

Assignment no 8

① § Type of Sampling

Random Sampling

* Simple

* Stratified → Proportionate
→ Disproportionate

* Systematic

* Cluster

Non Random sampling

Convenience

Judgement

Quota

Snowball

Stratified

Population are divided into non overlapping sub populations called strata. A random sample is taken from each strata.

Cluster

Population is divided into non overlapping clusters or areas.

Difference in strata and clusters is that all strata will be represented in final sample while all clusters may or may not be used.

② Parameter: refers to population (properly)

Statistic based on sample to give inference about population

③ Large sample theory basis is a generalization can when sample size $\rightarrow \infty$ then the ^{sampling} normal distribution can be assumed.

④ standard error of sample mean.

$$\sigma_x = \frac{\sigma}{\sqrt{n}}$$

sample variance

sample std

$$\frac{(n-1)s^2}{2}$$

$$\sqrt{(n-1)s}$$

Coefficient of variation

$$SE(CV) = \frac{CV}{\sqrt{n}}$$

CV = Coefficient of variation

Sample median

$$SE(\text{median}) = 1.2533 \times SE(\text{mean}) = 1.2533 \times \frac{\sigma}{\sqrt{n}}$$

⑤ Critical value is the significance value which is the threshold value for rejecting the null hypothesis

Any The region where critical value is crossed or null hypothesis is rejected
Two

⑥ One tailed test $H_0: \mu = 50$

$H_A: \mu \neq 50$ at 0.05 significance
Two tailed

one tailed test

