Chapter 6

Secondary Data and Online Information Databases

Learning Objectives:

- To learn how to distinguish between secondary and primary data
- To learn a classification of secondary data
- To understand databases, both internal and external
- To understand the advantages and disadvantages of secondary data
- To learn how to evaluate secondary data
- To learn how to find secondary data including search strategies needed for searching online information databases
- To know the contents of some of the major sources of secondary data provided by the government and private sources

Practitioner Viewpoint

Secondary data can provide information about the size and characteristics of any market—the number of people or households, age, ethnicity and language, education, labor force participation, commuting patterns, household type, marital status, income, housing type, and cost. Demographic profiles are the most common but not the only type of secondary data. Information is also available about crime rates, the location of businesses by industry, shopping centers, bank deposits, school enrollment, facilities such as hospitals or schools, amenities such as parks or museums, even traffic counts and climate conditions.

There is a variety of sources available for secondary data. Public data sources include a number of federal agencies. Compendia of federal data sources can be found at www.fedstats.gov or www.whitehouse.gov/fsbr/demography.html. Local agencies can also provide a variety of data for their states or communities. Public data sources are a good starting point for the intrepid market analyst. However, the recency and detail of the data are limited in most public sources. Census 2000 is the most comprehensive demographic database, but the data were already two years old by the time the last tables were released in 2002.

The alternative to public data sources is a private vendor. Private sector sources process the public databases, update the data to current-year and/or five-year forecasts, offer the data for any geographic area, and integrate public databases with a variety of private databases such as consumer surveys and business lists. Data are readily available from private vendors but are not free.

Lynn Wombold
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Marketing Research Using Census 2000

Marketers are constantly making decisions about geographical markets. Which markets are growing? Which markets are increasing the most in population? What are the changes in income levels in those markets? What have past sales been in those markets? These are but a few of the many variables marketing managers seek to understand when making business decisions. Fortunately, much of this information does not require primary data collection; it is available in secondary data sources. The Census of the Population, taken every decade by the U.S. Census Bureau, provides the backbone of secondary data used by marketing researchers. Information collected by the census is not only used by government policy makers but also is heavily relied on by business organizations collecting secondary data to make business decisions. The Department of Education is very interested in knowing how many 5-year-olds will enter the K–12 schooling system. Toy manufacturers are very interested in this same information. Visit the Census 2000 Web site at www.census.gov (see Figure 6.1). The change in population of 33 million people from 1990 to 2000 represented the largest increase between censuses ever recorded. The 1990s was the only decade in the twentieth century in which every state in the United States gained population. The figure below shows that, although all parts of the United States experienced growth, most growth took place in the South and West.¹

![Figure 6.1 Percentage Change in Metropolitan and Nonmetropolitan Populations by Region: 1990 to 2000](Source: U.S. Census Bureau, Census 2000 and 1990 census.)
Once a marketing researcher determines the appropriate research design for a research objective, he or she normally turns to secondary data. As our demographer, Lynn Wombold, suggests in her preceding viewpoint and as our introductory example of Census 2000 illustrates, many marketing decisions are based on information supplied by secondary data. By taking a quick tour of the Census Bureau’s homepage you can easily see how the type of information provided can be of practical use in making business decisions. The Internet’s greatest impact has been making information widely available and easily accessible. Much of this information is available through online databases such as LexisNexis and ABI Inform. Online databases, a part of online research, have had such a significant impact on secondary data search that we included the name in our chapter title. The Internet has greatly increased access to online databases. In just a few years, the Internet has become a very important source of seeking and retrieving secondary data of all types. Imagine how this information would help if you were trying to make marketing decisions. You would be able to quickly and inexpensively make many marketing decisions by accessing such information even though it was gathered by someone else for some other purpose. In this chapter, we introduce you to the sources of secondary data, including online databases. We discuss the advantages and disadvantages of secondary data and how to evaluate secondary data. We have a completely new and updated section that shows you how to search for secondary data, including strategies for searching online information databases. Finally, we take a close-up look at some of the most important secondary data sources for marketing researchers.\(^2\)

**SOURCES OF SECONDARY DATA**

**Primary Versus Secondary Data**

As presented in Chapter 2, data needed for marketing management decisions can be grouped into two types: primary and secondary. **Primary data** are information that is developed or gathered by the researcher specifically for the research project at hand. **Secondary data** have previously been gathered by someone other than the researcher and/or for some other purpose than the research project at hand. As government agencies and other organizations gather information in the daily course of business, they gather information that is recorded. U.S. customs officials, for example, record a wealth of information to help us understand the amount and types of goods being imported and exported. Businesses provide information to the government on sales by product or service, number of employees, business locations, and so on. When a consumer completes a warranty card to register a new scuba-diving tank, registers a new puppy, registers an automobile, applies for a driver’s license, or subscribes to a magazine, information is recorded. Much of this information is valuable. Government and private organizations provide this information to the public.

The evolution of the Internet has done more to bring fast and easy access of secondary data to end users than anything else since the Gutenberg press. Since the mid-1980s virtually all documents have been electronically produced, edited, stored, and made accessible to users. For several years firms have concentrated on bringing this information to users through specialized services. Today many of these firms offer these services via the Internet. Although some services are available only through a subscription, the Internet provides an incredible stock of free secondary data. Yet, with all the information available to Internet users today, this will likely be viewed as very primitive when Internet2 becomes widely available. Some com-
Classification of Secondary Data

We think secondary data access through the Internet, another form of online research, will continue to grow and become more and more important in the marketing researcher’s toolbox.

CLASSIFICATION OF SECONDARY DATA

With so much secondary information available, every marketing researcher must learn to properly manage these data. In fact, secondary data are more important to the marketing researcher today than ever before because so much information is available and it can be very useful. However, the stock of information available can be overwhelming. Marketing researchers must learn to properly handle secondary data. They must know the classifications of secondary data as well as their advantages and disadvantages, and they must know how to evaluate the information available to them.

Internal Secondary Data

Secondary data may be broadly classified as either internal or external. Internal secondary data are data that have been collected within the firm. Such data include sales records, purchase requisitions, and invoices. Obviously, a good marketing researcher always determines what internal information is already available. You may recall from Chapter 1 that we referred to internal data analysis as being part of the internal reports system of a firm’s marketing information system (MIS).

Today a major source of internal data is databases that contain information on customers, sales, suppliers, and any other facet of business a firm may wish to track. Database marketing is the term used to refer to uses of these internal databases to

Meet a Marketing Researcher

Demographers Use Secondary Data

Lynn Wombold, ESRI Business Information Solutions

Lynn Wombold manages data development for ESRI Business Information Solutions, including the current processing of Census 2000 data, development of unique databases such as demographic forecasts, consumer spending, and the ACORN market segmentation system, plus the acquisition and integration of third-party data, such as InfoUSA’s business database. She is also responsible for custom analysis and modeling projects. Her areas of expertise include population estimates and projections, state and local demography, census data, survey research, and consumer data.

Lynn has been with ESRI BIS since 1988; previously she was senior demographer at the University of New Mexico. Her education includes degrees in sociology, with a specialty in demographic studies from Bowling Green State University in Ohio. Awards include CACI’s Eagle Award for Technical Excellence and Encore Achievers.

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Chapter 6  Secondary Data and Online Information Databases

A database refers to a collection of data and information describing items of interest to the database owner.

Databases are composed of records that represent a unit of information. Subcomponents of information in records are called fields.

Internal databases, built with information collected during the normal course of business, can provide invaluable insights for managers.

What companies do with information collected in their internal databases can present ethical problems. The use of internal databases has grown dramatically for several years.

Internal Databases

Before we discuss internal and external databases, we should understand that a database refers to a collection of data and information describing items of interest. Each unit of information in a database is called a record. A record could represent a customer, a supplier, a production control, a product, an individual inventory item, and so on. Records are composed of subcomponents of information called fields. As an example, a company having a database of customers would have records representing each customer. Typical fields in a customer database would include name, address, telephone number, e-mail address, products purchased, dates of purchases, locations where purchased, warranty information, and any other information the company thought was important. Although you can have a noncomputerized database, the majority of databases are computerized because they contain large amounts of information and their use is facilitated by computer capability to edit, sort, and analyze the mass of information.

Internal databases are databases consisting of information gathered by a company typically during the normal course of business transactions. Marketing managers normally develop internal databases about customers but databases may be kept on any topic of interest such as members of the sales force, inventory, maintenance, and supplier firms. Companies gather information about customers when they inquire about a product or service, make a purchase, or have a product serviced. Think about the information you may have provided to marketing firms: your name, address, telephone number, fax number, e-mail address, credit card number, your banking institution and account number, and so on. Coupled with a knowledge of what products you have purchased in the past and with other information provided by government and other commercial sources, many companies know quite a bit about you. Companies use their internal databases for purposes of direct marketing and to strengthen relationships with customers called CRM, customer relationship management.

Internal databases can be quite large. Dealing with the vast quantities of data has been a problem with managing information from internal databases. Data mining is the name for software that is now available to help managers make sense out of seemingly senseless masses of information contained in databases. However, even simple databases in small businesses can be invaluable. Databases can tell managers which products are selling, report inventories, and profile customers by SKU. Coupled with geodemographic information systems (GIS), databases can provide maps indicating zip codes in which the most profitable and least profitable customers reside. Internal databases, built with information collected during the normal course of business, can provide invaluable insights for managers. We shall discuss GIS more completely in the next chapter.

