cluster sampling

Canonical name	ClusterSampling
Date of creation	2013-03-22 15:26:17
Last modified on	2013-03-22 15:26:17
Owner	CWoo (3771)
Last modified by	CWoo (3771)
Numerical id	4
Author	CWoo (3771)
Entry type	Definition
Classification	msc 62D05
Synonym	one-stage cluster sampling
Synonym	two-stage cluster sampling
Defines	single-stage cluster sampling
Defines	second-stage cluster sampling
Defines	subsampling

Cluster sampling is a method for sampling from a population P, in which the smallest units in P are first grouped into bigger units, called *clusters*, or *primary sampling units*, then a sampling procedure is performed based on these clusters. The units within each cluster are called the *secondary sampling units*. For example, when an advertisements are sent out to a sample of potential customers from a population, it is advisable to first group these potential customers into households, before any sample is drawn, so as to avoid any household receiving more than one ad. There are in general two types of cluster sampling:

1. *single-stage cluster sampling* or *one-stage cluster sampling*: a sample is taken from the primary sampling units, in which all of the secondary sampling units are considered.

2. *second-stage cluster sampling*, *two-stage cluster sampling*, or emphsub-sampling: a sample is taken from the primary sampling units; then within each primary sampling unit, a sample is taken from their secondary sampling units.