**Chapter 11: Primary Data: Experimentation and Test Markets**

**Multiple Choice**

1. In an experiment, which of the following variables would probably not be the dependent variable?

a. Total sales

b. Market share

c. Advertising

d. Percent increase in market penetration

e. All of these would probably be dependent variables.

Answer: c

1. The “treatment” is also referred to as which of the following?

a. Increase in sales

b. Change in market share

c. Dependent variable

d. Independent variable

e. None of these

Answer: d

1. Which of the following types of research allows the researcher to show causation?

a. Survey

b. Observation

c. Experiment

d. All of these

e. None of these

Answer: c

1. Which of the following is not a precondition for causation?

a. A linear relationship

b. Correlation

c. Appropriate time order of occurrence

d. Elimination of other possible causal factors

e. All of these are preconditions for causation.

Answer: a

1. Research that is designed to determine whether a change in one variable likely caused change in another variable is referred to as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

a. exploratory research

b. causal research

c. descriptive research

d. none of these

Answer: b

1. Concomitant variation occurs when 2 variables are \_\_\_\_\_\_\_.

a. causally related

b. experimentally related

c. correlated

d. none of these

Answer: c

1. In order to show that variable A causes variable B, A must occur:

a. after B.

b. before B.

c. simultaneously with B.

d. none of these

Answer: b

1. Suppose a manufacturer wants to determine whether or not changing the packaging of his/her major product will bring about a change in sales. Which type of research will be most appropriate?

a. Causal research

b. Exploratory research

c. Descriptive research

d. Qualitative research

e. None of these

Answer: a

1. To demonstrate that an increase in advertising causes a sales increase, one must be able to show that the increase in advertising occurred before the increase in sales. Which of the preconditions for causation is being illustrated?

a. Correlation

b. Appropriate time order of occurrence

c. Elimination of all possible causal factors

d. Elimination the effects of the independent variable

e. None of these

Answer: b

1. An analysis of company financial records shows that in every year that the company increased its advertising expenditures, sales increased. What can you say about the relationship between the two factors/variables?

a. Advertising expenditure and sales exhibited concomitant variation.

b. Increasing advertising expenditures led to increased sales.

c. Increased sales led to an increase in advertising expenditures.

d. Advertising and sales are inversely related.

e. None of these

Answer: a

1. In an experiment where the marketer is interested in finding out the impact of shelf position on a product’s sales, the shelf position is considered the \_\_\_\_\_\_\_\_\_\_variable.

a. correlation

b. dependent

c. independent

d. concomitant

e. none of these

Answer: c

1. Experiments are especially effective in showing causality because they are able to do what?

a. Show correlation

b. Demonstrate concomitant variation

c. Demonstrate an appropriate time order of occurrence

d. Eliminate other possible causal factors

e. None of these

Answer: d

1. Which of the following is the main disadvantage of laboratory experiments?

a. Exploratory research is enhanced.

b. The laboratory setting may not be a good representation of the real-world setting.

c. Concomitant variation is not possible.

d. Elimination of causal factors is increased.

e. None of these

Answer: b

1. Test markets are which of the following type of experiment?

a. controlled experiment

b. exploratory experiment

c. field experiment

d. laboratory experiment

e. none of these

Answer: c

1. If the researcher can show that the experimental or treatment variable actually produced the differences observed in the dependent variable, then the experiment can be said to be which of the following?

a. Internally valid

b. Extraneously valid

c. Externally valid

d. Laboratory valid

e. None of these

Answer: a

1. An experiment is designed to test how consumers go about choosing life insurance policies. If this experiment uses a sample of college students, it would likely *not* have \_\_\_\_\_\_\_.

a. internal validity

b. extraneous validity

c. external validity

d. laboratory validity

e. construct validity

Answer: c

1. Which of the following has the highest degree of external validity?

a. Field experiment

b. Laboratory experiment

c. Concomitant experiment

d. None of these

Answer: a

1. \_\_\_\_\_\_\_\_\_\_ refers to the intervention between the beginning and end of an experiment, involving outside variables or events that might change the dependent variable.