What companies do with information collected for their internal databases can present ethical problems. Should your credit card company share the information on what types of goods and services you bought with anyone who wants to buy that information? Should your Internet Service Provider be able to store information on which Internet sites you visit? As more consumers have grown aware of these privacy issues, more companies have adopted privacy policies.

External Secondary Data

Published Sources  External secondary data are data obtained from outside the firm. We classify external data into three sources: (1) published, (2) syndicated services
data, and (3) databases. **Published sources** are those sources of information that are prepared for public distribution and are normally found in libraries or through a variety of other entities such as trade associations, professional organizations, or companies. Published sources are available in a number of formats including print, CD-ROM, and online via the Internet. Many publications that were formerly available in print only are becoming available in electronic format. Magazines available electronically are called e-zines; journals are called e-journals. Published sources of secondary information come from the government (*Census of the Population*), nonprofit organizations (chambers of commerce, colleges, and universities), trade and professional associations (CASRO, AMA, IMRO, MRA), and for-profits (*Sales & Marketing Management* magazine, Prentice Hall, Inc., McGraw-Hill, and research firms). Many research firms publish secondary information in the form of books, newsletters, white papers, or special reports. Strategy Research Corporation (SRC), for example, specializes in marketing research in Hispanic markets. The company, a Market Facts Company, publishes a Latin America market planning report every two years. In addition, the company publishes the U.S. Hispanic Market Study. For companies marketing products and services to these markets, the secondary data provided by Strategy Research Corporation are valuable information.

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**Meet a Marketing Researcher**

**Strategy Research Corporation Produces Several Research Publications**

*Dick Thomas, Senior Vice President, Business Development, Strategy Research Corporation*

Dick Thomas has extensive experience in all phases of marketing research. He has designed, proposed, directed, and analyzed concept and product tests, image and strategic studies, major segmentation and market structure studies, and advertising development and tracking studies. He has developed and directed large-scale, multiphased research programs for new-product development, created marketing strategies, and evaluated marketing plans in both the product and service categories. His experience includes projects fielded in the general market, in the U.S. Hispanic market, and throughout Latin America. His clients have included both domestic and foreign-based companies. He has conducted research for both consumer and business-to-business clients on assignments in consumer package goods, health and beauty aids, retail, IT, financial services, and travel and tourism categories, as well as many others. Dick is a successful presenter and proposer of new studies to both prospective and current clients. He has attained senior-level responsibility on the client, advertising agency, and supplier sides of the industry. Dick is an experienced focus group moderator and has practiced a wide range of qualitative research techniques.

Starting at SRC as a senior project director, Dick moved on to research director before attaining his current account and brand development responsibilities. Prior to his arrival at SRC in 1987, Dick was vice president, associate research director at Foote, Cone and Belding Advertising, Inc. Previous experience also includes employment in marketing research for Pepsi-Cola Company, Seagram's, and MRCA. Dick serves on the board of the International Advertising Association and is a corporate member of the Beacon Council and the Greater Miami Chamber of Commerce. He holds degrees in clinical psychology and business administration from the University of Dayton and has done graduate course work at the New York Law School and the University of Miami.

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Visit Strategy Research Corporation at [www.strategyresearch.com](http://www.strategyresearch.com).
Understanding the function of different types of publications can help you find the secondary data you need.

A catalog consists of a list of a library’s holdings of books.

Indexes are records compiled from periodicals and contain information on the contents of periodicals recorded in fields such as author, title, keywords, date of publication, name of periodical, and so on.

The sheer volume of published sources makes searching this type of secondary data difficult. However, understanding the function of the different types of publications can be of great help to you in successfully searching published secondary information sources. Table 6.1 depicts the different types of publications and gives you their function as well as an example.

Today many libraries enter their holdings of books and other publications in electronic records whose fields are searchable electronically. These electronic libraries allow researchers to search secondary data quickly, conveniently, inexpensively, and thoroughly. Most electronic libraries have information available in two broad categories: catalogs and indexes. A catalog consists of a list of a library’s holdings of books. (Catalogs sometimes also list the periodicals to which the library subscribes.) Therefore, catalogs are useful for finding books by subject, author, title, date of publication, or publisher. Indexes are records compiled from periodicals and contain information on the contents of periodicals recorded in fields such as author, title, keywords, date of publication, name of periodical, and so on. Sometimes an index contains the entire contents of the periodical (called full-text indexes). Such indexes are not normally constructed by a library. Rather, they are provided by companies that make them available to libraries or other organizations. We shall talk more about these when we discuss online information databases.

Syndicated Services Data Syndicated services data are provided by firms that collect data in a standard format and make them available to subscribing firms. Such data are typically highly specialized and are not available in libraries for the general public. The suppliers syndicate (sell) the information to multiple subscribers, thus making the costs more reasonable to any one subscriber. Examples include Arbitron’s radio listenership data, Nielsen Media Research’s Television Rating Index, and Information Resources, Inc.’s InfoScan report of products sold in retail stores. In all these cases, these firms supply subscribing firms with external secondary data. We devote more attention to syndicated data services firms in Chapter 7.

External Databases External databases are databases supplied by organizations outside the firm. They may be used as sources for secondary data. Some of these databases are available in printed format but, in recent years, many databases are now available online. Online information databases are sources of secondary data searchable by search engines online. Some online databases are available free of charge and are supplied as a service by a host organization. However, many online information databases are available from commercial sources that provide subscribers password (or IP address identification) access for a fee. These databases have grown dramatically since the 1980s. During the 1990s and early 2000s many of the companies supplying external databases of secondary data have merged. We have fewer companies but each one is much larger, with the larger firms offering subscribers access to billions of records of information. Different databases are often packaged together by vendors that produce the software that retrieves the information. Sometimes called “aggregators” or “databanks,” these services or vendors may offer a wide variety of indexes, directories, and statistical and full-text files all searched by the same search logic. Such services include Gale Group, Proquest, First Search, LexisNexis, and Dialog, among others. Business databases comprise a significant proportion of these databases. Whereas many of these database services firms offer access through multiple media including print and CD-ROM, the trend has been to offer access through Internet sites.
Table 6.1 Understanding the Function of Different Types of Publications
Can Make You a Better User of Secondary Data

1. Reference Guides
Function: Refer to types of other reference sources and recommend specific titles. Guides tell you where to look to find different types of information.

2. Indexes and Abstracts
Function: List periodical articles by subject, author, title, keyword, etc. Abstracts also provide summaries of the articles. Indexes allow you to search for periodicals by the topic of your research.

3. Bibliographies
Function: Lists varied sources such as books, journals, etc. on a particular topic. Tell you what is available, in several sources, on a topic.

4. Almanacs, Manuals, and Handbooks
Function: These types of sources are “deskbooks” that provide a wide variety of data in a single handy publication.

5. Dictionaries
Function: Define terms and are sometimes available for special subject areas.

6. Encyclopedias
Function: Provide essays, usually in alphabetical order, by topic.

7. Directories
Function: List companies, people, products, organizations, etc. usually providing brief information about each entry.

8. Statistical Sources
Function: Provide numeric data, often in tables, pie charts, and bar charts.

9. Biographical Sources
Function: Provide information about people. Useful for information on CEOs, etc.

10. Legal Sources
Function: Provide information about legislation, regulations, and case law.
There are four types of databases categorized according to the nature of data records within the database:

- **Bibliographic databases** contain citations to journal articles, newspapers, and government documents. Many bibliographic databases also include full-text articles online. Examples include ABI Inform, an index to over 800 business, management, and trade journals, and the Gale Academic Index ASAP, an index to over 960 multidisciplinary journals. Social Science Citation Index, known as a citation bibliographic database, actually indexes the bibliographies of articles allowing the user to learn which articles “cited” certain sources.

- **Numeric or statistical databases** contain statistics or numeric data, such as baseball game attendance records or sales for a given industry over some time period. Examples include the 2000 Census of Population and Housing, County Business Patterns, and STAT-USA.

- **Directory or list databases** list information about certain organizations, individuals, government entities, and so on. Examples include Gale’s Associations Unlimited, which lists more than 80,000 nonprofit membership associations in the United States, and infoUSA, which lists addresses and phone numbers for residences and businesses in the United States.

- **Comprehensive databases** include many types of information. Examples are Dow Jones Interactive, Gale Business and Company Resource Center, and LexisNexis.

### ADVANTAGES OF SECONDARY DATA

There are four main advantages of using secondary data. First, it can be obtained quickly, in contrast to collecting primary data, which may take several months from beginning to end. Second, it is inexpensive when compared to collecting primary data. Third, it is usually available. Fourth, it enhances existing primary data. What do we mean by enhancing primary data? Simply because researchers use secondary data does not mean that they will not collect primary data. In fact, in almost every case, the researcher’s task of primary data collection is aided by first collecting secondary data. A secondary data search can familiarize the researcher with the industry, including its sales and profit trends, major competitors, and the significant issues facing the industry. A secondary data search can identify concepts, data, and terminology that may be useful in conducting primary research. A bank’s management, for example, hired a marketing research firm and, together, management and the research team decided to conduct a survey measuring the bank’s image among its customers. A check of the secondary information available on the measurement of bank image identified the components of bank image for the study. Also, the research team, after reviewing secondary information, determined there were three sets of bank customers: retail customers, commercial accounts, and other correspondent banks. When the researchers mentioned this to bank management, the original objectives of the primary research were changed in order to measure the bank’s image among all three customer groups.

