

## Chapter 4: The IBM SPSS Statistics environment

### Labcoat Leni's Real Research

#### Gonna be a rock 'n' roll singer

##### Problem

Oxoby, R. J. (2008). *Economic Enquiry*, 47(3), 598–602.



AC/DC are one of the best-selling hard rock bands in history with around 100 million certified sales, and an estimated 200 million actual sales. In 1980 their original singer Bon Scott died of alcohol poisoning and choking on his own vomit. He was replaced by Brian Johnson, who has been their singer ever since. Debate rages with unerring frequency within the rock music press over who is the better frontman. The conventional wisdom seems to be that Bon Scott was better, although personally, and I seem to be somewhat in the minority here, I prefer Brian Johnson. Anyway, Robert Oxoby, in a playful paper, decided to put this argument to bed once and for all (Oxoby, 2008).

Using a task from experimental economics called the ultimatum game, individuals are assigned the role of either proposer or responder and paired randomly. Proposers were allocated \$10 from which they had to make a financial offer to the responder (i.e., \$2). The responder can accept or reject this offer. If the offer is rejected neither party gets any money, but if the offer is accepted the responder keeps the offered amount (e.g., \$2), and the proposer keeps the original amount minus what they offered (e.g., \$8). For half of the participants the song 'It's a long way to the top' sung by Bon Scott was playing in the background; for the remainder 'Shoot to thrill' sung by Brian Johnson was playing. Oxoby measured the offers made by proposers, and the minimum accepted by responders (called the minimum acceptable offer). He reasoned that people would accept lower offers and propose higher offers when listening to something they like (because of the 'feel-good factor' the music creates). Therefore, by comparing the value of offers made and the minimum acceptable offers in the two groups he could see whether people have more of a feel-good factor when listening to Bon or Brian. The offers made (in dollars) are<sup>1</sup> as follows (there were 18 people per group):

- Bon Scott group: 1, 2, 2, 2, 2, 3, 3, 3, 3, 3, 4, 4, 4, 4, 4, 5, 5, 5
- Brian Johnson group: 2, 3, 3, 3, 3, 3, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5, 5, 5

<sup>1</sup> These data are estimated from Figures 1 and 2 in the paper because I couldn't get hold of the author to get the original data files.

Enter these data into the SPSS data editor, remembering to include value labels, to set the measure property, to give each variable a proper label, and to set the appropriate number of decimal places. This file can be found in **Oxoby (2008) Offers.sav** and should look like this:

The screenshot shows the SPSS Data Editor window for 'Oxoby (2008) Offers.sav'. The 'Data View' tab is active, displaying a table with 22 rows and 7 columns. The first column is 'Case Number' (1-22), the second is 'Music' (with value labels), and the third is 'Offer' (with value labels). The remaining four columns are labeled 'var'.

Case Number	Music	Offer	var	var	var	var
1	Bonn Scott (It's a Long Way to the Top)	1				
2	Bonn Scott (It's a Long Way to the Top)	2				
3	Bonn Scott (It's a Long Way to the Top)	2				
4	Bonn Scott (It's a Long Way to the Top)	2				
5	Bonn Scott (It's a Long Way to the Top)	2				
6	Bonn Scott (It's a Long Way to the Top)	3				
7	Bonn Scott (It's a Long Way to the Top)	3				
8	Bonn Scott (It's a Long Way to the Top)	3				
9	Bonn Scott (It's a Long Way to the Top)	3				
10	Bonn Scott (It's a Long Way to the Top)	3				
11	Bonn Scott (It's a Long Way to the Top)	4				
12	Bonn Scott (It's a Long Way to the Top)	4				
13	Bonn Scott (It's a Long Way to the Top)	4				
14	Bonn Scott (It's a Long Way to the Top)	4				
15	Bonn Scott (It's a Long Way to the Top)	4				
16	Bonn Scott (It's a Long Way to the Top)	5				
17	Bonn Scott (It's a Long Way to the Top)	5				
18	Bonn Scott (It's a Long Way to the Top)	5				
19	Brian Johnson (Shoot to Thrill)	2				
20	Brian Johnson (Shoot to Thrill)	3				
21	Brian Johnson (Shoot to Thrill)	3				
22	Brian Johnson (Shoot to Thrill)	3				

Or with the value labels off, like this:

The screenshot shows the same SPSS Data Editor window, but with the value labels for the 'Music' and 'Offer' variables turned off. The data is now represented by numbers in the 'Music' and 'Offer' columns.

Case Number	Music	Offer	var	var	var	var
1	1	1				
2	1	2				
3	1	2				
4	1	2				
5	1	2				
6	1	3				
7	1	3				
8	1	3				
9	1	3				
10	1	3				
11	1	4				
12	1	4				
13	1	4				
14	1	4				
15	1	4				
16	1	5				
17	1	5				
18	1	5				
19	2	2				
20	2	3				
21	2	3				
22	2	3				