

APPENDIX B

How to Conduct an Industry Analysis

How should one go about analyzing an industry and competitors? What types of data does one look for and how can they be organized? Where does one look for these data? This appendix deals with these questions and some of the other practical problems involved in conducting an industry analysis. There are basically two types of data about industries: published data and those gathered from interviews with industry participants and observers (field data). The bulk of discussion in this appendix will center on identifying the important sources of published and field data, their strengths and weaknesses, and strategies for approaching them most effectively and in the right sequence.

A full-blown industry analysis is a massive task, and one that can consume months if one is starting from scratch. In beginning an industry analysis there is a tendency to dive in and collect a mass of detailed information, with little in the way of a general framework or approach in which to fit this information. This lack of method leads to frustration at best, and confusion and wasted effort at worst. Thus before considering specific sources, it is important to consider an overall strategy for conducting the industry study and the critical first steps in initiating it.

Industry Analysis Strategy

There are two important aspects in developing a strategy for analyzing an industry. The first is to determine just what it is one is looking for. "Anything about the industry" is much too broad to serve as an effective guide for research. Although the full list of specific issues that need to be addressed in an industry analysis depends on the particular industry under study, it is possible to generalize about what important information and raw data the researcher should look for. The chapters in this book have identified the key structural features of industries, the important forces causing them to change, and the strategic information necessary about competitors. These are the factors that are the target of an industry analysis, and the core of the framework that identifies these factors has been presented in Chapters 1, 3, 7, and 8 and extended in the rest of the book. However, since these characteristics of structure and competitors are generally not raw data but rather the result of *analysis* of raw data, researchers may also find it useful to have a framework for systematically collecting raw data. A simple but exhaustive set of areas under which to collect raw data is given in Figure B-1. The researcher who can fully describe each of these areas should be in a position to develop a comprehensive picture of industry structure and competitors' profiles.

With a framework for assembling data, the second major strategy question is how sequentially to develop data in each area. There are a number of alternatives, ranging from taking one item at a time to proceeding randomly. As hinted earlier, however, there are important benefits in getting a general *overview* of the industry first, and only then focusing on the specifics. Experience has shown that a broad understanding can help the researcher more effectively spot important items of data when studying sources and organize data more effectively as they are collected.

A number of steps can be useful in obtaining this overview:

1. *Who is in the industry.* It is wise to develop a rough list of industry participants right away, especially the leading firms. A list of key competitors is helpful for quickly finding other articles and company documents (some of the sources discussed later will aid in this process). An entering wedge for many of these sources is the indus-

FIGURE B-1. Raw Data Categories for Industry Analysis

<i>Data Categories</i>	<i>Compilation</i>
Product lines	By company
Buyers and their behavior	By year
Complementary products	By functional area
Substitute products	
Growth	
Rate	
Pattern (seasonal, cyclical)	
Determinants	
Technology of production and distribution	
Cost structure	
Economies of scale	
Value added	
Logistics	
Labor	
Marketing and Selling	
Market segmentation	
Marketing practices	
Suppliers	
Distribution channels (if indirect)	
Innovation	
Types	
Sources	
Rate	
Economies of scale	
Competitors—strategy, goals, strengths and weaknesses, assumptions	
Social, political, legal environment	
Macroeconomic environment	

try's *Standard Industrial Classification* (SIC) code, which can be determined from the Census Bureau's *Standard Industrial Classification Manual*. The SIC system classifies industries on a variety of levels of breadth, with two-digit industries overly broad for most purposes, five-digit industries often too narrow, and four-digit industries usually about right.

2. *Industry studies*. If one is lucky, there may be a relatively comprehensive industry study available or a number of broadly-based articles. Reading these can be a quick way of developing an overview. (Sources of industry studies are discussed later.)

