixed logit model. As with the first choice exercise, the mixed logit model results have been obtained by assuming that that all non-price coefficients of the utility function are normally distributed and the price coefficient is assumed to be fixed.

A4.8   Similarly to what we find for the first choice exercise, almost all coefficients are statistically significant and show the expected sign.

A4.9   Regarding the songs performed, consumers always prefer a festival with the "songs you like" compared to a festival with any other type of songs. All else equal, consumers either prefer a festival with the "songs you neither like nor dislike" to the "songs you don't know" or are indifferent between the two. Finally, they prefer a festival with the "songs you neither like nor dislike" or the "songs you don't know" to a festival with the "songs you dislike".

A4.10   Regarding the artists' performances, the most preferred attribute is "artists you like", followed by "artists you neither like nor dislike" or "artists you don't know", all else equal.

A4.11   The estimated price coefficient is negative as expected.

Table A4-2: Mixed logit model: Second choice exercise[15]

Variable	Parameter	Estimate	Std. Error
Songs you like & Artists you like	Mean	3.515***	[0.316]
	St dev	-1.409**	[0.551]
Songs you like & Artists you neither like nor dislike	Mean	2.070***	[0.327]
	St dev	1.977***	[0.430]
Songs you like & Artists you don't know	Mean	2.328***	[0.292]
	St dev	0.764*	[0.414]
Songs you like & Artists you dislike	Mean	0.827**	[0.368]
	St dev	1.032*	[0.529]
Songs you neither like nor dislike & Artists you	Mean	2.159***	[0.314]

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15   As in the first choice exercise, the likelihood ratio index indicates that the explanatory power of the mixed logit is greater than with standard logit. In particular, the test statistic of standard logit versus mixed logit is equal to 2(1749 – 1635) = 228. This test statistic is distributed chi-squared with degrees of freedom equal to the number of random parameters (16). The value of the test (228) exceeds the critical value of the of chi-squared with 16 degrees of freedom (26.3) and, therefore, the test rejects standard logit relative to mixed logit.

Variable	Parameter	Estimate	Std. Error
like	St dev	-1.602***	[0.463]
Songs you neither like nor dislike & Artists you neither like nor dislike	Mean	0.978***	[0.311]
	St dev	-0.432	[0.526]
Songs you neither like nor dislike & Artists you don't know	Mean	0.467	[0.370]
	St dev	-0.824*	[0.486]
Songs you neither like nor dislike & Artists you dislike	Mean	-0.593	[0.530]
	St dev	-1.379**	[0.685]
Songs you don't know & Artists you like	Mean	2.437***	[0.287]
	St dev	0.07	[0.823]
Songs you don't know & Artists you neither like nor dislike	Mean	0.279	[0.367]
	St dev	0.844*	[0.468]
Songs you don't know & Artists you don't know	Mean	0.594*	[0.340]
	St dev	0.52	[0.830]
Songs you don't know & Artists you dislike	Mean	-1.660*	[0.866]
	St dev	1.881***	[0.672]
Songs you dislike & Artists you like	Mean	0.839*	[0.432]
	St dev	-0.943	[1.032]
Songs you dislike & Artists you neither like nor dislike	Mean	-0.338	[0.553]
	St dev	1.152	[0.746]
Songs you dislike & Artists you don't know	Mean	-0.778	[0.540]
	St dev	-0.707	[0.783]
None of these	Mean	0.331	[0.271]
	St dev	2.101***	[0.187]
Ticket price	Value	-0.006***	[0.000]
N			6,432
Log-Likelihood			-1,635

*Notes: * significant at 10%; ** significant at 5%; *** significant at 1%. The sign of the estimated coefficient for the St. dev. is irrelevant. Although in practice the estimates may be negative, interpret them as being positive.*

Third exercise: relative value of music and other entertainment at festivals

A4.12 In Table A4-3 we set out the estimated coefficients of the equation described in paragraph A1.15 based on the responses to the third choice exercise using a mixed logit model. As with the previous choice exercises, the mixed logit model results have been obtained by assuming that that all non-price coefficients of the utility function are normally distributed and the price coefficient is assumed to be fixed.

