

# Valuations of Transport Nuisances and Cognitive Biases: A Survey Laboratory Experiment in the Pyrenees Region

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## ROAD TRAFFIC NOISE EVALUATION SURVEY-EXPERIMENT

### Instructions

Welcome to this survey-experiment. The study you are going to take part has the only purpose the academic research and its results will be published in scientific journals. Therefore, no commercial exploitation of results will be done. The answers you are going to give will be anonymous, which means that nobody, including the researchers, will be able to know who answered this questionnaire

### A. Noise Analysis

#### (FOR ALL PARTICIPANTS)

Public University of Navarra has estimated the level of noise to which you are exposed living as you do in the vicinity of the AP-7/N-II/C-17/C-16/C-14 roads at 70 decibels, which is equivalent to the noise made by a heavy truck or a vacuum cleaner. This recording will give you an idea of how loud this is [**HIGH NOISE RECORDING**]

**Q.1.** Compared with the recording you have just heard, the level of noise you hear from your home is...

- |                               |   |
|-------------------------------|---|
| a. ...much louder             | 1 |
| b. ...a bit louder            | 2 |
| c. ...the same / very similar | 3 |
| d. ...a bit softer            | 4 |
| e. ... much softer            | 5 |

The Navarrese Government is considering measures such as the installation of acoustic panels for which they might ask all the citizens to pay a compulsory tax, similar to the one paid for garbage collection. Imagine that this measure would reduce the noise level from 70 to 50 decibels (like the noise made by a washing machine). You will now hear a brief recording of the current noise level followed by one of the reduced level [**COMBINED RECORDING - FRAGMENT OF HIGH NOISE LEVEL AND SHIFT TO A LOWER NOISE LEVEL**]

### 1) Noise Hypothetical treatment

**Q.2.** How much would you be willing to pay per year and household for a period of 5 years to achieve a **40%** reduction in the noise level affecting your home? Keep in mind that the money would be taken from your household budget, thereby limiting other payments.

**Q.3.** (if answer Q.2.=0) Given that you are unwilling to pay any sum at all, please indicate whether you agree (A) or disagree (D) with the following statements:

	<b>A</b>	<b>D</b>
a. I am not aware of any traffic noise at home	1	2
b. I cannot afford to pay because my income is too low	1	2
c. I do not think my health is affected by traffic noise	1	2
d. I would pay more for more effective traffic noise abatement	1	2
e. The traffic noise is not my fault. People who cause the noise are who should pay for it.	1	2
f. The taxes I am paying already should cover it	1	2
g. Other reasons (please specify) _____	1	2

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### 2) Noise real treatment

With regard to noise, the two experiment collaborative entities (Red NELS and GreenPeace) perform activities related to noise abatement that later have positive implications for the citizens of Navarra. For instance:

- 1) Red NELS supports local entities to the implementation of projects of Local Action Plans (Agendas Locales 21), many of them related to mitigation, control, and awareness of noise reduction.
- 2) GreenPeace participates in noise environmental importance awareness emitted by vehicles, making goods distribution companies to design protocols focused on noise abatement.

We will provide you 60 euros which you could invest part of them in fight against noise, giving us the authorization to transfer a portion of this amount to one of the associations you choose. You will keep the remaining money through a bank transfer. In addition, the sum to be eventually received by the chosen associations will be determined as follows:

- a) You are located in a 25 participants group. Each of these participants will indicate through a computer how much money of 60 euros will allocate to one of the above associations (let us call this individual amount  $x$ , in euros).
- b) Anonymously, we will collect the 25 payment proposals. Later, the computer will sort them from the lowest to the greatest amount. Let us call  $x_{Min}$  the lowest proposal and  $x_{Max}$  the greatest one. You will not know the money proposed by the other participants, just as the other participants will not know how much you propose.
- c) The computer will select randomly a number between 0 and 60 euros. All values between 0 and 60 have the same probability. Let us call  $Y$  this random number.
- d) If most of the  $x$  values proposed by participants are greater than  $Y$  (for example, in a 25 people group, if 13 propose an amount  $x$  greater than or equal to  $Y$ ), then the association that had been chosen will receive the amount of  $25 \cdot Y$ . At the end of the experiment, each participant will receive a individual amount of  $(60 - Y)$  euros.
- e) If most of the  $x$  values proposed by the participants are lower than  $Y$ , then the selected association does not receive any money and each participant will receive the amount of 60 euros.

An example would be useful here. Suppose that participant 1 proposes to pay 5 euros to one of the associations, that participant 2 proposes to pay 10 euros, (etc.) and the participant 25 proposes to pay 55 euros. In this situation, the minimum would be 5 and the maximum 55. The computer will choose a random number between 0 and 60 euros.

- i. Suppose the random number obtained is 25. If more than the 50% of the participants are willing to pay 25 euros or more, then the association would receive  $25 * 25$  euros = 625 euros. In this case, at the end, each participant would actually obtain  $60 - 25 = 35$  euros.
- ii. Suppose the random number obtained is 35. If more than 50% of the participants choose to pay an amount lower than 35 euros, then the selected association would receive 0 euros and each participant would receive  $60 - 0 = 60$  euros.

