

2 OPPORTUNITY RECOGNITION

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If an idea is not an opportunity, what is an opportunity?¹ *An opportunity has the qualities of being attractive, durable, and timely and is anchored in a product or service which creates or adds value for its buyer or end user.*

For an opportunity to have these qualities, the “window of opportunity” is opening and remains open long enough. Further, entry into a market with the right characteristics is feasible and the management team is able to achieve it. The venture has or is able to achieve a competitive advantage (i.e., to achieve leverage). Finally, the economics of the venture are rewarding and forgiving and allow significant profit and growth potential.

To repeat, opportunities that have the qualities named above are anchored in a product or service that creates or adds value for its buyer or end user. The most successful entrepreneurs, venture capitalists, and private investors are opportunity-focused; that is, they start with what customers and the marketplace want and do not lose sight of this.

THE REAL WORLD

Opportunities are created, or built, using ideas and entrepreneurial creativity. Yet, while the image of a carpenter or mason at work is useful, in reality

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the process is more like the collision of particles in the process of a nuclear reaction or like the spawning of hurricanes over the ocean. Ideas interact with real-world conditions and entrepreneurial creativity at a point in time. The product of this interaction is an opportunity around which a new venture can be created.

The business environment in which an entrepreneur launches his or her venture is usually given and cannot be altered significantly. Despite the assumptions individuals make about social and nonprofit organizations, they too are subject to market forces and economic constraints. Consider, for instance, what would happen to donations if it were perceived that a nonprofit organization was not reinvesting its surplus returns, but instead was paying management excessive salaries. Or what if a society oriented organization, like the Body Shop, concentrated all its efforts on the social mission, while neglecting profits? Clearly, dealing with suppliers, production costs, labor, and distribution are critical to the health of these social corporations. Thus, social and nonprofit organizations are just as concerned with positive cash flow and generating sufficient cash flows, even though they operate in a different type of market than for-profit organizations. For-profit businesses operate in a free enterprise system characterized by private ownership and profits.

In a free enterprise system, *opportunities* are spawned when there are changing circumstances, chaos, confusion, inconsistencies, lags or leads, knowledge and information gaps, and a variety of other vacuums in an industry or market.

Changes in the business environment and, therefore, anticipation of these changes, are so critical in entrepreneurship that constant vigilance for changes is a valuable habit. It is thus that an entrepreneur with credibility, creativity, and decisiveness can seize an opportunity while others study it.

Opportunities are situational. Some conditions under which opportunities are spawned are entirely idiosyncratic, while, at other times, they are generalizable and can be applied to other industries, products, or services. In this way, cross-association can trigger in the entrepreneurial mind the crude recognition of existing or impending opportunities. It is often assumed that a marketplace dominated by large, multibillion-dollar players is impenetrable by smaller, entrepreneurial companies. After all, how can you possibly compete with entrenched, resource-rich, established companies? The opposite can be true for several reasons. A number of research projects have shown that it can take six years or more for a large company to change its strategy, and even longer to implement the new strategy since it can take 10 years and more to change the culture enough to operate differently. For a new or small company 10 or more years is forever. When Cellular One was launched in Boston, giant NYNEX was the sole competitor. From all estimates they built twice as many

towers (at \$500,000 each), spent two to three times as much on advertising and marketing, in addition to having a larger head-count. Yet, Cellular One grew from scratch to \$100 million in sales in five years and won three customers for every one that NYNEX won. What made this substantial difference? An entrepreneurial management team at Cellular One.

Some of the most exciting opportunities have actually come from fields the conventional wisdom said are the domain of big business: technological innovation. The performance of smaller firms in technological innovation is remarkable—95% of the radical innovations since World War II have come from new and small firms, not the giants. In fact, another study from the National Science Foundation found that smaller firms generated *24 times as many innovations* per research and development dollar versus firms with 10,000 or more employees.

There can be exciting opportunities in plain vanilla businesses that might never get the attention of venture capital investors. The revolution in microcomputers, management information systems (MIS), and computer networking has had a profound impact on a number of businesses that had changed little in decades. Take, for instance, the used-auto-wreck and used-auto-parts business, which has not changed in decades. Yet, Pintendre Auto, Inc., saw a new opportunity in this field by applying the latest computer and information technology to a traditional business that relied on crude, manual methods to track inventory and find parts for customers.² In just three years, he built a business with \$16 million in sales.

Other regulatory and technology changes can radically alter the way you think about the opportunities because of the economics of sales and distribution for many customer products, from fishing lures to books to cosmetics to sporting goods. By the mid-1990s, there will be 500 or so cable television channels in America versus 40 to 50 for most markets in 1993. A number of new companies up to \$100 million in sales have already been built using "infomercials." A 30-minute program can be produced for \$50,000 to \$150,000 and a half hour of air time can be purchased today for about \$20,000 in Los Angeles or for about \$4,000 in smaller cities. Compare that with a \$25,000+ cost of a full-page advertisement in a monthly magazine. With a large increase in the number of channels, the cost and market focus will undoubtedly improve. Traditional channels of distribution through distributors, wholesalers, specialty stores, and retailers will be completely leapfrogged. Entrepreneurs will find ways to convert those funds previously spent on the profit margin that went to the distribution channel (30% to 50%) to their infomercial marketing budget and to an increased gross margin for their business.

