

SAMPLE SURVEY : A GEOSPATIAL APPROACH IN TOURISM STUDY

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Abstract:

Conducting a sample survey is very common in research studies. But collection of sample in selected area is vital in obtaining reliable results. The sample tied to the spatial dimension to take advantage of geographical distribution of population of sample in to consideration. This paper reveals the procedure of geo spatial sampling in tourism study.

Key words:

Geospatial sampling, Sampling tool, concentric grid, Squire Grid, Geo referencing.

1. Introduction:

Present paper evaluates the data collection procedure in tourism study which is very vital for the planning and development of tourism.

All the activities which take place are on the geographical space. There are so many socio-economic cultural problems which are the result of day to day interactions of the various development components resulting to number of problems. These problems need to be answered by the researchers hence researcher should collect the data.

2.1 Definition of tourist:

The word 'tourist' adopted for this study is internationally accepted definition by UN/WTO (World Tourism Organization) which defines visitors as "any person traveling to a place other than that of his/her usual environment for less than 12 months and whose main

purpose of the trip is other than the exercise of an activity remunerated from within the place visited.”¹

The concept of geo cannot be deviated from any human activities as it is a sacred word for today's technological development in relation to marketing and management services which are mostly depended upon the spatial distribution of customer like wise the sample survey is appropriate when it is linked to geo or spatial dimensions. This exercise is done in present tourist survey in this study.

2.2 Survey:

A survey is a system of collecting information from or about people to describe, compare, or explain their knowledge, attitudes, and behavior. The survey system is comprised of seven activities. These include setting objectives for information collection, designing the study, preparing a reliable and valid survey instrument, administering the survey, managing and analyzing survey data, and reporting the results. The survey system should be operated in an ethical manner and should have sufficient resources to achieve its objectives. (Arlene Fink, 2002)

A survey is a method of gathering information from a number of individuals, known as a sample, in order to learn something about the larger population from which the sample is drawn. Although surveys come in many forms, and serve a variety of purposes, they do share certain characteristics. In order for the objectives of a survey to be met, the results must reliably project on the larger public, from which the sample is drawn.

2.3.1 Types of surveying:

Surveyors can collect information directly, by asking people to answer questions, or indirectly, by reviewing written, oral, and visual records of people's thoughts and actions. Surveyors can also obtain data by observing people in natural or experimental settings.

The sample study depends upon the purpose of the study and population size, these criteria usually need to be specified to determine the appropriate sample size: the level of

precision, the level of confidence or risk, and the degree of variability in the attributes being measured (Miaoulis and Michener, 1976).

Gathering data and information about our earth means obtaining data for a population. It is often not possible or feasible to gather data about every object in the population, hence we must narrow our data collection to a subset of the population from is Unlimited and manageable size, hence need to 'select' a portion of the population to represent the problematic population whole by the sampling.

2.3.2 Sample and sampling methods:

A sample is a subset of entities or observations in a target population. It is intended to be representative of that population. The relationship between the samples and their parent populations underpins the theory and practice of inferential statistics.

The sampling method and sample size are very important for validity of the process of statistical inference and ensure that they take a representative sample of our population.

Here the geo component will have a very important role to play. Where the sampling should be taken is a very important factor which influences the result of a research.

The total sample size taken is 50. (<http://www.surveysystem.com/sscalc.htm>). The computer random generated numbers are used in cluster area random sampling to represent the true population sample.

Employing the samples is difficult in tourist surveys particularly in India as most of them do not use proper accommodation due to acute shortage of hotel rooms.

The level of reliability of sample statistics depends on the sample size. Higher the sample size and greater the accuracy. Accuracy also depends upon the method employed for the collection of sample. Therefore it is assumed that a single point collection of sample is not appropriate as tourists may stay as segregated groups like those who belong to same locality they try to be together. In such case it is difficult to represent true random sample of the population. Hence a geo referenced concentric grid prepared in ARC GIS 9.1 and numbered (Fig 1.1a and b) the center of the circle is the tourist spot because it is assumed that in a real situation more tourists

concentrate closer to tourist attraction. Hence this tourist attitude and spatial dimensions are taken in to consideration in collection samples.