## ROAD TRAFFIC NOISE EVALUATION SURVEY-EXPERIMENT

### C. Socioeconomic questionnaire:

**Q.4.** Did you know **GreenPeace** before this experiment?

- |    |     |   |
|----|-----|---|
| a. | Yes | 1 |
| b. | No  | 2 |

**Q.5.** Did you know **Red NELS** before this experiment?

- |    |     |   |
|----|-----|---|
| a. | Yes | 1 |
| b. | No  | 2 |

**Q.6.** How would rate your **health** over the last **12 months**?

- |    |              |   |
|----|--------------|---|
| a. | Excellent    | 1 |
| b. | Good         | 2 |
| c. | Satisfactory | 3 |
| d. | Poor         | 4 |
| e. | Very poor    | 5 |

**Q.7.** Now, please answer YES or NO to following statements about your **lifestyle habits**.

	YES	NO
a. I smoke	1	2
b. I have or have had hearing problems	1	2
c. I do sport or take a walk at least 3 times as week	1	2
d. I sleep between 7 and 8 hours a day	1	2
e. I eat 4 or 5 pieces of fruit and/or vegetables every day	1	2
f. I use a car for most trips	1	2

**Q.8.** Using the following scale, would you please indicate your degree of **concern** regarding the level of **noise** in the area where you live?

- |                         |   |
|-------------------------|---|
| a. Not at all concerned | 1 |
| b. Slightly concerned   | 2 |
| c. Moderately concerned | 3 |
| d. Very concerned       | 4 |
| e. Extremely concerned  | 5 |

**Q.9.** Using the following scale, would you please indicate your degree of **concern** regarding the level of **air pollution** in the area where you live?

- |                         |   |
|-------------------------|---|
| a. Not at all concerned | 1 |
| b. Slightly concerned   | 2 |
| c. Moderately concerned | 3 |
| d. Very concerned       | 4 |
| e. Extremely concerned  | 5 |

**Q.10.** How many people from each of the following groups **make up your household**?

- |  |  |
|--|--|
| a. Children (up to 10 years of age)    |  |
| b. Adolescents (11 to 18 years of age) |  |
| c. Adults                              |  |
| d. Pensioners                          |  |

**Q.11.** Are you a full-time student?

**Q.12.** What is your job? (Answer jointly with question 15)

**Q.13.** What is the current job of the main earner in your household? (Retired people, please state previous job, widows/widowers please state job of the deceased person).

**Self-employed:**

- Self-employed in business, retail, or industry
- Crop farmer, Livestock farmer.....
- Liberal professional.....
- Self-employed tradesman.....

**Employee:**

- Director, Manager.....
- High-level tenured post, High level technician
- High-ranking civil servant.....
- Middle-ranking civil servant.....
- Mid-level tenured post, Middle manager.....
- Commercial agent / representative.....
- Non-degree civil service post.....
- Administrative worker, Office clerk.....
- Salesperson, retail sales assistant.....

Q.14	Q.15
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13

Skilled worker.....	14	14
Unskilled worker, Labourer.....	15	15
Apprentice, Junior.....	16	16
<b>No occupation:</b>		
Unemployed.....	17	17
Student.....	18	-
Retired / Pensioner.....	19	-
Homeworker.....	20	-

**Q.14.** Now, taking into account all current sources, where would you say your total average monthly **household income** falls on the following scale?

- a. More than 4.000 euros
- b. Levels in between (Go to **Q.15**)
- c. Less than 1000 euros

**Q.15.** More specifically, how would you estimate your **household income** on the following scale?

- a. 2.801 to 4.000 euros per month
- b. 1.701 euros to 2.800 euros per month
- c. 1001 euros to 1.700 euros per month
- d. Do not know / No answer

**Q.16.** If you have chosen not to answer questions 16 and 17, are you willing to indicate which **social class** you belong to?

Upper	
Upper-middle	
Middle-middle	
Lower-middle	
Lower	

**Q.17.** Do you mind telling us your **gender**?

- a. Male 

1
---
- b. Female 

2
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**Q.18.** Do you mind telling us your **age**?

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**Q.19.** And your **education** level?

- a. None/primary 

1
---



- b. Lower secondary 

2
---
  - c. Upper secondary or vocational 

3
---
  - d. University 

4
---
  - e. Other (please specify) 

5
---
- \_\_\_\_\_

**Q.20.** What is your sensitivity to **local** economic and political issues?

- a. Not interested at all 

1
---
- b. A little interested 

2
---
- c. Something interested 

3
---
- d. Very interested 

4
---
- e. I do not know 

5
---

**Q.21.** What is your sensitivity to **global** economic and political issues?

- a. Not interested at all 

1
---
- b. A little interested 

2
---
- c. Something interested 

3
---
- d. Very interested 

4
---
- e. I do not know 

5
---

**Q.22.** Do you consider yourself sensitive to **ecological issues**?

- a. Yes 

1
---
- b. No 

2
---
- c. I do not know 

3
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