a. Maturation

b. History

c. Selection bias

d. Mortality

e. None of these

Answer: b

1. \_\_\_\_\_\_\_\_\_\_ refers to changes in subjects throughout the course of the experiment that are a function of time, such as getting older, tiring, etc.

a. Maturation

b. History

c. Selection bias

d. Mortality

e. None of these

Answer: a

1. When respondents drop out of an experiment before it is completed, this is referred to as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

a. maturation

b. history

c. instrument variation

d. mortality

e. selection bias

Answer: d

1. Suppose during an experiment, a researcher used several observers to record the results. The results of the experiment were perplexing to the researcher. In such a case one might expect \_\_\_\_\_\_\_\_\_\_\_ to have occurred, distorting the results of the experiment.

a. maturation

b. history

c. instrument variation

d. mortality

e. selection bias

Answer: c

1. If extraneous factors in an experiment can be identified and measured, \_\_\_\_\_\_\_\_\_\_ can be used to control these factors.

a. randomization

b. physical control

c. design control

d. statistical control

e. none of these

Answer: a

1. When measures of recall and brand attitudes are only taken after an advertising campaign is implemented, this is an example of what?

a. One-shot case study design.

b. One group pretest and posttest design.

c. Static group comparison design.

d. Solomon four-group design.

e. None of these

Answer: a

1. This true experimental design involves random assignment of subjects to experimental and control groups, but no pre-measurement of the dependent variable.

a. Solomon four-group design

b. Before and after with control group

c. After only with control group

d. One group pretest and posttest design

e. None of these

Answer: c

1. When designing a test market, the marketer is often interested in finding out whether a new product’s sales will take away sales from existing products. What is this referred to as?

a. Controlled test marketing

b. Virtual test marketing

c. Cannibalization

d. Interrupted time series

e. None of these

Answer: c

1. Which of the following is *not* a benefit of test marketing?

a. Estimate of market potential

b. Exposure of the new product to the competition

c. Identification of weak areas of the marketing mix

d. Provide management with strategic information about product performance

e. All of these are benefits of test marketing.

Answer: b

1. Which of the following is often the most important data produced by a test market?

a. Purchase data

b. Awareness data

c. Competitive response

d. Source of sales

e. None of these

Answer: a

1. A \_\_\_\_\_\_\_\_\_\_\_\_\_ is a by-product of the research process itself.

a. testing effect

b. research effect

c. result

d. decision

e. correlation

Answer: a

1. The three types of control discussed when dealing with extraneous variables are:

a. Physical, Mental, Statistical

b. Physical, Design, Statistical

c. Design, Mental, Statistical

d. Physical, Emotional, Design

Answer: b

1. \_\_\_\_\_\_\_\_\_\_\_\_\_ occur(s) when buyers from outside the test area come into the area to purchase the product being tested, thereby distorting the results of the experiment.

a. Most accurate results

b. Bias

c. Contamination

d. None of these

Answer: c

1. Studies in which the researcher lacks complete control over the scheduling of treatments or must assign respondents to treatments in a nonrandom manner is which of the following?

a. Pre-experimental designs

b. True experimental design

c. Quasi-Experiments

d. Pre-existing Experiments

Answer: c

1. The effect of the treatment variable on the dependent variable is referred to as which of the following?

a. Experimental effect

b. Change effect

c. Independent effect

d. Dependent effect

e. None of these

Answer: a

1. Intervention, between the beginning and end of an experiment, of outside variables or events that might change the dependent variable.

a. History

b. Maturation

c. Instrument variation

d. Selection bias

e. Mortality

Answer: a

1. Changes in subjects occurring during the experiment that are not related to the experiment but that may affect subjects’ response to the treatment factor.