Consider the following broad range of examples that illustrate the phenomenon of vacuums in which opportunities are spawned:

- Deregulation of telecommunications and airlines led to the formation of tens of thousands of new firms in the 1980s, including Cellular One and Federal Express.
- Microcomputer hardware in the early 1980s far outpaced the development of software. The development of the industry was highly dependent on the development of software, leading to aggressive efforts by IBM, Apple, and others to encourage software entrepreneurs to close this gap.
- Many opportunities exist in fragmented, traditional industries that may have a craft or mom-and-pop character and where there is little appreciation or know-how in marketing and finance. Consider such possibilities as fishing lodges, inns, and hotels; cleaners/laundries; hardware stores; pharmacies; waste management plants; flower shops; nurseries; tents; and auto repairs.
- In our service-dominated economy (where 70% of businesses are service businesses, versus 30% just 25 years ago), customer service, rather than the product itself, can be the critical success factor. One study by the Forum Corporation in Boston showed that 70% of customers leave because of poor service and only 15% because of price or quality. Can you think of your last "wow" experience with exceptional customer service?
- Sometimes existing competitors cannot, or will not, increase capacity as quickly as the market is moving. For example, the tent industry was characterized by this capacity stickiness in the mid-1970s. In the late-1970s, some steel firms had a 90-week delivery lag, with the price to be determined, and foreign competitors certainly took notice.
- The tremendous shift to off-shore manufacturing of labor-intensive and transportation-insensitive products in Asia, Eastern Europe, and Mexico, such as computer-related and microprocessor-driven consumer products, is an excellent example.
- In a wide variety of industries, entrepreneurs sometimes find they are the only ones who can perform. Such fields as consulting, software design, financial services, process engineering, and technical and medical products and services abound with examples of know-how monopolies. Sometimes a management team is simply the best in an industry and irreplaceable in the near term, just as is seen with great coaches with winning records.

Big Opportunities with Little Capital

Within the dynamic free enterprise system, opportunities are apparent to a limited number of individuals—and not just to the individuals with financial

resources. Ironically, successful entrepreneurs like Howard Head attribute their success to the discipline of limited capital resources. Thus, in the 1990s, many entrepreneurs have been learning the key to success is in the art of bootstrapping, which "in a start-up is like zero inventory in a just-in-time system: It reveals hidden problems and forces the company to solve them."³ Consider the following:

- A 1991 study revealed that of the 100 start-ups researched, 77% had been launched with \$50,000 or less; 46% were started with \$10,000 or less as seed capital. Further, the primary source of capital was, overwhelmingly, personal savings (74%), rather than outside investors with deep pockets.⁴
- In the 1930s, Josephine Esther Mentzer assisted her uncle by selling skin care balm and quickly created her own products with \$100 initial investment. After convincing the department stores rather than the drug stores to carry her products, Estee Lauder was on its way to a \$3 billion corporation.⁵
- Putting their talents (cartooning and finance) together, Walt and Roy Disney moved to California and started their own film studio—with \$290 in 1923. Today, the Walt Disney Co. has a market value exceeding \$16 billion.⁶
- While working for a Chicago insurance company, a 24-year-old sent out 20,000 inquiries for a black newsletter. With 3,000 positive responses and \$500, John Harold Johnson published *Jet* for the first time in 1942. In the 1990s, Johnson Publishing publishes various magazines, including *Ebony*.⁷
- With \$100, Nicholas Graham, age 24, went to a local fabric store, picked out some patterns, and made \$100 worth of ties. Having sold the ties to specialty shops, Graham was approached by Macy's to place his patterns on men's underwear. So Joe Boxer Corporation was born and "six months into Joe Boxer's second year, sales had already topped \$1 million."⁸

Real Time

Opportunities exist or are created in real time and have what is called a *window of opportunity*. For an entrepreneur to seize an opportunity requires that the window be opening, not closing, and that it remain open long enough.

Exhibit 2.1 illustrates a window of opportunity for a generalized market. Markets grow at different rates over time and as a market quickly becomes larger, more and more opportunities are possible. As the market becomes larger and established, conditions are not as favorable. Thus, at the point where a market starts to become sufficiently large and structured (e.g., at 5 years in

EXHIBIT 2.1 Changes in the placement of the window of opportunity.

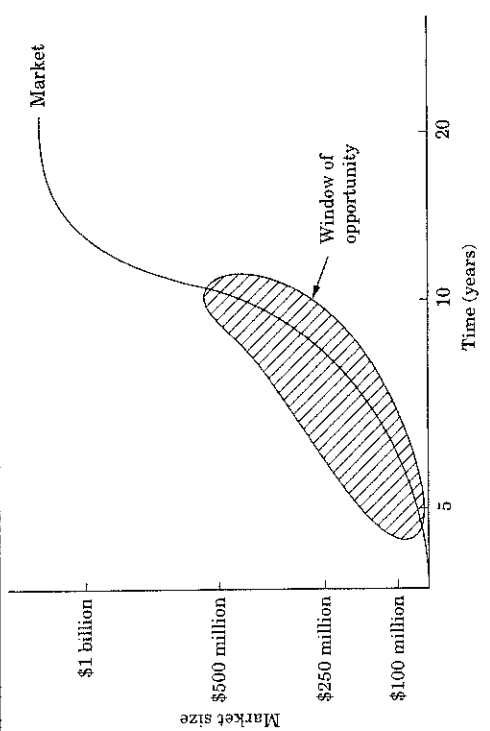


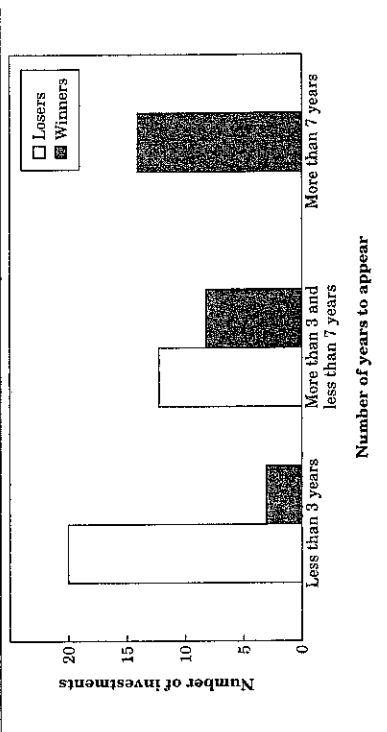
Exhibit 2.1), the window opens; the window begins to close as the market matures (e.g., at 15 years in the exhibit).

