8 Marketing Research: From Customer Insights to Actions

LEARNING OBJECTIVES

After reading this chapter you should be able to:

LO 8-1	Identify the reason for conducting marketing research.
LO 8-2	Describe the five-step marketing research approach that leads to marketing actions.
LO 8-3	Explain how marketing uses secondary and primary data.
LO 8-4	Discuss the uses of observations, questionnaires, panels, experiments, and newer data collection methods.
LO 8-5	Explain how information technology and data mining lead to marketing actions.
LO 8-6	Describe three approaches to developing a company's sales forecast.

Marketing Research Goes to the Movies

Avatar, *Titanic*, and *The Avengers* are blockbuster movies that have attracted millions of moviegoers worldwide. The revenues they generated each exceeded $1 billion, well above the $200+ million budgets needed to produce them.[1] Unfortunately, not every movie has such favorable results. So what can studios do to try to reduce the risk that a movie will be a box-office flop? Marketing research!

VIDEO 8-1

***Star Wars Episode VII* Movie Trailer**

Kerin.tv/13e/v8-1

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A Film Industry Secret

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Bad titles, poor scripts, temperamental stars, costly special effects, competing movies, and everchanging consumers are just a few of the risks studio executives face. They try to reduce their risk through a largely secretive process of marketing research that involves small sample audiences selected to be representative of the larger population.

Fixing bad movie names, for example, can turn potential disaster into successful blockbusters. Many studios use title testing—a form of marketing research—to choose a name. Here are a few examples:

- *3000* became *Pretty Woman* because the original title sounded too futuristic.
- *The Sessions*, which garnered Helen Hunt an Academy Award nomination, was originally titled *The Surrogate*, which was confusing, and then *Six Sessions*, which was difficult to say.
- *Rope Burns* became *Million Dollar Baby* because audiences didn't like the original name.
- *Shoeless Joe* became the baseball classic *Field of Dreams* to avoid suggesting that Kevin Costner was playing a homeless person.

Generally, filmmakers want movie titles that are short, memorable, appealing to consumers, and have no legal restrictions—the same factors that make a good brand name.[2]

Studios also try to reduce their risks with additional forms of marketing research such as:

- *Concept testing and script assessment*. These techniques are used to assess early ideas for proposed new films. In addition, because many scripts and films today are part of a series such as *The Fast and The Furious*, *The Hunger Games*, and *Star Wars*,

these forms of research can ensure that sequels are consistent with expectations created by the past movies.[3]

- *Test (or preview) screenings*. In test screenings, 300 to 400 prospective moviegoers are recruited to attend a “sneak preview” of a film before its release. After viewing the movie, the audience completes a survey to critique its title, plot, characters,

music, and ending to identify improvements to make in the final edit. John Cameron, for example, used a test screening of a segment of *Avatar* to convince Twentieth Century Fox executives of the movie's potential appeal.[4]

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- *Tracking studies*. Before an upcoming film's release studios will ask prospective moviegoers in the target audience three questions: (1) Are you aware of the film? (2) Are you interested in seeing the film? (3) Will you see the film? Studios also use "social listening" to understand what potential moviegoers are saying on Twitter, YouTube, Tumblr, Facebook, Instagram, and other social media sites. Studios use these data to monitor a promotional campaign, forecast the movie's opening weekend box-office sales and, if necessary, add additional marketing activities to promote the film.[5]

The text describes how its test screening helped *Avatar* become a success.

These examples show how marketing research leads to effective marketing actions, the main topic of this chapter. Also, marketing research is often used to help a firm develop its sales forecasts, the final topic of this chapter.

THE ROLE OF MARKETING RESEARCH

Let's (1) look at what marketing research is, (2) identify some difficulties with it, and (3) describe the five steps marketers use to conduct it.

LO 8-1

Identify the reason for conducting marketing research.

What Is Marketing Research?

Marketing research is the process of defining a marketing problem and opportunity, systematically collecting and analyzing information, and recommending actions.[6] Although imperfect, marketers conduct marketing research to reduce the risk of and thereby improve marketing decisions.

The Challenges in Doing Good Marketing Research

Whatever the marketing issue involved—whether discovering consumer tastes or setting the right price—good marketing research is challenging. For example:

- Suppose your firm is developing a product that is completely new to the marketplace, and you are charged with estimating demand for the product. How can marketing research determine if consumers will buy a product they have never seen, and never thought about, before?
- Understanding why consumers purchase some products often requires answers to personal questions. How can marketing research obtain answers that people know but are reluctant to reveal?
- Past purchase behaviors may help firms understand the influence of marketing actions. How can marketing research help people accurately remember and report their interests, intentions, and purchases?

Marketing research must overcome these difficulties and obtain the information needed so that marketers can assess what consumers want and will buy.

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Five-Step Marketing Research Approach

LO 8-2

Describe the five-step marketing research approach that leads to marketing actions.

A *decision* is a conscious choice from among two or more alternatives. All of us make many such decisions daily. At work we choose from alternative ways to accomplish an assigned task. At college we choose from alternative courses. As consumers we choose from alternative brands. No magic formula guarantees correct decisions.

Managers and researchers have tried to improve the outcomes of decisions by using more formal, structured approaches to *decision making*, the act of consciously choosing from among alternatives. The systematic marketing research approach used to collect information to improve marketing decisions and actions described in this chapter uses five steps and is shown in **Figure 8–1**. Although the five-step approach described here focuses on marketing decisions, it provides a systematic checklist for making both business and personal decisions.

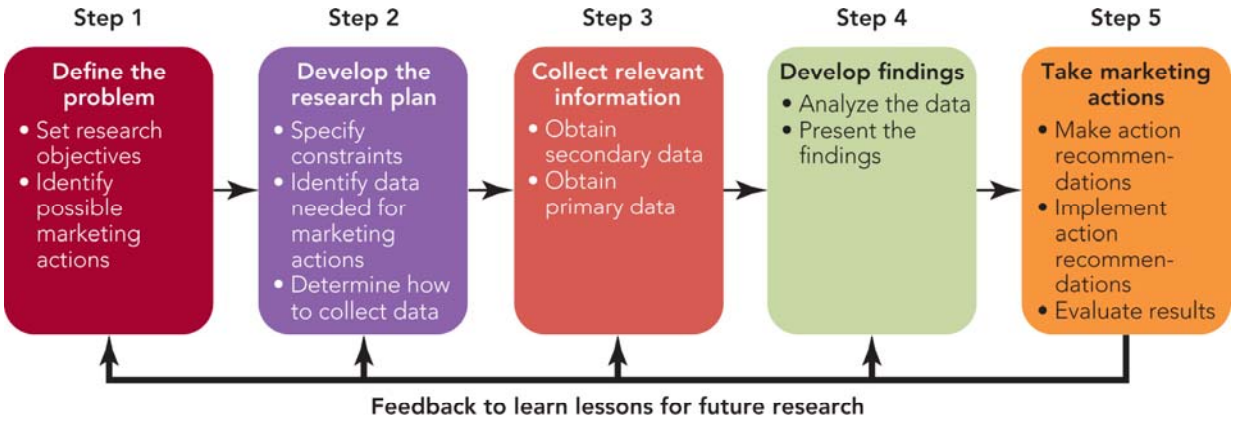

Figure 8–1 Five-step marketing research approach leading to marketing actions. Lessons learned from past research mistakes are fed back to improve each of the steps.

STEP 1: DEFINE THE PROBLEM

Every marketing problem faces its own research challenges. For example, the marketing strategy used by LEGO Group's toy researchers and designers in Denmark illustrates the wide variations possible in collecting marketing research data to build better toys.

LEGO Group's MINDSTORMS® EV3 TRACK3R has an interchangeable bazooka and hammer—and can operate after only 20 minutes of assembly.
Source: LEGO Group

LEGO Group's definition of "toy" has changed dramatically in the past 50 years—from interlocking plastic bricks to construction sets that create figures, vehicles, buildings, and even robots. One new version of a LEGO Group toy is the MINDSTORMS® kit, which integrates electronics, computers, and robots with traditional LEGO Group bricks. Developed with the help of the Media Lab at the Massachusetts Institute of Technology, the MINDSTORMS® kit appeals to a diverse market—from elementary school kids to world-class robotics experts. The kits can be found in homes, schools, universities, and industrial laboratories.[7]

A simplified look at the marketing research for the LEGO Group's MINDSTORMS® EV3 shows the two key elements in defining a problem: setting the research objectives and identifying possible marketing actions.

Set the Research Objectives

Research objectives are specific, measurable goals the decision maker seeks to achieve in conducting the marketing research. For

LEGO Group, let's assume the immediate research objective is to decide which of two new MINDSTORMS® designs should be selected for marketing.

In setting research objectives, marketers have to be clear on the purpose of the research that leads to marketing actions. The three main types of marketing research are as follows:

1. *Exploratory research* provides ideas about a vague problem. LEGO Group was concerned that middle school kids would be overwhelmed by the 500-plus pieces in MINDSTORMS® kits and quickly lose interest. LEGO Group's brainstorming—an example of exploratory research—revealed kids need to have a basic device up, running, and doing tricks in 20 minutes.
2. 

