Descriptive Statistics Worksheet using Excel 2000

Fast Food – Who can do without It?

Introduction

Britons consume more fast food than any other Europeans, with the number of fast food restaurants in the UK having doubled between 1984 and 1993. The trend towards healthier eating has caused some fast food giants to revise their menus, offering vegetarian meals, salads and other healthy options. With the market in a state of change the need for up-to-date market research is increasing. The data here consist of the responses of a random sample of 200 males and 200 females aged 15-70 from a wider telephone survey of fast food consumers. Respondents answered questions about themselves (e.g. sex, age) and about their fast food purchasing – how often, what brand they bought last, and what brand first comes to mind.

Getting started

The data are supplied in Excel format in the file *FastFood.xls*.

- Start Excel and from the main menu select **File > Open**;
- in the dialog box that appears click in the **Look in** box and navigate to the folder containing *FastFood.xls*;
- click on this file and then **Open**.

In this worksheet you will concentrate on analysing the frequency of purchase of fast food (in Column A), which is a quantitative variable, and the brand last bought (Column L), which is a qualitative variable. Your analysis will use summary statistics and tables of percentages.

Summarising frequency of purchase

Because the data in Column A have been grouped, we do not know precisely how often per month each person bought fast food. This is not only because of the grouping – e.g. 7 or more times – but because the person interviewed had to choose one of the stated categories and could not therefore respond with, say, 2.5 times per month.

The variable you are charting is essentially a continuous measurement, being an average figure per month. For example, the category "Less than once" presumably covers all values from 0.0000 to 0.9999, an interval with midpoint (near enough) 0.5. Similarly, the category "3 to 4 times" presumably means at least 3 times but not 5 times, i.e. covering values from 3.0000 to 4.9999, an interval with a midpoint of (near enough) 4.0. We have no idea how far the category 7 or more extends but, assuming it extends up to 10.0, a midpoint of 8.5 would seem reasonable.

In order to perform any calculations on these figures you will need to assume that the data are evenly distributed throughout each category. This is equivalent to assuming that the actual response for each person was the midpoint of the interval that they chose.

You now need to recode Column A to reflect this assumption.