3. *Annual reports.* If there are any publicly held firms in the industry, annual reports should be consulted early. A single annual report may contain only modest amounts of disclosure. However, a quick review of the annual reports for a number of major companies over a ten- or fifteen-year period is an excellent way to begin to understand the industry. Most aspects of the business will be discussed at one time or another. The most enlightening part of an annual report for an overview is often the president's letter. The researcher should look for the rationales given for both good and bad financial results; these should expose some of the critical success factors in the industry. It also is important to note what the company seems to be proud of in its annual report, what it seems to be worried about, and what key changes have been made. It is also possible to gain some insights into how companies are organized, the flow of production, and numerous other factors from reading between the lines in a series of annual reports from the same company.

The researcher will generally want to come back to annual reports and other company documents later in the study. The initial early reading will fail to uncover many nuances that become apparent once the knowledge of the industry and the competitor is more complete.

GET INTO THE FIELD EARLY

If there is any common problem in getting industry analyses underway, it is that researchers tend to spend too much time looking for published sources and using the library before they begin to tap field sources. As will be discussed later, published sources have a variety of limitations: timeliness, level of aggregation, depth, and so on. Although it is important to gain some basic understanding of the industry to maximize the value of field interviews, the researcher should not exhaust all published sources *before* getting into the field. On the contrary, clinical and library research should proceed simultaneously. They tend to feed on each other, especially if the researcher is aggressive in asking every field source to suggest published material about the industry. Field sources tend to be more efficient because they get to the issues, without the wasted time of reading useless documents. Interviews also sometimes help the researcher identify the issues. This help may come, to some extent, at the expense of objectivity.

GET OVER THE HUMP

Experience shows that the morale of researchers in an industry study often goes through a U-shaped cycle as the study proceeds. An initial period of euphoria gives way to confusion and even panic as the complexity of the industry becomes apparent and mounds of information accumulate. Sometime later in the study, it all begins to come together. This pattern appears to be so common as to serve as a useful thing for researchers to remember.

Published Sources for Analysis of Industry and Competitors

The amount of published information available varies widely by industry. The larger the industry, the older it is, and the slower the rate of technological change, the better the available published information tends to be. Unfortunately for the researcher, many interesting industries do not meet these criteria, and there may be little published information available. However, it is *always* possible to gain some important information about an industry from published sources, and these sources should be aggressively pursued. Generally, the problem the researcher will face in using published data for analyzing an economically meaningful industry is that they are *too broad*, or too aggregated, to fit the industry. If a researcher starts searching for data with this reality in mind, the usefulness of broad data will be better recognized and the tendency to give up too easily will be avoided.

Two important principles can greatly facilitate the development of references to published materials. First, every published source should be combed tenaciously for references to other sources, both other published sources and sources for field interviews. Often articles will cite individuals (industry executives, security analysts, and so on) who usually do not appear by accident; they tend to be either well-informed or particularly vocal industry observers, and they make excellent leads.

The second principle is to keep a thorough bibliography of everything that is uncovered. Although it is painful at the time, taking down the full citation of the source not only saves time in compiling the bibliography at the end of the study but also guards against

wasteful duplication of efforts by members of research teams and the agony of not being able to remember where some critical piece of information came from. Summary notes on sources or Xerox copies of useful ones are also useful. They minimize the need for rereading and can facilitate communication within a research team.

Although the types of published sources are potentially numerous, they can be divided into a number of general categories, which are discussed briefly below.¹

INDUSTRY STUDIES

Studies that provide a general overview of some industries come in two general varieties. First are book-length studies of the industry, often (but not exclusively) written by economists. These can usually best be found in library card catalogs and by cross-checking references given in other sources. Participants in or observers of an industry will almost always know of such industry studies when they exist, and they should be questioned about them as the study proceeds.

The second broad category is the typically shorter, more focused studies conducted by securities or consulting firms, such as Frost and Sullivan, Arthur D. Little, Stanford Research Institute, and all the Wall Street research houses. Sometimes specialized consulting firms collect data on particular industries, such as SMART, Inc., in the ski industry and IDC in the computer industry. Often access to these studies involves a fee. Unfortunately, although there are a number of published directories of market research studies, there is no one place where they are all compiled, and the best way to learn about them is through industry observers or participants.

