

POPULATION - the entire data

SAMPLE - a selection of the data

SAMPLING UNIT - one item of data

SAMPLING FRAME - a List (of all sampling units)

A survey of
the whole
population →

Census	Advantages	Disadvantages
	Accurate results	Time Consuming Expensive

Sample	Advantages	Disadvantages
	Cheaper Quicker	May not be accurate Small sub-groups may not be represented

— TYPES OF SAMPLING

Every sampling unit
has an **EQUAL** chance
of being selected.

Type	
Random Sampling	Simple Random Sampling
	Systematic Sampling
	Stratified Sampling
Non-Random	Quota Sampling
	Opportunity Sampling

- Names out of a hat
- Random number generator

Simple Random Sampling	Advantages	Disadvantages
	Bias free	Time consuming
	Easy and Cheap	Sampling frame needed
	Data has a equal chance of being selected	

- data chosen at regular intervals

Systematic Sampling	Advantages	Disadvantages
	Simple and quick to use	Sampling frame needed
	Suitable for large sample	Introduces bias if sample frame not random
	Data has a equal chance of being selected	

- Sample in proportion to population strata

Stratified Sampling	Advantages	Disadvantages
	Simple to use	Population must be in distinct strata
	Quick to use	Time Consuming
	Each strata gets represented	Can introduce bias

- Collect data until you have your quota for each strata

Quota Sampling	Advantages	Disadvantages
	Small sample can be representative of population	Bias can be introduced
	Quick and Easy	Population need to be divided into groups
	Inexpensive	Non-responses are not recorded

- Collect data at current location

Opportunity Sampling	Advantages	Disadvantages
	Easy to carry out	Sample not likely to represent the population
	Inexpensive	Highly dependent on the researcher.

STRATA - a sub group of the population (example male female)

- TYPES OF DATA

QUALITATIVE

Non-numerical
data

QUANTITATIVE

Numerical values

DISCRETE

Not all values
possible

CONTINUOUS

Any value
possible

- LARGE DATA SET

5 UK weather stations

3 International stations

Total rain-fall / wind speed / Humidity

Visibility / Wind direction / mean temp

Total sunshine / Cloud cover / Pressure

max gust speed