The curve shown describes the rapid growth pattern typical of such new industries as microcomputers and software, cellular car phones, quick oil changes, and biotechnology. For example, in the cellular car phone industry, most major cities began service between 1983 and 1984 for the very first time. By 1989, there were over 2 million subscribers in the United States, and the industry continued to experience significant growth. In other industries, such as a mature industry, where growth is not so rapid, the slope of a curve would be less steep and the possibilities for opportunities fewer.

Finally, in considering the window of opportunity, the length of time the window will be open is important. It takes a considerable length of time to determine whether a new venture is a success or a failure. And, if it is to be a success, the benefits of that success need to be harvested.

Exhibit 2.2 shows that for venture-capital-backed firms, the lemons (i.e., the losers) ripen in about two and a half years, while the pearls (i.e., the winners) take seven or eight years. An extreme example of the length of time it can take for a pearl to be harvested is the experience of a Silicon Valley venture capital firm that invested in a new firm in 1966 and was finally able to realize a capital gain in early 1984.

EXHIBIT 2.2 Lemons and pearls.



Another way to think of the process of creating and seizing an opportunity in real time can be thought of as a process of selecting objects (opportunities) from a conveyor belt moving through an open window, the window of opportunity. The speed of the conveyor belt changes, and the window through which it moves is constantly opening and closing. That the window is continually opening and closing and that the speed of the conveyor belt is constantly changing represent the volatile nature of the marketplace and the importance of timing. For an opportunity to be created and seized, it needs to be selected from the conveyor belt before the window closes.

The ability to recognize a potential opportunity when it appears and the sense of timing to seize it as the window is opening, rather than slamming shut, are critical. That opportunities are a function of real time is illustrated in a statement made by Ken Olsen, the president and founder of Digital Equipment Corporation, in 1977: "There is no reason for any individual to have a computer in their home." Nor is it so easy for even the world's leading experts to predict just which innovative ideas and concepts for new business will evolve into the major industries of tomorrow. This is vividly illustrated by several quotations from very famous innovators. In 1901, two years before the famous flight, Wilbur Wright said, "Man will not fly for 50 years." In 1910, Thomas Edison said, "The nickel-iron battery will put the gasoline buggy . . . out of existence in no time." And in 1932, Albert Einstein made it clear: "There is not the slightest indication that nuclear energy will ever be obtainable. It would mean that the atom would have to be shattered at will."

RELATION TO THE FRAMEWORK OF ANALYSIS

It is also important to remember that successful opportunities, once recognized, fit with the other forces of new venture creation. This iterative process of assessing and reassessing the fit among the central driving forces in the creation of a new venture was shown in Exhibit 1.3 in Chapter 1. Of utmost importance when talking of opportunity recognition is the fit of the lead entrepreneur and the management team with an opportunity. Good opportunities are both *desirable* to and *attainable* by those on the team using the resources that are available.

In order to understand how the entrepreneurial vision relates to the analytical framework, it may be useful to look at an opportunity as a three-dimensional relief map with its valleys, mountains, and so on, all represented. Each opportunity has three or four critical factors (e.g., proprietary license, patented innovation, sole distribution rights, an all-star management team, breakthrough technology). These elements pop out at the observer; they indicate huge possibilities where others might see obstacles. Thus, it is easy to see why there are thousands of exceptional opportunities that will fit with a wide variety of entrepreneurs, but that might not fit neatly into the framework outlined in Exhibit 2.3.

EXHIBIT 2.3 Criteria for evaluating venture opportunities.

Attractiveness			
Criteria	Highest potential	Lowest potential	
Industry and market	Changes way people live and work	Incremental improvement only	
Market:	Market driven; identified; recurring revenue niche	Unfocused; one-time revenue only	
Customers	Reachable; purchase orders	Loyal to others or unreachable	
User benefits	Less than one-year payback	Three years plus payback	
Value added	High; advance payments	Low; minimal impact on market	
Product life	Durable	Perishable	
Market structure	Imperfect, fragmented competition or emerging in industry	Highly concentrated or mature or declining industry	
Market size	\$100 million to \$1 billion sales potential	Unknown, less than \$20 million or multibillion sales	
Growth rate	Growth at 30–50% or more	Contracting or less than 10%	
Market capacity (Year 5)	At or near full capacity	Undercapacity	
Cost structure	20% or more; leader	Less than 5%	
	Low-cost provider; cost advantages	Declining cost	

EXHIBIT 2.3 (Continued)

Attractiveness			
Criteria	Highest potential	Lowest potential	
Economics			
Time to breakeven/positive cash flow	Under 1½–2 years	More than 4 years	
ROI potential	25% or more; high value	Less than 15–20%; low value	
Capital requirements	Low to moderate; fundable	Very high; unfundable	
Internal rate of return potential	25% or more per year	Less than 15% per year	
Free cash flow characteristics:			
Sales growth	Favorable; sustainable; 20–30% or more of sales	Less than 10% of sales	
Asset intensity	Moderate to high (+15% to +20%)	Less than 10%	
Spontaneous working capital	Low/sales \$	High	
R&D/capital expenditures	Low, incremental requirements	High requirements	
Gross margins	Exceeding 40% and durable	High requirements	
After-tax profits	High; greater than 10%; durable	Under 20% Low	
Time to break-even profit and loss	Less than two years; breakeven not creeping	Greater than four years; breakeven creeping up	
Harvest issues			
Value-added potential	High strategic value	Low strategic value	
Valuation multiples and comparables	20 × P/E; 8–10 × EBIT; 1.5–2 × revenue; 8–10 × free cash flow	≤ 5 × P/E; 3–4 × EBIT; ≤ .4 × revenue	
Exit mechanism and strategy	Present or envisioned options	Undefined; illiquid investment	
Capital market context	Favorable valuations, timing, capital available; realizable liquidity	Unfavorable; credit crunch	
Competitive advantage issues			
Fixed and variable costs	Lowest; high operating leverage	Highest	
Control over costs, prices, and distribution	Moderate to strong	Weak	
Barriers to entry:			
Proprietary protection	Have or can gain	None	
Response/lead time	Competition slow, napping	Unable to gain edge	
Legal, contractual advantage	Proprietary or exclusivity	None	
Contracts and networks	Well-developed; accessible	Crude; limited	
Key people	Top talent; an A team	B or C team	