   LEGO Group's MINDSTORMS® EV3RSTORM has infrared sensors that let it walk or skate.
   Source: LEGO Group

   Descriptive research generally involves trying to find the frequency with which something occurs or the extent of a relationship between two factors. So if LEGO Group wants to know which of the two MINDSTORMS® kits is of greatest interest to middle school versus high school students, it might ask them. LEGO Group can then assess the relationship by doing a cross tabulation (discussed later in the chapter) of school level versus kit preference.
3. *Causal research* tries to determine the extent to which the change in one factor changes another one. Changing key pieces in a MINDSTORMS® kit affects how quickly the newly built device can do tricks—affecting acceptance by kit users. Test markets, discussed later, use causal research.

Identify Possible Marketing Actions

Effective decision makers develop specific **measures of success**, which are criteria or standards used in evaluating proposed solutions to the problem. Different research outcomes, based on the measure of success, lead to different marketing actions. For LEGO Group, assume the measure of success is the total time spent with each of the two potential new MINDSTORMS® kits until a device that can do simple tricks is produced. This measure of success leads to a clear-cut marketing action: Market the kit that produces an acceptable device in the least amount of playing time.

Marketing researchers know that defining a problem is an incredibly difficult task. If the objectives are too broad, the problem may not be researchable. If they are too narrow, the value

of the research results may be seriously lessened. This is why marketing researchers spend so much time defining a marketing problem precisely and writing a formal proposal that describes the research to be done.[8]

STEP 2: DEVELOP THE RESEARCH PLAN

The second step in the marketing research process requires that the researcher (1) specify the constraints on the marketing research activity, (2) identify the data needed for marketing actions, and (3) determine how to collect the data.

Specify Constraints

The **constraints** in a decision are the restrictions placed on potential solutions to a problem. Examples include the limitations on the time and money available to solve the problem.

What constraints might LEGO Group set in developing new LEGO Group MINDSTORMS® EV3 products? LEGO Group might establish the following constraints on its decision to select one of the two improved designs: The decision (1) must be made in five weeks (2) using 10 teams of middle schoolers playing with the two improved MINDSTORMS® kits.

Identify Data Needed for Marketing Actions

Effective marketing research studies focus on collecting data that will lead to effective marketing actions. In the MINDSTORMS® case, LEGO Group's marketers might want to know students' math skills, time spent playing video games, and so on. But that information, while nice to know, is largely irrelevant because the study should focus on collecting only those data that will help them make a clear choice between the two MINDSTORMS® designs.

Determine How to Collect Data

Determining how to collect useful marketing research data is often as important as actually collecting the data—step 3 in the process, which is discussed later. Two key elements to consider in deciding how to collect the data are (1) concepts and (2) methods.

Concepts

In the world of marketing, *concepts* are ideas about products or services. To find out about consumer reactions to a potential new product, marketing researchers frequently develop a *new-product concept*, which is a picture or verbal description of a product or service the firm might offer for sale. For example, the LEGO Group designers might develop a new-product concept for a new MINDSTORMS® EV3 robot that uses a color sensor, responds to voice commands, or uses GPS navigation software.

Methods

Methods are the approaches that can be used to collect data to solve all or part of a problem. To collect data, LEGO Group marketing researchers might use a combination of (1) observing the behavior of MINDSTORMS® users and (2) asking users questions about their opinions of the MINDSTORMS® kits. Observing people and asking them questions—the two main data collection methods—are discussed in the section that follows.

How successful is LEGO Group's marketing research and design strategy for its MINDSTORMS® products? Among younger users alone, tens of thousands of elementary and middle-school teams face off in competitions around the world each year.

How can you find and use the methods that other marketing researchers have found successful? Information on useful methods is available in tradebooks, textbooks, and handbooks that relate to marketing and marketing research. Some periodicals and technical journals, such as the *Journal of Marketing* and the *Journal of Marketing Research*, both published by the American Marketing Association, summarize methods and techniques valuable in addressing marketing problems.

Special methods vital to marketing are (1) sampling and (2) statistical inference. For example, marketing researchers often use *sampling* by selecting a group of distributors, customers, or prospects, asking them questions, and treating their answers as typical of all those in whom they are interested. They may then use *statistical inference* to generalize the results from the sample to much larger groups of distributors, customers, or prospects to help decide on marketing actions.

learning review

8-1. What is marketing research?

8-2. What is the five-step marketing research approach?

8-3. What are constraints as they apply to developing a research plan?

STEP 3: COLLECT RELEVANT INFORMATION

LO 8-3

Explain how marketing uses secondary and primary data.

Collecting enough relevant information to make a rational, informed marketing decision sometimes simply means using your knowledge to decide immediately. At other times it entails collecting an enormous amount of information at great expense.

Figure 8–2 shows how the different kinds of marketing information fit together. **Data**, the facts and figures related to the project, are divided into two main parts: secondary data and primary data. **Secondary data** are facts and figures that have already been recorded prior to the project at hand. As shown in **Figure 8–2**, secondary data are divided into two parts—internal and external secondary data—depending on whether the data come from inside or outside the organization needing the research. **Primary data** are facts and figures that are newly collected for the project. **Figure 8–2** shows that primary data can be divided into observational data, questionnaire data, and other sources of data.

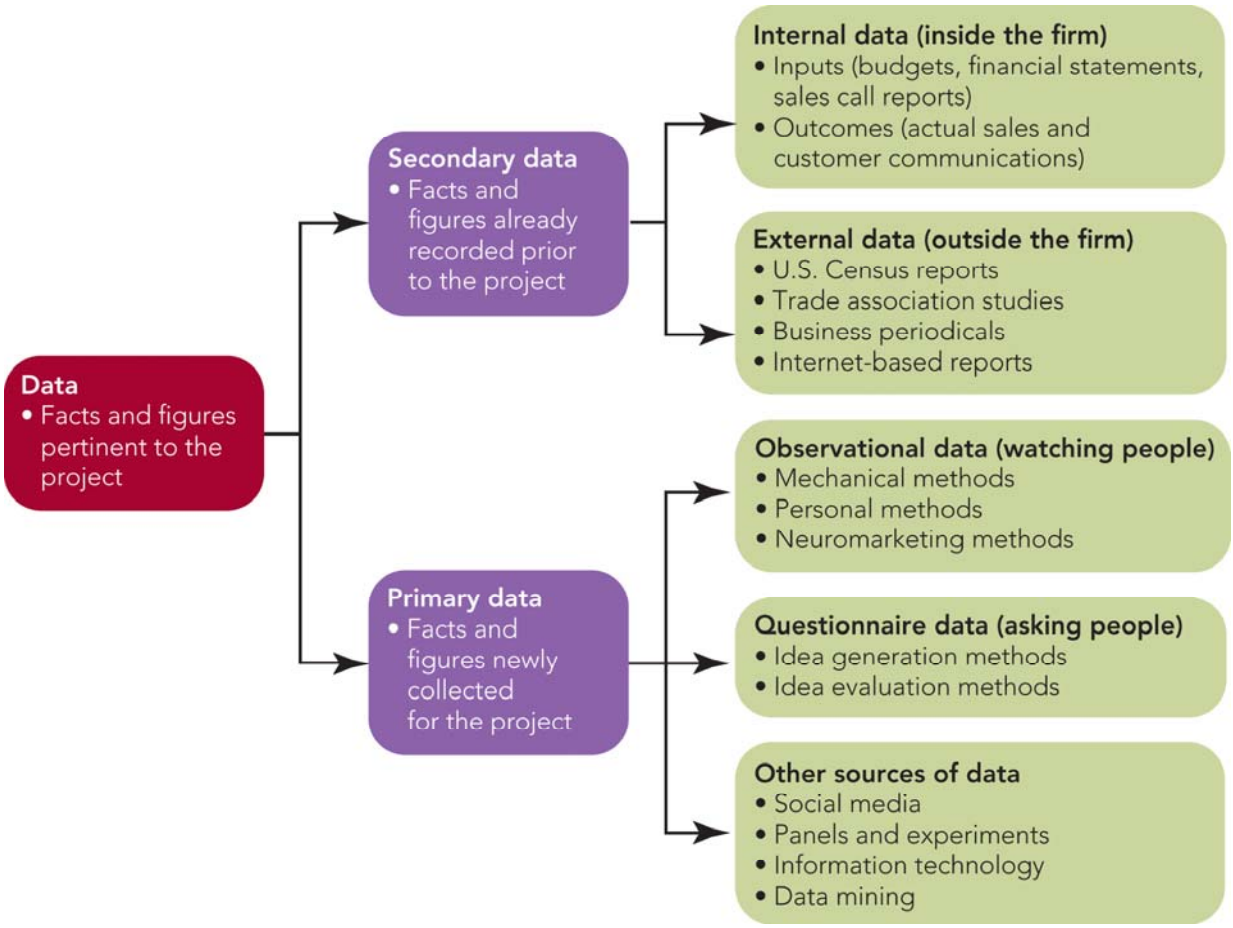

Figure 8–2 Types of marketing information. Researchers must choose carefully among these to get the best results, considering time and cost constraints.

