Chapter 2

Customer Analysis

This chapter, as are Chapters 3 and 4, is devoted to the second step of the successful marketing management process: understanding (see Figure 2.1). These three chapters encompass the market analysis phases of the marketing process and the relationship between these phases is shown in Figure 2.2. Chapter 2 introduces the concept of identifying and selectively marketing to market segments. Chapter 3 discusses the analysis of competitive forces, and Chapter 4 discusses the financial analysis of marketing decisions.

INTRODUCTION TO MARKET SEGMENTATION

Our discussion of market segmentation begins with the following somewhat surprising bits of due diligence:

- Nobody makes money by segmenting a market (except for marketing research suppliers). You make money by establishing profitable, long-term, highly satisfying exchange relationships with brand-loyal customers. Market segmentation is merely a device created by marketers to more efficiently and effectively generate such relationships.
- Market segments do not actually exist. Or perhaps it is more accurate to say that marketers try to impose their approach to structuring a market upon a market that has no universal, naturally occurring structure to it. Markets are not like the animal kingdom with its universally understood natural "segments" of genus, subgenus, and species. If segments exist in a market, they are there because a marketer has constructed them, hopefully by tapping into marketplace realities.

Societal marketing orientation

↓

Understanding
Customers (market segments): Chapter 2
Competition: Chapter 3
Financial implications: Chapter 4

↓

Planning

↓

Implementing

↓

Connecting with customers

FIGURE 2.1. The Effective Marketing Management Process

Identify market segments
and develop a profile of each segment

↓

Develop a forecast of market
potential for each segment

↓

Analyze competitive forces
in each segment

↓

Analyze sales, costs, profitability,
and return on investment
for each segment

↓

Select target marketing segments
and develop positioning and
marketing mixes for each group

FIGURE 2.2. Market Analysis Process

The truthfulness of this second point is supported by your own experience as a consumer: You have been classified by domestic and foreign marketers into hundreds, if not thousands, of market segments, yet you do not define yourself in any way by these segment memberships. For example, you are simultaneously a member of the heavy-use ice-cream-eating segment, the price-shopper clothing segment, the outdoor-sports-activist segment, and hundreds of other segments because marketers have found it useful to categorize you in such a way for marketing planning purposes. Sometimes you are grouped in the same segment as your peers or neighbors; sometimes you are put in different segments. In every case, marketers understand how to better think about a market's structure in ways that reflect the realities of how consumers can be grouped together so that a marketing appeal can connect with the people in the targeted segment. The rationale for segmenting a market as a prerequisite for marketing planning is therefore based on the following assumptions:

1. Not everyone in the market is looking for the same things from the product or service. That is, a specific marketing appeal will not connect equally well with all consumers in a market.
2. It is better to establish very successful connections with a portion of the people in a market than to only marginally connect with everyone.
3. To be very successful with your portion of the market you must be able to identify them, understand them in-depth, and then use that understanding to develop highly satisfying goods and services.
4. People prefer to give their business to companies who seek to understand the consumers who occupy the market segments, and then develop satisfying marketing offerings upon that understanding.

If any of these four assumptions is invalid, market segmentation may not prove as profitable as mass marketing appeals (i.e., treating all consumers as the same and marketing the same product to everyone). However, these assumptions hold true for the vast majority of markets, whether business to consumer (B2C) or business to business (B2B) in nature.

In addition to these assumptions, marketers also use a set of criteria to determine whether segmentation, targeting, and positioning are worthwhile exercises in developing marketing programs.[1]

1. *Sizable*—Any segmentation of a market must generate segments of a size (sales revenues) sufficient to be of interest to the marketer. If the resulting sizes are too small, segmentation may not be worthwhile.

2. *Identifiable*—Segments arising from this process should have characteristics that allow for easy description and correspond to the marketers' general observations. For example, if a study of the toothpaste market generated segments that could be described as "cosmetic" (seek dazzling white teeth), "economy" (look for lowest price), "worrier" (want decay prevention), and "sociables" (want fresh breath), then marketers have identified those characteristics of segments that make it easier for planning purposes.

3. *Reachable*—Marketers want to be able to identify the segments but also to reach them *selectively,* that is, without having to talk to the entire market to reach a particular segment's consumers. Therefore, if "romantic couples" is the target segment, the marketer would look for media patterns that these couples have in common within the segment. This allows for a promotional campaign that could speak to them without wasting resources on people who have no interest in the market offering.

4. *Respond differently*—Marketers want to develop a segmentation scheme for the market that results in different "sweet spots." In other words, what appeals to the members of one segment will be common within that segment but different from what consumers in another segment find appealing.

5. *Coherent*—Ideally, members within a particular segment are homogeneous along several attitudinal, behavioral, and other dimensions, which are useful in developing marketing programs, but they are heterogeneous with respect to other segments. In this way a marketer can maximize effectiveness by choosing a customized appeal for each segment that is uniquely capable of connecting with its members.

6. *Stable*—Although this criterion is not absolute (no segment will remain perfectly stable forever), hopefully, the formation of the segments and the resulting marketing programs will have a lifetime sufficiently long to allow for profitable connections over a reasonable length of time.

