become clear when we understand the distinction between primary and secondary data.

PRIMARY VERSUS SECONDARY DATA

Primary data are originated by a researcher for the specific purpose of addressing the problem at hand. The collection of primary data involves all six steps of the marketing research process (Chapter 1). Obtaining primary data can be expensive and time consuming. The department store patronage project cited in Chapter 1 is an example of primary data collection.

Secondary data are data that have already been collected for purposes other than the problem at hand. These data can be located quickly and inexpensively. In the department store project, secondary data on the criteria used by households to select department stores were obtained from marketing journals (*Journal of Retailing, Journal of Marketing, Journal of the Academy of Marketing Science,* and *Journal of Marketing Research*). Several other examples of secondary data were provided in the preceding section. The differences between primary and secondary data are summarized in Table 4.1. As compared to primary data, secondary data are collected rapidly and easily, at a relatively low cost, and in a short time.

These differences between primary and secondary data lead to some distinct advantages and uses of secondary data.

TABLE 4.1

A Comparison of Primary and Secondary Data

	PRIMARY DATA	SECONDARY DATA
Collection purpose	For the problem at hand	For other problems
Collection process	Very involved	Rapid and easy
Collection cost	High	Relatively low
Collection time	Long	Short

ADVANTAGES AND USES OF SECONDARY DATA

As can be seen from the foregoing discussion, secondary data offer several advantages over primary data. Secondary data are easily accessible, relatively inexpensive, and quickly obtained. Some secondary data, such as those provided by the U.S. Bureau of the Census, are available on topics where it would not be feasible for a firm to collect primary data. Although it is rare for secondary data to provide all the answers to a non-routine research problem, such data can be useful in a variety of ways.[4] Secondary data can help you:

1. Identify the problem
2. Better define the problem
3. Develop an approach to the problem
4. Formulate an appropriate research design (for example, by identifying the key variables)
5. Answer certain research questions and test some hypotheses
6. Interpret primary data more insightfully

Given these advantages and uses of secondary data, we state the following general rule:

> Examination of available secondary data is a prerequisite to the collection of primary data. Start with secondary data. Proceed to primary data only when the secondary data sources have been exhausted or yield marginal returns.

The rich dividends obtained by following this rule are illustrated by examples we have given in the introduction. These examples show that analysis of secondary data can provide valuable insights and lay the foundation for conducting primary data. However, the researcher should be cautious in using secondary data, because they have some limitations and disadvantages.

DISADVANTAGES OF SECONDARY DATA

Because secondary data have been collected for purposes other than the problem at hand, their usefulness to the current problem may be limited in several important ways, including relevance and accuracy. The objectives, nature, and methods used to collect the secondary data may not be appropriate to the present situation. Also, secondary data may be lacking in accuracy, or they may not be completely current or dependable. Before using secondary data, it is important to evaluate them on these factors.

CRITERIA FOR EVALUATING SECONDARY DATA

The quality of secondary data should be routinely evaluated, using the criteria of Table 4.2.

Criteria for Evaluating Secondary Data

CRITERIA	ISSUES	REMARKS
Specifications/ Methodology	Data collection method Response rate Quality of data Sampling technique Sample size Questionnaire design Field work Data analysis	Data should be reliable, valid, and generalizable to the problem at hand.
Error/Accuracy	Examine errors in: Approach, Research design, Sampling, Data collection, Data analysis, Reporting	Assess accuracy by comparing data from different sources.
Currency	Time lag between collection and publication Frequency of updates	Census data are periodically updated by syndicated firms.
Objective	Why were the data collected?	The objective will determine the relevance of the data.
Nature	Definition of key variables Units of measurement Categories used Relationships examined	Reconfigure the data to increase their usefulness, if possible.
Dependability	Expertise, credibility, reputation, and trustworthiness of the source	Data should be obtained from an original rather than an acquired source.

Specifications: Methodology Used to Collect the Data

The specifications, or the methodology used to collect the data, should be critically examined to identify possible sources of bias. Such methodological considerations include size and nature of the sample, response rate and quality, questionnaire design and administration, procedures used for field work, and data analysis and reporting procedures. These checks provide information on the reliability and validity of the data and help determine whether they can be generalized to the problem at hand. The reliability and validity can be further ascertained by an examination of the error, currency, objectives, nature, and dependability associated with secondary data.

