Sampling

	What it is	Advantages	Disadvantages
Census	A collection of data from an entire population	Gives a completely accurate result	- Time consuming+Expensive - Can not be used when testing involves destruction - Large volume of data to process
Sample survey	A survey of a small sample of the population	- Cheaper - Quicker - Easier to process	- Data may not be accurate - Data may not be large enough to represent small sub groups
Random Sampling	Each thing has an equal chance of being selected	- Numbers truly random and free from bias - Easy to use - Each number has a known equal chance of being selected	Not suitable when population is large
Lottery sampling	Each element of a population put on a ticket. Tickets drawn randomly from container(without displacement)	- Tickets are drawn at random - It is easy to use - Each ticket has a known chance of selection	- It is not suitable when the population is large - A sampling frame is needed
Systematic sampling	Required elements are chosen at regular intervals in an ordered list	- Simple to use - Suitable for large samples	- Only random if ordered list is truly random - Can introduce bias
Stratified sampling	Population is divided into groups and a simple random sample is carried out in each group	- It can give more accurate estimates than simple random sampling where clear strata are present - Reflects the population structure	- Within the strata, the problems are than same as for any simple random sample - If the strata are not clearly defined they may overlap
Quota sampling	The population is divided into groups by gender etc. A quota of people in each group is set to try and reflect the group's proportion in the whole population	- Enables fieldwork to be done quickly because a small sample size is taken. - Costs kept to a minimum - Administering test is easy	- Not possible to estimate the sampling errors - Interviewers may not be able to judge characteristics easily - Non responses are not recorded - Can introduce interview bias

Types of data

Type of data	Advantages	Disadvantages
Primary	• The collection method is known • The accuracy is known • The exact data needed is collected	• It is costly in time and effort
Secondary	• They are cheap to obtain • A large quantity of data is available • Much of the data has been collected for years and can be used to plot trends	• Bias is not always recognised • It can be in a form that is difficult to deal with