TRADE ASSOCIATIONS

Many industries have trade associations, which serve as clearing houses for industry data and sometimes publish detailed industry statistics.² Trade associations differ greatly in their willingness to

¹L. Daniels (1976) is an excellent general source of business information. There are also a number of computerized abstract services for references and articles available at major business libraries, which can speed the task of finding articles and sorting the useful ones from those that are not so useful.

²There are a number of published directories of trade associations.

give data to researchers. Usually, however, an introduction from a member of the association is helpful in gaining the cooperation of staff in sending data.

Whether or not the association is a source of data, members of the staff are extremely useful in alerting the researcher to any published information about the industry that exists, identifying the key participants and discussing their general impressions of how the industry functions, its key factors for company success, and important industry trends. Once contact with a trade association staff member has been made, this person can in turn be a useful source of referrals to industry participants and can identify participants who represent a range of viewpoints.

TRADE MAGAZINES

Most industries have one or more trade magazines which cover industry events on a regular (sometimes even daily) basis. A small industry may be covered as part of a broader-based trade publication. Trade journals in customer, distributor, or supplier industries are often useful sources as well.

Reading through trade magazines over a long period of time is an extremely useful way to understand the competitive dynamics and important changes in an industry, as well as to diagnose its norms and attitudes.

BUSINESS PRESS

A wide variety of business publications cover companies and industries on an intermittent basis. To obtain references, there are a number of standard bibliographies, including the *Business Periodicals Index*, *The Wall Street Journal Index*, and the *F&S Index*, United States (and companions for Europe and International).

COMPANY DIRECTORIES AND STATISTICAL DATA

There are a variety of directories of both public and private U.S. firms, some of which give a limited amount of data. Many directories list firms by SIC code, and thus they provide a way to build

a complete list of industry participants. Comprehensive directories include *Thomas Register of American Manufacturers*, the Dun and Bradstreet *Million Dollar Directory* and *Middle Market Directory*, *Standard and Poor's Register of Corporations, Directors and Executives*, and the various *Moody's* publications. Another broad list of companies classified by industry is the Newsfront *30,000 Leading U.S. Corporations*, which gives some limited financial information as well. In addition to these general directories, other potential sources of broad company lists are financial magazines (*Fortune*, *Forbes*) and buyers guides.

Dun and Bradstreet compiles credit reports on all companies of significant size, whether they be public or private. These reports are not available to any library and provided only to subscribing companies who pay a high fixed cost for the service plus a small fee for individual reports. Dun and Bradstreet reports are valuable as sources about private companies, but since data provided by the companies are not audited, it must be used with caution; many users have reported errors in the information.

There are also many statistical sources of such data as advertising spending and stock market performance.

COMPANY DOCUMENTS

Most companies publish a variety of documents about themselves, particularly if they are publicly traded. In addition to annual reports, SEC form 10-K's, proxy statements, prospectuses, and other government filings can be useful. Also useful are speeches or testimony by firm executives, press releases, product literature, manuals, published company histories, transcripts of annual meetings, want ads, patents, and even advertising.

MAJOR GOVERNMENT SOURCES

The Internal Revenue Service provides in the *IRS Corporation Source Book of Statistics of Income* extensive annual financial information on industries (by size of organizations within the industry) based on corporate tax returns. A less detailed, printed version of the data is in the IRS's *Statistics of Income*. The main drawback

of this source is that the financial data for an entire company are allocated to that company's principle industry, thereby introducing biases in industries in which many participants are highly diversified. However, the IRS data are available annually back to the 1940s, and it is the only source that gives financial data covering all firms in the industry.

Another source of government statistics is the Bureau of the Census. The most frequently used volumes are *Census of Manufacturers*, *Census of Retail Trade*, and *Census of the Mineral Industries*, which are available quite far back in time. As with the IRS data, the census does not refer to specific companies but rather breaks down statistics by SIC code. Census material also has considerable regional data for industries. Unlike IRS data, census data are based on aggregates of data from establishments within corporations, such as plant sites and warehouses, rather than corporations as a whole. Therefore, the data are not biased by company diversification. One feature of the *Census of Manufacturers* that can be particularly useful is the special report, *Concentration Ratios in Manufacturing Industry*. This section gives the percentages of industry sales of the largest four, eight, twenty, and fifty firms in the industry for each SIC four-digit manufacturing industry in the economy. Another useful government source for price level changes in industries is the Bureau of Labor Statistics, *Wholesale Price Index*.