If, by segmenting a market, the marketer is correctly assuming that the four assumptions hold true, and he or she finds that the resulting segments pass these six criteria, then segmentation can lead to several benefits:

Effectiveness—Marketers can better connect with a group of consumers whose common needs are better understood and are not highly diffuse.

Efficiency—Marketers get more "bang for the buck" when they can concentrate on smaller, more responsive segments instead of larger diverse markets.

Loyalty—Developing marketing programs that communicate to the consumer that the marketer really understands them and has used that understanding to deliver highly satisfying offerings leads to loyal consumers seeking to maintain long-term relationships.

Now that we have established a strong theoretical support for the value of segmenting a market, the natural question is, "Does segmentation really work in the real world? Are companies that segment markets actually better off from having done it?" Consider the following case of Mobil Oil (prior to its merger with Exxon), a company selling gasoline, a product that is best described as an undifferentiated commodity.[2]

Mobil Oil Company had always assumed it was marketing gasoline and related services to a mass market of consumers whose sole motivation for choosing where to fill up was finding the lowest price. Losses in its retailing business forced Mobil to challenge this conventional wisdom for explaining marketplace behavior, and led it to conduct a survey of 2,000 motorists. Among other things, the study revealed that five segments existed in the market:

Road warriors: They are higher-income males of middle age who drive up to 50,000 miles per year, use premium gas, use the car wash, and buy convenience food items from the service station (16 percent of the market).

True blues: Men and women with moderate to high incomes, brand loyal, pay for premium gas with cash (16 percent of buyers).

Generation F3: They want fuel and food fast; these upwardly mobile males and females are constantly on the go, are young (under age twenty-five), and buy a lot of snack foods at the service station (27 percent of the market).

Homebodies: The second largest segment, these are usually "soccer moms" who buy gas wherever they are when they need it (21 percent of market).

Price shoppers: These buyers are not brand loyal, are on tight budgets, and do not buy premium gas (20 percent of the market).

Strategic analysis of these five segments resulted in targeting only the first three segments. This meant that Mobil was trying to improve its profits by ignoring 41 percent of the market! Its strategy was to raise prices but improve services ("friendly serve"). Revenues improved as much as 25 percent at some of the stations implementing the new strategy.

This case illustrates the dramatic positive effect that can occur in both strategy and financial results when a company seeks to understand a market through segmentation analysis and then uses that understanding to develop plans to improve the satisfaction of consumers in the targeted segments.

So segmentation works. We now describe how segmentation is done.

METHODS OF SEGMENTING MARKETS

Segmentation uses one of three methods:

Research-based segmentation—The Mobil case was an example of this approach. Consumers are screened to ensure they are members of the market under study, then surveyed to determine their attitudes, behaviors, motives, preferences, etc. Multivariate statistical analysis of the research results is conducted to then reveal the number and characteristics of market segments.

Existing segmentation services—In this approach, the marketer uses an existing segmentation service or system to identify market segments that can be evaluated for making targeting decisions. These systems may either be commercial systems, such as the geodemographic systems, or governmental, such as the North American Industry Classification Systems (NAICS). In either case, the segments are already established before the marketer buys the information, so this approach lacks the customization of the research-based method.

Managerial judgment—In this approach, the marketer uses his or her knowledge of the market and industry to identify segments. The marketer's insight and skill at using existing information are key in generating good results from this approach.

Each of these approaches is successfully used by firms in a variety of industries for segmentation purposes. Although each has its advantages and disadvantages, no single approach can be said to be best under all circumstances. Each of these methods is described next.

RESEARCH-BASED SEGMENTATION

Although it offers a highly customized method of segmentation based upon extensive up-to-date market data, research-based segmentation demands a high degree of expertise in research methodology and analysis, and can be very expensive and time-consuming. Typically, for first-time market segmentation, the process begins with qualitative market research followed by a large-scale quantitative survey (Mobil's study of 2,000 consumers is typical of research scope), which is analyzed using multivariate statistical computer software packages. Worthington Foods' study of the vegetarian market exemplifies this approach.

A Case Study in Research-Based Segmentation

Worthington Foods, now owned by Kellogg, produces a line of prepared foods from textured vegetable protein (TVP) (primarily made from soy). In more than fifty years of serving the vegetarian market, the company had never performed any studies to determine whether the market structure was best thought of as a mass market or if distinct segments existed within the market. Whether one thinks of the vegetarian market with segments, or the vegetarian segment with niches, the question remains the same: Would mass marketing or a segmentation, targeting, and positioning strategy be best? If the four segmentation assumptions apply and the six criteria fit in this case, the company would in all likelihood benefit from market segmentation. Worthington decided to conduct a research study of vegetarians and people who do not classify themselves as vegetarian but who are cutting back on the amount of meat they eat to lower their cholesterol intake. A series of focus groups helped to identify the kinds of questions that should be included in the quantitative survey. Because these two types of consumer groups may be hard (i.e., expensive) to find in the general population, Worthington used a consumer panel (i.e., 50,000 members of Market Facts consumer mail panel of over 600,000 U.S. households) to first screen for vegetarianism or reduced meat consumption, and then sent a twelve-page questionnaire to 2,000 of those people fitting these characteristics. Segmentation studies of this type typically ask questions intended to determine respondent attitudes, behaviors, preferences, motivations, benefits sought, psychographics/lifestyle questions, satisfaction with current products, intentions to try new products, shopping and media patterns, sources of information, and demographic data for households. In the Worthington case, five vegetarian and four meat-reducing segments were formed based on an analysis of attitudinal questions that were answered on a six-point scale:

Agree completely	Agree somewhat	Agree slightly	Disagree slightly	Disagree somewhat	Disagree completely
6	5	4	3	2	1

Table 2.1 shows the resulting segments and the percentage of the market each segment comprises. The term *meat alternatives* is the name given to the TVP products made by Worthington and other companies marketing these types of prepared foods.