REAL RESEARCH

Rating the Television Ratings Methodology

WTVJ-TV, an NBC affiliate, uses the syndicated services of Nielsen Media Research (*www.nielsenmedia.com*), which provides television ratings and audience estimates. The television station feels that these data provided by Nielsen Media Research have been skewed as the methodology used was flawed. Specifically, they claim that Nielsen Media Research is putting too many meters into the homes of families that speak only Spanish, which is underestimating their ratings.

The problem is that the station is English speaking, and although 46 percent of its viewers were Hispanics in 2003, they all spoke English. By placing more Nielsen meters in homes that do not speak English, the information is not representative of the Miami community or the station's viewers. Also, because many decisions are based on the information provided by Nielsen, such as programming, advertising, and media buys, it is important that the station has accurate and reliable information about the market.

Although many support the actions of Nielsen Media Research and feel that the data do represent the community, it still raises a very important question. Can a company be confident that the information it receives is generated using appropriate methodology?[5]

Error: Accuracy of the Data

The researcher must determine whether the data are accurate enough for the purposes of the present study. Secondary data can have a number of sources of error, or inaccuracy,

including errors in the approach, research design, sampling, data collection, analysis and reporting stages of the project. Moreover, it is difficult to evaluate the accuracy of secondary data, because the researcher did not participate in the research. One approach is to find multiple sources of data and compare them using standard statistical procedures.

The accuracy of secondary data can vary, particularly if they relate to phenomena that are subject to change. Moreover, data obtained from different sources may not agree. In these cases, the researcher should verify the accuracy of secondary data by conducting pilot studies or by other appropriate methods. Often, by exercising creativity, this can be done without much expense or effort.

REAL RESEARCH

Detailing E-Tailing Revenues

In order to determine e-commerce sales, many research firms such as Forrester Research (*www.forrester.com*), ComScore (*www.comscore.com*), Nielsen/NetRatings (*www.netratings.com*), and the U.S. Commerce Department (*www.commerce.gov*) conduct studies to determine such results. All four organizations have distinct methodologies of collecting and analyzing data to report results. The Forrester Research firm polls 5,000 online consumers every month during the first nine working days of each month. Responses from those polled consumers are adjusted to represent the U.S. population. Differing from Forrester Research, Nielsen/NetRatings' EcommercePulse polls a larger sample of 36,000 Internet users monthly and tracks how much money those consumers spend online. Differing once again is the U.S. Commerce Department, which randomly chooses 11,000 merchants to fill out survey forms about online sales. Finally, ComScore uses a passive response system that collects data from 1.5 million Internet users that allow ComScore to track their Internet traffic through the company's servers.

For the third quarter in 2001, Forrester Research reported $12 billion in online sales, Nielsen/NetRatings reported $14.5 billion, the Commerce Department reported $7.47 billion, and ComScore reported $7.24 billion. Unlike Forrester and NetRatings, the Commerce Department and ComScore exclude sales of travel services, event tickets, and auctions. According to ComScore, the total 2001 e-tail sales were $53 billion. Excluding travel services, event tickets, and auctions, the figures for 2001 were $33.7 billion. Such huge differences in online sales create problems for e-commerce companies, and even Federal Reserve Chairman, Alan Greenspan, has addressed this issue as a major problem. Comparing e-tail sales figures available from different sources can give marketing researchers an idea of the degree of error that may be present in the data.[6]

Currency: When the Data Were Collected

Secondary data may not be current, and the time lag between data collection and publication may be long, as is the case with much census data. Moreover, the data may not be updated frequently enough for the purpose of the problem at hand. Marketing research requires current data; therefore the value of secondary data is diminished as they become dated. For instance, while the 2000 Census of Population data are comprehensive, they may not be applicable to a metropolitan area whose population has changed rapidly during the last two years. Fortunately, several marketing research firms update census data periodically and make the current information available on a syndicated basis.

Objective: The Purpose for Which the Data Were Collected

Data are invariably collected with some objective in mind, and a fundamental question to ask is why the data were collected in the first place. The objective for collecting data will ultimately determine the purpose for which that information is relevant and useful. Data collected with a specific objective in mind may not be appropriate in another situation. As explained in more detail later in the chapter, scanner ***volume tracking data*** are collected with the objective of examining aggregate movement of brands, including shifts in market

volume tracking data
Scanner data that provide information on purchases by brand, size, price, and flavor or formulation.

shares. Such data on sales of orange juice, for example, would be of limited value in a study aimed at understanding how households select specific brands.

