

• There will be negligible effect on sample size due to number of sampling units in the population. For large populations, the actual size of the population has little, if any, effect on sample size. Thus, for small populations, audit sampling is often not as efficient as alternative means of obtaining sufficient appropriate audit evidence. (However, when using monetary unit sampling, an increase in the monetary value of the population increases sample size, unless this is offset by a proportional increase in materiality for the financial statements as a whole (and, if applicable, materiality level or levels for particular classes of transactions, account balances or disclosures.)

Data Analytics- Data analytics is defined as the process of inspecting, cleaning, transforming and modelling data with the goal of highlighting useful Information, suggesting conclusions and supporting decision making.
For example, JE Testing is a Data Analytic Tool.

Sample Selection Methods

(1) Random Sampling: Random selection ensures that all items in the population or within each stratum have a known chance of selection. It may involve use of random number tables. Random sampling includes two very popular methods which are discussed below-

(i) Simple Random Sampling: Under this method each unit of the whole population e.g. purchase or sales invoice has an equal chance of being selected. The mechanics of selection of items may be by choosing numbers from table of random numbers by computers or picking up numbers randomly from a drum. It is considered that random number tables are simple and easy to use and also provide assurance that the bias does not affect the selection. This method is considered appropriate provided the population to be sampled consists of reasonably similar units and fall within a reasonable range.

ii) Stratified Sampling: This method involves dividing the whole population to be tested in a few separate groups called strata and taking a sample from each of them. Each stratum is treated as if it was a separate population and if proportionate of items are selected from each of these stratum. The number of groups into which the whole population has to be divided is determined on the basis of auditor judgment.

The reasoning behind the stratified sampling is that for a highly diversified population, weights should be allocated to reflect these differences. This is achieved by selecting different proportions from each strata. It can be seen that the stratified sampling is simply an extension of simple random sampling. Therefore, we can say that random selection method is applied through random number generators, for example, random number tables).

(2) Interval Sampling or Systematic Sampling: Systematic selection is a selection method in which the number of sampling units in the population is divided by the sample size to give a sampling interval, for example 50, and having determined a starting point within the first 50, each 50th sampling unit thereafter is selected. Although the starting point may be determined haphazardly, the sample is more likely to be truly random if it is determined by use of a computerized random number generator or random number tables. When using systematic selection, the auditor would need to determine that sampling units within the population are not structured in such a way that the sampling interval corresponds with a particular pattern in the population. To minimise the effect of the possible known buyers through a pattern in the population, more than one starting point may be taken. The multiple random starting point is taken because it minimises the risk of interval sampling pattern with that of the population being sampled.

(3) Monetary Unit Sampling: It is a type of value-weighted selection in which sample size, selection and evaluation results in a conclusion in monetary amounts.

(4) Haphazard sampling: Haphazard selection, in which the auditor selects the sample without following a structured technique. Although no structured technique is used, the auditor would nonetheless avoid any conscious bias or predictability (for example, avoiding difficult to locate items, or always choosing or avoiding the first or last entries on a page) and thus attempt to ensure that all items in the population have a chance of selection. Haphazard selection is not appropriate when using statistical sampling.

(5) Block Sampling: This method involves selection of a block(s) of contiguous items from within the population. Block selection cannot ordinarily be used in audit sampling because most populations are structured such that items in a sequence can be expected to have similar characteristics to each other, but different characteristics from items elsewhere in the population. Although in some circumstances it may be an appropriate audit procedure to examine a block of items, it would rarely be an appropriate sample selection technique when the auditor intends to draw valid inferences about the entire population based on the sample.

Sampling and Non-Sampling Risk
Sampling Risk. The risk that the auditor's conclusion based on a sample may be different from the conclusion if the entire population were subjected to the same audit procedure. Sampling risk can lead to two types of erroneous conclusions: (i) In the case of a test of controls, that controls are more effective than they actually are, or in the case of a test of details, that a material misstatement does not exist when in fact it does. The auditor is primarily concerned with this type of erroneous conclusion because it affects audit effectiveness and is more likely to lead to an inappropriate audit opinion. (ii) In the case of a test of controls, that controls are less effective than they actually are, or in the case of a test of details, that a material misstatement exists when in fact it does not. This type of erroneous conclusion affects audit efficiency as it would usually lead to additional work to establish that initial conclusions were incorrect. Non-Sampling Risk. The risk that the auditor reaches an erroneous conclusion for any reason not related to sampling risk.
NATURE AND CAUSE OF DEVIATIONS AND MISSTATEMENTS AND PROJECTING MISSTATEMENTS
Auditor shall investigate the nature and causes of any deviations or misstatements identified, and evaluate their possible effect on the purpose of the audit procedure and on other areas of the audit. The auditor is required to project misstatements for the population to obtain a broad view of the scale of misstatement
EVALUATING RESULTS OF AUDIT SAMPLING
The auditor shall evaluate- (a) The results of the sample; and (b) Whether the use of audit sampling has provided a reasonable basis for conclusions about the population that has been tested. For tests of controls, an unexpectedly high sample deviation rate may lead to an increase in the assessed risk of material misstatement, unless further audit evidence substantiating the initial assessment is obtained. For tests of details, an unexpectedly high misstatement amount in a sample may cause the auditor to believe that a class of transactions or account balance is materially misstated, in the absence of further audit evidence that no material misstatement exists. In the case of tests of details, the projected misstatement plus anomalous misstatement, if any, is the auditor's best estimate of misstatement in the population. When the projected misstatement plus anomalous misstatement, if any, exceeds tolerable misstatement, the sample does not provide a reasonable basis for conclusions about the population that has been tested. The closer the projected misstatement plus anomalous misstatement is to tolerable misstatement, the more likely that actual misstatement in the population may exceed tolerable misstatement. Also if the projected misstatement is greater than the auditor's expectations of misstatement used to determine the sample size, the auditor may conclude that there is an unacceptable sampling risk that the actual misstatement in the population exceeds the tolerable misstatement. Considering the results of other audit procedures helps the auditor to assess the risk that actual misstatement in the population exceeds tolerable misstatement, and the risk may be reduced if additional audit evidence is obtained. In case the auditor concludes that audit sampling has not provided a reasonable basis for conclusions about the population that has been tested, the auditor may request management to investigate misstatements that have been identified and the potential for further misstatements and to make any necessary adjustments; or tailor the nature, timing and extent of those further audit procedures to best achieve the required assurance. For example, in the case of tests of controls, the auditor might extend the sample size, test an alternative control or modify related substantive procedures. procedure and on other areas of the audit. In the extremely rare circumstances when the auditor considers a misstatement or deviation discovered in a sample to be an anomaly, the auditor shall obtain a high degree of certainty that such misstatement or deviation is not representative of the population. The auditor shall obtain this degree of certainty by performing additional audit procedures to obtain sufficient appropriate audit evidence that the misstatement or deviation does not affect the remainder of the population.

