

## Bias & Primary & Secondary Data HD3

### Who to ask?

A **population** is the group being studied. A **sample** is a part of this group and is the people who you ask. If the sample is large enough and taken without bias, then the sample is likely to be a good representation of the whole population. Remember **increasing** the **sample size** usually means the sample will **better reflect the population** as a whole.

### Example

The students in a school could be a **population**. A sample could just be the first 10 students you see but these might be a group of friends with similar opinions. A better sample might be 1 student from each class (assuming there are 10 classes in this school). By asking students from different classes you ensure that students of different ages and not just friends of the original group are represented!!

The results of your survey will probably be even better if you were to increase the number of students you ask to say 50, say 5 from each class. The more students you ask the more likely your survey will represent the school as a whole.

### Examination Hint:

Some exam questions ask you for a reason why a particular survey is not good.

Look to see **which people are being asked** and if they do not represent the population as a whole then simply say, 'The people asked (probably) do not represent the population being studied.'

### Example

John, a restaurant owner, gives his family a questionnaire about his restaurant. What might be wrong with this and suggest something better.

### Solution

John's family probably do not represent his customers very well.

John could give every 10<sup>th</sup> customer he has his questionnaire.

### Primary and Secondary Data

**Primary data** is collected by the person analysing and using the data, usually through an experiment or by a survey. **Secondary data** is already collected, for example data in books, newspapers and the national census.

### Bias

**Bias** is introduced i) in questionnaires by asking **leading questions**, "You like baked beans, don't you?" ii) in samples where the sample is **not representative** of the group, e.g. Data for opinions about school dinners by asking the **first** 5 people in a dinner queue! iii) in samples where sample size is **too small**.

### Your Turn!!

- Learn the meaning of the terms '**Primary Data**' and '**Secondary Data**'
- What might a **leading question** do to the results of a questionnaire?

### RAPID 'ACID' TEST – Blank out the page above before answering these!

- There is one way which is always likely to improve the results for any sample. What is it?
- What is secondary data?
  - Explain one way in which bias may be introduced in questionnaires.