Nature: The Content of the Data

The nature, or content, of the data should be examined with special attention to the definition of key variables, the units of measurement, categories used, and the relationships examined. If the key variables have not been defined or are defined in a manner inconsistent with the researcher's definition, then the usefulness of the data is limited. Consider, for example, secondary data on consumer preferences for TV programs. To use this information, it is important to know how preference for programs was defined. Was it defined in terms of the program watched most often, the one considered most needed, most enjoyable, most informative, or the program of greatest service to the community?

Likewise, secondary data may be measured in units that may not be appropriate for the current problem. For example, income may be measured by individual, family, household, or spending unit, and could be gross or net after taxes and deductions. Income may be classified into categories that are different from research needs. If the researcher is interested in high-income consumers with gross annual household incomes of over $90,000, secondary data with income categories of less than $15,000, $15,001–$35,000, $35,001–$50,000, and more than $50,000 will not be of much use. Determining the measurement of variables such as income may be a complex task. Finally, the relationships examined should be taken into account in evaluating the nature of data. If, for example, actual behavior is of interest, then data inferring behavior from self-reported attitudinal information may have limited usefulness. Sometimes it is possible to reconfigure the available data, for example, convert the units of measurement, so that the resulting data are more useful to the problem at hand.

Dependability: How Dependable Are the Data?

An overall indication of the dependability of data may be obtained by examining the expertise, credibility, reputation, and trustworthiness of the source. This information can be obtained by checking with others who have used the information provided by the source. Data published to promote sales, to advance specific interests, or to carry on propaganda should be viewed with suspicion. The same may be said of data published anonymously or in a form that attempts to hide the details of the data collection methodology and process. It is also pertinent to examine whether the secondary data came from an original source, one that generated the data, or an acquired source, one that procured the data from an original source. For example, the Census of Population is an original source, whereas Statistical Abstracts of the United States is an acquired source. As a general rule, secondary data should be secured from an original rather than an acquired source. There are at least two reasons for this rule. First, an original source is the one that specifies the details of the data collection methodology. Second, an original source is likely to be more accurate and complete than a secondary source.

REAL RESEARCH

Flying High on Secondary Data

Money magazine published the results of a study conducted to uncover the airline characteristics consumers consider most important. In order of importance, these characteristics are safety, price, baggage handling, on-time performance, customer service, ease of reservations and ticketing, comfort, frequent flyer programs, and food. *Money* magazine then ranked the 10 largest U.S. airlines according to these characteristics.

This article would be a useful source of secondary data for American Airlines in conducting a market research study to identify characteristics of its service that should be improved. However, before using the data, American should evaluate them according to several criteria.

First, the methodology used to collect the data for this article should be examined. This *Money* magazine article includes a section that details the methodology used in the study. *Money* used a poll of 1,017 frequent fliers to determine important airline characteristics. The results of the survey had a 3 percent margin of error. American would need to decide whether a sample size of 1,017 was generalizable to the population and whether an error of 3 percent is acceptable. In addition, American should evaluate what type of response or nonresponse errors may have occurred in the data collection or analysis process.

The currency of the data and objective of the study would be important to American Airlines in deciding whether to utilize this article as a source of secondary data. This study was conducted before the airline hijackings of September 11, 2001. Perhaps, airline passengers' criteria have changed since these tragic events, which would diminish the usefulness of this study. The objective of the study was to rate airlines along choice criteria for a popular business magazine. The results are not likely to be biased towards any particular airline, as the magazine does not have a vested interest in any of the airline companies.

American would also need to look at the nature and dependability of the data. For instance, it would need to look at how the nine choice criteria are defined. For example, price is measured in terms of fare per mile. This may not be useful to American if it did not want to quantify price in that manner. In regards to dependability, American would need to research the reputation of *Money* magazine and of ICR, the company *Money* hired to administer the survey. American also needs to consider the fact that *Money* used some secondary research in its study. For instance, it used reports from the National Transportation Safety Board data on airline accidents and incident reports from the Federal Aviation Administration to rank the safety performance of the 10 airlines. It is always better to get information from the original source. Thus, American might want to acquire these reports themselves and do its own safety ranking. This would be more reliable than getting this information from the *Money* magazine report.