(Continued)

EXHIBIT 2.3 (Continued)

Criteria	Attractiveness	
	Highest potential	Lowest potential
Management team		
Entrepreneurial team	All-star combination; free agents	Weak or solo entrepreneur
Industry and technical experience	Top of the field; super track-record	Underdeveloped
Integrity	Highest standards	Questionable
Intellectual honesty	Know what they do not know	Do not want to know what they do not know
Fatal-flaw issue		
Non-existent		One or more
Personal criteria		
Goals and fit	Getting what you want; but wanting what you get.	Surprises, as in <i>The Crying Game</i>
Upside/downside issues	Attainable success/limited risks	Linear; on same continuum
Opportunity costs	Acceptable cuts in salary, etc.	Comfortable with status quo
Desirability	Fits with lifestyle	Simply pursuing big money
Risk/reward tolerance	Calculated risk; low risk/reward ratio	Risk adverse or gambler
Stress tolerance	Thrives under pressure	Cracks under pressure
Strategic differentiation		
Degree of fit	High	Low
Team	Best in class; excellent free agents	B team; no free agents
Service management	Superior service concept	Perceived as unimportant
Timing	Rowing with the tide	Rowing against the tide
Technology	Groundbreaking; one of a kind	Many substitutes or competitors
Flexibility	Able to adapt; commit and decommit quickly	Slow; stubborn
Opportunity orientation	Always searching for opportunities	Operating in a vacuum; napping
Pricing	At or near leader	Undercut competitor; low prices
Distribution channels	Accessible; networks in place	Unknown; inaccessible
Room for error	Forgiving strategy	Unforgiving, rigid strategy

SCREENING OPPORTUNITIES

Opportunity Focus

Opportunity focus is also the most fruitful point of departure for screening opportunities. The screening process should not begin with strategy (which derives from the nature of the opportunity), with financial and spreadsheet analysis (which flow from the former), or with estimations of how much the company is worth and who will own what shares.⁹

These starting points, and others, usually place the cart before the horse. Perhaps the best evidence of this phenomenon comes from the tens of thousands of tax-sheltered investments that turned sour in the mid-1980s. Also, as has been noted, a good number of entrepreneurs who start businesses—particularly those for whom the ventures are their first—run out of cash at a faster rate than they bring in customers and profitable sales. There are lots of reasons why this happens, but one thing is certain: These entrepreneurs have not focused on the right opportunity.

Over the years, those with experience in business and in specific market areas have developed rules of thumb to guide them in screening opportunities. For example, one such rule of thumb was used by a firm with approximately \$1 billion in sales in evaluating start-ups in the minicomputer industry in the mid-1980s. This firm believed, based on an analysis of performance data relating to 60 computer-related start-ups in the United States from 1975 to 1984, that one leading indicator of the progress of new firms and a good boundary measure of positive performance and a healthy start was sales per employee of \$75,000 or more. To this firm, sales of less than \$50,000 per employee signaled serious trouble. While there is always the risk of oversimplification in using rules of thumb, it is true also that one can miss the fundamentals while searching for subtleties.

Screening Criteria: The Characteristics of High-Potential Ventures

Venture capitalists, savvy entrepreneurs, and investors also use this concept of boundaries in screening ventures. Exhibit 2.3 summarizes criteria used by venture capitalists to evaluate opportunities. These criteria are used by this group to evaluate a select group of opportunities that tend to have a high-technology bias. As will be seen later, venture capital investors reject 60% to 70% of the new ventures presented to them very early in the review process, based on how the entrepreneurs satisfy these criteria.

However, these criteria are not the exclusive domain of venture capitalists. The criteria are based on plain good business sense that is used by successful entrepreneurs, private investors, and venture capitalists. Consider the following examples of great little companies built without a dime of professional venture capital:

- Paul Tobin, who built Cellular One in eastern Massachusetts from ground zero to \$100 million in revenue in five years, has started Roamer Plus with less than \$300,000 of internally generated funds from other ventures. Within two years, it grew to a \$15 million annual sales rate and was very profitable.
- Another entrepreneur started a small specialty publishing company with minimal capital and grew it to over \$12 million in highly profitable sales by 1987. While looking for acquisitions, he discovered that valuations were at an all-time high. Instead of buying, he decided to sell. In 1988, he sold his small firm for over \$70 million.
- Morris Alper & Sons was a third-generation, small, traditional food brokerage business with around 40 employees when the founder's grandson joined the firm in the early 1970s. By 1993, financed entirely by internally generated cash flow, they have grown to nearly 350 employees. The company has become an integrated marketing services firm whose clients are 70 of the largest consumer food product companies in North America.
- In 1983, Charlie Butcher, at age 66, had to decide whether to buy out an equal partner in his 100-year-old industrial polish and wax business with less than \$10 million in sales. This niche business had high gross margins, very low working capital and fixed-asset requirements for increased sales, substantial steady growth of over 18 percent per year, and excellent products. The result was a business with very high free cash flow and potential for growth. He acquired the company with a bank loan and seller financing, and then he increased sales to over \$50 million by 1993. The company continues to be highly profitable. Charlie vows never to utilize venture capital money or to take the company public.