Secondary data are so important in marketing research that several companies offer Web sites allowing users to link to secondary information sources on the Internet. Decision Analyst, Inc., a marketing research firm, provides the Web site SecondaryData.com for this purpose. The site provides you with access to links that
DISADVANTAGES OF SECONDARY DATA

Although the advantages of secondary data almost always justify a search of this information, there are caveats associated with secondary data. Some of the problems associated with secondary data include mismatch of the units of measurement, differing definitions used to classify the data, the timeliness of the secondary data, and the lack of information needed to assess the credibility of the data reported. These problems exist because secondary data have not been collected specifically to address the researcher’s problem at hand but have been collected for some other purpose. Consequently, the researcher must determine the extent of these problems before using the secondary data. This is done by evaluating the secondary data. We discuss the first three disadvantages in the following paragraphs. Evaluation of secondary data is discussed in the next section.

Sometimes secondary data are reported in measurement units that do not match the measurement unit needed by the researcher. In analyzing markets, for example, marketing researchers are typically interested in income levels. Available studies of income may measure income in several ways: total income, income after taxes, household income, and per capita income. Or consider a research project that needs to categorize businesses by size in terms of square footage. Secondary data sources, however, classify businesses in terms of size according to sales volume, number of employees, profit level, and so on. Much information in the United States is recorded in American units of measurement (feet, pounds, etc.), yet most of the rest of the world uses metric units (meter, kilograms, etc.). The United States is slowly becoming metric.9

The class definitions of the reported data may not be usable to a researcher. Secondary data are often reported by breaking a variable into different classes and reporting the frequency of occurrence in each class. For example, the “Survey of Buying Power” reports the variable, effective buying income (EBI), in three classes. The first class reports the percentage of households having an EBI between $20,000 and $34,999, and the final class reports the percentage of households having an EBI of $50,000 and over. For most studies, these classifications are applicable. However, it is doubtful that Beneteau, Inc., a manufacturer of sailing yachts in South Carolina, could use these income classifications to help it target potential customer markets. Because Beneteau’s average customer is thought to have an EBI in excess of $75,000, Beneteau could not use the data reported because of the way the EBI classes were defined. What does the researcher do? Typically, if you keep looking you can find what you need. For example, Beneteau can obtain secondary data that would solve its problem by purchasing Demographics USA, published by the same producers of the “Survey of Buying Power.” It would find that Demographics USA provides information on EBI up through categories of $150,000 or more.10

Sometimes a marketing researcher will find information reported with the desired unit of measurement and the proper classifications, however, the data are “out-of-date.” Some secondary data are published only once. However, even for secondary data that are published at regular intervals, the time that passed since the last publication can be a problem when applying the data to a current problem. Ultimately, the researcher must make the decision as to whether or not to use the data.

The four advantages of secondary data are that secondary data can be obtained quickly and inexpensively, are usually available, and enhance primary data collection.

In almost every case, the researcher’s task of primary data collection is aided by first collecting secondary data. Sometimes secondary research will solve the research objective.

Some of the problems associated with secondary data include mismatch of the units of measurement, differing definitions used to classify the data, the timeliness of the secondary data, and the lack of information needed to assess the credibility of the data reported.

A disadvantage of secondary data is that they are sometimes reported in measurement units that do not match the researcher’s needs. For example, a researcher needs to know per capita income and the secondary data source reports income as household income.

A second disadvantage of secondary data is that the data may be categorized into class definitions that are unsuitable for the researcher’s needs. A researcher, forecasting demand for a day care center, desires to know how many children ages 3, 4, or 5 reside in each zip code area of a city. Yet, the secondary data source reports age as “children less than 10 years of age.”

A third disadvantage of secondary data is that they are out-of-date.
Chapter 6  Secondary Data and Online Information Databases

EVALUATING SECONDARY DATA

Hopefully, you have learned that not everything you read is true. In order to properly use secondary data, you must evaluate that information before you use it as a basis for decision making. A reader must be most cautious when using an Internet source because few quality standards are applied to most Internet sites. To determine the reliability of secondary information, marketing researchers must evaluate it. This is done by answering the following five questions:

◗ What was the purpose of the study?
◗ Who collected the information?
◗ What information was collected?
◗ How was the information obtained?
◗ How consistent is the information with other information?

A discussion of each question follows.

What Was the Purpose of the Study?

Studies are conducted for a purpose. Unfortunately, studies are sometimes conducted in order to “prove” some position or advance the special interest of those conducting the study. Many years ago, chambers of commerce were known for publishing data that exaggerated the size and growth rates of their communities. They did this to “prove” that their communities were a good choice for new business locations. However, after a few years, they learned that few people trusted chamber data and today chambers of commerce publish reliable and valid data. But the lesson is that you must be very careful to determine whether the entity publishing the data acted in a fair and unbiased manner. Consider the example of disposable diapers. The disposable diaper industry was created in the 1960s. Environmental concerns became alarming as information became available about the forecasts of huge mountains of disposable diapers that would take 50 years to decompose. Consequently, during the late 1980s, the number of customers buying old-fashioned cloth diapers doubled. Also, more than a dozen state legislatures were considering various bans, taxes, and even warning labels on disposable diapers. Then “research studies” were produced on the environmental effects of disposable versus cloth diapers. It seemed that the “new” research proved that cloth diapers, by adding detergent by-products to the water table, were more harmful to the environment than the ever-lasting plastic disposables! Soon after several of these studies were made available to legislators, the movement against disposables was dead. Who conducted the studies? Procter & Gamble. P&G, owning the lion’s share of the market for disposable diapers, commissioned the consulting firm of Arthur D. Little, Inc. to conduct a study of disposable versus cloth diapers. The study found that disposable diapers were no more harmful to the environment than reusable cotton diapers. Another favorable study for the disposables was conducted by Franklin Associates whose research showed disposables were not any more harmful than cloth diapers. But who sponsored this study? The American Paper Institute, an organization with major interests in disposable diapers. But wait, before you become too critical of the disposable diaper folks, let’s consider some other “scientific” studies. In 1988, a study was published that showed disposable diapers as being “garbage” and contributing to massive buildups of waste that was all but impervious to deterioration. Who sponsored this study? The cloth diaper industry! Another study published in 1991 found cloth diapers to be environmentally superior to disposable diapers. Guess who
An Ethical Issue

It Ain’t Necessarily So!

Many times research studies are reported in secondary data and sometimes what they report “...ain’t necessarily so,” according to authors Murray, Schwartz, and Licture’s book (It Ain’t Necessarily So: How Media Make and Unmake the Scientific Picture of Reality). These authors illustrate their point by citing a study undertaken by an “activist” group called the Food Research and Action Center whose aim, the authors report, is to highlight the problem of hunger and to increase government spending to fight hunger. The study reported that one out of eight children had gone hungry at some point in the previous year. But the researchers did not measure “hunger” in any direct manner. Instead they used a “proxy” measure of hunger. They measured what people said about hunger. (The Census Bureau uses income as a proxy measure of hunger.) Was their measure an accurate measure? Even if it were an accurate measure of actual hunger, CBS Network incorrectly reported the results of the study by stating that the study found one in eight American children under the age of 12 is going hungry (tonight). This is a totally different picture than the number of children who reported being hungry in the last year. Other studies report that coffee is associated with disease, whereas others report that coffee prevents disease.

In another book, Cynthia Crossen, a reporter and editor with the Wall Street Journal, writes about the truthfulness of research information. Her conclusions were interesting and led her to title the book Tainted Truth: The Manipulation of Fact in America. She warns that, even though Americans have a fascination with research information, we must understand that much of the “research” we use to help us to buy, elect, advise, acquit, and heal has been created not to expand our knowledge but to sell a product or advance a cause of the sponsor of the research. Furthermore, if the research results contradict a sponsor’s agenda, the results are routinely suppressed. Crossen gives some compelling evidence for her thesis including a study that found that 62 percent of Americans want to keep the penny in circulation. The sponsor? The zinc industry (most pennies are made with zinc). Another study found that 70 percent of cellular telephone users reported that the cellular phones made them more successful in business. The sponsor? Motorola. Even studies to test the effectiveness of new drugs are often sponsored by the pharmaceutical company selling the drug! Crossen believes that the explosion of “tainted truth” has come from money. Money is used to “sponsor” (buy) research studies and that even once independent and objective institutions such as universities have given in to the monetary pressures. Few researchers escape the pressures of financial support and they are influenced, whether knowingly or not, by trying to please their financial sponsors. Results can be manipulated by subtle means known to researchers.

Crossen has raised an important ethical issue for the research industry. Are research results totally independent and objective? Crossen’s book is one among several that deal with research not being objectively prepared or presented.

Who Collected the Information?