Secondary Data: Internal

The internal records of a company generally offer the most easily accessible marketing information. These internal sources of secondary data may be divided into two related parts: (1) marketing inputs and (2) marketing outcomes.

Marketing input data relate to the effort expended to make sales. These range from sales and advertising budgets and expenditures to salespeople's call reports, which describe the number of sales calls per day, who was visited, and what was discussed.

Marketing outcome data relate to the results of the marketing efforts. These involve accounting records on shipments and include sales and repeat sales, often broken down by sales representative, industry, and geographic region. In addition, e-mails, phone calls, and letters from customers can reveal both complaints and what is working well.[9]

Secondary Data: External

Scanner data at supermarket checkout counters provide valuable information for marketing decisions.

Published data from outside the organization are external secondary data. The U.S. Census Bureau publishes a variety of useful reports. Best known is the Census 2010, which is the most recent count of the U.S. population that occurs every 10 years. Recently, the Census Bureau began collecting data annually from a smaller number of people through the American Community Survey. Both surveys contain detailed information on American households, such as the number of people per household and the age, sex, race/ethnic background, income, occupation, and education of individuals within the household. Marketers use these data to identify characteristics and trends of ultimate consumers.

The Census Bureau also publishes the Economic Census, which is conducted every five years. These reports are vital to business firms selling products and services to organizations. The 2012 Economic Census contains data on the number and sales of establishments in the United States that produce a product or service based on each firm's geography (state, county, zip code, etc.), industry sector (manufacturing, retail trade, etc.), and North American Industry Classification System (NAICS) code. Data from the 2012 Economic Census are released from March 2014 through June 2016 and the next Economic Census takes place in October 2017.

VIDEO 8-2

Census

kerin.tv/13e/v8-2

Several market research companies pay households and businesses to record all their purchases using a paper or electronic diary. Such *syndicated panel* data economically answer

questions that require consistent data collection over time, such as, “How many times did our customers buy our products this year compared to last year?” Examples of syndicated panels that provide a standard set of data on a regular basis are the Nielsen TV ratings and J.D. Power’s automotive quality and customer satisfaction surveys.

Some data services provide comprehensive information on household demographics and lifestyle, product purchases, TV viewing behavior, responses to coupon and free-sample promotions, and social media use. Their advantage is that a single firm can collect, analyze, interrelate, and present all this information. For consumer product firms such as Procter & Gamble, sales data from various channels help them allocate scarce marketing resources. As a result, they use tracking services such as IRI’s InfoScan to collect product sales and coupon/free-sample redemptions that have been scanned at the checkout counters of supermarket, drug, convenience, and mass merchandise retailers.

Finally, trade associations, universities, and business periodicals provide detailed data of value to market researchers and planners. These data are often available online and can be identified and located using a search engine such as Google or Bing. The Marketing Matters box provides examples.

Marketing **Matters** technology

Online Databases and Internet Resources Useful to Marketers

Marketers in search of secondary data can utilize a wide variety of online databases and Internet resources. These resources provide access to articles in periodicals; statistical or financial data on markets, products, and organizations; and reports from commercial information companies.

Sources of news and articles include:

- LexisNexis Academic (**www.lexisnexis.com**) which provides comprehensive news and company information from domestic and foreign sources.
- *The Wall Street Journal* (**www.wsj.com**), *CNBC* (**www.cnbc.com**), and *Fox Business* (**www.foxbusiness.com)**), which provide up-to-the-minute business news and video clips about companies, industries, and trends.

Sources of statistical and financial data on markets, products, and organizations include:

- FedStats (**www.fedstats.sites.usa.gov**) and the Census Bureau (**www.census.gov**) of the U.S. Department of Commerce, which provide information on U.S. business, economic, and trade activity collected by the federal government.

Portals and search engines include:

- USA.gov (**www.usa.gov**), the portal to all U.S. government websites. Users can click on links to browse by topic or enter keywords for specific searches.
- Google (**www.google.com**), the most popular portal to the entire Internet. Users enter keywords for specific searches and then click on results of interest.

Some of these websites are accessible only if you or your educational institution have paid a subscription fee. Check with your institution's website.

Advantages and Disadvantages of Secondary Data

A general rule among marketing people is to obtain secondary data first and then collect primary data. Two important advantages of secondary data are (1) the tremendous time savings because the data have already been collected and published or exist internally and (2) the low cost, such as free or inexpensive Census reports. Furthermore, a greater level of detail is often available through secondary data, especially U.S. Census Bureau data.

However, these advantages must be weighed against some significant disadvantages. First, the secondary data may be out of date, especially if they are U.S. Census data collected only every 5 or 10 years. Second, the definitions or categories might not be quite right for a researcher's project. For example, the age groupings or product categories might be wrong for the project. Also, because the data have been collected for another purpose, they may not be specific enough for the project. In such cases, it may be necessary to collect primary data.

learning review

8-4. What is the difference between secondary and primary data?

8-5. What are some advantages and disadvantages of secondary data?

Primary Data: Watching People

LO 8-4

Discuss the uses of observations, questionnaires, panels, experiments, and newer data collection methods.

Observing people and asking them questions are the two principal ways to collect new or primary data for a marketing study. Facts and figures obtained by watching how people actually behave is the way marketing researchers collect **observational data** . Observational data can be collected by mechanical (including electronic), personal, or neuromarketing methods.

What determines if *Dancing With The Stars* stays on the air? For the importance of the TV "ratings game," see the text.

© Adam Taylor/ABC via Getty Images

Mechanical Methods

National TV ratings, such as those of Nielsen shown in **Figure 8–3**, are an example of mechanical observational data collected by a "people meter." The device measures what channel and program are tuned in and who is watching. The people meter (1) is a box that is attached to a television, DVR, cable box, or satellite dish in about 30,000 households across the country;[10] (2) has a remote control unit that is used to indicate when a viewer begins and finishes watching a TV program; and (3) stores and then transmits the viewing information to Nielsen each night. Data about TV viewing are also collected using diaries (a paper-pencil recording system).

Obtaining an accurate picture of television viewing behavior is complicated, however, as audiences are increasingly delaying their viewing and watching on multiple devices. More than 40 percent of viewing of *The Blacklist*, for example, takes place on a delayed basis, while 37 percent of *Parks and Recreation* viewers watch on devices other than televisions. To address these issues, Nielsen introduced a "cross-platform television rating," which combines Nielsen's existing TV ratings with its new online ratings. These ratings include traditional consumer viewing of TV programs and

programming that is streamed on PCs, smartphones, tablets, and video game consoles.[11]

On the basis of all these observational data, Nielsen then calculates the rating of each TV program. With 116 million TV households in the United States, a single rating point equals 1 percent, or 1,160,000 TV households.[12] In some situations ratings are reported as share points, or the percentage of television households with a television in use that are tuned to the program. Because TV and cable networks sell over $67 billion annually in advertising and set advertising rates to advertisers on the basis of those data, precision in the Nielsen data is critical.[13]

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RANK	PROGRAM	NETWORK	RATING	VIEWERS (000)
1	*NCIS*	CBS	9.3	14,939
2	*Dancing with the Stars*	ABC	8.6	13,479
3	*NCIS: New Orleans*	CBS	8.5	13,610
4	*DWS: The Results Show (s)*	ABC	6.7	10,159
5	*Billboard Music Awards*	ABC	6.5	11,181
6	*The Voice*	NBC	6.2	10,051
7	*The Big Bang Theory*	CBS	6.1	9,567
8	*The Voice-Tues*	NBC	5.8	9,138
9	*60 Minutes*	CBS	5.7	8,989
10	*Grey's Anatomy*	ABC	5.7	8,332

Source: The Nielsen Company Broadcast Ranking Report for the week ending May 11, 2015. Viewing estimates include live viewing and DVR playback on the same day, defined as 3 A.M. to 3 A.M. Rank is based on the number of U.S. viewers (in millions) from Nielsen's National People Meter Sample. Nielsen © 2013.

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Figure 8–3 Nielsen Television Index Ranking Report for network TV prime-time households for the week ending May 11, 2015. The difference of a few share points in Nielsen TV ratings affects the cost of a TV ad on a show and even whether the show remains on the air.

A change of one percentage point in a rating can mean gaining or losing millions of dollars in advertising revenues because advertisers pay rates on the basis of the size of the audience for a TV program. So as shown by the green rows in **Figure 8–3**, we might expect to pay more for a 30-second TV ad on *NCIS* than one on *60 Minutes*. Broadcast and cable networks may change the time slot or even cancel a TV program if its ratings are consistently poor and advertisers are unwilling to pay a rate based on a higher rating.