How did these segments form? In the research-based approach to market segmentation, the questions about respondent attitudes, behaviors, motivations, demographics, etc., become "candidates" for being the basis of the segmentation scheme. Sometimes the marketer uses a statistical program such as regression to sort through these sets of variables to discover the set that does the best job of explaining a dependent variable of interest, such as consumption rate or likelihood

TABLE 2.1. Segments of the Vegetarian and Meat-Restricting Markets

Vegetarian market	**% of market**	**Meat-restricting market**	**% of market**
MA advocates	20	MA fans	26
Convenience driven	19	Time savers	26
Reluctant vegetarians	21	Meat lovers	29
Animal lovers	24	Natural nuts	19
MA opponents	16		

Note: MA = meat alternative

of purchase, which would have been included in the same survey. The set that has the highest explanatory value is then used as the basis for segmentation. Sometimes, based on past experience, the marketer will select one of the sets of variables as the segmentation base. In the Worthington case eighty-eight attitudinal questions were chosen as the segmentation base. Typically, once the variable set has been selected, it is processed through a data reduction program such as factor analysis that looks for response patterns in the way the questions were answered in order to group questions together that appear to be addressing a common theme. This accomplishes several worthwhile objectives. Instead of having to look at how 2,000 respondents answered eighty-eight attitude questions, eight different factors may arise from the factor analysis of the questions. Factors may, for example, include an emphasis on "convenience," another on "antimeat," another on "natural diet," and so on. One could try to eyeball the questions and group them together, but the factor analysis program processes the actual way the respondents answered the questions and determines the groupings.

Another benefit is that it is possible to compute a factor score for each respondent to each factor. For instance, respondent #1019 has a score for the convenience factor, the antimeat factor, and so on, which indicates how much he or she agreed to each of the sets of questions that constitute each factor. A high score for the convenience factor would indicate that respondent #1019 values the convenience of preparation of these food items to a significant degree. Factor analysis processes the scores for eight factors instead of eighty-eight questions. This determines how people can be best grouped together so that they are maximally similar to other people in terms of their factor scores and maximally different from the people in another group. In other words, the factor scores for the respondents become candidates for creating segments. For example, if you were a vegetarian respondent to the survey and you were put in the convenience-driven segment, the analysis would indicate that your desire for convenience dominates the way you think, feel, and act (the tricomponents of attitudes: cognitive, affective, and conative) toward these food products and your vegetarian lifestyle more than any of the other factors revealed by the data. Other people in your segment are very similar to you in this regard. This similarity pattern holds true for other respondents' memberships in their segments. Following are the questions that the factor analysis program grouped together for the convenience-driven factor (the questions were responded to with the six-point agreement scale previously shown):

________ I buy a lot of foods that are quick and easy to prepare.
________ I prefer buying products which can be cooked in a microwave.
________ I eat a lot of fast food.
________ There aren't enough prepared vegetarian foods available in grocery stores.
________ It's hard to find prepared foods for meat-restricting people.
________ Prepared foods are as healthy as meals made from scratch.
________ It's hard to find prepared foods for people on a vegetarian diet.
________ Vegetarian foods take a lot of time to prepare.

The label "convenience driven" for this segment seemed apt, given the high agreement with this set of attitudes that respondents in this segment had in common. The cluster analysis program seeks to find the smallest number of segments that group people around common responses within the segment, and maximize the differences with people in another segment (our homogeneous within, heterogenous between segment objective). In the Mobil case, a similar procedure was used to form the segments, then a descriptive label was used to capture the unique attributes of people in the segment.

Once segments have been grouped based on the variable used to form them (again, attitudes in this case), all the other variables can be used to profile the members of each segment. Although the members of the convenience-driven segment belong to that segment based on their answers to the attitude questions, we can see how members answered questions about behaviors, preferences, demographics, and intentions to determine if they have some of these things in common as well. Usually they do, which just confirms marketers' generally held belief that there is a strong connection between attitudes and behaviors (and lifestyles, preferences, etc.). The value of profiling of segments will be discussed in Chapter 6.

Worthington discovered, as did Mobil, that what was previously thought of as a mass market was really a market with distinct segments. Each segment is different from the others in ways significant for targeting and marketing planning purposes. This leads to effectiveness, efficiency, and brand loyalty if the company can capitalize on this new understanding of the market.