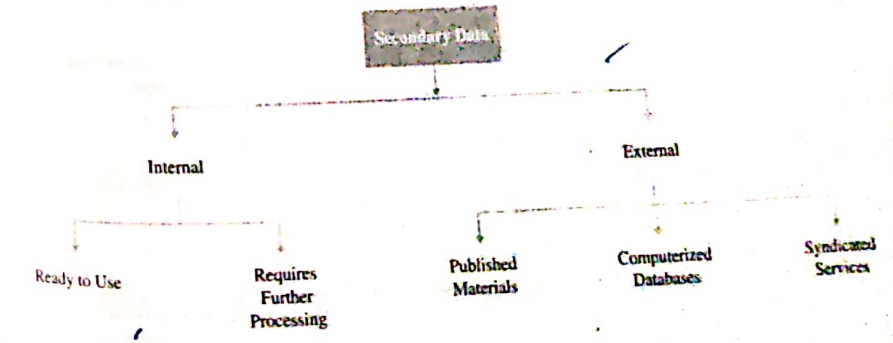
Though sales were almost $19 billion in 2001, American suffered a loss of income of $1.76 billion. Most of the loss was due to the residual effects of September 11th and the many security issues that airlines have to face. American Airlines decided to start adding back routes to its schedule in January 2002. The *Money* magazine article might be useful as a starting place for the marketing research project by American Airlines. For instance, it might be useful in formulating the problem definition. However, because of the article's limitation in regards to currency, nature, and dependability, this source should be supplemented by other sources of secondary research, as well as primary research.[7] ■

CLASSIFICATION OF SECONDARY DATA

internal data
Internal data are data available within the organization for which the research is being conducted.

Figure 4.1 presents a classification of secondary data. Secondary data may be classified as either internal or external. ***Internal data*** are those generated within the organization for which the research is being conducted. This information may be available in a ready-to-use

Figure 4.1
A Classification of Secondary Data



CRM (Customer Relationship Management) is a unique type of database-driven marketing. As part of its CRM system, DaimlerChrysler (*www.daimlerchrysler.com*) implemented what they call Personal Information Centers. These PICs, as they are called, offer car owners an individualized Web site that creates direct links with the marketing research team. These PICs collect data on all aspects of buying a car, giving the company the ability to engage in customized marketing. If a prospect, on his completed online survey, indicated handling of minivans to be a concern, separate data could be included on a brochure sent only to that prospect. These data would show how the DaimlerChrysler minivan stood up against the competition in the minivan market. DaimlerChrysler believes that the customer relationship begins when a prospect first contacts the company and does not stop when a buyer purchases a vehicle. With this in mind, the company uses its CRM system to constantly track buyers' and prospects' opinions and desires. Its CRM has enabled the company to maintain its leadership in the automobile market. DaimlerChrysler is the number three carmaker in the world with sales of over $152 billion in 2001.[9]

Database marketing can lead to quite sophisticated and targeted marketing programs, as illustrated in the following example.

REAL RESEARCH

The Colonel's Secret Weapon: A Massive Database

As of 2003, there are over 11,000 KFC (*www.kfc.com*) outlets in more than 80 countries around the world that serve nearly eight million customers each day.

To better understand customer profiles and trends, KFC hired IBM (*www.ibm.com*) to develop "Metacube Software," which collects data from each of its 11,000 restaurants and compiles them in user-friendly spreadsheet format. According to Micki Thomas, KFC's director of information systems, "There's a day-and-a-half lag between when someone buys an order and when a record of that transaction is available in our data warehouse." These detail data provide market researchers a valuable tool in analyzing market research problems. This information can be used to help guide corporate marketing decisions and provide insight to individual stores that may not have the technology or expertise to complete their own market research. By using the data warehouse, customer profiles are developed, analyzing what and when purchases are made, including the percentage of customers eating in, going through the drive-through, and using home delivery.

By understanding consumer behavior, KFC could greatly improve the profitability and customer satisfaction within its individual franchisees. For example, the database is used to forecast sales by hour, day of the week, and by time of year based on stored historical data within the warehouse and economic trends in the geographic area. These forecasts are used to maximize the efficiency of employee scheduling and minimize food inventory. Thus, by using database marketing techniques, KFC helps franchisees anticipate customer needs, improve service and customer satisfaction, and maximize efficiency and profitability.[10] ■

REAL RESEARCH

Type of Individual/Household Level Data Available from Syndicated Firms

1. Demographic Data

- Identification (name, address, telephone)
- Sex
- Marital status
- Names of family members
- Age (including ages of family members)
- Income
- Occupation
- Number of children present

- Home ownership
- Length of residence
- Number and make of cars owned

II. Psychographic Lifestyle Data

- Interest in golf
- Interest in snow skiing
- Interest in book reading
- Interest in running
- Interest in bicycling
- Interest in pets
- Interest in fishing
- Interest in electronics
- Interest in cable television

There are also firms such as Dun & Bradstreet (*www.dnb.com*) and American Business Information, a division of InfoUSA (*www.infousa.com*), that collect demographic data on businesses.