Personal Methods

Watching consumers in person is another approach to collecting observational data. Procter and Gamble, for example, invests millions of dollars in observational research to identify new innovations. As several industry experts have observed, “Odds are that as you’re reading this, P&G researchers are in a store somewhere observing shoppers, or even in a consumer’s home.” When observing consumers using its Tide laundry detergent in India, P&G noticed that because clothes were often washed by hand, the detergent sometimes caused skin irritation. As result, P&G introduced Tide Naturals, which cleaned well without causing irritation. Similarly, IKEA noticed that customers often stopped shopping when their baskets or carts were full, so additional shopping bags are now placed throughout IKEA stores.[14]

Observational data led P&G to develop Tide Naturals.

Another method of collecting observational data is through the use of mystery shoppers. Companies pay researchers to shop at their stores, outlets, or showrooms to obtain the point of view of actual customers. Mystery shoppers can check on the

availability and pricing of products and services and on the quality of the customer service provided by employees. Supermarkets such as Kroger, Publix, and H-E-B, for example, use this technique as part of their customer experience management efforts by evaluating customer service, store cleanliness, and staff appearance and conduct. This process provides unique marketing research information that can be obtained in no other way.[15]

Ethnographic research is a specialized observational approach in which trained observers seek to discover subtle behavioral and emotional reactions as consumers encounter products in their "natural use environment," such as in their home or car.[16] Recently, Kraft launched Deli Creations, which are sandwiches made with its Oscar Mayer meats, Kraft cheeses, and Grey Poupon mustard, after spending several months with consumers in their kitchens. Kraft discovered that consumers wanted complete, ready-to-serve meals that are easy to prepare—and it had the products to create them.[17]

Personal observation is both useful and flexible, but it can be costly and unreliable if different observers report different conclusions when watching the same event. And while observation can reveal *what* people do, it cannot easily determine *why* they do it.

"Neuromarketing" often uses a cap with dozens of sensors to measure brain waves to try to understand consumers better. For some changes made by Campbell Soup Company based on neuromarketing, see the text.
© *annedde/E+/Getty Images*

Neuromarketing Methods

Marketing researchers are also utilizing neuromarketing methods to observe responses to nonconscious stimuli. Neuromarketing is a relatively new field of study that merges technologies used to study the brain with marketing's interest in understanding consumers. Aradhna Krishna, one of the foremost experts in the field, suggests that "many companies are just starting to recognize how strongly the senses affect the deepest parts of our brains." Another expert, Martin Lindstrom, has used brain scanning to analyze the buying processes of more than 2,000 people. The findings of his research are summarized in his book *Buyology*.[18]

Based on the results of neuromarketing studies, Campbell Soup Company recently changed the labels of most of its soup cans. Some of the changes: Steam now rises from more vibrant images of soup; the "unemotional spoons" have disappeared; and the script logo is smaller and has been moved to the bottom of the can.[19]

Primary Data: Asking People

How many times have you responded to some kind of a questionnaire? Maybe a short survey at school or a telephone or e-mail survey to see if you are pleased with the

service you received. Asking consumers questions and recording their answers is the second principal way of gathering information.

We can divide this primary data collection task into (1) idea generation methods and (2) idea evaluation methods, although they sometimes overlap and each has a number of special techniques.[20] Each survey method results in valuable **questionnaire data**, which are facts and figures obtained by asking people about their attitudes, awareness, intentions, and behaviors.

Idea Generation Methods—Coming Up with Ideas

In the past, the most common way of collecting questionnaire data to generate ideas was through an *individual interview*, which involves a single researcher asking questions of one respondent. This approach has many advantages, such as being able to probe for additional ideas using follow-up questions to a respondent's initial answers. However, this method is very expensive. Later in the chapter we'll discuss some alternatives.

General Mills sought ideas about why Hamburger Helper didn't fare well when it was introduced. Initial instructions called for cooking a half-pound of hamburger separately from the noodles or potatoes, which were later mixed with the hamburger. So General Mills researchers used a special kind of individual interview, called a *depth interview*, in which researchers ask lengthy, free-flowing kinds of questions to probe for underlying ideas and feelings. These depth interviews discovered that consumers (1) didn't think it contained enough meat and (2) didn't want the hassle of cooking in two different pots. The Hamburger Helper product manager changed the recipe to call for a full pound of meat and to allow users to prepare it in one dish, leading to product success.

Focus groups of students and instructors were used in developing this textbook. To see the specific suggestion that may help you study, read the text.

Focus groups are informal sessions of 6 to 10 past, present, or prospective customers in which a discussion leader, or moderator, asks for opinions about the firm's products and those of its competitors, including how they use these products and special needs they have that these products don't address. Often recorded and conducted in special interviewing rooms with a one-way mirror,

these groups enable marketing researchers and managers to hear and watch consumer reactions.

The informality and peer support in an effective focus group help uncover ideas that are often difficult to obtain with individual interviews. For example, to improve understanding and learning by students using this textbook, focus groups were conducted among both marketing instructors and students. Both groups recommended providing answers to each chapter's set of Learning Review questions. This suggestion was followed, so you can see the answers by going to the section at the end of the chapter or by tapping your finger on the question in the SmartBook version.

VIDEO 8-3

Trend Hunter

kerin.tv/13e/v8-3

Finding "the next big thing" for consumers has caused marketing researchers to turn to some less traditional techniques. For example, "fuzzy front end" methods attempt early identification of elusive consumer tastes or trends. Trend Hunter is a firm that seeks to anticipate and track "the evolution of cool." Trend hunting (or watching) is the practice of identifying "emerging shifts in social behavior," which are driven by changes in pop culture that can lead to new products. Trend Hunter has identified about 250,000 cutting edge ideas through its global network of 155,000 members, and features these new ideas on its daily Trend Hunter TV broadcast via its YouTube channel (trendhuntertv).[21]

Idea Evaluation Methods—Testing an Idea

In idea evaluation, the marketing researcher tries to test ideas discovered earlier to help the marketing manager recommend marketing actions. Idea evaluation methods often involve conventional questionnaires

Wendy's spent over two years remaking its 42-year-old burger. The result: Dave's Hot 'N' Juicy, named after Wendy's founder, Dave Thomas. See **Figure 8–4** for some questions that Wendy's asked consumers in a survey to discover their fast-food preferences, behaviors, and demographics.
Source: Wendy's International, LLC

using personal, mail, telephone, fax, and online (e-mail or Internet) surveys of a large sample of past, present, or prospective consumers. In choosing among them, the marketing researcher balances the cost of the particular method against the expected quality of the information and the speed with which it can be obtained.

Personal interview surveys enable the interviewer to be flexible in asking probing questions or getting reactions to visual materials but are very costly. *Mail surveys* are usually biased because those most likely to respond have had especially positive or negative experiences with the product or brand. While *telephone interviews* allow flexibility, unhappy respondents may hang up on the interviewer, even with the efficiency of computer-assisted telephone interviewing (CATI).

Increasingly, marketing researchers have begun to use *online surveys* (e-mail and Internet) to collect primary data. The reason: Most consumers have an Internet connection and an e-mail account. Marketers can embed a survey in an e-mail sent to targeted respondents. When they open the e-mail, consumers can either see the survey or click on a link to access it from a website. Marketers can also ask consumers to complete a "pop-up" survey in a separate browser window when they access an organization's website. Many organizations use this method to have consumers assess their products and services or evaluate the design and usability of their websites.

The advantages of online surveys are that the cost is relatively minimal and the turnaround time from data collection to report presentation is much quicker than the traditional methods discussed earlier. However, online surveys have serious drawbacks: Some consumers may view e-mail surveys as “junk” or “spam” and may either choose to not receive them (if they have a “spam blocker”) or purposely or inadvertently delete them, unopened. For Internet surveys, some consumers have a “pop-up blocker” that prohibits a browser from opening a separate window that contains the survey; thus, they may not be able to participate in the research. For both e-mail and Internet surveys, consumers can complete the survey multiple times, creating a significant bias in the results. This is especially true for online panels. In response, research firms such as SurveyMonkey have developed sampling technology to prohibit this practice.[22]

The foundation of all research using questionnaires is developing precise questions that get clear, unambiguous answers from respondents.[23] **Figure 8–4** shows a number

of formats for questions taken from a Wendy's survey that assessed fast-food restaurant preferences among present and prospective consumers.