Even when you are convinced that there is no bias in the purpose of the study, you should question the competence of the organization that collected the information. Why? Simply because organizations differ in terms of the resources they command and their quality control. But how do you determine the competency of the organization that collected the data? First, ask others who have more experience in a given industry. Typically, creditable organizations are well known in those industries for which they conduct studies. Second, examine the report itself. Competent firms will almost always provide carefully written and detailed explanations of the procedures and methods used in collecting the information contained in the report. Third, contact previous clients of the firm. Have they been satisfied with the quality of the work performed by the organization?
What Information Was Collected?
There are many studies available on topics such as economic impact, market potential, feasibility, and the like. But what exactly was measured in these studies that constitutes impact, potential, or feasibility? There are many examples of studies that claim to provide information on a specific subject but, in fact, measure something quite different. Consider a study conducted by a transit authority on the number of riders on its bus line. On examination of the methodology used in the study, the number of riders was not counted at all. Rather, the number of fares was counted. A single rider may pay several fares per day. Is this distinction important? It may be or it may not be depending on how the study’s user intends to use the information. The important point here is that the user should discover exactly what information was collected!

How Was the Information Obtained?
You should be aware of the methods used to obtain information reported in secondary sources. What was the sample? How large was the sample? What was the response rate? Was the information validated? As you will learn throughout this book, there are many alternative ways of collecting primary data and each may have an impact on the information collected. Remember that, even though you are evaluating secondary data, this information was gathered as primary data by some organization. Therefore, the alternative ways of gathering the data had an impact on the nature and quality of the data. It is not always easy to find out how the secondary data were gathered. However, as noted earlier, most reputable organizations that provide secondary data also provide information on their data collection methods. If this information is not readily available and your use of the secondary data is very important to your research project, you should make the extra effort to find out how the information was obtained.

How Consistent Is the Information with Other Information?
In some cases, the same secondary data are reported by multiple, independent organizations, which provides an excellent way to evaluate secondary data sources. Ideally, if two or more independent organizations report the same data, you can have greater confidence in the validity and reliability of the data. Demographic data, for example, for metropolitan areas (MAs), counties, and most municipalities are widely available from more than one source. If you are evaluating a survey that is supposedly representative of a given geographic area, you may want to compare the characteristics of the sample of the survey with the demographic data available on the population. If you know, based on U.S. census data, that there are 45 percent males and 55 percent females in a city and a survey, which is supposed to be representative of that city, reports a sample of 46 percent males and 54 percent females, then you can be more confident in the survey data. It is indeed rare, however, that two organizations will report exactly the same results. Here you must look at the magnitude of the differences and determine what you should do. If all independent sources report very large differences of the same variable, then you may not have much confidence in any of the data. You should look carefully at what information was collected, how it was collected, and so on for each reporting source. For example, if you were to get the number of businesses in a county from Survey Sampling, Inc., and compare that number to the number of businesses reported by the governmental publication, County Business Patterns (CBP), you would see a marked difference. Specifically, Survey Sampling’s number of businesses would be much larger than the number reported by CBP. Why? The answer is found by asking the questions “What information was actually collected?” and “How was this information obtained?” As it turns out, neither organization actually counts the numbers of businesses in a given area. CBP counts the number of firms submitting payroll information on their employees. Some firms may not report this information and other small firms with “no paid employees” (whose owners are the
Locating Secondary Data Sources

employees) are excluded from CBP data. Therefore, the CBP surrogate indicator used to count the number of business firms is going to have a downward bias because it does not count all firms. On the other hand, Survey Sampling counts the number of business firms by adding up the number of businesses listed in the Yellow Pages.

This brings up the question, “What is a business firm?” One franchise organization may run the McDonald’s in a city, yet the Yellow Pages lists nine locations. Is this one business or nine? Survey Sampling would list this as nine separate businesses. Therefore, Survey Sampling’s estimates of the number of businesses has an upward bias. Which data source should be used? It would depend on the purpose of your study and how the information would be used. Either source of information may be appropriate for use as long as the user understood exactly what the information represented. The key point is that you must adequately evaluate the various data sources so that you are in a position to select the information that will give you the most valid and reliable results.

A final word about evaluating information sources is that you may be able to get some help in terms of evaluations by others. For example, books are often reviewed and those reviews are published. However, it is far more difficult to evaluate journal articles or Web sites.

LOCATING SECONDARY DATA SOURCES

How does one go about the actual task of locating secondary data sources? We suggest you follow the approach outlined here.\textsuperscript{18}

\textbf{Step 1.} Identify what you wish to know and what you already know about your topic. This is the most important step in searching for information. Without having a clear understanding of what you are seeking, you will undoubtedly have difficulties. Clearly define your topic: relevant facts, names of researchers or organizations associated with the topic, key papers and other publications with which you are already familiar, and any other information you may have.

\textbf{Step 2.} Develop a list of key terms and names. These terms and names will provide access to secondary sources. Unless you already have a very specific topic of interest, keep this initial list long and quite general. Use business dictionaries and handbooks to help develop your list. Be flexible. Every time a new source is consulted, you may have to use a new selection of terms.

In printed sources as well as databases, it is important to use correct terminology to locate the most relevant resources. In many cases, the researcher must think of related terms or synonyms for a topic. For example, one database may use the term \textit{pharmaceutical industry} to describe that industry, whereas another may use the term \textit{drug industry}. In addition, the source may require that a broader term be used. \textit{Pharmaceutical industry} may be listed as part of the \textit{chemical industry}. However, there may be a need to use a narrower term. For example, if one is researching a database on the \textit{drug industry}, it would be foolish to put in the term \textit{drugs} because almost everything in that database would include that term. Perhaps a specific drug may be a wiser choice.

Many databases have lists of the terms or subject headings they assign to records of information, such as books or articles. These lists are called thesauri, dictionaries, or subject headings lists. In most library catalogs the Library of Congress (LC) Subject Headings are used. These are standard (sometimes called controlled) terms that are consistently used to describe a particular subject. For example, the term \textit{real property} is standard in the LC Subject Headings instead of the term \textit{real estate}. Using a standard subject heading should result in a more efficient search. Marketing Research Insight 6.4 shows you how to find a standard subject heading using \textit{ABI Inform}.
MARKETING RESEARCH

INSIGHT

6.4

Finding a Standard Subject Heading: A Way to Improve Your Information Searching Skills

How many times have you used an online information service database only to end up frustrated that you could not find what you really needed? Problems of two types occur. First, you get thousands of “hits,” which requires that you read through huge amounts of information still searching for what you wanted to find in the first place. Second, you get information that has your key search terms contained within the article but the articles do not have anything to do with what you really want. Sound familiar? You need to learn an important skill in searching online information databases: finding the standard subject heading.

Imagine that you had several persons who were well trained in evaluating and interpreting the contents of information sources such as books, manuals, special reports, magazine articles, journal articles, and so on. Next, imagine if you had these well-trained persons to look through everything that has been published and to place all the books, articles, reports, and so on that pertained to your topic in one stack. So, you now have all publications on your topic in one category and now imagine that this information is all scanned into an electronic database that you can now search using any one or a combination of search strategies. Wow! Think this would improve your information search skills? The good news is that this has already been done for you. You just need to learn how to take advantage of what we shall call standard subject headings.

Databases have a field called the subject field. When a new piece of information arrives, be it a book, journal article, or whatever, that information is evaluated to determine its subject matter. For example, let’s say that an article is entitled “Miami Blues.” The title can be very misleading. In fact, if someone were doing a search about blues music, this article would appear in a results list (along with thousands of other nonrelevant information sources). But why is it misleading? Because the subject of the article is really about real estate in Miami. If you were interested in finding information about real estate, chances are you would not find this book using key terms in the title field of your database search engine. But, because those “people who are working for you” have looked over this article and correctly placed it in the category of real estate, we are going to find it. So, standard subject headings are specific words or phrases that are used to properly categorize the subject matter of records as they are entered into databases. Let’s see how you would do it using ABI Inform, an index to business journals.

In ABI Inform, there is a list of standard subject headings that one can locate by using the advanced search screen and selecting “browse lists” and then “subjects.” In the following example we submit the words “real estate.” If that term is listed, then it can be used in a search by subject field.

In the next example, the searcher is using the term “real estate” as a subject term (not as a keyword in any field) to make sure the emphasis of the articles retrieved is on real estate. The searcher combines it with the word “Florida” (as a keyword in any field) to further narrow the search. Please
Locating Secondary Data Sources

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notice that the searcher got to this screen by selecting “search methods” at the top of the screen and then “guided screen.”

Finally the search retrieves the results as indicated in the following example. Notice that item 3 entitled “Miami Blues” is a title that would not have been recognizable as an article about real estate. Also notice that the presence of the camera image before the item means that the full-text article is available online.

Although this is just one database from several hundred, a good researcher learns to look for lists of standard subject headings whether they are called thesaurus terms, subject headings, terms, and so on. It is also important to check all guide screens and instructions that are made available by each database. Notice that in the preceding example the instructions are listed under the tab marked “Search Guide.” Happy searching!
Keyword searching is usually available for searching a database, but using a keyword often retrieves too many false results. A keyword search means that the computer will retrieve a record that has that word anywhere in the record. For example, if someone is searching for the word banks, it could be the name of a person, a business, type of bank, a bank of dirt (hill), or any other use of that word. Sometimes to avoid false results the searcher may simply want to search one field in the record as described later in “Field Searching.” Keywords may also be used to lead one to better terms to use. If one retrieves a long list of sources, it is wise to select an item that is relevant and examine its record to identify the standard subject heading assigned to that item. Submitting that subject heading should retrieve a much more relevant list of sources (see Marketing Research Insight 6.4).