The point of departure here is opportunity and, implicitly, the customer, the market-place, and the industry. Exhibit 2.3 shows how higher and lower potential opportunities can be placed along an attractiveness scale. The criteria provide some quantitative way in which an entrepreneur can make judgments about industry and market issues, competitive advantage issues, economic and harvest issues, management team issues, and fatal flaw issues and whether these add up to a compelling opportunity. For example, *dominant* strength in any one of these criteria can readily translate into a winning entry, whereas a flaw in any one can be fatal.

Entrepreneurs contemplating opportunities that will yield attractive companies, not high-potential ventures, can also benefit from paying attention to these criteria. These entrepreneurs will then be in a better position to decide how these criteria can be compromised. As outlined in Exhibit 2.3, business opportunities with the greatest potential will possess many of the following, or they will so dominate in one or a few that the competition cannot come close.

Industry and Market Issues

Market

Higher potential businesses can identify a market niche for a product or service that meets an important customer need and provides high value-added or value-created benefits to customers. Customers are reachable and receptive to the product or service, with no brand or other loyalties. The potential payback to the user or customer of a given product or service through cost savings or other value-added or value-created properties is one year or less and is identifiable, repeatable, and verifiable. Further, the life of the product or service exists beyond the time needed to recover the investment, plus a profit. And the company is able to expand beyond a one-product company. Take, for example, the growing success of cellular car phone service. At prevailing rates, one can talk for about \$25 an hour, and many providers of professional services can readily bill more than the \$25 an hour for what would otherwise be unused time. If benefits to customers cannot be calculated in such dollar terms, then the market potential is far more difficult and risky to ascertain.

Lower potential opportunities are unfocused regarding customer need, and customers are unreachable and/or have brand or other loyalties to others. A payback to the user of more than three years and a low value added or created also makes an opportunity unattractive. Being unable to expand beyond a one-product company also can make for a lower potential opportunity. The failure of one of the first portable computer companies, Osborne Computer, is a good example of this.

Market structure

Market structure, such as evidenced by the number of sellers, size distribution of sellers, whether products are differentiated, conditions of entry and exit, number of buyers, cost conditions, and sensitivity of demand to changes in price, are significant.

A fragmented, imperfect market or emerging industry often contains vacuums and asymmetries that create unfilled market niches—for example, markets where resource ownership, cost advantages, and the like can be achieved. In addition, those where information or knowledge gaps exist and

where competition is profitable, but not so strong as to be overwhelming, are attractive. An example of a market with an information gap is that of the experience a Boston entrepreneur encountered with a large New York company that wanted to dispose of a small, old office building in downtown Boston. This office building, because its book value was about \$200,000, was viewed by the financially oriented firm as a low-value asset, and the company wanted to dispose of it so the resulting cash could be put to work for a higher return. The buyer, who had done more homework than the out-of-town sellers, bought the building for \$200,000 and resold it in less than six months for over \$8 million.

Industries that are highly concentrated, that are perfectly competitive, or that are mature or declining industries are typically unattractive. The capital requirements and costs to achieve distribution and marketing presence can be prohibitive, and such behavior as price cutting and other competitive strategies in highly concentrated markets can be a significant barrier to entry. (The most blatant example is organized crime and its life-threatening actions when territories are invaded.) Yet, revenge by normal competitors who are well-positioned through product strategy, legal tactics, and the like, also can be punishing to the pocketbook.

The airline industry, after deregulation, is an example of a perfectly competitive market and one where many of the recent entrants will have difficulty. The unattractiveness of perfectly competitive industries is captured by the comment of prominent Boston venture capitalist William Egan, who put it this way: "I want to be in a nonauction market."¹⁰

Market size

An attractive new venture sells to a market that is large and growing (i.e., one where capturing a small market share can represent significant and increasing sales volume). A minimum market size of over \$100 million in sales is attractive. Such a market size means it is possible to achieve significant sales by capturing roughly 5% or less and thus not threatening competitors. For example, to achieve a sales level of \$1 million in a \$100 million market requires capturing only 1% of the market. Thus, a recreational equipment manufacturer entered a \$60 million market that was expected to grow at 20% per year to over \$100 million by the third year. The founders were able to create a substantial smaller company without obtaining a major market share and possibly incurring the wrath of existing competitors.

However, such a market can be too large. A multibillion-dollar market may be too mature and stable, and such a level of certainty can translate into competition from *Fortune* 500 firms and, if highly competitive, into lower margins and profitability. Further, an unknown market or one that is less than \$10 million in sales also is unattractive. To understand the disadvantage of a large,

more mature market, consider the entry of a firm into the microcomputer industry today versus the entry of Apple Computer into that market in 1975.

Growth rate

An attractive market is large and growing (i.e., one where capturing a good share of the increase is less threatening to competitors and where a small market share can represent significant and increasing sales volume). An annual growth rate of 30% to 50% creates new niches for new entrants, and such a market is a thriving and expansive one, rather than a stable or contracting one, where competitors are scrambling for the same niches. Thus, for example, a \$100 million market growing at 50% per year has the potential to become a \$1 billion industry in a few years, and if a new venture is able to capture just 2% of sales in the first year, it can attain sales in the first year of \$1 million. If it just maintains its market share over the next few years, sales will grow significantly.

Market capacity

Another signal of the existence of an opportunity is a market is a market at full capacity in a growth situation—in other words, a demand that the existing suppliers cannot meet. Timing is of vital concern in such a situation, which means the entrepreneur should be asking himself or herself: Can a new entrant fill that demand before the other players can decide to and then actually increase capacity?