A4.13 Almost all coefficients are statistically significant and show the expected sign. We find that consumers always prefer a festival with the "music you like" than a festival with any other type of music, all else equal. Consumers also prefer a festival with the "music you neither like nor dislike" than a festival with the "music you don't know" and any of these two types of festivals than a festival with the "music you dislike", all else equal.

A4.14 We also find that, given a particular type of music, consumers prefer a festival with "other entertainment" than a festival without "other entertainment". The exception to this is when the music is the "music you dislike", in which case having "other entertainment" does not change consumers preferences. The estimated coefficients show that respondents are not willing to pay to go to such a festival.

Table A4-3: Mixed logit model: Third choice exercise[16]

Variable	Parameter	Estimate	Std. Error
Music you like & Other entertainment	Mean	4.225***	[0.268]
	St dev	1.360***	[0.316]
Music you like & No other entertainment	Mean	3.538***	[0.242]
	St dev	0.233	[0.408]
Music you neither like nor dislike & Other entertainment	Mean	1.994***	[0.247]
	St dev	0.832***	[0.318]
Music you neither like nor dislike & No other entertainment	Mean	1.155***	[0.281]
	St dev	1.022**	[0.424]
Music you don't know & Other entertainment	Mean	1.646***	[0.256]
	St dev	-0.815**	[0.403]
Music you don't know & No other entertainment	Mean	0.462	[0.373]
	St dev	1.272***	[0.478]
Music you dislike & Other entertainment	Mean	-0.988	[0.660]
	St dev	2.317***	[0.626]
None of these	Mean	0.636***	[0.234]
	St dev	1.888***	[0.175]
Ticket price	Value	-0.008***	[0.001]
N			6,432
Log-Likelihood			-1,510

*Notes: * significant at 10%; ** significant at 5%; *** significant at 1%. The sign of the estimated coefficient for the St. dev. is irrelevant. Although in practice the estimates may be negative, interpret them as being positive.*

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[16] As in the previous choice exercises, the likelihood ratio index indicates that the explanatory power of the mixed logit is greater than with standard logit. In particular, the test statistic of standard logit versus mixed logit is equal to 2(1607 – 1510) = 194. This test statistic is distributed chi-squared with degrees of freedom equal to the number of random parameters (8). The value of the test (194) exceeds the critical value of the of chi-squared with 8 degrees of freedom (15.51) and, therefore, the test rejects standard logit relative to mixed logit.

Appendix 5
Relative value calculations

A5.1   In this appendix we provide additional details on the WTP computed for each attribute and the relative valuations of songs and performances in concerts and festivals and the relative valuation of music and other entertainment types in festivals.

Potential baselines

4.9   As explained in paragraph 1.9, we estimate the incremental WTP for a particular attribute in a concert or festival as the difference between the WTP for a concert or festival with the songs/performance/music that respondents like and the WTP for the same concert or festival but with other types of songs/performance/music. Thus, the incremental WTP for an attribute depends on the baseline used as a reference. Table A5-1 below shows all the potential baselines that could be used to calculate the incremental WTP for the composition and for the performance in concerts or festivals. We could calculate the incremental WTP for the composition by comparing the WTP in scenario A, B, C or D with any other scenario in the same column (for instance, scenario B with scenario F). Similarly, we could calculate the incremental WTP for the performance by comparing the WTP in scenario A, E, I or M with any other scenario in the same row (for instance, scenario E and scenario F).