**Step 3.** Begin your search using several of the library sources such as those listed in Table 6.2. If you need help in selecting the appropriate sources or databases, refer to Table 6.2 and review the functions of different types of publications.

**Search Strategies Used for Searching Online Information Databases**

To better understand how to search online databases, the researcher should understand how databases are organized. A common vendor, also known as an aggregator or databank, may provide many databases. For example, the vendor Proquest provides ABI Inform and the Wall Street Journal. An actual hierarchy exists in the organization of these databases. For example:

- **Top level** – Databank = Proquest
- **Second level** – Databases = ABI Inform
- **Third level** – Records = the units describing each item in the database
- **Fourth level** – Fields = parts of the record, such as author, title, SIC number, and so on
- **Fifth level** – Words or numbers = the text of the fields

Usually all databases from the same databank are searched similarly. There may be several methods (basic, advanced, and command) of searching databases. A basic search is often sufficient when searching for books in a catalog or when searching small databases; however, it is often advisable to use the advanced mode when searching for journal articles or complex ideas, so that search refinements can be employed.

Most databanks employ the same search features, but other databanks may use different symbols or interfaces to retrieve results. An interface is the “look and feel” of the database that actually helps the searcher know how to submit a search. Each database has a help screen that is always useful. The following examples of the search techniques are those for a typical library catalog, but each databank, such as First Search, Dow Jones Interactive, and others, may use different searching symbols to accomplish the same results.

**Boolean Logic**

**Boolean logic** allows the establishment of relationships between words and terms in most databases. Typical words used as operators in Boolean logic are AND, OR, and NOT. The following examples illustrate the use of Boolean logic:

<table>
<thead>
<tr>
<th>Operator</th>
<th>Requirements</th>
<th>Examples</th>
</tr>
</thead>
</table>
| AND      | Both terms are retrieved | chemical AND industry  
Exxon AND financial |
| OR       | Either term is retrieved | drug OR pharmaceutical  
outlook OR forecast |
| NOT      | Eliminates records containing the term | Cherokee NOT jeeps  
drugs NOT alcohol |
### Table 6.2 Secondary Information Sources on Marketing

<table>
<thead>
<tr>
<th>I. Reference Guides</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Encyclopedia of Business Information Sources</strong></td>
</tr>
<tr>
<td>Detroit: GaleGroup, Annual. For the researcher, this lists marketing associations, advertising agencies, research centers, agencies, and sources relating to various business topics. It is particularly useful for identifying information about specific industries.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>II. Indexes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ABI Inform</strong></td>
</tr>
<tr>
<td>Ann Arbor, MI: Proquest, 1982. Available online, this database indexes and abstracts major journals relating to a broad range of business topics. Electronic access to some full-text articles is also available.</td>
</tr>
<tr>
<td><strong>Business File ASAP</strong></td>
</tr>
<tr>
<td>Detroit: Gale Group, 1982. Available online and on CD-ROM. This index covers primarily business and popular journals and includes some full-text articles.</td>
</tr>
<tr>
<td><strong>Business Periodicals Index</strong></td>
</tr>
<tr>
<td>New York: H. W. Wilson, Co., 1958. Available online and in print. This basic index is useful for indexing the major business journals further back in time than other indexes.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>III. Dictionaries and Encyclopedias</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dictionary of Marketing Terms</strong></td>
</tr>
<tr>
<td><strong>Encyclopedia of Consumer Brands</strong></td>
</tr>
<tr>
<td>Detroit: St. James Press, 1994. For consumable products, personal products, and durable goods, this source provides detailed descriptions of the history and major developments of major brand names.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IV. Directories</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bradford’s Directory of Marketing Research Agencies and Management Consultants in the United States and the World</strong></td>
</tr>
<tr>
<td>Middleberg, VA: Bradford’s, Biennial. Indexed by type of service, this source gives scope of activity for each agency and lists names of officers.</td>
</tr>
<tr>
<td><strong>Broadcasting and Cable Yearbook</strong></td>
</tr>
<tr>
<td><strong>Directories in Print</strong></td>
</tr>
<tr>
<td>Detroit: Gale Research, Annual. Provides detailed information on business and industrial directories, professional and scientific rosters, online directory of databases, and other lists. This source is particularly useful for identifying directories associated with specific industries or products.</td>
</tr>
<tr>
<td><strong>Gale Directory of Publications and Broadcast Media</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>V. Statistical Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Datapedia of the United States, 1790–2005</strong></td>
</tr>
<tr>
<td>Lanham, MD: Bernan Press, 2001. Based on the Historical Statistics of the United States from Colonial Times and other statistical sources, this volume presents hundreds of tables reflecting historical and, in some cases, forecasting data on numerous demographic variables relating to the United States.</td>
</tr>
<tr>
<td><strong>Demographics USA—“Survey of Buying Power”</strong></td>
</tr>
<tr>
<td>New York: Sales &amp; Marketing Management magazine. Annual. A compilation of data published in Sales &amp; Marketing Management magazine, which includes statistics on population, income, retail sales, effective buying income, etc., for counties, cities, and metropolitan areas. (This source is discussed at length later in this chapter.)</td>
</tr>
<tr>
<td><strong>Editor and Publisher Market Guide</strong></td>
</tr>
<tr>
<td>New York: Editor and Publisher, Annual. Provides market data for more than 1,500 U.S. and Canadian newspaper cities covering facts and figures about location, transaction, population, households, banks, autos, etc.</td>
</tr>
<tr>
<td><strong>Market Share Reporter</strong></td>
</tr>
<tr>
<td>Detroit: Gale Research, Annual. Provides market share data on products and service industries in the United States.</td>
</tr>
<tr>
<td><strong>Standard Rate and Data Service</strong></td>
</tr>
<tr>
<td>Des Plaines, IL: SRDS, Monthly. In the SRDS monthly publications (those for consumer magazine and agrimedia, newspapers, spot radio, spot television) marketing statistics are included at the beginning of each state section.</td>
</tr>
</tbody>
</table>
Field Searching

Field searching refers to searching records in a database by one or more of its fields. Databases are collections of records, which consist of fields designated to describe certain parts of the record. Searching “by field” may make a search more efficient. For example, if a title is known, a search of the title field should find the desired record. Terms entered as “subjects” may be restricted to specific subject headings (e.g., Library of Congress Subject Headings in most library catalogs), depending on the database. Most databases also allow the use of keyword searching, which searches every word in a record.

Most electronic databases employ the same search strategies for searching databases, but they often vary in the keystrokes designated to perform the search. For example, on the Internet, the keyword “real estate” should be submitted with quotes surrounding the phrase so that the exact sequence of words will be searched; however, to get the same keyword phrase in some library catalogs, one would submit: “real ADJ estate.”

Proximity Operators

The preceding “real estate” example demonstrates one of the proximity operators, that are available to enhance keyword searching. Proximity operators allow the searcher to indicate how close and in which order two or more words are to be positioned within the record. Examples of proximity operators are:

<table>
<thead>
<tr>
<th>Operator</th>
<th>Requirements</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADJ</td>
<td>Adjoining words in order specified</td>
<td>Electronic ADJ commerce</td>
</tr>
<tr>
<td>NEAR</td>
<td>Adjoining words in any order</td>
<td>Bill NEAR Gates</td>
</tr>
<tr>
<td>SAME</td>
<td>Both terms are located in the same field of the record</td>
<td>Microsoft SAME legal</td>
</tr>
</tbody>
</table>

Truncation

Another feature of database searching is truncation, which allows the root of the word to be submitted, retrieving all words beginning with that root. The term “forecast?” would retrieve “forecasting, forecasts, forecaster,” and so on. The question mark is the truncation symbol for some databases, but other databases may use an asterisk, a plus sign, a dollar sign, or other symbols. In some cases truncation symbols may not be useful. For example, if one wanted “cat” in singular or plural, submitting “cat?” would retrieve “cat, cats, catch, catastrophe,” and so on. Using the search “cat OR cats” would be preferred.

Nesting

It is essential that the computer translate the search statement correctly. Nesting is a technique that indicates the order in which a search is to be done. For example, if one wishes to search for microcomputers or personal computers in Florida, one would submit “Florida AND (microcomputer? OR personal ADJ computer?),” indicating that “Florida” should be combined with either term. The parenthesis nests the two terms as one. Without the parentheses, “Florida” would be combined with “microcomputer,” but every instance of the words “personal computer” would be added to the results. In search engines, there are text boxes that serve much like parentheses to aid in keeping similar terms together.

Limiting

Limiting allows for restricting searches to only those database records that meet specified criteria. For example, searches may be limited to a search of records containing a specific language, location, format, and/or date. These limitations are usu-
KEY SOURCES OF SECONDARY DATA FOR MARKETERS

We hope you understand by now that there are thousands of sources of secondary data that may be relevant to business decisions. However, there are a few sources that are so important that they deserve some attention. In the next few paragraphs we give you additional information about Census 2000 and other government publications, the North American Industrial Classification System (NAICS), which is replacing the Standard Industrial Classification (SIC) system, the “Survey of Buying Power,” Demographics USA, and the Lifestyle Market Analyst.