PUBLISHED EXTERNAL SECONDARY SOURCES

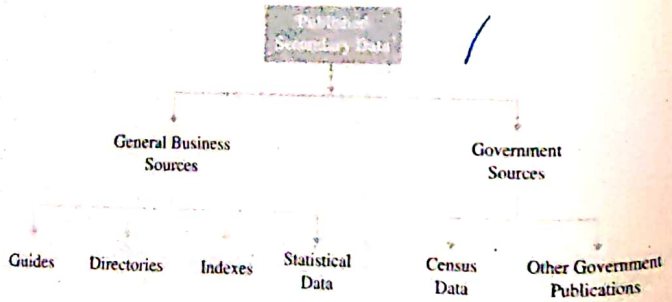
Sources of published external secondary data include federal, state, and local governments, nonprofit organizations (e.g., chambers of commerce), trade associations and professional organizations, commercial publishers, investment brokerage firms, and professional marketing research firms. In fact, so much data are available that the researcher can be overwhelmed. Therefore, it is important to classify published sources. (See Figure 4.2.) Published external sources may be broadly classified as general business data or government data. General business sources are comprised of guides, directories, indexes, and statistical data. Government sources may be broadly categorized as census data and other publications.

General Business Data

Businesses publish a lot of information in the form of books, periodicals, journals, newspapers, magazines, reports, and trade literature. This information can be located by using guides, directories, and indexes. Sources are also available for identifying statistical data.

Guides. Guides are an excellent source of standard or recurring information. A guide may help identify other important sources such as directories, trade associations, and trade publications. Guides are one of the first sources a researcher should consult. Some of the most useful are the *American Marketing Association Bibliography Series, Business Information Sources, Data Sources for Business and Market Analysis,* and *Encyclopedia of Business Information Sources.*

Figure 4.2
A Classification of Published Secondary Sources



ACTIVE RESEARCH DEPARTMENT STORE PROJECT

Data Search

In addition to reviewing the theoretical literature, as discussed in Chapter 2, it was also necessary to identify the nonacademic sources of secondary data related to the factors considered in selecting department stores and other aspects of store patronage. The *Business Periodical Index*, the *Wall Street Journal Index*, and the *New York Times Index* were used to generate a list of relevant articles that had appeared in the last five years. The *Business Periodical Index* classifies articles by specific industries and firms, making it easy to locate articles of interest. Several articles obtained in this manner proved useful. One pointed to the tendency of people to combine shopping with eating out. Therefore, as discussed in Chapter 2, a specific research question was framed to investigate this behavior.

Directories. Directories are helpful for identifying individuals or organizations that collect specific data. Some of the important directories include *Directories in Print, Consultants and Consulting Organizations Directory, Encyclopedia of Associations, FINDEX: The Directory of Market Research Reports, Studies and Surveys,* and *Research Services Directory.*

Indexes. It is possible to locate information on a particular topic in several different publications by using an index. Indexes can, therefore, increase the efficiency of the search process. Several were used in the department store project.

As illustrated by this example, indexes greatly facilitate a directed search of the relevant literature. Several indexes are available for both academic and business sources. Some of the more useful business indexes are *Business Periodical Index, Business Index, Predicasts F & S Index: United States, Social Sciences Citation Index,* and the *Wall Street Journal Index.*

Nongovernmental Statistical Data. Published statistical data are of great interest to researchers. Graphic and statistical analyses can be performed on these data to draw important insights. Important sources of nongovernmental statistical data include *A Guide to Consumer Markets, Predicasts Forecasts, Sales and Marketing Management Survey of Buying Power, Standard and Poor's Statistical Service,* and *Standard Rate and Data Service.*

Government Sources

The U.S. government also produces large amounts of secondary data. Its publications may be divided into census data and other publications.[11]

Census Data. The U.S. Bureau of the Census is the world's largest source of statistical data. Its monthly catalog lists and describes its various publications.[12] More convenient, however, is the *Guide to Economic Census.* The quality of census data is high and the data are often extremely detailed. Furthermore, one can purchase computer tapes or diskettes from the Bureau of the Census for a nominal fee and recast this information in a desired format.[13] Many private sources update census data at a detailed geographic level for the between-census years.[14] Important census data include Census of Housing, Census of Manufacturers, Census of Population, Census of Retail Trade, Census of Service Industries, and Census of Wholesale Trade.