Leads on further government information can be obtained through the various indexes of government publications, as well as by contacting the U.S. Department of Commerce and the libraries of other government agencies. Other government sources include regulatory agency filings, congressional hearings, and patent office statistics.

OTHER SOURCES

Some other potentially fruitful published sources include the following:

- antitrust records;
- local newspapers in which a competitor's facilities or headquarters are located;
- local tax records.

Gathering Field Data for Industry Analysis

In gathering field data it is important to have a framework for identifying possible sources, determining what their attitude toward cooperation with the research is likely to be, and developing an approach to them. Figure B-2 gives a schematic diagram of the most important sources of field data, which are participants in the industry itself, firms and individuals in adjacent businesses to the industry (suppliers, distributors, customers), service organizations that have contact with the industry (including trade associations), and industry observers (including the financial community, regulators, etc.). Each of these sources has somewhat differing characteristics, which are useful to identify explicitly.

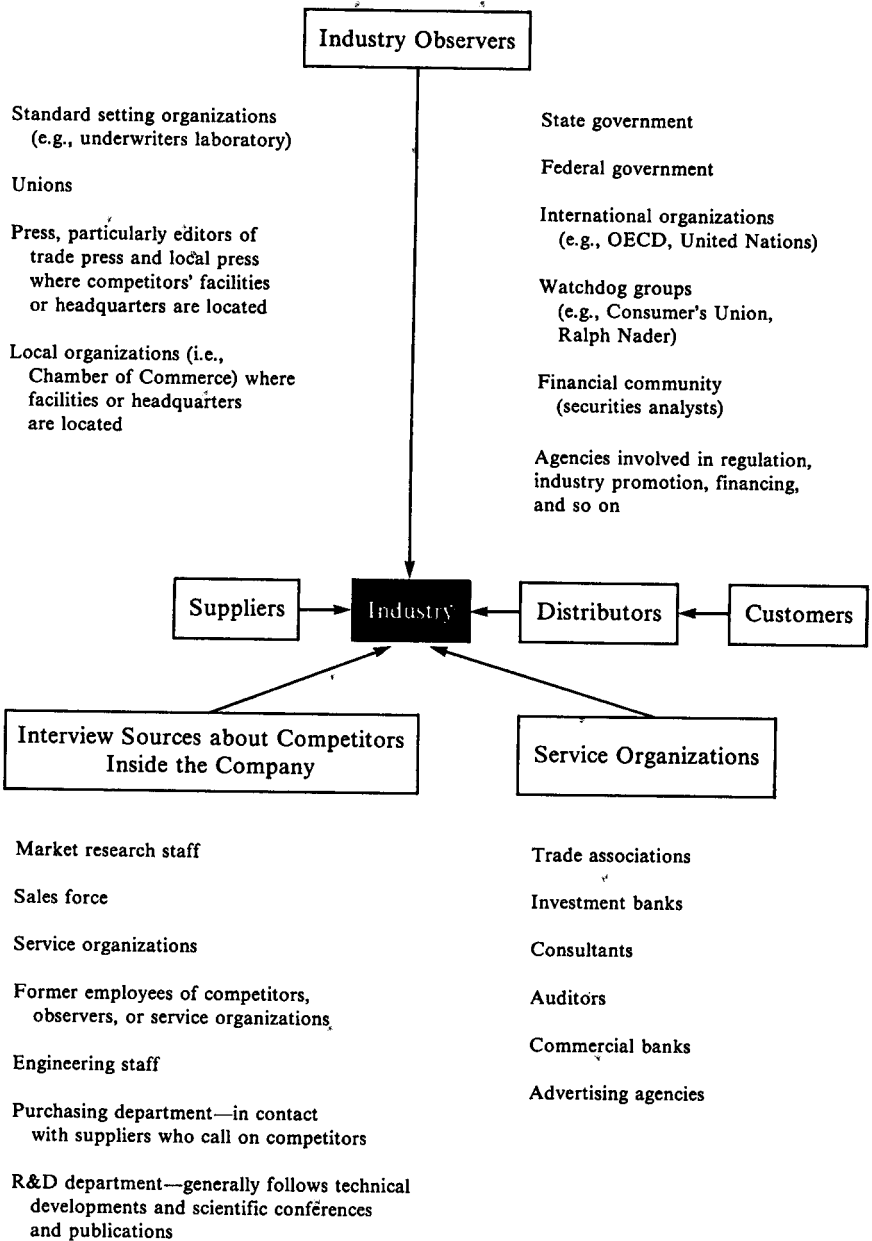
CHARACTERISTICS OF FIELD SOURCES

Industry competitors will perhaps be the most uncertain about cooperating with researchers, because the data they release have a real potential of causing them economic harm. Approaching sources in the industry requires the greatest degree of care (some guidelines will be discussed later). Sometimes they will not cooperate at all.

The next most sensitive sources are service organizations, such as consultants, auditors, bankers, and trade association personnel, who operate under a tradition of confidentiality about individual clients, though usually not about general industry background information. Most of the other sources are not threatened directly by industry research, and in fact they often perceive it as a help. The most perceptive outside observers of the industry are often suppliers' or customers' executives who have taken an active interest in the whole range of industry participants over a long period of time. Retailers and wholesalers are often excellent sources as well.

The researcher should attempt to speak with individuals in all of the major groups since each of them can supply important data and provide useful cross-checks. Because of their differing perspectives, the researcher should *not* be surprised if they make conflicting and even directly contradictory statements. One of the arts of interviewing is cross-checking and verifying data from different sources.

FIGURE B-2. Sources of Field Data for Industry Analysis