Census 2000: Census of the Population

The United States Decennial Census, the Census of the Population, is considered the “granddaddy” of all market information. Even though the census is conducted only once every 10 years, census data serve as a baseline for much marketing information that is provided in the “in-between” years. Firms providing secondary data commercially, such as ESRI and the “Survey of Buying Power,” make adjustments each year to report current information. Besides market data, census data are used to make many governmental decisions such as highway construction, health care services, educational needs, and, of course, redistricting. (You can see why each Census 2000 question was asked at [www.census.gov/dmd/www/content.htm](http://www.census.gov/dmd/www/content.htm).) Because these decisions affect how federal funds are allocated, the method used in taking Census 2000 was highly politicized. Essentially, the Bureau of the Census wanted to use more statistical sampling in order to get more accurate data. Opponents wanted the bureau to continue taking a complete census. Normally, this would not have led
The census is composed of a short form, which every household received, and a long form, which was sent to one in six households. You can see both forms at www.census.gov/dmd/www/2000quest.html.

Visit the NAICS site, which allows you to convert SIC codes to NAICS codes at www.census.gov/epcd/www/naics.html.

The SIC is being replaced by NAICS as a result of the North American Free Trade Agreement (NAFTA).

NAICS is not a source of secondary information. Rather, it is a coding system that can be used to access information.

Other Government Publications
The U.S. government publishes a huge volume of secondary data. Most of these publications are produced in the U.S. Government Printing Office (GPO). You can visit its Web site at www.gpo.gov. The Statistical Abstract of the United States is a convenient source of statistical secondary data and it is now available to you online. Marketing Research Insight 6.5 identifies the sections of information available in this source.

North American Industry Classification System (NAICS)
The North American Industry Classification System (NAICS) is pronounced “nakes” and is not actually a source in and of itself. By this, we mean that NAICS is not information per se; rather, it is a coding system that can be used to access information. All marketing research students should be familiar with it because it will be used by so many secondary data sources. Many readers will not be familiar with NAICS, but they will have heard of the Standard Industrial Classification (SIC) system, which NAICS is replacing. (We discuss both here because data based on the SIC will be around for several years.) The SIC was created in the mid-1930s when the government required all agencies gathering economic and industrial data to use the same system for classifying businesses. The SIC was a system that classified establishments by the type of activity in which they were engaged. Codes, describing a type of business activity, were used to collect, tabulate, summarize, and publish data. Each industry was assigned a code number and all firms within that particular industry reported all activities (sales, employment, etc.) by this assigned code. The SIC divides all establishments into 11 divisions: Division A, for agriculture, forestry, and fishing; Division B, for mining; Division C, for construction; Division D, for manufacturing; Division E, for transportation, communications, electric, gas, and sanitary services; Division F, for wholesale trade; Division G, for retail trade; Division H, for finance, insurance, and real estate; Division I, for services; Division J, for public administration; and Division K, for nonclassifiable establishments. Divisions are then subdivided into a second level of classification dividing the industry into “major groups.” Major groups are numbered consecutively 01 through 99. Division A, for example, contains major groups 01 through 09. A major group within Division A is agricultural production—crops; this is major group 01. Division B contains major groups 10 through 14: 10 is metal mining, 11 is coal mining, and so on. Each major group is further divided into two other categories, which provide greater specificity of classification.

The SIC is being replaced by NAICS as a result of the North American Free Trade Agreement (NAFTA). The system will allow reports conducted by the...
Statistics Online: Statistical Abstract of the United States

The Statistical Abstract of the United States was first published in 1878 and is still a much-used reference for summary statistics on social, political, and economic sectors of the United States. It serves not only as a convenient, one-volume source for statistical data on a wide variety of topics, but it also is a reference guide to aid users in finding more detailed statistical information on their subject areas. The printed copy of the book is available for purchase at bookstore.gpo.gov or you can access the electronic copy of the book at www.census.gov/statab/www.

Contents include by section:

1. Population—by age, sex, race/ethnic origin
2. Vital Statistics—births, deaths, life expectancy
3. Health and Nutrition—health expenditures, facilities, food consumption
4. Education—projections, degrees conferred, Internet access
5. Law Enforcement, Courts, and Prisons—arrests, child abuse, inmates
6. Geography and Environment—land and water, air quality, hazardous waste
7. Elections—vote results, campaign finances
8. State and Local Government Finances and Employment
10. National Defense and Veterans Affairs
11. Social Insurance and Human Services—social security, aid
12. Labor Force, Employment and Earnings—projections, minimum wage
13. Income, Expenditures and Wealth—GDP, family income, poverty
14. Prices—purchasing power of the dollar, cost-of-living index
15. Business Enterprise—economic census data
16. Science and Technology
17. Agriculture—farms, farmland, farm income, crops, livestock
18. Natural Resources—timber, fishery, mineral, petroleum, gas
19. Energy and Utilities—consumption
20. Construction and Housing—spending, home sales, remodeling
21. Manufacturing—summary statistics
22. Domestic Trade—retail, wholesale, e-commerce
23. Transportation—air, highways, motor vehicles
24. Information and Communications—newspapers, Internet access and use, telecommunications, book purchasing
25. Banking and Finance—financial institutions, interest rates, stocks and bonds
26. Arts, Entertainment and Recreation—performing arts, NCAA, leisure activities, and travel
27. Accommodation, Food Services and Other Services—professional scientific and technical, advertising, administrative support and waste management, tax-exempt organizations
28. Foreign Commerce and Aid
29. Outlying Areas—Puerto Rico, Virgin Islands, Guam, American Samoa, and Northern Mariana Islands
30. Comparative International Statistics—world population, vital statistics, economic measures, finance

It’s important to remember that the information contained in the Statistical Abstract of the United States did not originate with the abstract. Always reference the original source of secondary information. The original source for information reported in the Statistical Abstract is provided in the publication. Also, agencies preparing the data are listed along with telephone numbers, addresses, and Internet sites.


Mexican, Canadian, and U.S. governments to share a common language for easier comparisons of international trade, industrial production, labor costs, and other statistics. NAICS will have improvements over the SIC and yet will allow for comparative analyses with past SIC-based data. In fact, Dun & Bradstreet is marketing software that provides a crossover from SIC codes to NAICS codes. NAICS will classify businesses based on similar production processes; special attention is being given to classifying emerging industries such as services and high technology, and more classifications will be assigned to certain industry groups such as eating and

drinking places. Under the SIC, all restaurants—beaneries, caterers, hamburger stands, and five-star restaurants—fall under the same category: Eating and Drinking Places. NAICS will break this down into several categories, which will be more useful to researchers.23

NAICS groups the economy into 20 broad sectors as opposed to the 11 SIC divisions. Many of these new sectors reflect recognizable parts of the SIC, such as the Utilities and Transportation section broken out from the SIC Transportation, Communications and Utilities division. Because the service sector of the economy has grown so much in recent years, the SIC division for Services Industries has been broken into several new sectors including Professional, Scientific, and Technical Services; Management, Support, Waste Management and Remediation Services; Education Services; Health and Social Assistance; Arts, Entertainment and Recreation; and Other Services except Public Administration. Other new NAICS sectors are composed of combinations of pieces from more than one SIC division. For example, the new information sector is composed of components from Transportation, Communications and Utilities (broadcasting and telecommunications); Manufacturing (publishing); and Services Industries (software publishing, data processing, information services, and motion pictures and sound recording).

The NAICS uses a six-digit classification code instead of the old SIC four-digit code. The additional two digits allow for far greater specificity in identifying special types of firms. However, the six-digit code is not being used by all three NAFTA countries. The three countries agreed on a standard system using the first five digits and the sixth digit is being used by each country in a manner allowing for special user needs in each country. Note that the NAICS code doesn’t tell you anything per se. However, knowing a NAICS number that represents a type of business will allow you to find all kinds of secondary information about the firms in that business.

“Survey of Buying Power”

The “Survey of Buying Power” is an annual survey that is published every August in Sales & Marketing Management magazine. The survey contains data for the United States on population, income, and retail sales for food, eating and drinking places, appliances, and automotives. These data are broken up into metropolitan (MSA), county, and city levels, and media market levels. Five-year projections are also provided. Because the data for the survey are extrapolated from census data, the data are current with each year’s publication. In addition to the general data, the survey also reports the effective buying income (EBI) and the buying power index (BPI). Table 6.3 illustrates secondary data taken from the “Survey of Buying Power.”

EBI is defined as disposable personal income. It is equal to gross income less taxes and, therefore, reflects the effective amount of income available for expenditure on goods and services. This is important because taxes differ widely depending on geographic location. BPI is an indicator of the relative market potential of a geographic area. It is based on the factors that make up a market: People, ability to buy, and willingness to buy. The BPI is an index number that represents a market’s percentage of the total buying power in the United States.