1. What things are most important to you when you decide to eat out at a fast-food restaurant?

_____

_____

_____

2. Have you eaten at a fast-food restaurant in the past month?

○ Yes ○ No

3. If you answered yes to question 2, how often do you eat at a fast-food restaurant?

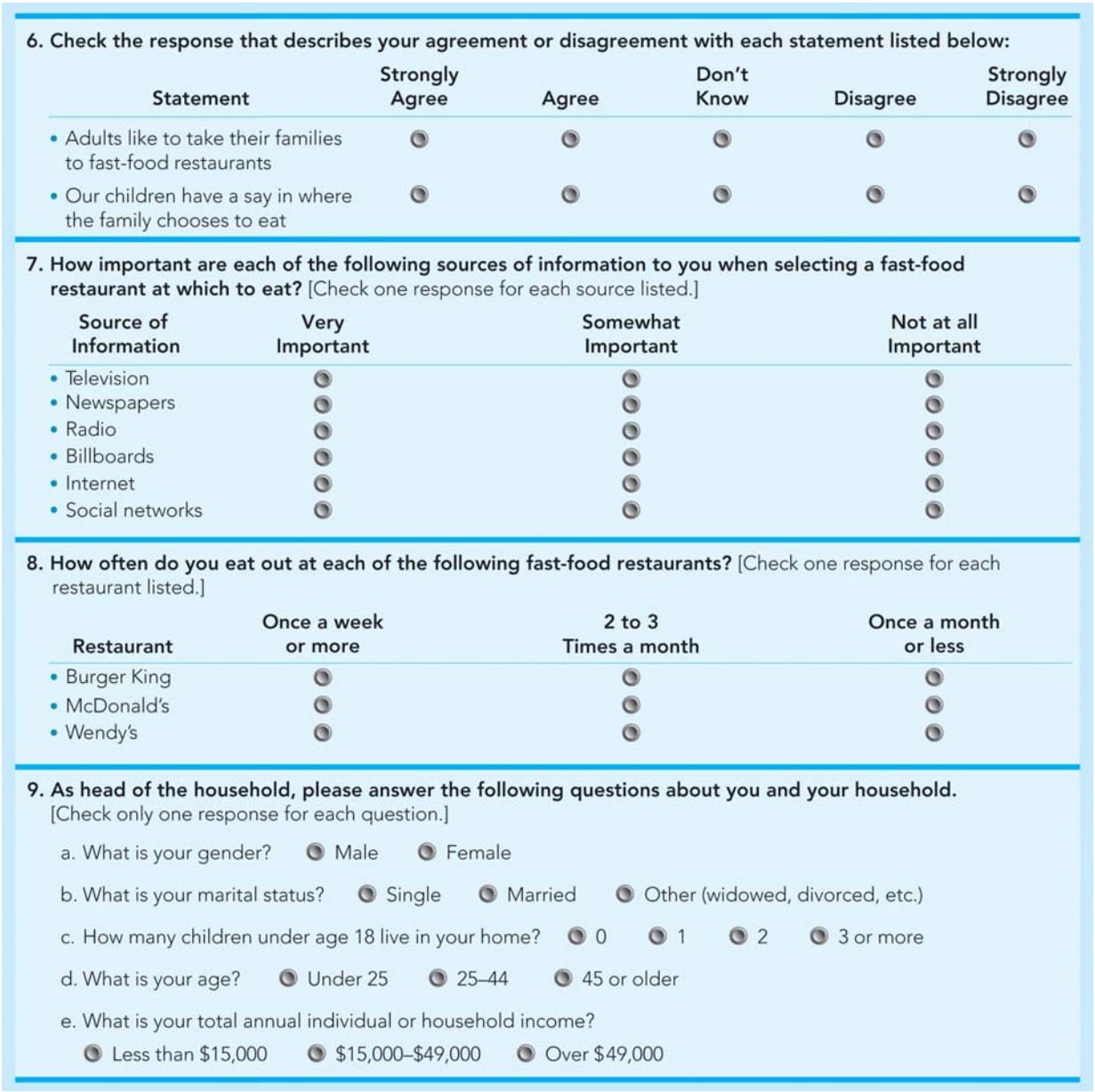
○ Once a week or more ○ 2 to 3 times a month ○ Once a month or less

4. How important is it to you that a fast-food restaurant satisfies you on the following characteristics?
[Check the response that describes your feelings for each characteristic listed.]

Characteristic	Very Important	Somewhat Important	Important	Unimportant	Somewhat Unimportant	Very Unimportant
• Taste of food	○	○	○	○	○	○
• Cleanliness	○	○	○	○	○	○
• Price	○	○	○	○	○	○
• Variety of menu	○	○	○	○	○	○

5. For each of the characteristics listed below check the space on the scale that describes how you feel about Wendy's. Mark an X on only **one** of the five spaces for each characteristic listed.

Characteristic		Check the space that describes the degree to which Wendy' is . . .					
• Taste of food	Tasty	_____	_____	_____	_____	_____	Not Tasty
• Cleanliness	Clean	_____	_____	_____	_____	_____	Dirty
• Price	Inexpensive	_____	_____	_____	_____	_____	Expensive
• Variety of menu	Broad	_____	_____	_____	_____	_____	Narrow



6. Check the response that describes your agreement or disagreement with each statement listed below:

Statement	Strongly Agree	Agree	Don't Know	Disagree	Strongly Disagree
• Adults like to take their families to fast-food restaurants	○	○	○	○	○
• Our children have a say in where the family chooses to eat	○	○	○	○	○

7. How important are each of the following sources of information to you when selecting a fast-food restaurant at which to eat? [Check one response for each source listed.]

Source of Information	Very Important	Somewhat Important	Not at all Important
• Television	○	○	○
• Newspapers	○	○	○
• Radio	○	○	○
• Billboards	○	○	○
• Internet	○	○	○
• Social networks	○	○	○

8. How often do you eat out at each of the following fast-food restaurants? [Check one response for each restaurant listed.]

Restaurant	Once a week or more	2 to 3 Times a month	Once a month or less
• Burger King	○	○	○
• McDonald's	○	○	○
• Wendy's	○	○	○

9. As head of the household, please answer the following questions about you and your household. [Check only one response for each question.]

a. What is your gender? ○ Male ○ Female

b. What is your marital status? ○ Single ○ Married ○ Other (widowed, divorced, etc.)

c. How many children under age 18 live in your home? ○ 0 ○ 1 ○ 2 ○ 3 or more

d. What is your age? ○ Under 25 ○ 25–44 ○ 45 or older

e. What is your total annual individual or household income?

○ Less than $15,000 ○ $15,000–$49,000 ○ Over $49,000

Figure 8–4 To obtain the most valuable information from consumers, this Wendy's survey utilizes four different kinds of questions discussed in the text.

Question 1 is an example of an *open-ended question*, which allows respondents to express opinions, ideas, or behaviors in their own words without being forced to choose among alternatives that have been predetermined by a marketing researcher. This information is invaluable to marketers because it captures the "voice" of respondents, which is useful in understanding consumer behavior, identifying product benefits, or developing advertising messages.

In contrast, *closed-end* or *fixed alternative questions* require respondents to select one or more response options from a set of predetermined choices. Question 2 is an example of a *dichotomous question*, the simplest form of a fixed alternative question that allows only a "yes" or "no" response.

A fixed alternative question with three or more choices uses a *scale*. Question 5 is an example of a question that uses a *semantic differential scale*, a five-point scale in which the opposite ends have one- or two-word adjectives that have opposite meanings. For example, depending on the respondent's opinion regarding the cleanliness of Wendy's restaurants, he or she would check the left-hand space on the scale, the right-hand space, or one of the three other intervening points. Question 6 uses a *Likert scale*, in which the respondent indicates the extent to which he or she agrees or disagrees with a statement.

The questionnaire in **Figure 8–4** provides valuable information to the marketing researcher at Wendy's. Questions 1 to 8 inform him or her about the respondent's likes and dislikes in eating out, frequency of eating out at fast-food restaurants generally and at Wendy's specifically, and sources of information used in making decisions about fast-food restaurants. Question 9 gives details about the respondent's personal or household characteristics, which can be used in trying to segment the fast-food market, a topic discussed in **Chapter 9**.

Marketing research questions must be worded precisely so that all respondents interpret the same question similarly. For example, in a question asking whether you eat at fast-food restaurants regularly, the word *regularly* is ambiguous. Two people might answer "yes" to the question, but one might mean "once a day" while the other means "once or twice a month." However, each of these interpretations suggests that dramatically different marketing actions be directed to these two prospective consumers.

The high cost of using personal interviews in homes has increased the use of *mall intercept interviews*, which are personal interviews of consumers visiting shopping centers. These face-to-face interviews reduce the cost of personal visits to consumers in their homes while providing the flexibility to show respondents visual cues such as ads or actual product samples. A disadvantage of mall intercept interviews is that the people interviewed may not be representative of the consumers targeted, giving a biased result.

Electronic technology has revolutionized traditional concepts of interviews or surveys. Today, respondents can walk up to a kiosk in a shopping center, read questions off a screen, and key their answers into a computer on a touch screen. Fully automated telephone interviews exist in which respondents key their replies on a touch-tone telephone.

Primary Data: Other Sources

Four other methods of collecting primary data exist that overlap somewhat with the methods just discussed. These involve using (1) social media, (2) panels and experiments, (3) information technology, and (4) data mining.

Social Media

Visitors to Frito-Lay's Facebook Page voted on new potato chip flavors by clicking on the "Vote" button to show their preferences.
Source: Frito-Lay North America, Inc.

Facebook, Twitter, and other social media are revolutionizing the way today's marketing research is done. In developing a new potato chip flavor, Frito-Lay substituted Facebook research for its usual focus groups. Visitors to its Facebook Page were polled, allowing them to suggest new flavors, three of which appeared in supermarkets. All they had to do was click a "Vote" button to show their preferences. And Estée Lauder asked social media users to vote on which discontinued shades to bring back.[24]

***

Carmex's home page topics range from its Twitter Giveaways to win Carmex products to its family history. For how it uses social media marketing research, see the Applying Marketing Metrics box.
Courtesy of Carma Laboratories, Inc.