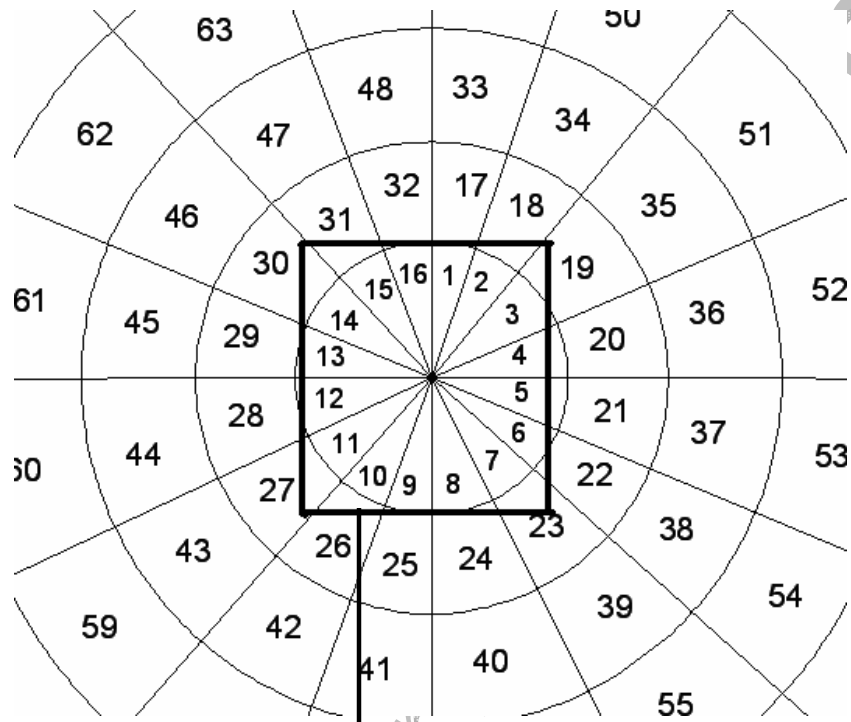


Figure 1.1(a) Sampling Geo Referenced Grid for Tourist Population.

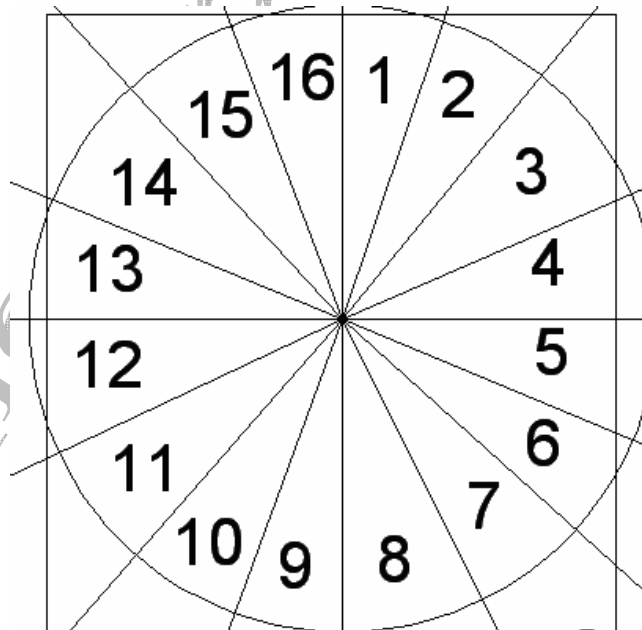


Figure 1.1(b) Sampling Geo Referenced Grid for Tourist Population (enlarged view)

The geo referenced concentric grid is exported to Google earth, on the basis of random number and location of the samples collected. (Fig 1.2).