How to Calculate the Buying Power Index (BPI) The BPI is one of the main reasons that managers and researchers find the “Survey of Buying Power” so useful. With all the demographic information available to marketers, the BPI is useful because it takes the three factors making up a market (people, ability to buy, and willingness to buy) and calculates those factors into a quantitative index that repre-
### Table 6.3 Secondary Data from the “Survey of Buying Power”

#### The 10 Metros with the Highest Median Household EBI

<table>
<thead>
<tr>
<th>Market</th>
<th>EBI</th>
<th>2001</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Bridgeport–Stamford–Norwalk–Danbury, CT</td>
<td>$75,312</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2. San Jose, CA</td>
<td>$72,124</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3. Middlesex–Somerset–Hunterdon, NJ</td>
<td>$64,333</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4. Nassau–Suffolk, NY</td>
<td>$60,941</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5. San Francisco, CA</td>
<td>$58,670</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>7. Trenton, NJ</td>
<td>$57,246</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>8. Washington, DC</td>
<td>$57,056</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>9. Ventura</td>
<td>$56,574</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>10. Santa Cruz–Watsonville</td>
<td>$55,490</td>
<td>10</td>
<td>15</td>
</tr>
</tbody>
</table>

#### The 10 Metros with the Highest Total Retail Sales

<table>
<thead>
<tr>
<th>Metro</th>
<th>($000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Los Angeles–Long Beach</td>
<td>$111,276,587</td>
</tr>
<tr>
<td>2. Chicago</td>
<td>107,339,981</td>
</tr>
<tr>
<td>3. New York</td>
<td>87,695,524</td>
</tr>
<tr>
<td>4. Detroit</td>
<td>66,249,125</td>
</tr>
<tr>
<td>5. Philadelphia</td>
<td>65,740,609</td>
</tr>
<tr>
<td>6. Atlanta</td>
<td>64,611,440</td>
</tr>
<tr>
<td>7. Washington</td>
<td>63,408,444</td>
</tr>
<tr>
<td>9. Houston</td>
<td>57,622,352</td>
</tr>
<tr>
<td>10. Minneapolis–St.Paul</td>
<td>54,213,658</td>
</tr>
</tbody>
</table>

#### The 10 Metros with the Highest Hispanic Origin Population

<table>
<thead>
<tr>
<th>Market</th>
<th>(000s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Los Angeles–Long Beach</td>
<td>4,310.9</td>
</tr>
<tr>
<td>2. New York</td>
<td>2,373.4</td>
</tr>
<tr>
<td>3. Chicago</td>
<td>1,462.1</td>
</tr>
<tr>
<td>4. Miami</td>
<td>1,318.9</td>
</tr>
<tr>
<td>5. Houston</td>
<td>1,293.9</td>
</tr>
<tr>
<td>6. Riverside–San Bernardino</td>
<td>1,274.0</td>
</tr>
<tr>
<td>7. Orange County, CA</td>
<td>900.1</td>
</tr>
<tr>
<td>8. Phoenix–Mesa</td>
<td>855.9</td>
</tr>
<tr>
<td>9. Dallas</td>
<td>847.6</td>
</tr>
<tr>
<td>10. San Antonio</td>
<td>830.8</td>
</tr>
</tbody>
</table>

Source: 2001 Survey of Buying Power, SMM Magazine. These data were taken from www.mysbp.com, by permission.

The BPI (Buying Power Index) represents the buying power of a market. We provide you the formula and illustrate how to calculate the BPI as follows:

\[
BPI = \frac{\text{Population of Market Area A}}{\text{Total U.S. Population}} \times 2 \\
+ \left( \frac{\text{EBI of Market Area A}}{\text{Total U.S. EBI}} \right) \times 5 \\
+ \left( \frac{\text{Retail Sales of Market Area A}}{\text{Total U.S. Retail Sales}} \right) \times 3
\]

The market areas that can be selected are regions, states, counties, MSAs, cities, or DMAs (Designated Market Areas represent television markets). Population is...
A major advantage of the SBP is that it provides demographic data updated each year, provides five-year projections and the BPI, and it quantifies markets.

Advantages of the “Survey of Buying Power.” First, a major advantage of the SBP is that it provides demographic data updated each year. Second, it also provides five-year projections each year. Third, by calculation of the index numbers making up the BPI, the SBP quantifies markets. Like all index numbers, the BPI is useful when used to evaluate a market over a time period. This could be achieved by plotting the BPI for a market over a five-year period. In this way, a manager or researcher would have an indication as to the trend in buying power for that market area. A second useful way to use the BPI is to compare one market with other markets. The BPI represents a quantifiable measure of markets’ buying power and, therefore, is an objective measure that is useful for comparing markets. Specific uses of the BPI include selection of new markets, dividing markets into sales territories having equal buying power, and allocating media expenditure based on the potential buying power in a market. A fourth advantage of the SBP is that it is inexpensive and easy to access.

Disadvantages of the SBP. There are two weaknesses of using data reported in the “Survey of Buying Power.” As we mentioned earlier, one disadvantage of using secondary data is that the data are not classified in categories useful to the user. The example we gave was that data for EBI is reported in the SBP in only three categories, the last being $50,000 and over. Limited categories of data reported in the SBP can be overcome by using another publication called Demographics USA. A second disadvantage of the SBP lies in the logic of the calculation of the BPI. The BPI is a general index in that it uses the entire population, all levels of EBI, and total retail sales in a market area. However, for some products, a general BPI may not be an accurate predictor of buying power. Again, by knowing which secondary data source to consult, researchers can sometimes remedy shortcomings of one source of secondary data with another. We explain how Demographics USA overcomes the problem of the SBP’s “general BPI” next.

Demographics USA

Another useful source of secondary data is found in the publication Demographics USA. It not only provides much more detailed information but it also overcomes some of the disadvantages of the SBP. First, as we noted earlier, the SBP has a limited number of categories by which it reports data. Demographics USA expands these categories. For example, it reports EBI in seven categories with the highest category being “$150,000 and above.” Instead of providing only the general BPI, Demographics USA offers other market indexes, such as Total Business BPI, High-Tech BPI, Manufacturing BPI, BPI for economy-priced products, BPI for moderately priced products, BPI for premium-priced products, BPI for business-to-business markets, and BPI for high-tech markets. These market indexes are calculated as follows:

Demographics USA is much more expensive than the SBP. It not only provides much more detailed information but it also overcomes some of the disadvantages of the SBP.

Instead of providing only the general BPI, Demographics USA offers other market indexes.
Key Sources of Secondary Data for Marketers

Special Indexes in Demographics USA

Total Business Buying Power Index (B2B)
Total establishments with:
1–19 employees, weight = .1
20–99 employees, weight = .2
100–499 employees, weight = .4
with 500+ employees, weight = .3

Hi-Tech Buying Power Index
Total employment: electronic and related equipment (SIC 36), weight = .2
Engineers, weight = .4
Computer specialists, weight = .4

Manufacturing BPI
Total employment: food and kindred products (SIC 20), weight = .2
Apparel and other textiles (SIC 23), weight = .4
Instruments and related products (SIC 38), weight = .4

Economy-Priced Products
Households with incomes less than $15,000, weight = .6
Food store sales, weight = .3
Total number of households, weight = .1

Moderately Priced Products
Households with incomes $15,000 to $24,999, weight = .6
Total retail sales, weight = .3
Number of three- and four-person households, weight = .1

Premium-Priced Products
Households with incomes greater than $25,000, weight = .6
Combined apparel/furniture/appliance sales, weight = .3
Households with householder 35–64 years old, weight = .1

Even with these additional choices, some firms may want to calculate their own customized BPI. A customized BPI is an index that uses market factors selected for their relevancy to a particular product or service in terms of how they best represent the buying power for that particular product or service. As an example, let’s suppose you were making a decision to locate new dealerships for a new luxury automobile. Which markets represent the highest buying power for a luxury automobile? You might be predisposed to using the premium-priced products index from Demographics USA, but let’s say you want an even better indicator of buying power for your very expensive new luxury car. A customized BPI may consist of (1) households with incomes of $75,000 or more, (2) automobile sales, and (3) households with householder 35–64 years old. Of course, you would now have the problem of actually calculating your customized BPI for each market you want to consider. Another advantage of Demographics USA is the specificity of the geographic detail of the reporting units. In addition to providing the standard reporting units (MSAs, DMAs, etc.), Demographics USA also provides data by zip code and information about the business market, such as the number of establishments within nine business categories (e.g., agriculture, manufacturing, retailing, and services).
Chapter 6  Secondary Data and Online Information Databases

Lifestyle Market Analyst

A unique source of secondary data is the Lifestyle Market Analyst. This printed source of information analyzes several dozen lifestyle categories such as Avid Book Readers; Own a Cat; Take Cruise Ship Vacations; Golf; Own a Camcorder; Have Grandchildren; Shop by Catalog/Mail; Stock/Bond Investments; Improving Health; and Donate to Charitable Causes. Information is organized into sections that have different objectives. First, you can examine markets (defined as DMAs). Not only will you get some standard demographic data for the DMA but you will also be able to determine the dominant (and least dominant) lifestyles in that market. This information helps “paint a personality portrait” of a market for users who otherwise see only a sea of numbers describing markets. Another section of the book focuses on each lifestyle. There you will find the demographic profile of the participants in that lifestyle category as well as other information. For example, to understand the lifestyle of a bicycling enthusiast, one may answer the following questions:

- What are the demographics of bicyclists?
- In what other activities are bikers involved?
- Which markets have the heaviest concentration of bikers?
- Which magazines do bikers read?

As another example, a Lifestyle Market Analyst profile of boating/sailing enthusiasts reveals that they also enjoy scuba diving, snow skiing, recreation vehicles, vacation property, and fishing, but they have little interest in devotional reading or needlework. Obviously this type of consumer is an appropriate target for outdoor equipment sales.