REAL RESEARCH

The Changing Color of the American Marketplace

According to Census 2000, there are 105.5 million households within the United States that included 281.4 million people. Census 2000 revealed a great deal on the makeup of our population including that 3.6 percent are Asian, 12.3 percent are African American, and 12.5 percent are Hispanic. This means that there are over 10.2 million Asians, over 34.7 million African Americans, and over 35.3 million Hispanics living within the United States. From 1990 to 2000, the minority races grew at a much faster pace than the rest of the population.

Such a dramatic difference in growth seriously changes the retailing landscape. Marketing companies must embrace these trends and determine how to best configure their marketing mix to meet the needs of these varying cultures. Their inclusion in the research process and marketing plans will be crucial to the long-term success of many organizations.

Mazda North America, though it had been making efforts to sell with diversity in mind, decided to put more money and effort into targeting Hispanics, Asians, and African Americans in the years 2002 to 2005. Univision, a Hispanic television network, is using the census results to pitch to CEOs to put more money into ethnic entertainment. Maintaining a close eye on the U.S. census data and understanding that the Asian American, African American, and Hispanic markets are not only different markets but also different cultures, each with vastly different histories, will help fuel America's growth for the next decade.[15]

Other Government Publications. In addition to the census, the federal government collects and publishes a great deal of statistical data. The more useful publications are *Business America, Business Conditions Digest, Business Statistics, Index to Publications, Statistical Abstract of the United States,* and *Survey of Current Business.* The second example in the overview section showed how statistics from the U.S. Department of Labor helped fast-food restaurants switch from a high-touch to a high-tech orientation.

Most published information is also available in the form of computerized databases.

COMPUTERIZED DATABASES

Computerized databases consist of information that has been made available in computer-readable form for electronic distribution. In the 2000s, the number of databases, as well as the vendors providing these services, has grown phenomenally.[16] Thus, a classification of computerized databases is helpful.

Classification of Computerized Databases

online databases
Databases, stored in computers, which require a telecommunications network to access.

Internet databases
Internet databases can be accessed, searched, and analyzed on the Internet. It is also possible to download data from the Internet and store them in the computer or an auxiliary storage device.

offline databases
Databases that are available on diskette or CD-ROM.

Computerized databases may be classified as online, Internet, or offline, as shown in Figure 4.3. ***Online databases*** consist of a central data bank, which is accessed with a computer (or dumb terminal) via a telecommunications network. ***Internet databases*** can be accessed, searched, and analyzed on the Internet. It is also possible to download data from the Internet and store them in the computer or an auxiliary storage device.[17] ***Offline databases*** make the information available on diskettes and CD-ROM disks. Thus, offline databases can be accessed at the user's location without the use of an external telecommunications network. For example, the U.S. Bureau of the Census makes computer data files available on CD-ROM disks. These disks contain detailed information organized by census track or zip code. In the department store patronage project, this type of information was used in sample selection.[18] As indicated in the following example, several vendors are providing data in various forms.

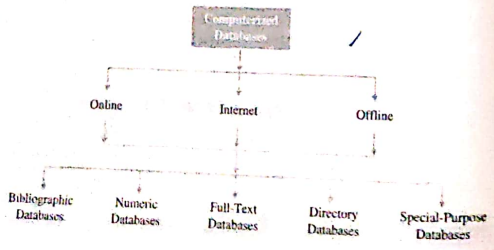


Figure 4.3
A Classification of Computerized Databases

REAL RESEARCH

InfoUSA: Here, There, and Everywhere

InfoUSA (*www.infousa.com*) is a leading provider of sales and marketing support data. The company also operates under various trade names such as Donnelley Marketing, American Business Information, Walter Karl, idEXEC, and infoCanada. Net sales in 2001 were $289 million. The company markets subsets of its data in a number of forms, including the professional online services (LEXISNEXIS and DIALOG), the general online services (CompuServe and Microsoft Network), the Internet (LookupUSA), and on CD-ROM. The underlying database on which all these products are based contains information on 113 million residential listings and 14 million business listings, as of 2003. These are verified with over 16 million phone calls annually. The products derived from these databases include sales leads, mailing lists, business directories, mapping products, and also delivery of data over the Internet.[19]

bibliographic databases
Databases composed of citations to articles in journals, magazines, newspapers, marketing research studies, technical reports, government documents, and the like. They often provide summaries or abstracts of the material cited.

numeric databases
Numeric databases contain numerical and statistical information that may be important sources of secondary data.

full-text databases
Databases containing the complete text of secondary source documents comprising the database.

directory databases
Directory databases provide information on individuals, organizations, and services.

special-purpose databases
Databases that contain information of a specific nature, e.g., data on a specialized industry.