4.10   For the purposes of our analysis a baseline is a valid one if the WTP for attending a concert or festival of that level of liking is positive.[17] Otherwise, we would overestimate the value of the attribute. For simplicity of exposition, in our main calculations we used as a baseline the songs/artist/music respondents neither like nor dislike, when the WTP is positive in all cases. As we discuss below, we find qualitatively similar results when we use any other benchmarks with a positive WTP.

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[17]   A negative WTP for a concert or a festival would mean that individuals do not want to attend that concert or that festival and, actually, that they would only attend if they got some money in exchange.

Table A5-1: Potential benchmarks for the relative value of composition and performance

Type of songs:	Type of artist:			
	"Artists you like"	"Artists you neither like nor dislike"	"Artists you don't know"	"Artists you dislike"
"Songs you like"	A	B	C	D
"Songs you neither like nor dislike"	E	F	G	H
"Songs you don't know"	I	J	K	L
"Songs you dislike"	M	N	O	P

4.11   Table A5-2 below shows all the potential benchmarks that could be used to compute the incremental WTP for the music and for the availability of other entertainment activities in festivals. We could compute the incremental WTP for the music in a festival by comparing the WTP in scenario A or B with any other scenario in the same column (for instance, scenario B and D). Similarly, we could compute the incremental WTP for other entertainment activities by comparing the WTP in scenario A, C, E or G with any other scenario if the same row (for instance, scenario C and D).

4.12   In our main analysis we use the benchmarks in which there are no other entertainment activities and respondents neither like nor dislike the music. As we discuss below, we find qualitatively similar results when we use any other benchmarks with a positive WTP.

Table A5-2: Potential benchmarks for the relative value of music and other entertainment

Type of music:	Availability of other entertainment activities	
	"Yes"	"No"
"Music you like"	A	B
"Music you neither like nor dislike"	C	D
"Music you don't know"	E	F
"Music you dislike"	G	H

Relative value of composition and performance in concerts

A5.2   Table A5-3 below shows the relative value of the composition and performance in concerts calculated using the different baselines. Our primary baseline is highlighted in grey. The top part of the table shows the incremental value of the songs in concerts. The incremental value of the songs in concerts will depend on the type of performance considered.

A5.3 Each column indicates the type of performance we have set when computing the incremental value of the songs in concerts. For instance, in the first column we show the estimated incremental value of the songs when the performance is the one that respondents neither like nor dislike, and the estimated incremental value of the performance when the songs are the ones respondents neither like nor dislike. The bottom part of the table shows the incremental value of the performance in concerts. Again, the incremental value of the performance in concerts will depend on the type of songs considered. Each column indicates the type of songs we have set when computing the incremental value of the performance in concerts. The table shows that the incremental value of the composition in a concert is larger than the incremental value of the performance. In particular, the incremental value of the composition in concerts ranges between 105% and 126% of the incremental value of the performance.

Table A5-3: Relative value of the composition and performance in concerts

Incremental value of the Songs		Type of the Artist:		
		Neither like nor dislike	Like	Like
Estimated coefficients:				
Like	[1]	3.410	5.733	5.733
Neither like nor dislike	[2a]	1.712	3.055	
Do not know	[2b]			3.151
Increment	[3] = [1] – [2]	1.698	2.678	2.582
Price coefficient	[4]	-0.026	-0.026	-0.026
Δ WTP Songs	[5] = – [3] / [4]	65.31	103.00	99.31

Incremental value of the Artist		Type of Songs:		
		Neither like nor dislike	Like	Like
Estimated coefficients:				
Like	[6]	3.055	5.733	5.733
Neither like nor dislike	[7a]	1.712	3.410	
Do not know	[7b]			3.284
Increment	[8] = [6] – [7]	1.343	2.323	2.449
Price coefficient	[9]	-0.026	-0.026	-0.026
Δ WTP Artist	[10] = – [8] / [9]	51.65	89.35	94.19
Δ WTP Songs / Δ WTP Artist	**[5]/[6]**	**1.26**	**1.15**	**1.05**

Relative value of composition and performance in festivals

A5.4   Table A5-4 below shows the relative value of the composition and performance in festivals calculated using different baselines. Our base case is highlighted in grey. The top part of the table shows the incremental value of the songs in festivals. The incremental value of the songs in festivals will depend on the type of performance considered.

