Chapter 9 Case Clues

Case 9.1 Peaceful Valley: Trouble in Suburbia

Case Objective

In this case you will ponder various sample methods as to representativeness and bias.

Answers to Case Questions

1. There is only one street into/out of the subdivision. The president is thinking that he can pay his teenage daughter to stand at the stop light at the entrance to the Peaceful Valley next week between the hours of 7 a.m. and 8:30 a.m. and hand out questionnaires to exiting drivers in their cars while they wait for the red light to change. The handouts would include addressed, postage-paid envelopes for returns. Identify what sample method the president would be using, list its pros and cons, and indicate how representative a sample would result.

Clue: why does the pres want to use his daughter and the stop light location?

2. The chairperson of the Suburb Steering Committee thinks the 1000 homeowners whose houses are on the waterfront properties of Peaceful Lake are the best ones to survey because they paid more for their lots; their houses are bigger, and they tend to have lived in Peaceful Valley longer than other residents. If these 1000 homeowners are used for the sample, what sample method would be involved, what are its pros and cons, and how representative a sample would result?

Clue: This is the chairperson’s opinion.

3. Assume that the Steering Committee chairperson’s point that the 1000 waterfront owners are not the same as the 5000 other Peaceful Valley Subdivision homeowners is true. How should this fact be utilized to draw a representative sample of the entire subdivision? Identify the probability sampling method that is most appropriate, and indicate, step-by-step, how it should be applied here.

Clue: They are the same but they are different.

4. How would you select a simple random sample of those Peaceful Valley homeowners who paid their subdivision association dues last year? What, if any, sample bias, might result from this approach?

Clue: Assume they are listed on a spreadsheet.

5. How could a two-step cluster sample be used here? Identify this sample method and describe how it could be used here to select a representative sample of Peaceful Valley households?
Clue: 50 streets each with 120 houses.

### Case 9.2 The Integrated Case: Global Motors

#### Case Objective

The integrated case requires you to assess the application of various sample methods when the goal is to obtain a sample that represents all Americans who may purchase an automobile in the next 3-5 years.

#### Clues to Case Questions

1. **Specify the population definition.**

   Clue: The new models could be anything from a 2 wheeler to a 4 door sedan.

2. **If a probability sampling method is to be used, what would be a reasonable sample frame for:**
   
   a. A telephone survey
   
   b. A mail survey
   
   c. An online survey

   Clue: With a sample frame there is almost always some error.

3. **What are the practical problems involved with drawing a simple random sample of American households (regardless of the survey method)?**

   Clue: How many 3x5 index cards would it take?

4. **If random digit dialing was used for the sample plan, what are the advantages and disadvantages of this sample method?**

   Clue: RDD, CATI, QED

5. **Should Global Motors use a probability online panel such as the one maintained by Knowledge Networks, Inc? With respect to sample design, what are the advantages and disadvantages involved with using this approach? (You may want to review Knowledge Networks, Inc. services by visiting its website at www.knowledgenetworks.com.)**

   Clue: Such panels are doing a booming business.