SUMMARY

We can group data into two categories: primary and secondary. Primary data are gathered specifically for the research project at hand. Secondary data are data that have been previously gathered for some other purpose. Secondary data may be internal. Internal secondary data are data already gathered within the firm for some other purpose. For example, in normal business transactions, much information is obtained and recorded. Sales receipts record customer names, types, quantities and prices of goods or services purchased, delivery addresses, shipping dates, salesperson making the sale, and so on. Storing internal data in electronic databases has become increasingly popular. External secondary data are data obtained from sources outside the firm. These data may be classified as (1) published, (2) syndicated services data, and (3) databases. There are different types of published secondary data such as reference guides, indexes and abstracts, bibliographies, almanacs, manuals and handbooks, and so on. Different types of secondary data have different functions and understanding the different functions is useful in researching secondary data. Online information databases are sources of secondary data searchable by search engines online. When several databases are offered under one search engine, the service is called either an aggregator or a database. Examples include LexisNexis and Proquest. The four types of databases include bibliographic, numeric or statistical, directories or lists, and comprehensive databases.

Secondary data have the advantages of being quickly gathered, being readily available, being relatively inexpensive, and often adding helpful insights should primary data be needed. Disadvantages are that the data are often reported in measurement units or class definitions that are incompatible with the researchers’ needs, and secondary data may be outdated. Evaluation of secondary data is important; researchers must ask certain questions in order to ensure the integrity of the information they use.
Finding secondary data involves understanding what you need to know and understanding key terms and names associated with the subject. Indexes and bibliographies may first be consulted; they list sources of secondary information by subject. Consult the sources and evaluate the information. Make use of computerized data searches from databases, if available. A good way to increase searching skills of online information databases is to learn how to find standard subject headings. Seek the services of a reference librarian to help you improve your searching skills.

Using online information databases requires understanding how these databases are organized and the fundamental search strategies used including Boolean logic, field searching, proximity operators, truncation, nesting, and limiting.

Examples of important secondary data for business decisions are the Census of the Population from the U.S. Bureau of the Census and the Statistical Abstract of the United States, both of which are available online. The North American Industry Classification System (NAICS) is replacing the Standard Industrial Classification (SIC) system as the government’s classification system for business. Because NAICS groups businesses into 20 sectors (instead of the 11 used by the SIC) and uses codes of up to six digits to classify businesses (instead of the four-digit code used by the SIC), NAICS offers a classification system that is much better at specifying types of industries. A privately produced secondary data source that is useful to marketers is the “Survey of Buying Power” (SBP). The SBP is useful because it provides a quantitative index, called the buying power index (BPI), to measure the buying power of various geographical markets in the United States. Demographics in the SBP are updated annually. A second privately produced source of secondary information is Demographics USA, which provides useful demographic information that is updated annually. In addition to calculating the BPI (as is provided in the SBP), Demographics USA provides several other indexes to quantify the buying power of both industrial and retail markets. Firms may also calculate customized BPIs that are specifically formulated to measure the buying power for their specific product or service. The Lifestyle Market Analyst is a unique publication in that it provides information on lifestyles. It contains information on several dozen lifestyles such as bicycling enthusiasts, dog owners, snow skiing enthusiasts, and so on. Demographic profiles of each lifestyle are reported along with what other lifestyle interests (and noninterests) apply.

**KEY TERMS**

- Primary data (p. 152)
- Secondary data (p. 152)
- Internal secondary data (p. 153)
- Database (p. 154)
- Internal databases (p. 154)
- Data mining (p. 154)
- External secondary data (p. 154)
- Published sources (p. 155)
- Catalog (p. 156)
- Indexes (p. 156)
- Syndicated services data (p. 156)
- External databases (p. 156)
- Online information databases (p. 156)
- Bibliographic databases (p. 158)
- Numeric or statistical databases (p. 158)
- Directory or list databases (p. 158)
- Comprehensive databases (p. 158)
- Standard subject headings (p. 164)
- Boolean logic (p. 166)
- Field searching (p. 168)
- Proximity operators (p. 168)
- Truncation (p. 168)
- Nesting (p. 168)
- Limiting (p. 168)
- Census of the Population (p. 169)
- North American Industry Classification System (NAICS) (p. 170)
- Standard Industrial Classification (SIC) system (p. 170)
- “Survey of Buying Power” (p. 172)
- Effective buying income (EBI) (p. 172)
- Buying power index (BPI) (p. 172)
- Demographics USA (p. 174)
- Total business BPI (p. 174)
- Hi-tech BPI (p. 174)
- Manufacturing BPI (p. 174)
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Economy-priced products (BPI) (p. 174)  High-tech markets (BPI) (p. 174)
Moderately priced products (BPI) (p. 174)  Customized BPI (p. 175)
Premium-priced products (BPI) (p. 174)  *Lifestyle Market Analyst* (p. 176)
Business-to-business markets (BPI) (p. 174)

**REVIEW QUESTIONS/APPLICATIONS**

1. How would you find information about the 2000 census?
2. What are some of the disadvantages of data provided by public data sources, such as the government?
3. What are secondary data and how do they differ from primary data?
4. How would you classify secondary data?
5. Name four types of publications and describe their function.
6. What is the difference between a library catalog and an index?
7. Explain what a database is and describe how databases are organized.
8. What is data mining and why is it used?
9. What are online information databases and what are the four types of these databases?
10. Discuss three advantages of secondary data. Discuss three disadvantages of secondary data.
11. How would you go about evaluating secondary data? Why is evaluation important?
12. Discuss how you would go about finding secondary data in your own library.
13. Explain why it is important to know the purpose of a study reported in secondary data.
14. What is a standard subject heading and explain why knowing how to find a standard subject heading would help increase your information searching skills when using online information databases.
15. Explain what is meant by Boolean logic.
16. Why would searching by field help you efficiently search online information databases?
17. Describe the purposes of the U.S. *Census of the Population*.
19. Name five publications listed as being published by the GPO.
20. Access the *Statistical Abstract of the United States* online and find information relevant to any topic you are presently studying in your coursework.
21. Why is the NAIC system important? How would you use a NAICS code once you have identified the appropriate code? List three industries in which you have a career interest. What are the appropriate NAICS codes for these industries?
22. What is the BPI and what is its significance?
23. Explain why a marketer would use each of the indexes published in *Demographics USA*.
24. Explain how a marketer of boats could use the *Lifestyle Market Analyst*.
25. The CEO of a national retail jewelry chain is considering expanding its stores into several retail malls in the Southeast. The chain already owns several stores in this region of the country. Imagine that you are the director of marketing research for this chain and the CEO has asked you to provide information at next Monday’s Executive Committee meeting that will help in making the decision about the selection of the cities in which to open new stores. What kind of internal information would you seek? What kind of external secondary data would you seek? In what way would you use these two sources of information in order to place them in a format that would enable you to contribute to the decisions to make?
INTERACTIVE LEARNING

Visit the Web site at www.prenhall.com/burnsbush. For this chapter, work through the Self-Study Quizzes, and get instant feedback on whether you need additional studying. On the Web site, you can review the chapter outlines and case information for Chapter 6.

CASE 6.1  U.S. Sporting Goods Market:
Using the Internet to Find Information

John Bonner, vice president for marketing research at Wilson Sporting Goods, has been reviewing last year's marketing plan and product revenues for the U.S. market. He reflects that sales revenues for the product lines are up and that the company exceeded its marketing goals. However, he notes that the trends for the next year are not as promising as the last. The economy has been in recession and it is apparent that a discretionary item such as sports equipment may be tough to sell in the upcoming year. He decides that a specialized task force of product researchers should be put together to analyze how the sporting goods industry will perform during the next year.

The research team's first task is to understand the industry for sporting goods products. Certain team members attack the problem by surveying the relevant online secondary research services that provide sporting goods product data. Other members of the team observe the industry trade association Web sites that provide data on the sporting goods industry. Given the importance of understanding the nature of the intense competition in this market, a few team members analyze Wilson's competitive environment by accessing research on the Internet.

Search the following Internet Web sites to find the required information:

2. Top industry competitors and their relative market shares (http://www.hoovers.com/industry/snapshot/0,2204,55,00.html).
3. Year over year industry sales growth (same link as #1).
4. Sporting goods product categories (same link as #1).

CASE 6.2  Your Integrated Case

The Hobbit's Choice: A Restaurant

After the first meeting between Jeff Dean and Cory Rogers of CMG Research, Cory decided to conduct some secondary data analysis on the restaurant business. He knew he could benefit from doing this because he could conduct the research quickly and inexpensively, and he also knew he was very likely to find information in these secondary data sources that would be helpful to his client, Jeff Dean. First, Cory walked into CMG's library. The library had a reference guide, the Encyclopedia of Business Information Sources, almanacs, handbooks, and special business dictionaries. In addition, Cory had Internet access in his office.

1. Based on the published sources available in CMG's library, which book would you recommend as the first book Rogers should consult? The second book? Why?
2. Conduct a search of the Internet that you think Cory would have conducted. Describe the kind of information you retrieved about the restaurant industry and provide the Web sites from which you gathered the information.
3. Based on the information you retrieved from your Internet search, did you find any examples illustrating the weaknesses of secondary data? What are the weaknesses?
4. Assuming that Cory earns $55,000 a year, estimate what CMG's costs are for Cory doing the search that you conducted over the Internet. You can exclude other fixed costs such as the costs of Internet access, building, utilities, and so on. Just estimate the amount of Cory's salary allocated to the search.