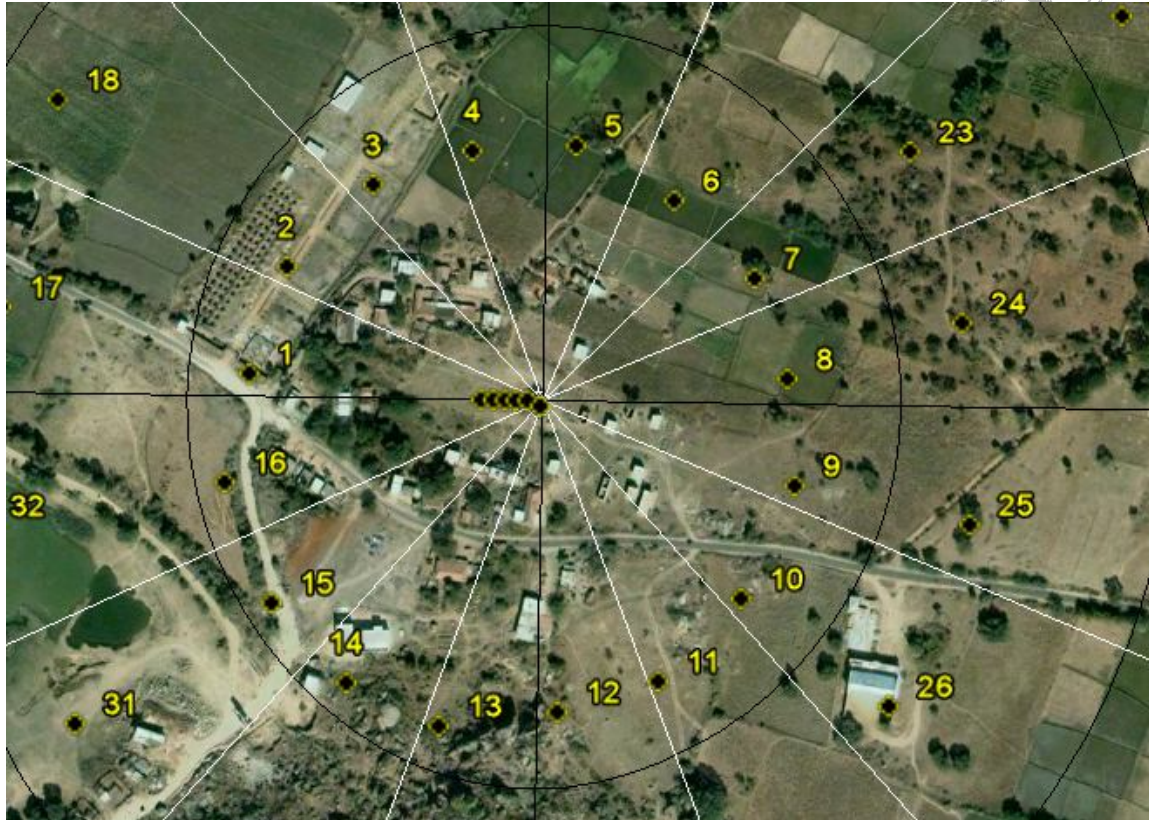


Figure 1.2 .Geo Referenced Sample Grid on Google Earth.

The distribution of questionnaire is proportionate to the number of tourists who visited the place in calendar year 2009. As any effect in tourist spot is proportionate to number of visitors for the tourist spot. This survey is quite a successful due to the technique adapted for survey.

2.3.3 Spatial sampling:

The spatial sampling is very important in data collection process to get optimized error free data. Preparing the geo referenced concentric grid and transferring on to Google earth is

good idea to visualize the places selected for the sample. If the population is in dispersed pattern the geo referenced square grid can be appropriate to use for successful sampling.

3. Advantages:

The spatial sampling has an advantage of correlating the distribution of population and sampling region so that the target group will be definitely in the sample.

4. Conclusions:

This sampling method was used in a tourist study of Karimnagar and obtained satisfactory results as the link between the location and population distribution is being established. Spatial sampling could be a good tool for any type of the sample surveys as all the surveys conducted on earth.

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