

Discussion paper sample size statistical analysis



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Discussion Paper " Sample Size" Statistical Analysis The article under analysis discusses the problems of sample size determination and proposes practical guidelines for hypothesis testing. The author of the article states that the information gathered from a sample (i. e. measurements, facts and/or opinions) will normally give a good indication of the measurements, facts and/or opinions of the population from which it was drawn. The advantages of sampling are usually smaller costs, time and resources. A general disadvantage is a natural resistance by the layman in accepting the results as representative. Other disadvantages depend on the particular method of sampling used and are specified in later sections, when each sampling method is described in turn.

Certain sampling methods require each member of the population under consideration to be known and identifiable. The structure which supports this identification is called a sampling frame. Some sampling methods require a sampling frame only as a listing of the population; other methods need certain characteristics of each member also to be known. The author underlines that: " Better success is achieved by asking concrete questions and testing out concrete examples" (Lenth, 2001). Also, Lenth underlines that sample size is not important in all studies. " It may be beneficial to ask about relative differences instead of absolute ones" (Lenth, 2001). It is important to avoid " canned" effect to obtain reliable results. The article gives critical overview of the sample size techniques proposed by Cohen (1998) and Hoenig and Heise (2001).

Taking into account job satisfaction surveys and present day problems faced by multinational corporations, it is possible to say that tailoring a training program and family support can increase the job satisfaction and

enthusiasm of foreign employees and encourages open communication.

These problems were discussed by Bruning and Mccaughey (2005) in their article "Enhancing Opportunities for Expatriate Job Satisfaction". They state that technology and cultural environment is clearly a major influence on the pattern of group operation and behavior.

Taking into account sample size concepts, it is possible to determine a required sample size for this study. The aim will be to test a hypothesis that pre-assignment support, assignment support and training programs positively influence job satisfaction of foreign and domestic employees. For statistical analysis, the data will be gathered from a sample. Data will be collected by means of a questionnaire sent to interviewees. In this situation, certain sampling methods required each member of the workers population under consideration to be known and identifiable.

In order to estimate a sample size the population will be divided into two broad categories: domestic and foreign employees. Primarily, the researchers should know the precision and confidence required. Degree of precision required means that the less precise the results need to be, the smaller the sample size. Usually, it is 95%. In this situation it is possible to assume that the size is sufficient and the t-value is close to a normal distribution value. Also, the researcher assumes that the population standard deviation is known, it means that s is close to σ . Also, the value 'd' means the maximum margin of error. The usual number of employees in multinational corporations is 4,000. Also, The sample size requires to be 95% confident. The value of n will be 400. According to the normal table the 97.5th percentile is $z = 1.96$. The margin of error will be 100. The researcher will estimate that minimum 124 samples are required. Also, it is important to note that the

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larger the size of sample, the more precise would be the information given about the population. Sampling frames can come in all shapes and sizes. For example, employees can be identified from personnel records. Random sampling will be used in this research. This ensures that each and every member of the population under consideration has an equal chance of being selected as part of the sample.

References

1. Bruning, N. S. Mccaughey, D. (2005). Enhancing Opportunities for Expatriate Job Satisfaction: HR Strategies for Foreign Assignment Success. *Human Resource Planning*, Vol. 28, p. 21.
2. Lenth, R. L. (2001). Some Practical Guidelines for Effective Sample Size Determination. *The American Statistician*, Vol. 55, p. 187.