Clearly, the research-based approach to market segmentation can be a powerful tool in providing an understanding of the market, which leads to better planning. However, for this approach to be of maximum value in its contribution to the goal of connecting with customers, it must be based on good research—proper identification of the right research design, good questionnaire design, right sampling method and selection, proper use of statistical analysis, correct data interpretation—which require time, money, and expertise. Also, management must be willing to make targeting and positioning decisions based on the results and then quickly implement those decisions. If decision makers do not trust the research results to guide their decisions, one of the other methods for segmenting should be used.

EXISTING SEGMENTATION SYSTEMS

Managers who want to segment their markets for planning purposes but who do not have the resources or inclination to use a customized research study to identify segments can use existing segmentation systems. These systems have been developed either by commercial firms to sell to companies for use in making marketing plans or by the government. In either case, companies buying these services get "standardized" market segmentation schemes—the segments do not vary in composition by market or product type (e.g., you get the same segmentation scheme whether you are selling bicycles, wireless communications, or real estate). The advantage to using such a system is the wealth of information available describing the people or firms that occupy each segment. The best known of these systems for the consumer market are the geodemographic systems and SRI Consulting Business Intelligence's (SRIC-BI) Values and Lifestyle Survey (VALS) system. These two systems are described next, followed by the federal government's NAICS system for companies doing B2B marketing.

Consumer Markets

Geodemographic Systems

Claritas' PRIZM is perhaps the best known of the geodemographic segmentation systems that divide the U.S. population into specific lifestyle segments. All of these systems begin with U.S. census data and then add other databases to develop detailed descriptions of consumer segments. The PRIZM system divides the U.S. adult population into sixty-two separate lifestyle segments or "clusters" and ranks these clusters in socioeconomic order. They are given snappy names that reflect their ranking, such as Blue Blood Estates, Kids and Cul-de-Sacs, Bohemian Mix, and Shotguns and Pickups. Each residential address in the United States is classified into one of the segments based upon what the census data and other databases indicate as the socioeconomic, housing, and aggregated consumer demand information for that household. A Young Literati household in Portland, Maine, is more similar in the lifestyle to a Young Literati household in Portland, Oregon, than it is to a Shotguns and Pickups household located two miles away in the same city. Marketers can identify segments they wish to target and then get a map that shows the geographic areas where those segments are in highest concentration. They can also identify specific geographic areas they are desiring to penetrate and get a profile of the segments located in those areas. For example, PRIZM identifies the following segments present in the zip code 90210, Beverly Hills, California:

PRIZM rank	Segment name
1	Blue Blood Estates
2	Winner's Circle
7	Money + Brains
10	Bohemian Mix

The Blue Blood Estates are described as follows:

Elite, superrich families
Age group: 45-64
Professionally employed
1.2 percent of U.S. households belong to this segment

They are likely to:

- belong to a health club
- visit Eastern Europe
- buy classical music
- watch *Wall Street Week*
- read *Architectural Digest*

This is merely a sampling of the detailed information available for the segments.

Over 20,000 companies have used Claritas' PRIZM system to identify segments for target marketing purposes. Cox Communications is an example of how one company successfully used PRIZM.

> Cox Communications is a nationwide cable TV service that wanted to increase the number of households using its pay-per-view (PPV) service. It decided to launch a direct mail campaign in 12 of the cable TV geographic markets it serves. Of the 12 markets, most simply sent a mass mailing to those households which had never ordered PPV. In the Phoenix, AZ market Cox used Claritas' PRIZM segmentation system to help identify segments to target with its mailing. PRIZM analysis identified 14 of the 62 clusters (segments) that had high PPV usage. They created a mailing list of 41,000 of their 600,000 customers that belonged to these 14 clusters, and sent either 99¢ or $1.99 coupons to those targeted households. The coupons were coded so that responses to the campaign could be tracked. Results? The PRIZM targeted households in Phoenix had the highest response rate of all 12 markets involved in the campaign, even though the Phoenix market had considerably fewer direct mail pieces sent than in the other markets. Also, nearly 20 percent of the responders were repeat buyers in the following month.[3]

Some companies have found even greater value from using PRIZM when they combine it with segmentation information discovered in their own market surveys (i.e., combining the research-based approach with the existing segmentation system approach). Sodexho Marriott is an example of this hybrid method.

Sodexho Marriott, a food service provider, used the PRIZM segmentation system for a nationwide college food program. Since there were no "off-theshelf" segmentation systems for student populations, Sodexho crafted its own—called LifeSTYLING—linking into PRIZM's household clusters to quickly and easily identify student segments by plugging in their zip codes. Adding customized information developed from a series of student surveys, the system identified the predominant food and dining preferences within a school's diverse population.

The mix of student segments, unique for each campus, was used to shape a particular school's meal services—including menus, dining environments, branding, development, product selection, marketing, and merchandising. Sodexho has used its LifeSTYLING segmentation system at more than forty colleges and universities and the student segments have proven to be on target regardless of the school's geographic location or focus. It has also uncovered some surprising niches.

At one university in the rural northeast, LifeSTYLING revealed a strong showing of students interested in foods and dining options with a global flair. So, at Sodexho's recommendation, the university's food service program installed a Starbucks coffee and pastry kiosk that gained immediate popularity among students.[4]

Claritas and its geodemographic competitors have developed a variety of proprietary software programs to help clients customize the segmentation systems to fit their needs. A detailed discussion of Claritas' segmentation services can be found at <www.claritas.com>.