Online, Internet, and offline databases may be further classified as bibliographic, numeric, full-text, directory, or special-purpose databases. ***Bibliographic databases*** are composed of citations to articles in journals, magazines, newspapers, marketing research studies, technical reports, government documents, and the like.[20] They often provide summaries or abstracts of the material cited. An example of bibliographic databases is ABI/Inform by ProQuest Information & Learning (*www.proquest.com*).

Numeric databases contain numerical and statistical information. For example, some numeric databases provide time series data (data arranged in relation to time) about the economy and specific industries produced by vendors such as Boeing Computer Services Co. (*www.boeing.com*), and the Department of Commerce (*www.commerce.gov*). Census-based numeric databases that use the 2000 census of population and housing with proprietary updating to provide data at the census tract and zip code level are also available. Vendors providing these databases include the U.S. Bureau of the Census (*www.census.gov*), Donnelley Marketing Information Services (*www.donnelleymarketing.com*), and CACI, Inc. (*www.caci.com*).

Full-text databases contain the complete text of the source documents comprising the database. The LexisNexis (*www.lexisnexis.com*) service provides full-text access to hundreds of business databases, including selected newspapers, periodicals, company annual reports, and investment firm reports.

Directory databases provide information on individuals, organizations, and services. As an example, the national electronic Yellow Pages (*www.yellowpages.com*) directories of manufacturers, wholesalers, retailers, professionals, and service organizations provide the names, addresses, and North American Industrial Classification codes of numerous organizations.

Finally, there are ***special-purpose databases.*** For example, the Profit Impact of Market Strategies (PIMS) database is an ongoing database of research and analysis on business strategy conducted by the Strategic Planning Institute in Cambridge, Massachusetts. This database comprises more than 250 companies that provide data on over 2,000 businesses.[21] Virtually all libraries of major universities maintain computerized databases of management and related literature that students can access free of charge.

Because computerized databases are numerous and varied, their sheer number can be overwhelming, and locating a particular database may seem difficult. How, then, do you locate specific bibliographic, numeric, full-text, directory, or special-purpose databases? Directories of databases provide the needed help.

Directories of Databases

There are numerous sources of information on databases. Perhaps the best way to obtain information about databases is to consult a directory. *Gale Directory of Databases* by Gale Research, Inc. (*www.gale.com*) is published every six months. Volume I covers online databases and Volume II covers CD-ROMs and other offline databases. Some of the other useful directories that are periodically updated are:

Directory of On-line Databases. Santa Monica, CA: Cuadra Associates, Inc. (*www.cuadra.com*)

Encyclopedia of Information System and Services. Detroit: Gale Research Company (*www.gale.com*)

SYNDICATED SOURCES OF SECONDARY DATA

syndicated sources (services)
Information services offered by marketing research organizations that provide information from a common database to different firms that subscribe to their services.

In addition to published data or data available in the form of computerized databases, syndicated sources constitute the other major source of external secondary data. ***Syndicated sources***, also referred to as syndicated services, are companies that collect and sell common pools of data of known commercial value, designed to serve information needs shared by a number of clients (see Chapter 1). These data are not collected for the purpose of marketing research problems specific to individual clients, but the data and reports supplied to client companies can be personalized to fit particular needs. For example, reports could be organized on the basis of the clients' sales territories or product lines. Using syndicated sources is frequently less expensive than collecting primary data. Figure 4.4 presents a classification of syndicated sources. Syndicated sources can be classified based on the unit of measurement (households/consumers or institutions). Household/consumer data may be obtained from surveys, purchase and media panels, or electronic scanner services. Information obtained through surveys consists of values and lifestyles, advertising evaluation, or general information related to preference, purchase, consumption, and other aspects of behavior. Panels emphasize information on purchases or media consumption. Electronic scanner services might provide scanner data only, scanner data linked to panels, or scanner data linked to panels and (cable) TV. When institutions are the unit of measurement, the data may be obtained from retailers, wholesalers, or industrial firms. An overview of the various syndicated sources is given in Table 4.3. Each of these sources will be discussed.