***

Carma Laboratories, Inc., the maker of Carmex lip balm, is a third-generation, family-owned business with a history of accessibility to customers. In fact, founder Alfred Woelbing personally responded to every letter he received from customers. Today, Carma Labs relies on social media programs to help promote its products.[25]

Carmex lip balm is meant to reduce cold sore symptoms and soothe dry and chapped lips. It is packaged in jars, sticks, and squeezable tubes. The U.S. Carmex product line includes original, strawberry, lime twist, vanilla, pomegranate, and cherry flavors. Although Carmex lip balm sales trend behind ChapStick and Blistex, Carmex consumers tend to be loyalists—true zealots.

One opportunity for Carmex (**www.mycarmex.com**) is to conduct marketing research using social media listening tools to understand the nature of online lip balm conversations. Lip balm is a seasonal product, with both sales and online activity peaking during the cough–cold season of November through March.

The Applying Marketing Metrics box shows how Carmex uses marketing metrics to assess its social media programs for its line of products. Data have been modified to protect proprietary information.

***

Applying **Marketing Metrics**

Are the Carmex Social Media Programs Working Well?

As a marketing consultant to Carmex, you've just been asked to assess its social media activities for its lip balm product line.

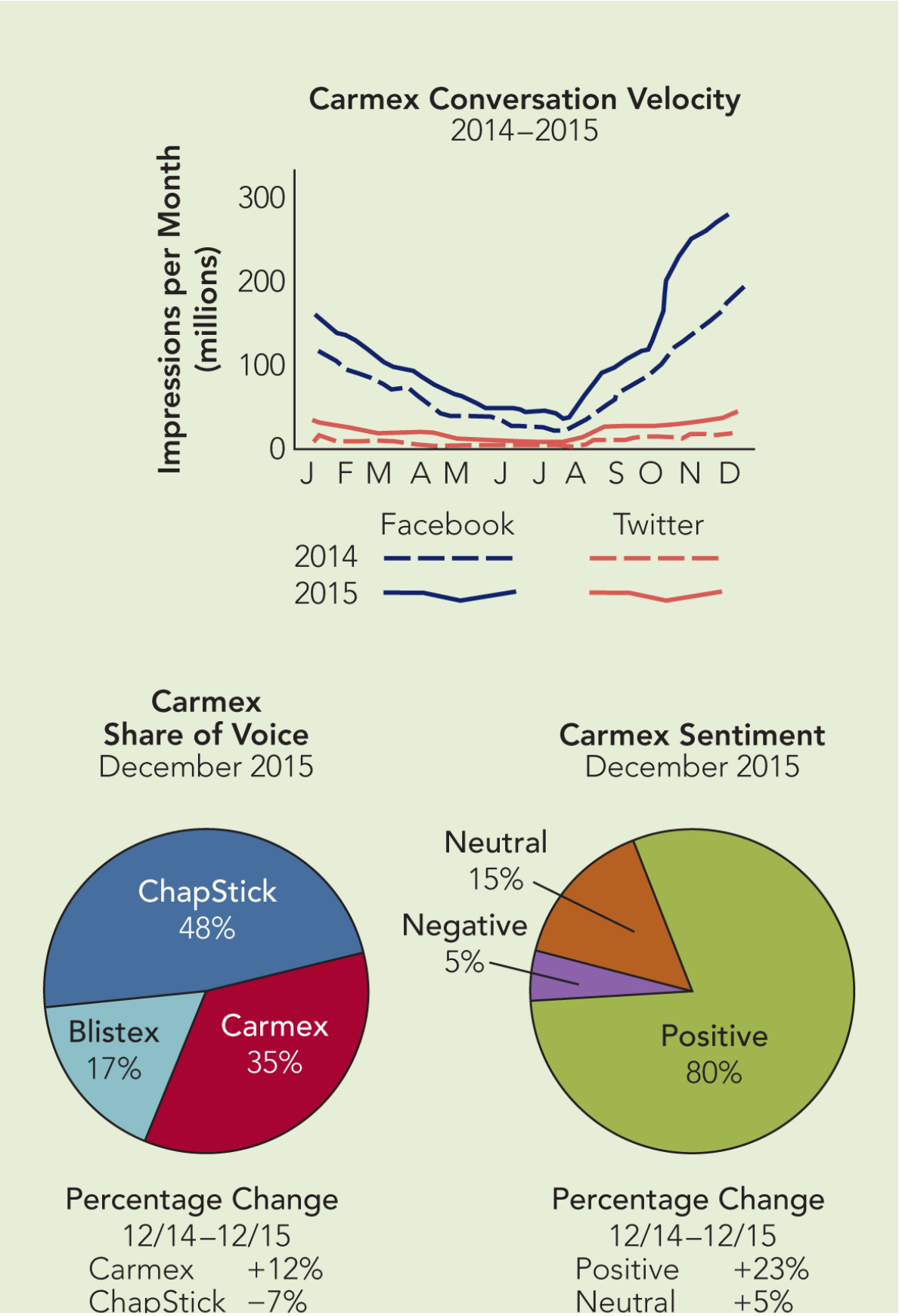
Carmex has recently launched new social media programs and promotions to tell U.S. consumers more about its line of lip balm products. These include Facebook and Twitter contests that allow Carmex fans and followers to win free samples by connecting with Carmex. A creative "Carmex Kiss" widget allows users to upload their photo and to send an animated kiss to a friend.

Your Challenge

To assess how the Carmex social media programs are doing, you choose these five metrics: (1) Carmex conversation velocity—total Carmex mentions on the Internet; (2) Facebook fans—the number of Facebook users in a time period who have liked Carmex's Facebook brand page; (3) Twitter followers—the number of Twitter users in a time period who follow Carmex's Twitter feed; (4) Carmex share of voice—Carmex mentions on the Internet as a percentage of mentions of all major lip balm brands; and (5) Carmex sentiment—the percentage of Internet Carmex share-of-voice mentions that are (*a*) positive, (*b*) neutral, or (*c*) negative.

Your Findings

Analyzing the marketing dashboard here, you reach these conclusions. First, the number of both Facebook fans and Twitter followers for Carmex is up significantly for 2015 compared to 2014 which is good news. Second, the Carmex share of voice of 35 percent is good, certainly relative to the 48 percent for the #1 brand ChapStick. But especially favorable is Carmex's 12 percent increase in share of voice compared to a year ago. Third, the Carmex sentiment dashboard shows 80 percent of the mentions are positive, and only 5 percent are negative. Even more significant is that positive mentions are up 23 percent over last year.


Carmex Conversation Velocity
2014–2015
Impressions per Month (millions)
300
200
100
0
J F M A M J J A S O N D
Facebook
Twitter
2014
2015
Carmex
Share of Voice
December 2015
ChapStick
48%
Blistex
17%
Carmex
35%
Carmex Sentiment
December 2015
Neutral
15%
Negative
5%
Positive
80%
Percentage Change
12/14–12/15
Carmex +12%
ChapStick −7%
Percentage Change
12/14–12/15
Positive +23%
Neutral +5%

Blistex	−5%	Negative	−7%

Your Actions

You conclude that Carmex's social media initiatives are doing well. Your next step is to probe deeper into the data to see which ones—such as free samples or the Carmex Kiss—have been especially effective in triggering the positive results and build on these successes in the future.

***

Carmex uses several social media metrics, such as *conversation velocity*, *share of voice*, and *sentiment*.[26] These metrics are tracked by electronic search engines that comb the Internet for consumers' behaviors and "brand mentions" to calculate share of voice and determine whether these brand mentions appear to be "positive," "neutral," or "negative" in order to calculate "sentiment." A widely used Facebook metric measures the number of *likes*, which refers to the number of Facebook users opting in to a brand's messages and liking the brand.

Marketing researchers increasingly want to glean information from sites to "mine" their raw consumer-generated content in real time. However, when relying on this consumer-generated content, the sample of individuals from whom this content is gleaned may not be statistically representative of the marketplace.[27]

Panels and Experiments

Two special ways that observations and questionnaires are sometimes used are panels and experiments.

Marketing researchers often want to know if consumers change their behavior over time, so they take successive measurements of the same people. A *panel* is a sample of consumers or stores from which researchers take a series of measurements. For example, the NPD Group collects data about consumer purchases such as apparel, food, and electronics from its Online Panel, which consists of nearly 2 million individuals worldwide. So a firm like General Mills can count the frequency of consumer purchases to measure switching behavior from one brand of its breakfast cereal (Wheaties) to another (Cheerios) or to a competitor's brand (Kellogg's Special K). A disadvantage of panels is that the marketing research firm needs to recruit new members continually to replace those who drop out. These new recruits must match the characteristics of those they replace to keep the panel representative of the marketplace.

To discover how Walmart used test markets to help develop its internationally successful supercenters, such as this one in China, see the text.