VALS

SRI Consulting Business Intelligence's VALS was first established in 1978 as a consumer segmentation system based on lifestyle characteristics. In 1989 VALS2 was established to focus on consumer purchase behavior for advertising and marketing applications. VALS2 categorizes the U.S. adult population into eight mutually exclusive groups based on their psychology and several key demographics. They promote their segmentation service as allowing marketers to:[5]

- identify who to target;
- uncover what your target group buys and does;
- locate where concentrations of your target group live;
- identify how to communicate with your target group; and
- gain insight into why the target group acts the way it does.

A survey of thirty-five attitudinal and four demographic questions is used to classify people into one of the eight segments. Product usage and media data for the segments are available through VALS' link with the database from Simmons Market Research Bureau and other consumer databases. VALS differs from the geodemographic segmentation systems by classifying people into segments based upon attitudinal surveys of a sample of the population which permits classification into the eight segments. However, the geodemographers have up to sixty-plus lifestyle segments, which offer finer distinctions among segments, compared to the eight offered by VALS. The choice between VALS and PRIZM would depend upon the particular product and market, as well as the future segmentation needs of the marketer. Both systems have been used successfully for market segmentation, targeting, and positioning purposes.

Business Markets

NAICS

The North American Industry Classification System (NAICS, pronounced "nakes") replaced the Standard Industrial Classification (SIC) system in 1997. NAICS was jointly developed by the United States, Mexico, and Canada to provide comparable business statistics for these three North American Free Trade Agreement (NAFTA) countries. A North American Product Classification System (NAPCS) will initially focus on service industries, and will later include manufacturing products. The NAICS covers over 350 new industries, such as fiber optic cable manufacturers, wireless communication companies, HMOs, and bed and breakfast inns that have been grouped into twenty broad sectors (the SIC had ten sectors). The new six-digit codes (SIC used four) provide more detailed segmentation of businesses. The 1997 Economic Census serves as the starting point for NAICS. The Census Bureau will provide data that allow comparisons between the SIC and NAICS for several more years to facilitate companies making the transition.

Following is an example that will illustrate how a company might use the NAICS for segmenting business markets. If a company that sells hand tools were using NAICS to segment the market for prospective buyers, they would be interested in the following breakdown of one submarket:

Code	Definition
81	Other services
811	Repair and maintenance
8111	Automotive repair and maintenance
81111	Automotive mechanical electrical repair and maintenance
811111	General automotive repair
811112	Automotive exhaust system repair
811113	Automotive transmission repair

The government data for segment 811111 would indicate, for example, how many establishments existed in a particular geographic area, such as in Berrien County in the state of Michigan, that were categorized as general automotive repair businesses. Other information on the sizes of the businesses (number of employees) and other data of interest would be provided. See <http://www.census.gov/epcd/www.naics.html> for more information on NAICS.

The NAICS is the largest and best known of segmentation systems available to B2B companies in either goods or service businesses. Quite often, marketers in B2B industries will use the NAICS in combination with the managerial judgment method of segmenting markets, which is described next.

MANAGERIAL JUDGMENT

The third approach to segmenting markets is managerial judgment. This is not to suggest that using a research-based or existing segmentation system method does not also involve the judgment of marketing managers, because clearly marketers must make choices in either of those approaches. Managerial judgment in this approach means that managers use their judgment, based upon experience with the market in question, to identify the base for segmenting markets and for the number of segments the market contains. Some typical bases for use in specifying market segments are shown in Table 2.2.

Table 2.3 shows some possible bases to use in segmenting B2B or industrial markets. It lists major questions that industrial marketers

TABLE 2.2. Segmentation Bases—Consumer Markets

Bases	**Examples**
Geographic	
Region	Pacific, Middle Atlantic, New England
Metro size	Under 5,000, 500,000-999,999, 4 million +
Density	Urban, suburban, rural
Demographic	
Age	18-25, 65+
Gender	Male, female
Income	Under $10K, $30K-45K, $100K+
Occupation	Professional, technical, unskilled
Education	Less than high school, graduate school
Social class	Lower lower, upper middle, lower upper
Psychographic	
Lifestyle	Outdoor, sociable, sedentary
Personality	Compulsive, authoritarian
Behavioral	
Occasions	Regular, special
Benefits sought	Quality, economy, speed
User status	Nonuser, potential user, regular user
User rate	Light, medium, heavy

Source: Adapted from Philip Kotler, *Marketing Management,* Eleventh Edition (Upper Saddle River, NJ: Prentice-Hall, 2003), p. 288.

should ask in determining which customer they want to serve. In going after segments instead of the whole market, a company has a much better chance of delivering real value and receiving a premium price for its close attention to the needs of those segments. Thus, a tire company should decide which industries it wants to serve, noting the following differences: Automobile manufacturers seeking original equipment tires vary in their requirements; luxury car manufacturers want a much higher grade tire than standard car manufacturers. Tires needed by aircraft manufacturers have to meet much higher safety standards than do tires needed by farm tractors.