The researcher can make the initial field contact at any point shown in Figure B-2. Initially, to gather background, it is best to make contact with someone who is knowledgeable about the industry *but who does not have a competitive or direct economic stake in it*. Such interested third parties are usually more open and provide the best way of gaining an unbiased overview of the industry and of the key actors involved, which is important early in the research. When the researcher is in a position to ask more perceptive and discriminating questions, direct industry participants can be tackled. However, to maximize the chances of success in any interview, it is important to have a personal introduction, no matter how indirect. This consideration may dictate the choice of where to begin. Field research always involves an element of opportunism, and following a method of analysis should not deter the researcher from pursuing good leads.

It is important to remember that many participants in an industry or observers of it know each other personally. Industries are not faceless; they are composed of people. Thus one source will lead to another if the researcher is adept at his task. Particularly receptive subjects for field interviews are often individuals who have been quoted in articles. Another good method to develop interviews is to attend industry conventions to meet people informally and generate contacts.

FIELD INTERVIEWS

Effective field interviewing is a time-consuming and subtle process, but one that will amass the bulk of critical information for many industry studies. Although each interviewer will have his or her own style, a few simple points may be useful.

Contacts. It is generally most productive to make contacts with potential sources by telephone, rather than by letter, or by a telephone call following up a letter. People are apt to put a letter aside and avoid a decision about whether to cooperate. A telephone call forces the issue, and people are more likely to cooperate with an articulate and well-informed verbal request than they are with a letter.

Lead Time. Researchers should begin to arrange interviews as early as possible, since lead times may be long and travel schedules

difficult to coordinate; it may take months to arrange and complete them. Although at least a week is necessary lead time for most interviews, often the researcher can get an interview on very short notice as peoples' schedules change. It is desirable to have identified a number of alternative sources for any interview trip; if time becomes available they just might be willing to meet on short notice.

Quid Pro Quo. When arranging an interview, one should have something to offer the interviewee in return for his or her time. This can range from an offer to discuss (selectively of course) some of the researcher's observations based on the study, to thoughtful feedback on the interviewees' comments, to summaries of results or extracts of the study itself when feasible.