An *experiment* involves obtaining data by manipulating factors under tightly controlled conditions to test cause and effect. The interest is in whether changing one of the

independent variables (a cause) will change the behavior of the dependent variable that is studied (the result). In marketing experiments, the independent variables of interest—sometimes called the marketing *drivers*—are often one or more of the marketing mix elements, such as a product's features, price, or promotion (like advertising messages or coupons). The ideal dependent variable usually is a change in the purchases (incremental unit or dollar sales) of individuals, households, or organizations. For example, food companies often use *test markets*, which offer a product for sale in a small geographic area to help evaluate potential marketing actions. In 1988, Walmart opened three experimental stand-alone supercenters to gauge consumer acceptance before deciding to open others. Today, Walmart operates over 4,000 supercenters around the world.

A potential difficulty with experiments is that outside factors (such as actions of competitors) can distort the results of an experiment and affect the dependent variable (such as

sales). A researcher's task is to identify the effect of the marketing variable of interest on the dependent variable when the effects of outside factors in an experiment might hide it.

Big Data and Data Analytics

Big data is a vague term generally used to describe large amounts of data collected from a variety of sources and analyzed with an increasingly sophisticated set of technologies. **Information technology** includes all of the computing resources that collect, store, and analyze the data. Marketing researchers have observed that today we live in an era of data deluge. The challenge facing managers is not data collection or even storage but how to efficiently transform the huge amount of data into useful information. This transformation is accomplished through the use of data analytics. Products such as Yahoo's Hadoop and Google's Bigtables are examples of the analytical tools available for people often referred to as data scientists. Their work is also creating a new field of marketing research that focuses on *data visualization*, or the presentation of the results of the analysis.

Today, businesses can obtain data from many sources such as barcode scanners at checkout counters, online tracking software on computers and tablets, and usage histories on your telephone. In fact, the growth of the Internet of things now allows data collection from almost any device a consumer might use. Marketing managers must use the combination of data, technology, and analytics to convert the data into useful information that will answer marketing questions and lead to effective marketing actions. Organizations that accomplish this successfully are often referred to as an *intelligent enterprise*.[28]

As shown in **Figure 8–5**, the elements of an intelligent marketing enterprise platform interact to facilitate the work of the marketing researcher or data scientist. The top half of the figure shows how big data are created through a sophisticated communication network that collects data from internal and external sources. These data are stored, organized, and managed in databases. Collectively, these databases form a data warehouse. Data

storage (and computing) may also take place in "the cloud," which is simply a collection of servers accessed through an Internet connection.

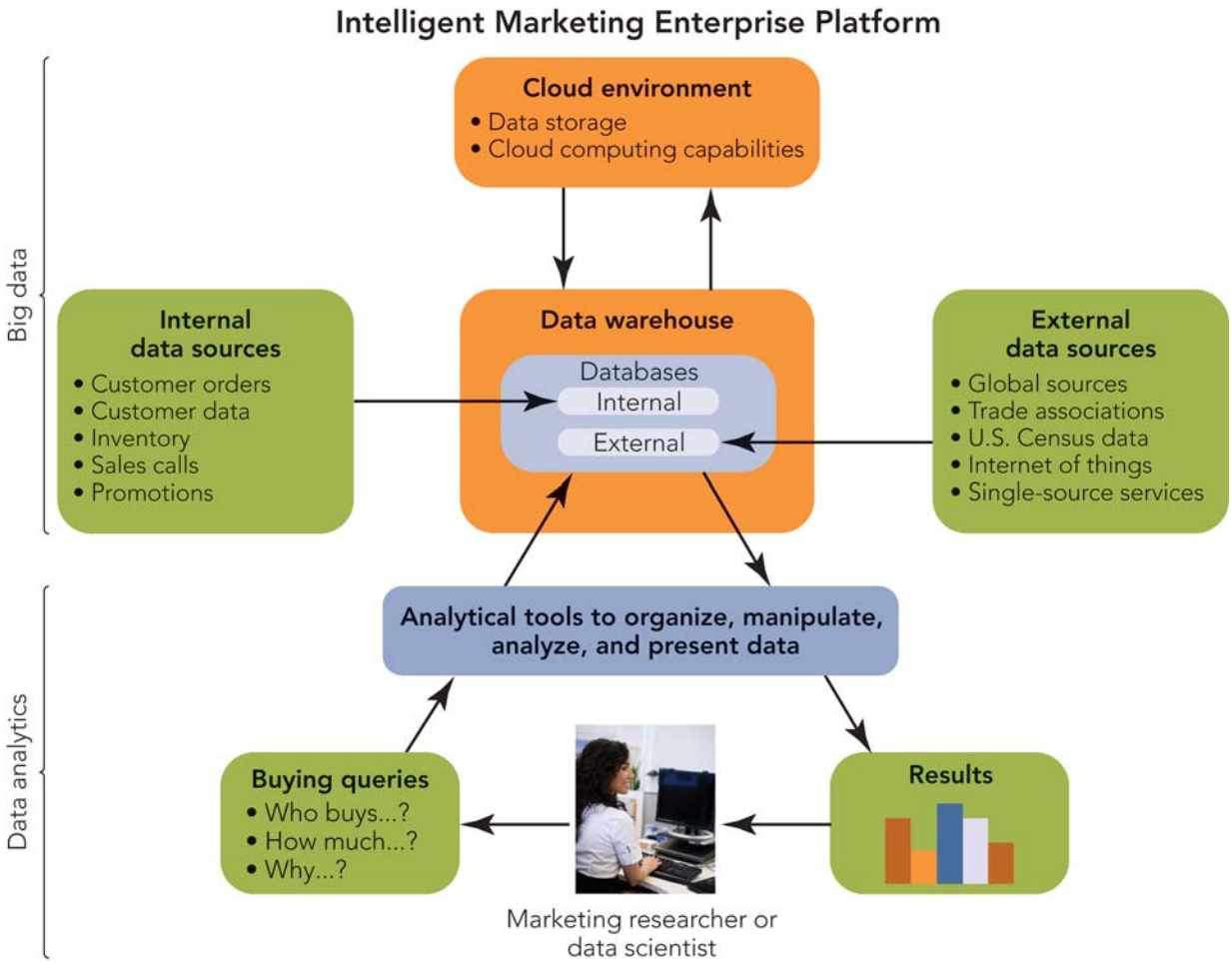


Figure 8–5 How marketing researchers and managers use an intelligent enterprise platform to turn data into action.

Photo: © Todd Warnock/Lifesize/Getty Images

As shown at the bottom of **Figure 8–5**, data analytics consists of several elements. Marketers use computers to specify important marketing queries or questions and to access the databases in the warehouse (or the cloud). Analytical tools are used to organize and manipulate the data to identify any managerial insights that may exist. The results are then presented using tables and graphics for easier interpretation. When accessing a database, marketers can use sensitivity analysis to ask "what if" questions to determine how hypothetical changes in product

or brand drivers—the factors that influence the buying decisions of a household or organization—can affect sales.

Traditional marketing research typically involves identifying possible drivers and then collecting data. For example, we might collect data to test the hypothesis that increasing couponing (the driver) during spring will increase trials by first-time buyers (the result).

Data Mining

***

At 10 P.M., what is this man likely to buy besides these diapers? For the curious answer that data mining gives, see the text.
© *Brent Jones*

***

In contrast, *data mining* is the extraction of hidden predictive information from large databases to find statistical links between consumer purchasing patterns and marketing actions. Some of these are common sense: Since many consumers buy peanut butter and grape jelly together, why not run a joint promotion between Skippy peanut butter and Welch's grape jelly? But would you have expected that men buying diapers in the evening sometimes buy a six-pack of beer as well? Supermarkets discovered this when they mined checkout data from scanners. So they placed diapers and beer near each other, then placed potato chips between them—and increased sales on all three items! On the near horizon is RFID (radio frequency identification) technology using "smart tags" on the diapers and beer to tell whether they wind up in the same shopping bag. For how much online data mining can reveal about you personally and the ethical issues involved, see the Making Responsible Decisions box.[29]

Making **Responsible Decisions** Ethics

No More Personal Secrets: The Downside of Data Mining

eXelate, Intellidyn, Rapleaf, Google Ad Preferences, Yahoo!, BlueKai, Alliance Data, reputation.com . . . yes . . . and Facebook and Twitter, too!

The common denominator for all these is their sophisticated data mining of the Internet and social media that reveals an incredible amount of personal information about any American. *Time* journalist Joel Stein, using both online and offline sources, discovered how easily outsiders could find his social security number and then found a number of other things about himself—some correct, some not.

For example, he likes hockey, rap, rock, parenting, recipes, clothes and beauty products, and movies. He makes most of his purchases online, averaging only $25 per purchase. He uses Facebook, Friendster, LinkedIn, MySpace, Pandora, and StumbleUpon. He bought his house in November, which is when his home insurance is up for renewal. His dad's wife has a traffic ticket.

And he uses an Apple iMac and is an 18- to 19-year-old woman???!!!