a. History

b. Maturation

c. Instrument variation

d. Selection bias

e. Mortality

Answer: b

1. Changes in measurement instruments (e.g., interviewers or observers) that might affect measurements.

a. History

b. Maturation

c. Instrument variation

d. Selection bias

e. Mortality

Answer: c

1. Systematic differences between the test group and the control group due to a biased selection process.

a. Testing effect

b. Regression to the mean

c. Regression to the maximum

d. Selection bias

e. Mortality

Answer: d

1. Loss of test units or subjects during the course of an experiment, which may result in a nonrepresentativeness.

a. Testing effect

b. Regression to the mean

c. Regression to the maximum

d. Selection bias

e. Mortality

Answer: e

1. Effect that is a by-product of the research process itself.

a. Testing effect

b. Regression to the mean

c. Regression to the maximum

d. Selection bias

e. Mortality

Answer: a

1. Tendency of subjects with extreme behavior to move toward the average for that behavior during the course of an experiment.

a. Testing effect

b. Regression to the mean

c. Regression to the maximum

d. Selection bias

e. Mortality

Answer: b

1. Causal factors that threaten validity must be controlled in some manner to establish a clear picture of the effect of the manipulated variable on the dependent variable. Which of the following is not a control method.

a. Randomization

b. Physical control

c. Design control

d. Proper sequencing

e. Statistical control

Answer: d

1. Random assignment of subjects to treatment conditions to ensure equal representation of subject characteristics.

a. Randomization

b. Physical control

c. Design control

d. Proper sequencing

e. Statistical control

Answer: a

1. Holding constant the value or level of extraneous variables throughout the course of an experiment.

a. Randomization

b. Physical control

c. Design control

d. Proper sequencing

e. Statistical control

Answer: b

1. Use of the experimental design to control extraneous causal factors.

a. Randomization

b. Physical control

c. Design control

d. Proper sequencing

e. Statistical control

Answer: c

1. Adjusting for the effects of confounded variables by statistically adjusting the value of the dependent variable for each treatment condition.

a. Randomization

b. Physical control

c. Design control

d. Proper sequencing

e. Statistical control

Answer: d

1. There are four general types of test markets. Which of the following is not one of the four?

a. Traditional

b. Simulated

c. Virtual

d. Controlled

e. Online

Answer: e

1. A test market where the new product or strategy is actually introduced in one or more selected or test markets.

a. Traditional

b. Simulated

c. Virtual

d. Controlled

e. Online

Answer: a

1. In these test markets, a more limited amount of information is used in conjunction with mathematical models that include estimates of the effects of different marketing variables that can be adjusted to fit the situation.

a. Traditional

b. Simulated

c. Virtual

d. Controlled

e. Online

Answer: b

1. In this type of test marketing, consumers are recruited, based on their characteristics – demographics, product usage and others as appropriate for the test – to shop online.

a. Traditional

b. Simulated

c. Virtual

d. Controlled

e. Online

Answer: c

1. These test markets are conducted in markets where research firms have panels of consumers who they can track regarding their purchase of various products.

a. Traditional

b. Simulated

c. Virtual

d. Controlled

e. Online

Answer: d

**True/False**

1. Experimental research is often referred to as causal research.

Answer: True

1. Both surveys and experiments can show causation between two variables.

Answer: False

1. Two variables must be correlated to be causally related.

Answer: True

1. Laboratory experiments are usually conducted in uncontrolled settings.

Answer: False

1. Because laboratory experiments can control extraneous effects, the researcher’s ability to infer that the independent variable is causing change in the dependent variable is enhanced.

Answer: True

1. Field experiments in marketing are conducted in the actual marketplace.

Answer: True

1. The extent to which the results of an experiment can be generalized to represent what would happen in a population is referred to as internal validity.

Answer: False

1. Selection bias generally is minimized by randomization of subjects to test groups.

Answer: True

1. Laboratory experiments tend to produce higher internal validity than field experiments.

Answer: True

1. The results of a field experiment are often impacted by competitors’ actions.

Answer: True

1. Sales are a common independent variable in marketing experiments.

Answer: False

1. A test market generally occurs after a national rollout of a new product.

Answer: False

1. The extent to which a new product takes away from the innovative company’s present business is referred to as cannibalization.