Figure 4.4
A Classification of Syndicated Services

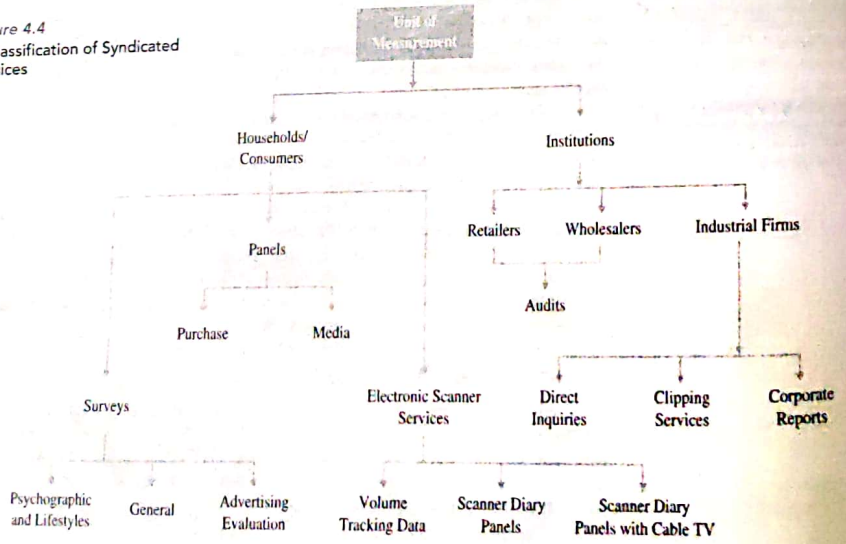


TABLE 4.3
Overview of Syndicated Services

Type	Characteristics	Advantages	Disadvantages	Uses
Surveys	Surveys conducted at regular intervals	Most flexible way of obtaining data; information on underlying motives	Interviewer errors; respondent errors	Market segmentation, advertising theme selection, and advertising effectiveness
Purchase Panels	Households provide specific information regularly over an extended period of time; respondents asked to record specific behaviors as they occur	Recorded purchase behavior can be linked to the demographic/ psychographic characteristics	Lack of representativeness; response bias; maturation	Forecasting sales, market share, and trends; establishing consumer profiles, brand loyalty, and switching; evaluating test markets, advertising, and distribution
Media Panels	Electronic devices automatically recording behavior, supplemented by a diary	Same as purchase panel	Same as purchase panel	Establishing advertising rates; selecting media program or air time; establishing viewer profiles
Scanner Volume Tracking Data	Household purchases recorded through electronic scanners in supermarkets	Data reflect actual purchases; timely data; less expensive	Data may not be representative; errors in recording purchases; difficult to link purchases to elements of marketing mix other than price	Price tracking, modeling, effectiveness of in-store modeling
Scanner Diary Panels with Cable TV	Scanner panels of households that subscribe to cable TV	Data reflect actual purchases; sample control; ability to link panel data to household characteristics	Data may not be representative; quality of data limited	Promotional mix analyses, copy testing, new-product testing, positioning
Audit Services	Verification of product movement by examining physical records or performing inventory analysis	Relatively precise information at the retail and wholesale levels	Coverage may be incomplete; matching of data on competitive activity may be difficult	Measurement of consumer sales and market share, competitive activity, analyzing distribution patterns; tracking of new products
Industrial Product Syndicated Services	Data banks on industrial establishments created through direct inquiries of companies, clipping services, and corporate reports	Important source of information in industrial firms, particularly useful in initial phases of the projects	Data is lacking in terms of content, quantity, and quality	Determining market potential by geographic area, defining sales territories, allocating advertising budget

SYNDICATED DATA FROM HOUSEHOLDS

Surveys

Surveys
Interviews with a large number of respondents using a predesigned questionnaire

Psychographics
Quantified psychological profiles of individuals

Various services regularly conduct ***surveys***, which involve interviews with a large number of respondents using a predesigned questionnaire. Surveys may be broadly classified on the basis of their content as psychographics and lifestyles, advertising evaluation, or general surveys.

Psychographics and Lifestyles. ***Psychographics*** refer to the psychological profiles of individuals and to psychologically based measures of lifestyle. ***Lifestyles*** refer to