A5.5   Each column indicates the type of performance we have set when computing the incremental value of the songs in festivals. For instance, in the first column we show the estimated incremental value of the songs when the performance is the one that respondents neither like nor dislike, and the estimated incremental value of the performance when the songs are the ones respondents neither like nor dislike. The bottom part of the table shows the incremental value of the performance in festivals. Again, the incremental value of the performance in festivals will depend on the type of songs considered.

A5.6   Each column indicates the type of songs we have set when computing the incremental value of the performance in festivals. The table shows that the incremental value of the composition in a festival is similar than the incremental value of the performance. In particular, the incremental value of the composition in concerts ranges between 91% and 100% of the incremental value of the performance.

Table A5-4: Relative value of the composition and performance in festivals

Incremental value of the: Songs		Type of Artist:				
		Neither like nor dislike	Don't know	Like	Like	Like
Estimated coefficients						
Like	[1]	2.070	2.328	3.515	3.515	3.515
Neither like nor dislike	[2a]	0.978		2.159		
Do not know	[2b]		0.594		2.437	
Dislike	[2c]					0.839
Increment	[3] = [1] – [2]	1.092	1.734	1.356	1.078	2.676
Price coefficient	[4]	-0.0065	-0.0065	-0.0065	-0.0065	-0.0065
Δ WTP Songs	[5] = – [3] / [4]	168.00	266.77	208.62	165.85	411.69

Incremental value of the: Performance		Type of Songs:				
		Neither like nor dislike	Don't know	Like	Like	Like
Estimated coefficients						
Like	[6]	2.159	2.437	3.515	3.515	3.515
Neither like nor dislike	[7a]	0.978		2.070		
Do not know	[7b]		0.594		2.328	
Dislike	[7c]					0.827
Increment	[8] = [6] – [7]	1.181	1.843	1.445	1.187	2.688
Price coefficient	[9]	-0.0065	-0.0065	-0.0065	-0.0065	-0.0065
Δ WTP Artist	[10] = – [8] / [9]	181.70	283.54	222.31	182.62	413.54
Δ WTP Songs / Δ WTP Artist	**[5]/[6]**	**0.92**	**0.94**	**0.94**	**0.91**	**1.00**

Relative value of music and other entertainment types in festivals

A5.7 Table A5-5 below shows the relative value of the music and other entertainment types in festivals. The top part of the table shows the incremental value of the music. In particular, we compute the incremental value of the music as the difference between the music you like and the music you neither like nor dislike when there is no other entertainment activities. The bottom part of the table shows the incremental value of other entertainment that is computed as the difference between the value of a festival with and without the presence of other entertainment activities when the music is the one you neither like nor dislike. The table shows that the incremental value of the music in festivals is larger than the incremental value of other types of activities. In particular, the incremental value of the music in festivals ranges between 284% of the incremental value of other types of entertainment.

Table A5-5: Relative value of the composition and performance in festivals

Incremental value of the Music		No other entertainment
Estimated coefficients		
Like	[1]	3.538
Neither like nor dislike	[2a]	1.155
Increment	[3] = [1] – [2]	2.383
Price coefficient	[4]	-0.0083
Δ WTP Music	[5] = – [3] / [4]	287.11

Incremental value of Other entertainment		Music Neither like nor dislike
Estimated coefficients		
Yes	[6]	1.994
No	[7a]	1.155
Increment	[8] = [6] – [7]	0.839
Price coefficient	[9]	-0.0083
Δ WTP Other entertainment	[10] = – [8] / [9]	101.08
Δ WTP Music / Δ WTP Other entertainment	[5]/[6]	2.84