TABLE 2.3. Segmentation for Industrial Markets

Segmentation basis	Implications
Demographic factors	
1. Company size	Should we target large, medium, or small organizations based on number of employees, dollar sales, or number of plants/locations?
2. Type of industry	Do we target virtually all companies in many industries (horizontal market) or most all companies in a single industry (vertical market)?
3. Stage in life cycle	Should we focus on new or older, established organizations?
Geographic factors	
1. Location	Should we target companies in local, regional, or national geographic markets? Domestic or foreign markets?
Company style and culture	
1. Corporate culture	Should we target companies that place emphasis on technological superiority? Innovativeness? Market leaders or followers? Risk takers or risk avoiders?
Usage behavior	
1. Volume	Should we target heavy, light, or nonusers?
2. Size of order	Should we focus on large-order or small-order buyers?
3. Loyalty	Should we target buyers who exhibit high or low brand or company loyalty?
4. Situation	Should we target buyers seeking certain product applications? Those who need quick response?
Purchasing behavior	
1. Tasks	Should we target segments who exhibit a more scientific, high-quality approach to their buying tasks and decisions?
2. Organization structure	Should we focus on organizations with buying structures that are centralized or decentralized? Formal or informal? Specialized or generalized?
3. Technology	Should we target buyers with more sophisticated buying processes or systems?
4. Buying center	Should we focus on targets based on buying roles played by members and their power relationships?
5. Benefits sought	Should we focus on targets who seek low cost or price? High product quality? Excellent service?

Segmentation basis	Implications
Individual factors	
1. Motivation	Can we target segments based on their "hot buttons"?
2. Perception	Should we target customers based on risk tolerance? Importance of supplier size or image?
3. Learning	Should we focus on buyers with routinized purchase patterns?

Source: Adapted from David Loudon and Albert Della Bitta, *Consumer Behavior: Concepts and Applications,* Fourth Edition (New York: McGraw-Hill, 1993), pp. 661-675.

Within a chosen target industry, a company can further segment by customer size. The company might set up separate systems for dealing with large and small customers. For example, Steelcase, a major manufacturer of office furniture, divides its customers into two groups:

1. *Major accounts:* Accounts such as IBM and Prudential are handled by national account managers working with field district managers.
2. *Dealer accounts:* Smaller accounts are handled through field sales personnel working with franchised dealers who sell Steelcase products.

Within a certain target industry and customer size, a company can segment by purchase criteria. For example, government laboratories, university laboratories, and industrial laboratories typically differ in their purchase criteria for instruments. Government laboratories need low prices (because they have difficulty getting funds to buy instruments) and service contracts (because they can easily get money to maintain instruments). University laboratories need equipment that requires little continuous service because they do not have service people on their payroll. Industrial laboratories need equipment that is highly reliable because they cannot afford downtime.

In general, business-to-business marketers do not focus on one segmentation variable but instead apply multiattribute segmentation.

Marketers using a managerial judgment approach typically select one or more of the bases in Tables 2.2 or 2.3 and then use a market grid analysis to form the segments.

Market Grid Analysis

Marketing planners can use data collected from customers and prospective customers to segment their markets, then offer products aimed at specific needs. This is like using a rifle rather than a shotgun to shoot at a target. Specific products are developed for specific segments.

One basic tool that can be used to segment a market is a market grid. A market grid is a two-dimensional view of a market which is divided into various segments based on characteristics of potential customers. There are two important concepts in grid analysis. First, characteristics of potential customers are used to segment the market rather than product characteristics. This ensures a customer-oriented view of the market rather than a product-oriented view. Second, characteristics of *potential* customers rather than existing ones are used to focus on customers the organization may not currently serve.

Normally, a series of grids must be used to describe a market completely. Therefore, the planner must begin with a set of characteristics thought to be useful in differentiating consumers' needs. Each characteristic must be analyzed to determine its probable effect on consumers' satisfaction.

The types of characteristics used in the analysis may be those described previously: demographic, geographic, usage, benefits sought, or psychographics. Using these characteristics to divide a large group into smaller subgroups enables the planner to isolate the needs of very specific segments and then design products for them.

The examples previously discussed are not all-inclusive but are intended to illustrate the types of characteristics that can be used. A planner may begin with a relatively long list of characteristics. The characteristics chosen from the list are those which not only differentiate among groups of customers (i.e., customers can be grouped by that characteristic into segments that are homogeneous within and heterogeneous between segments), but which also are instrumental in some way in affecting consumer response to marketing programs.

For example, company size may vary among customers, but does it matter? That is, will companies have different needs and respond to different appeals based upon factors that vary by company size? If not, then the mere fact that we can group companies by their size is insufficient justification for the use of company size in the grid analysis. Managerial market experience is used to choose characteristics. Selection of characteristics is accomplished by assessing the impact of the characteristic on buyer need satisfaction. Only those characteristics useful in differentiating needs are used in the market grids. For example, a clothing manufacturer might develop a list that includes age, sex, income, geographic location, shopping behavior, and activity engaged in by consumers. The primary impact of each characteristic might be assessed as shown in Table 2.4. The consumer's age would certainly influence his or her needs, e.g., the styles the consumer is interested in, the person who actually is the decision maker, and the types of retail stores shopped.