Answer: True

1. Full commercialization of a new product is generally less expensive than conducting a test market.

Answer: False

1. The costs of producing a product for a test market are comparable to the cost associated with a national launch of the new product.

Answer: False

1. Pre-experimental designs offer little or no control over extraneous factors.

Answer: True

1. Quasi-experiments are studies in which the researcher lacks complete control over the scheduling of treatments or must assign respondents to treatments in a nonrandom manner.

Answer: True

1. Test markets offer at least two important benefits to the firm conducting the test. First and foremost, the test should identify weaknesses of the product and the proposed marketing strategy for the product and give management an opportunity to correct any weaknesses.

Answer: False

1. The first step in a test market study is to select a basic approach.

Answer: False

1. Manipulation refers to a process in which the researcher sets the levels of the independent variable to test a particular causal relationship.

Answer: True

1. The One-Shot Case Study Design is the design employed most frequently for testing changes in established products or marketing strategies.

Answer: False

1. The Before and After with Control Group Design generally controls for all but mortality and history.

Answer: True

1. An Interrupted Time-Series Design is an example of a quasi- experiment.

Answer: True

1. McDonald’s once experimented with pizza.

Answer: True

1. McDonald’s once sold a burger intended only for adults.

Answer: True

1. McDonald’s once sold a burger containing seaweed.

Answer: True

1. McDonald’s once sold an Africa teamed burger.

Answer: True

**Essay Questions**

1. Under what conditions can the results of a test market be used to forecast sales for a region?

Answer: Test market results can be used to forecast sales for larger areas, such as a region, when the characteristics associated with the behavior of interest are similar in both the test market and the region.

1. Your client is interested in determining which of two Internet banner ads is more effective. Design a field experiment. Be sure to identify the independent and dependent variables.

Answer: The independent variable is whether the respondent sees ad A or ad B. The dependent variable would possibly be the click through rate of each ad. Students should mention that these ads should be shown randomly to subjects, and whichever ad had a higher click through would be deemed most effective.

1. How would you respond to the following statement: “Advertising and sales are almost perfectly correlated, as when more is spent on advertising, sales go up, and vice-versa. Surely our advertising expenditures are ‘causing’ sales to rise.”

Answer: Even though advertising and sales exhibit con-commitment variation, correlation is only one of three conditions necessary for causation. The other two are appropriate time order of occurrence and elimination of other possible causal factors.

1. Marketing research firms often have exclusive rights to doing interviews in shopping malls they have contracts with. They also often maintain facilities within the mall. Such firms might set up an artificial store within the mall to test advertising or sales promotion associated with such a store. Discuss the type of experiment being conducted if the marketing research firm offers an incentive to persons in the mall, such as those participating in mall intercept interviews, who would be observed as they interact with the promotional materials in artificial store.

Answer: The marketing research firm is setting up a laboratory experiment in the shopping mall, with the goal of isolating the effect of various promotional strategies on certain products. The goal is to control the environment so that the effect of the marketing efforts being invoked within the artificial store can be isolated and measured.

1. Test marketing sounds like a natural step in the progression of a product through the product development process. However, there are some risks associated with conducting test markets. Hence, what are factors that should be taken into account in determining whether or not to conduct a test market?

Answer: The factors that must be taken into account in determining whether or not to conduct a test market are outlined on page 212-213, and include the costs of the test market, especially in the event of a failure; informing your competitors of your new offering, and giving them time to respond before your national rollout; the investment required for a test market relative to the investment required for a full scale rollout; and the damage to the firm’s reputation and product line in the event of a failed test market.

1. List and describe (3) three limitations of experimental research?

Answer: High costs of experimentation: Experiments can be very costly in both money and time

Security issues: involves exposing a marketing plan or some key element of a marketing plan in the actual marketplace.

Implementation costs: difficulty gaining cooperation within the organization, contamination problems, differences between test markets and the total population, and the lack of an appropriate group of people or geographic area for a control group.