Affiliation. An interviewer must be prepared to give his or her affiliation and make some statement about the identity or (at least) the nature of his or her client if the study is being conducted for another organization. There is a moral obligation to alert an interviewee if information may be used to his or her detriment. If the identity of the interviewer's firm or client cannot be disclosed, some general statement must be made regarding the economic stake of the firm or client in the business being studied. Otherwise interviewees generally will not (and should not) grant an interview. Failure to disclose the identity of the firm or client will often limit (though not necessarily destroy) the usefulness of the interview.

Perseverance. No matter how skillful the interviewer, scheduling interviews is invariably a frustrating process; many times an interview is declined or the interviewee is openly unenthusiastic about it. This is in the nature of the problem and must not deter the interviewer. Often an interviewee is much more enthusiastic once a meeting has commenced and the relationship between interviewer and interviewee has become more personal.

Credibility. Interviewers greatly build credibility in arranging interviews and conducting them by having some knowledge of the business. This knowledge should be displayed early both in initial contacts and in interviews themselves. It makes the interview more interesting and potentially useful for the subject.

Teamwork. Interviewing is a tiring job and should ideally be done in teams of two if resources permit. While one member asks a

question, the other can be taking notes and thinking up the next round of questions. It also allows one interviewer to maintain eye contact while the other takes notes. Teamwork also allows for a debriefing session immediately after the interview or at the end of the day, which is extremely useful in reviewing and clarifying notes, checking for consistent impressions, analyzing the interview, and synthesizing findings. Often much creative work in industry research is done in such sessions. A solo interviewer should leave time for such activity as well.

Questions. Gathering accurate data depends on asking unbiased questions, which do not prejudge or limit the answer nor expose the interviewer's own leanings. The interviewer must also be sensitive not to signal with his or her behavior, tone of voice, or expression what the "desired" answer is. Most people like to be cooperative and agreeable, and such signaling may bias the answer.

Notes. In addition to taking notes, the researcher can benefit from writing down observations about the interview itself. What publications does the individual use? What books are on the shelves? How are the offices decorated? Are they plush or sparse? Does the interviewee have any sample products in the office? This type of information often provides useful clues in interpreting the verbal data that result from the interview and also provides leads for additional sources.

Relationships. It is important to recognize that the subject is human, has never met the researcher before, has his or her own set of personal characteristics, and may be quite uncertain about what to say or not say. The style and vocabulary of the subject, his or her posture and attitude, body language, and so on give important clues and should be diagnosed quickly. A good interviewer is usually adept at quickly building a relationship with the subject. Making an effort to adapt to the style of the interviewee, to lower the level of uncertainty, and to make the interaction personal rather than keeping it on an abstract business level will pay off in the quality and candor of the information received.

Formal Versus Informal. Much interesting information often comes after the formal interview is over. For example, if the researcher can get a plant tour, the interviewee may become much more open as the setting becomes removed from the more formal

setting of the office. The researcher should attempt to engineer interviews so that the inherent formality of the situation is overcome. This may be done by meeting on neutral ground, getting a tour, having lunch, or discovering and discussing other topics of common interest besides the industry in question.

Sensitive Data. It will generally be most productive to start an interview with nonthreatening general questions rather than asking for specific numbers or other potentially sensitive data. In situations in which concern over sensitive data may be likely, it is usually best to state explicitly at the beginning of an interview that the researcher is not asking for proprietary data but rather impressions about the industry. Often individuals will be willing to provide data in the form of ranges, "ball park" figures, or "round numbers" that can be extremely useful to the interviewer. Questions should be structured as follows: "Is the number of salespersons you have closer to 100 or 500?"

Pursuing Leads. A researcher should always devote some time in interviews to asking questions such as the following: Whom else should we speak to? What publications should we be familiar with? Are there any conventions going on that might be useful to attend? (A large number of industries have conventions taking place in January and February.) Are there any books that might be enlightening? The way to maximize the use of interviews is to gain further leads from each one. If an interviewee is willing to provide a personal reference to another individual, the offer should always be taken. It will greatly facilitate the arrangement of further interviews.

Phone Interviews. Phone interviews can be quite productive relatively late in a study when questions can be highly focused. Phone interviews work best with suppliers, customers, distributors, and other third-party sources.