Grid Construction

Once a list of potential consumer characteristics has been developed, the next step is actual grid construction. Tables 2.5 and 2.6 illustrate the process. Each section within the grid is actually a market segment for accounting services. As each characteristic is used to identify a specific segment it becomes possible to determine the nature of the products, place, and promotion most likely to satisfy needs in each segment.

TABLE 2.4. Consumer Characteristics for Grid Analysis in Clothing Purchases

Characteristic	**Probable impact on need**
Age	Style, who decision maker is, type of retail outlet
Sex	Style, type of retail outlet, motives for purchase
Income level	Price of quality, type of retail outlet, motives for purchase
Geographic location	Style, material used
Shopping behavior	Promotion, type of retail outlet
Product usage	Style, materials used, durability, colors

TABLE 2.5. Market Grid for Individual Income Tax Services

Ethnic Group	Income		
	Low	Medium	High
Hispanic			
Non-Hispanic			

TABLE 2.6. Market Grid for Corporate Accounting Services

Location	Company size (sales)		
	Under $5 million	$5-$100 million	Over $100 million
Regional			
National			

The shaded areas in Table 2.5 represent two rather different market segments. Needs of these groups would be different and different marketing strategies must be used to satisfy the clients in each segment.

In Table 2.6, it is also apparent that the needs of users represented by the two shaded areas (segments) would be different. As market segments emerge through the analysis, a potential group of consumers with similar characteristics can be seen. Planners can then select specific target markets. For smaller firms, only one or a few segments may be of interest, whereas a large firm may develop or already have a complete line of products and therefore select several segments as potential target markets. This type of analysis is needed regardless of whether one or many segments is selected.

An alternate approach to the representation of a market is a buildup grid or diagram. This approach involves identifying the individual market segments and then putting them together to represent a mar-

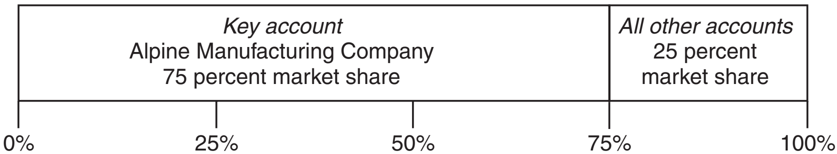

FIGURE 2.3. Market Segments for Industrial Product

ket. The result is the same: a recognition of the differences in needs of different consumers.

An example of this approach for an industrial product is shown in Figure 2.3. This shows the market for component parts of mud pumps used on oil rigs. In the consumer analysis, it was found that the market was dominated by one firm, which accounted for about 75 percent of the original equipment manufacturers' (OEM) sales in this market. The rest of the sales volume was divided among four other firms. The large manufacturer was designated a *key account,* meaning it was a very significant buyer and, therefore, a different marketing effort would be directed at this segment.

Consumer Profiles

As the process of developing market grids continues, a profile of the consumers in each segment emerges. This profile should be as complete as possible for each segment and should include all three types of characteristics (socioeconomic, behavioral, and psychological). The results of the analysis can be used in subsequent time periods so they should be easily accessible. In fact, if this type of analysis has already been completed, it can be updated or expanded.

The results of the analysis may be summarized as shown in Table 2.7. This approach allows a comparison of the characteristics for each segment in which a planner is interested.

Most of the information needed for this type of analysis can be obtained through secondary data. The most difficult data to obtain from secondary sources is psychological data. Unless the firm has previously conducted research to collect these data, a new study will be

TABLE 2.7. Consumer Characteristics by Segment

	Segment		
Characteristics	**1**	**2**	**3**
Socioeconomic			
Age	26-40	41-65	Over 65
Sex	Male	Male	Male
Income	Upper	Middle	Lower
Location	Southwest	Southeast	Southwest
Behavioral			
Shopping behavior	Specialty store	Department stores	Discount stores
Purchase rate	High	High	High
Psychological			
Opinions	Fashion oriented	Comfort oriented	Economy oriented
Awareness	High brand-name awareness	Some brand-name awareness	Low brand-name awareness

needed to collect them. For firms without a research staff, outside consultants or research firms may be used.

ESTIMATING THE POTENTIAL OF MARKET SEGMENTS

Once a market has been segmented, marketing managers seek to identify the level of demand that exists in each segment. This involves the use of market factors and the estimation of market potential for the segments.

Market Factors

Market factors are those realities of a market which cause demand for a product. For example, the market factor for baby beds is the number of babies born each year. Since a market is merely people with money and a motivation to buy, population figures and income figures are commonly used as market factors. However, it is usually possible to be much more specific in identifying market factors for a given company or product/service. The role of market factors is threefold: (1) identification of the factors that influence a product or service demand, (2) determination of the relationship between the factor and the product or service, and (3) forecasting that market factor for future years. Since many of the same market factors are used by different forecasters, much of that work may have already been completed and simply needs to be located. Population projections, for example, are available through many sources so there is usually no need to develop your own forecast of population.