Market share attainable

The potential to be a leader in the market and capture at least a 20% share of the market is important. The potential to be a leader in the market and capture at least 20% can create a very high value for a company that might otherwise be worth not much more than book value. For example, one such firm, with less than \$15 million in sales, became the dominant factor in its small market niche with a 70% market share. The company was acquired for \$23 million in cash.

A firm that will be able to capture less than 5% of a market is unattractive in the eyes of most investors seeking a higher potential company.

Cost structure

A firm that can become the low-cost provider is attractive, but a firm that continually faces declining cost conditions is less so. Attractive opportunities exist in industries where economies of scale are insignificant (or work to the advantage of the new venture). Attractive opportunities boast of low costs of learning by doing. Where costs per unit are high when small amounts of the product are sold, existing firms that have low promotion costs can face attractive market opportunities.

For instance, consider the operating leverage of Johnsonville Sausage. Their variable costs were 6% labor and 94% materials. What aggressive incentives could management put in place for the 6% to manage and to control the 94%? Imagine the disasters that would occur if the scenario were reversed!

A word of caution from Scott W. Kunkel and Charles W. Hofer, who observed that

Overall, industry structure . . . had a much smaller impact on new venture performance than has previously been suggested in the literature. This finding could be the result of one of several possibilities:

1. Industry structure impacts the performance of established firms, but does NOT have a significant impact on new venture performance.
2. The most important industry structural variables influencing new ventures are different from those which impact established firms and thus research has yet to identify the industry structural variables that are most important in the new venture environment.
3. Industry structure does NOT have a significant DIRECT impact on firm performance, as hypothesized by scholars in the three fields of study. Instead, the impact of industry structure is strongly mitigated by other factors, including the strategy selected for entry.¹¹

Economics

Profits after tax

High and durable gross margins usually translate into strong and durable after-tax profits. Attractive opportunities have potential for durable profits of at least 10% to 15%, and often 15% to 20% or more. Those generating after-tax profits of less than 5% are quite fragile.

Time to breakeven and positive cash flow

As mentioned above, breakeven and positive cash flow for attractive companies are possible within two years. Once the time to breakeven and positive cash flow is greater than three years, the attractiveness of the opportunity diminishes accordingly.

ROI potential

An important corollary to forgiving economics is reward. Very attractive opportunities have the potential to yield a return on investment of 25% or more per year. After all, during the 1980s, many venture capital funds achieved only single-digit returns on investment. High and durable gross margins and high and durable after-tax profits usually yield high earnings per share and high return on stockholders' equity, thus generating a satisfactory "harvest" price for a company. This is most likely true whether the company is sold

through an initial public offering or privately or whether it is acquired. Given the risk typically involved, a return on investment potential of less than 15% to 20% per year is unattractive.

Capital requirements

Ventures that can be funded and have capital requirements that are low to moderate are attractive. Realistically, most higher potential businesses need significant amounts of cash—several hundred thousand dollars and up—to get started. However, a business that can be started with little or no capital is rare, but they do exist. One such venture was launched in Boston in 1971 with \$7,500 of the founder's capital and grew to over \$30 million in sales by 1989. In today's venture capital market, the first round of financing is typically \$1 million to \$2 million or more for a start-up.¹² Some higher potential ventures, such as those in the service sector or "cash sales" businesses, have lower capital requirements than do high-technology manufacturing firms with continual large research and development expenditures.

If the venture needs too much money or cannot be funded, it is unattractive. An extreme example is a venture that a team of students recently proposed to repair satellites. The students believed that the required start-up capital was in the \$50 million to \$200 million range. Projects of this magnitude are in the domain of the government and the very large corporation, rather than that of entrepreneurs and venture capitalists.

Internal rate of return potential

Is the risk reward relationship attractive enough? The response to this question can be quite personal, but the most attractive opportunities often have the promise—and deliver—a very substantial upside of 5 to 10 times the original investment in 5 to 10 years. Of course, the extraordinary successes can yield 50 to 100 times or more, but these truly are exceptions. A 25% or more annual compound rate of return is considered very healthy. In the early 1990s, those investments considered basically risk free had yields of 3% to 8%.

Free cash flow characteristics¹³

Free cash flow is a way of understanding a number of crucial financial dimensions of any business: the robustness of its economics; its capital requirements, both working and fixed assets; its capacity to service external debt and equity claims; and its capacity to sustain growth. We define unlevered free cash flow (FCF) as earnings before interest but after taxes (EBIAT) plus amortization (A) and depreciation (D) less spontaneous working capital requirements (WC) less capital expenditures (CAPEX), or $FCF = EBIAT + [A + D] - [+ \text{ or } - WC] - CAPEX$. EBIAT is driven by sales, profitability, and asset intensity.

Low-asset-intensive, high-margin businesses generate the highest profits and sustainable growth.¹⁴

Gross margins

The potential for high and durable gross margins (i.e., the unit selling price less all direct and variable costs) is important. Gross margins exceeding 40% to 50% provide a tremendous built-in cushion that allows for more error and more flexibility to learn from mistakes than do gross margins of 20% or less. High and durable gross margins, in turn, mean that a venture can reach breakeven earlier, an event that preferably occurs within the first two years. Thus, for example, if gross margins are just 20%, for every \$1 increase in fixed costs (e.g., insurance, salaries, rent, and utilities), sales need to increase \$5 just to stay even. If gross margins are 75%, however, a \$1 increase in fixed costs requires a sales increase of just \$1.33. An example of the cushion provided by high and durable gross margins is provided by an entrepreneur who built the international division of an emerging software company to \$17 million in highly profitable sales in just five years (when he was 25 years of age). He stresses there is simply no substitute for outrageous gross margins, by saying, "It allows you to make all kinds of mistakes that would kill a normal company. And we made them all. But our high gross margins covered all the learning tuition and still left a good profit."¹⁵ Gross margins of less than 20%, particularly if they are fragile, are unattractive.