OK, OK, sometimes data mining errors occur!

These data are collected many ways from the Internet—from tracking devices (like cookies, discussed in **Chapter 21**) on websites to apps downloaded on a cell phone, PC, or tablet device that reveal a user's contact list and location.

These personal details have huge benefits for marketers. Data mining enables one-to-one personalization and now enables advertisers to target individual consumers. This involves using not only demographics such as age and sex but also "likes," past buying habits, social media used, brands bought, TV programs watched, and so on.

Want to do some sleuthing yourself? Download Ghostery at **www.ghostery.com**. It tells you all the companies grabbing your data when you visit a website.

Advantages and Disadvantages of Primary Data

Compared with secondary data, primary data have the advantages of being more flexible and more specific to the problem being studied. The main disadvantages are that primary data are usually far more costly and time-consuming to collect than secondary data.

Analyzing Primary Data Using Cross Tabulations

Suppose top management at Wendy's wants to use the questionnaire in **Figure 8–4** to survey a sample of U.S. households to assess how often customers of different ages eat at fast-food restaurants. Management suspects that as the age of the head of the household increases, visits

Wendy's Customer Satisfaction Survey allows customers to provide feedback on their meal experience. To take the survey, go to **www.talktowendys.com**. You'll need a receipt from a recent visit, which has an 8-digit code to start the survey. Your reward? A printable coupon that can be used on your next visit!

Courtesy of Wendy's

to fast-food restaurants decline. The data provided by the questionnaire confirm this, but the information is not in a format that suggests ideas for viable marketing actions. Using cross tabulations will provide answers leading to actions.

Developing Cross Tabulations

A **cross tabulation** , or *cross tab*, is a method of presenting and analyzing data involving two or more variables to discover relationships in the data.

The Wendy's questionnaire in **Figure 8–4** includes many questions that might be paired to understand the fast-food business better. For example, to try to answer

the question in which Wendy's top management is interested, we can pair the question regarding the age of the head of the household in **Figure 8–4** (question 9d) with the question that asks how often the respondent eats at a fast-food restaurant (question 3).

Using the answers to question 3 as the column headings and the answers to question 9d as the row headings gives the cross tabulation shown in **Figure 8–6**, based on answers from 586 respondents. The figure shows two forms of cross tabulations:

- The raw data or answers to the specific questions are shown in **Figure 8–6A**. For example, this cross tab shows that 144 households in the sample whose head was

under 25 (shaded red) ate at fast-food restaurants once a week or more. It also shows the loyalty of many customers of fast-food restaurants; the number of customers who visit them once a week or more is more than double the number who visit them once a month or less, as indicated by the totals shaded brown in **Figure 8–6A**.

- Answers on a percentage basis, with the percentages running horizontally, are shown in **Figure 8–6B**. Of the 215 households headed by someone under 25, 67.0 percent ate at a fast-food restaurant at least once a week and only 8.8 percent ate there once a month or less. Also, across all age groups, 46.4 percent—almost half—ate in a fast-food restaurant once a week or more.

A. ABSOLUTE FREQUENCIES

Age of Head of Household (Years)	Frequency of Visiting Fast-Food Restaurants			
	Once a Week or More	2 to 3 Times a Month	Once a Month or Less	Total
Under 25	144	52	19	215
25 to 44	46	58	29	133
45 or Older	82	69	87	238
Total	272	179	135	586

B. ROW PERCENTAGES: RUN HORIZONTALLY

Age of Head of Household (Years)	Frequency of Visiting Fast-Food Restaurants			
	Once a Week or More	2 to 3 Times a Month	Once a Month or Less	Total
Under 25	67.0%	24.2%	8.8%	100.0%
25 to 44	34.6%	43.6%	21.8%	100.0%
45 or Older	34.5%	29.0%	36.5%	100.0%
Total	46.5%	30.5%	23.0%	100.0%

Figure 8–6 Two forms of a cross tabulation relating age of head of household to frequency of fast-food restaurant patronage.

Two other forms of cross tabulation using the raw data shown in **Figure 8–6A** are described in problem 7 in Applying Marketing Knowledge at the end of the chapter.

Interpreting Cross Tabulations

A careful analysis of **Figures 8–6A** and **8–6B** shows that patronage of fast-food restaurants is related to the age of the head of the household. The percentages on the diagonal (in orange)

in **Figure 8–6B** reveal that younger households are far more likely than older households to visit fast-food restaurants once a week or more.

So if we want to reach frequent users of fast-food restaurants, we should target those whose head of household is under 25 years of age and who tend to visit these restaurants once a week or more, as shown in **Figure 8-6B**. Marketers often use special efforts to reach these loyal, frequent users. So Wendy's might advertise to the segment of households headed by a man or woman under 25 years old. But **Figures 8–6A** and **8–6B** *do not* tell us what media to use to reach them—such as by television ads or social networks. For those answers, we need to relate the age of the head of household again to the answers given to question 7 in **Figure 8–4**—the source of information that households use.

Probably the most widely used technique for organizing and presenting marketing data, cross tabulations have some important advantages. The simple format permits direct interpretation and an easy means of communicating data to management. Cross tabs offer great flexibility and can be used to summarize questionnaire, observational, and experimental data.

Cross tabulations also have some disadvantages. For example, they can be misleading if the percentages are based on too few observations. Also, cross tabulations can hide some relationships because each cross tab typically shows only two or three variables. Balancing both advantages and disadvantages, more marketing decisions are probably made using cross tabulations than any other method of analyzing data.

learning review

8-6. What is the difference between observational and questionnaire data?

8-7. Which type of survey provides the greatest flexibility for asking probing questions: mail, telephone, or personal interview?

8-8. What is cross tabulation?

STEP 4: DEVELOP FINDINGS

Mark Twain once observed, "Collecting data is like collecting garbage. You've got to know what you're going to do with the stuff before you collect it." So, marketing data have little more value than garbage unless they are analyzed carefully and translated into information and findings, step 4 in the marketing research approach.[30]

LO 8-5

Explain how information technology and data mining lead to marketing actions.

Analyze the Data

Schwan Food Company produces 3 million frozen pizzas a day under brand names that include Tony's and Red Baron. Let's see how Teré Carral, the marketing manager for the Tony's brand, might address a market segment question. We will use hypothetical data to protect Tony's proprietary information.

How are sales doing? To see how marketers at Tony's Pizza assessed this question and the results, read the text.

Teré is concerned about the limited growth in the Tony's brand over the past four years. She hires a consultant to collect and analyze data to explain what's going on with her brand and to recommend ways to improve its growth. Teré asks the consultant to put together a proposal that includes the answers to two key questions:

1. How are Tony's sales doing on a household basis? For example, are fewer households buying Tony's pizzas, or is each household buying fewer Tony's pizzas? Or both?
2. What factors might be contributing to Tony's very flat sales over the past four years?

Facts uncovered by the consultant are vital. For example, is the average household consuming more or less Tony's pizza than in previous years? Is Tony's flat sales performance related to a specific factor? With answers to these questions Teré can take actions to address the issues in the coming year.

Present the Findings

Findings should be clear and understandable from the way the data are presented. Managers are responsible for *actions*. Often it means delivering the results in clear pictures and, if possible, in a single page.

The consultant gives Teré the answers to her questions using the marketing dashboards in **Figure 8–7**, a creative way to present findings graphically. Let's look over Teré's shoulder as she interprets these findings:

- **Figure 8–7A**, *Annual Sales*—This shows the annual growth of Tony's Pizza is stable but virtually flat from 2012 through 2015.
- **Figure 8–7B**, *Average Annual Sales per Household*—Look closely at this graph. At first glance, it seems like sales in 2015 are *half* what they were in 2012, right? But be careful to read the numbers on the vertical axis. They show that household purchases of Tony's pizzas have been steadily declining over the past four years, from an average of 3.4 pizzas per household in 2012 to 3.1 pizzas per household in 2015. (Significant, but hardly a 50 percent drop.) Now the question is, if Tony's annual sales are stable, yet the average individual household is buying fewer Tony's pizzas, what's going on? The answer is, more households are buying pizzas—it's just that each household is buying fewer Tony's pizzas. That households aren't choosing Tony's is a genuine source of concern. But again, here's a classic example of a marketing problem representing a marketing opportunity. The number of households buying pizza is *growing*, and that's good news for Tony's.
- **Figure 8–7C**, *Average Annual Sales per Household, by Household Size*—This chart starts to show a source of the problem: Even though average sales of pizza to households with only one or two people are stable, households with three or four people and those with five or more are declining in average annual pizza consumption. Which households tend to have more than two people? Answer: Households *with children*. Therefore, we should look more closely at the pizza-buying behavior of households with children.

Figure 8–7D, *Average Annual Sales per Household, by Age of Children in the Household*—The real problem that emerges is the serious decline in average consumption in the households with younger children, especially in households with children in the 6-to-12-year-old age group.

Identifying a sales problem in households with children 6 to 12 years old is an important discovery, as Tony's sales are declining in a market segment that is known to be one of the heaviest in buying pizzas.