Two basic techniques for selecting and determining the impact of market factors on a given product or service are arbitrary judgment and correlation analysis. Arbitrary judgment involves use of the decision maker's own experience and judgment in selecting factors and weighing them. (For new products/services this is a common technique since no sales history is available unless, of course, a test market is used.) For example, a drug manufacturer might determine from historical data that twelve dollars' worth of drugs are purchased for each person residing in a given market area. The number of consumers in a market area would be used to get information on the future size of that market area.

A more complex yet usually more reliable approach is to use correlation analysis to help identify factors and assign weights to them. Although it is beyond the scope of this book to discuss the details of this technique, a specific technique in correlation analysis called step-wise regression analysis not only weighs the various factors but also provides a measure of what the addition of each factor adds to an explanation of changes in sales. This method requires a sales history so it is limited mainly to existing products even though it could be used on test market data for new products.

Regardless of the technique used in analyzing market factors, the objectives include understanding the factors that influence demand for a product or service and the historical and future trend of that factor. This will be more evident in the discussion of using market factors to estimate market potential in the next section.

Market Potential

Once a market has been divided into various segments and characteristics of consumers and market factors have been analyzed, the next step is to estimate the *size* of the market. The term *market potential* is used to refer to the expected sales of a product or service for an entire market. Simply put, "If everybody that could buy would buy, how many units or dollars worth of sales would occur?" The answer to that question is the market potential. A market segment that does not have enough consumers spending enough dollars does not justify effort in that market unless a firm is seeking to accomplish some nonrevenue-related objective. You are not just seeking consumer markets but markets that can be served profitably by the firm attempting to meet its needs. Market potential is a quantitative measure of a market's capacity to consume a product in a given time period, which is a prerequisite to assessing profitability.

Estimating Potential for Existing Products or Services

Market potential can be measured in either absolute or relative terms. An absolute measure is one that can be expressed in units or dollars while a relative measure relates one part of a market to another and is expressed as a percent. Techniques for estimating absolute measures of potential are discussed as follows. These techniques are used when products and services are already on the market and the future size of the market is desired.

Sales index measure of relative potential. The sales index method provides a relative measure of potential for products that have reached the maturity stage of their product life cycle. This technique is useful in answering questions about the relative potential of various geographic market areas. Its use requires familiarity with the product in terms of stage and life cycle, penetration of distribution in various areas, and a sales history.

Market factor method. Normally, relative potential is not adequate and an absolute measure of potential is needed to provide estimates in units or dollars. One technique used to accomplish this is the market factor method. This involves identifying the factors that influence goods' or service's sales and relating the factors to sales in some way.

Regression analysis method. Another technique used to estimate potential is a statistical technique known as regression analysis. This technique relates market factors to sales in a more mathematically complex manner. Space does not permit a complete explanation of this technique; the purpose here is to show how it could be used in estimating potential. One result of regression analysis is an equation that relates market factors to sales. If more than one market factor is used, then multiple regression is needed. The resulting equation is then used to estimate potential. The approach still requires estimates of two market factors (independent variables) for the future time period for which the measure of potential is desired. This technique also permits calculation of a confidence interval for the estimate.

Estimating Potential for New Products or Services

When innovative new products or services are proposed, no industry sales are available as a point of reference for estimating potential. Under such circumstances, it is still important to identify market factors that are likely to influence the demand for the product or service. These factors can provide an upper limit to demand. For instance, knowing that there were 5 million men in a certain income and age category would be a useful reference point in beginning to analyze potential for a new product for males with these two characteristics. However, you would not expect each one of them to buy the product. Three techniques commonly used to refine estimates of potential from that upper limit are (1) judgmental estimates, (2) consumer surveys, and (3) the substitute method. A fourth technique combines several techniques and uses secondary data and consumer surveys to estimate potential.

Judgmental estimates. This technique involves the use of expert opinion of those knowledgeable about a market and product. This judgment can be used in a formalized approach such as the Delphi technique or it could involve pooled estimates and a reconciliation of differences between estimates given by different people.

Consumer surveys. Surveys of potential consumers can be used to estimate potential new products. This approach is especially useful for industrial products markets where the number of consumers is smaller and they can be more readily identified. For example, a part used in mud pumps for oil drilling rigs would involve only a few customers—manufacturers of mud pumps. They can be easily identified and their potential purchases can be estimated. This technique is more difficult to use in more diverse consumer markets but it can be adapted to consumer goods.

Substitute method. Most new products are substitutes for existing products on the market. If the size of these markets can be estimated, then the sales of the new product can be estimated based on its replacement potential. An acceptance rate would have to be estimated for the proportion of existing consumers who would switch to the new product when it was introduced on the market. This acceptance rate could be estimated through consumer research.

SUMMARY

A truly marketing-oriented organization seeks to understand the market, its competitors, and the financial implications of its possible actions before it begins to develop marketing plans. This chapter focused on the first of those activities—understanding markets—by discussing the rationale, benefits, and methods of market segmentation. Throughout, the marketing orientation philosophy of concentrating on understanding the market, rather than dictating to the market, was evident. Properly done, market segmentation is an extremely valuable first step in the process of identifying target markets and developing positioning strategies, which will be discussed in the chapters on marketing planning.