Time to breakeven—cash flow and profit and loss (P&L)

New businesses which can quickly achieve a positive cash flow and become self-sustaining are highly desirable. It is often the second year before this is possible, but the sooner the better. Simply having a longer window does not mean that the business will be lousy. Two great companies illustrate that a higher potential business can have a longer window. For instance, Pilkington Brothers, an English firm that developed plate glass technology, ran huge losses for over two and a half years before it was regarded as a great company. Similarly, Federal Express went through an early period of enormous negative cash flows of \$1 million a month.

Harvest Issues

Value-added potential

New ventures that are based on strategic value in an industry, such as valuable technology, are attractive, while those with low or no strategic value are less attractive. For example, most observers contend, a product technology of compelling strategic value to Xerox was owned, in the mid-1980s, by a small

company with about \$10 million in sales and showing a prior-year loss of \$1.5 million. Xerox purchased the company for \$56 million. Opportunities with extremely large capital commitments, whose value on exit can be severely eroded by unanticipated circumstances, are less attractive. An example would be nuclear power.

Thus, one characteristic of businesses that command a premium price is that they have high value-added strategic importance to their acquirer: distribution, customer base, geographic coverage, proprietary technology, contractual rights, and the like. To illustrate, such companies might be valued at four, five, even six times (or more) last year's sales, whereas perhaps 60% to 80% of companies might be purchased at .75 to 1.25 times sales.

Valuation multiples and comparables

Consistent with the above point, there is a large spread in the value the capital markets place on private and public companies. Part of your analysis is to identify some of the historical boundaries for the valuations placed on companies in the market/industry/technology area you intend to pursue. The rules of thumb outlined in Exhibit 2.3 are variable and should be thought of as a boundary and a point of departure.

Exit mechanism and strategy

Businesses that are eventually sold—privately or to the public—or acquired usually are started and grown with a harvest objective in mind. Attractive companies that realize capital gains from the sale of their businesses have, or envision, a harvest or exit mechanism. Unattractive opportunities do not have an exit mechanism in mind. Planning is critical because, as is often said, it is much harder to get out of a business than to get into it. Giving some serious thought to the options and likelihood that the company can eventually be harvested in an important initial and ongoing aspect of the entrepreneurial process.

Capital market context

The context in which the sale or acquisition of the company takes place is largely driven by the capital market context at that particular point in time. Timing can be a critical component of the exit mechanism because, as one study indicated, since World War II, the average bull market on Wall Street has lasted just six months. For a keener appreciation of the critical difference the capital markets can make, one only has to recall the stock market crash of October 19, 1987, or the bank credit crunch of 1990–1992. In fact, by the end of 1987, the valuation of the Venture Capital 100 index dropped 43% and private company valuations followed. Initial public offerings are especially

vulnerable to the vicissitudes of the capital markets; here the timing is vital. Some of the most successful companies seem to have been launched when debt and equity capital were most available and relatively cheap.

Competitive Advantages Issues

Variable and fixed costs

An attractive opportunity has the potential for being the lowest-cost producer and for having the lowest costs of marketing and distribution. For example, Bowmar was unable to remain competitive in the market for electronic calculators after the producers of large-scale integrated circuits, such as Texas Instruments, entered the business. Being unable to achieve and sustain a position as a low-cost producer shortens the life expectancy of a new venture.

Degree of control

Attractive opportunities have potential for moderate-to-strong degree of control over prices, costs, and channels of distribution. Fragmented markets where there is no dominant competitor—no IBM—have this potential. These markets usually have a market leader with a 20% market share or less. For example, sole control of the source of supply of a critical component for a product or of channels of distribution can give a new venture market dominance even if other areas are weak.

Lack of control over such factors as product development and component prices can make an opportunity unattractive. For example, in the case of Viatron, its suppliers were unable to produce several of the semiconductors that the company needed at low enough prices to permit Viatron to make the inexpensive computer terminal that it had publicized extensively.

A market where a major competitor has a market share of 40%, 50%, or, especially, 60% usually implies a market where power and influence over suppliers, customers, and pricing create a serious barrier and risk for a new firm. Such a firm will have few degrees of freedom. However, if a dominant competitor is at full capacity, is slow to innovate or to add capacity in a large and growing market, or routinely ignores or abuses the customer (remember "Ma Bell"), there may be an entry opportunity. However, entrepreneurs usually do not find such sleepy competition in dynamic, emerging industries dense with opportunity.

Entry barriers

Having a favorable window of opportunity is important. Having or being able to gain proprietary protection, regulatory advantage, or other legal or contractual

advantage, such as exclusive rights to a market or with a distributor, is attractive. Having or being able to gain an advantage in response/lead times is important since these can create barriers to entry or expansion by others. For example, advantages in response/lead times in technology, product innovation, market innovation, people, location, resources, or capacity make an opportunity attractive. Possession of well-developed, high-quality, accessible contacts that are the products of years of building a top-notch reputation and that cannot be acquired quickly is also advantageous. In fact, there are times when this competitive advantage may be so strong as to provide dominance in the marketplace, even though many of the other factors are weak or average. An example of how quickly the joys of start-up may fade if others cannot be kept out is the experience of firms in the hard disk drive industry that were unable to erect entry barriers in the United States in the early to mid-1980s. By the end of 1983, some 90 hard disk drive companies were launched, and severe price competition led to a major industry shakeout.

If a firm cannot keep others out or if it faces already existing entry barriers, it is unattractive. An easily overlooked issue is a firm's capacity to gain distribution of its product. As simple as it may sound, even venture-capital-backed companies fall victim to this market issue. Air Florida apparently assembled all the right ingredients, including substantial financing, yet was unable to secure sufficient gate space for its airplanes. Even though it sold passenger seats, it had no place to pick the passengers up or drop them off.

Management Team Issues

Entrepreneurial team

Attractive opportunities have teams which are existing and strong and contain industry superstars. The team has proven profit and loss experience in the same technology, market, and service area, and members have complementary and compatible skills. An unattractive opportunity does not have such a team in place or has no team.

Industry and technical experience

A management track record of significant accomplishment in the industry, with the technology, and in the market area, with a proven profit, and lots of achievements where the venture will compete is highly desirable. A top-notch management team can become the most important strategic competitive advantage in an industry. Imagine relocating the Chicago Bulls or the Phoenix Suns to Halifax, Nova Scotia; do you think you would have a winning competitor in the National Basketball Association?

Integrity

Trust and integrity are the oil and glue that make economic interdependence possible. Having an unquestioned reputation in this regard is a major long-term advantage for entrepreneurs and should be sought in all personnel and backers. A shady past or record of questionable integrity is for B team players only.

Intellectual honesty

There is a fundamental issue of whether the founders know what they do and do not know, as well as whether they know what to do about shortcomings or gaps in the team and the enterprise.

Fatal-Flaw Issues

Basically, attractive ventures have no fatal flaws; an opportunity is rendered unattractive if it suffers from one or more fatal flaws. Usually, these relate to one of the above criteria, and examples abound of markets which are too small, which have overpowering competition, where the cost of entry is too high, where an entrant is unable to produce at a competitive price, and so on. An example of an entry barrier's being a fatal flaw was Air Florida's inability to get its flights listed on reservation computers.

Personal Criteria

Goals and fit

Is there a good match between the requirements of business and what the founders want out of it? A very wise woman, Dorothy Stevenson, pinpointed the crux of it with this powerful insight: "Success is *getting* what you want. Happiness is *wanting* what you get."

Upside/downside issues

An attractive opportunity does not have excessive downside risk. The upside and the downside of pursuing an opportunity are not linear, nor are they on the same continuum. The upside is easy, and it has been said that success has a thousand sires. The downside is quite another matter, since it has also been said that failure is an orphan. An entrepreneur needs to be able to absorb the financial downside in such a way that he or she can rebound, without becoming indentured to debt obligations. If an entrepreneur's financial exposure in launching the venture is greater than his or her net worth—the resources he or she can reasonably draw upon, and his or her alternative disposable earnings stream if it does not work out—the deal may be too big. While today's bankruptcy laws are extremely generous, the psychological burdens of living

through such an ordeal are infinitely more painful than the financial consequences. An existing business needs to consider if a failure will be too demanding to the firm's reputation and future credibility, aside from the obvious financial consequences.¹⁶

Opportunity cost

In pursuing any venture opportunity, there are also opportunity costs. An entrepreneur who is skilled enough to grow a successful, multimillion-dollar venture has talents that are highly valued by medium- to large-sized firms as well. While assessing benefits that may accrue in pursuing an opportunity, an entrepreneur needs to take a serious look at other alternatives, including potential "golden handcuffs," and account honestly for any cut in salary that may be involved in pursuing a certain opportunity.

Further, pursuing an opportunity can shape an entrepreneur in ways that are hard to imagine. An entrepreneur will probably have time to execute between two to four multimillion-dollar ventures between the ages of 25 and 50. Each of these experiences will position him or her, *for better or for worse*, for the next opportunity. Since it is important for an entrepreneur, in his or her early years, to gain relevant management experience and since building a venture (either one that works out or one that does not) takes a lot more time than is commonly believed, it is important to consider alternatives while assessing an opportunity.

Desirability

A good opportunity is not only attractive but also desirable (i.e., a good opportunity fits). An example of an intensely personal criterion would be the desire for a certain lifestyle. This desire may preclude pursuing certain opportunities (i.e., certain opportunities may be opportunities for someone else). The founder of a major high-technology venture in the Boston area was asked why the headquarters of his firm were located in downtown Boston, while those of other such firms were located on the famous Route 128 outside of the city. His reply was that he wanted to live in Boston because he loved the city and wanted to be able to walk to work. He said, "The rest did not matter."

Risk/reward tolerance

Successful entrepreneurs take calculated risks or avoid risks they do not need to take; as a country western song put it: "You have to know when to hold 'em, know when to fold 'em, know when to walk away, and know when to run." This is not to suggest that all entrepreneurs have the same risk tolerance; some are quite conservative while others actually seem to get a kick out of the inherent danger and thrill in higher risk and higher stake games. The real issue is fit—

recognizing that gamblers and overly risk averse entrepreneurs are unlikely to sustain any long-term successes.

Stress tolerance

Another important dimension of the fit concept is the stressful requirements of a fast-growth high-stakes venture. Or as President Harry Truman said so well: "If you can't stand the heat, then stay out of the kitchen."

Strategic Differentiation

Degree of fit

To what extent is there a good fit among the driving forces (founders and team, opportunity and resource requirements) and the timing given the external environment?

Team

There is no substitute for an A quality team, since the execution and the ability to adapt and to devise constantly new strategies is so vital to survival and success. A team is nearly unstoppable if it can inculcate into the venture a philosophy and culture of superior learning, as well as teaching skills, an ethic of high standards, delivery of results, and constant improvement. Are they free agents—clear of employment, noncompete, proprietary rights, and trade secret agreements—who are able to pursue the opportunity?

Service management

A few years ago, the Forum Corporation of Boston conducted research across a wide range of industries with several hundred companies to determine why customers stopped buying these companies' products. The results were surprising. 15% of the customers defected because of quality and 70% stopped using a product or service because of bad customer service. Having a "turbo-service" concept that can be delivered consistently can be a major competitive weapon against small and large competitors alike. Home Depot, in the home supply business, and Lexus, in the auto industry, have set an entirely new standard of service for their industries.

Timing

From business to historic military battles to political campaigns, timing is often the one element that can make a significant difference. Time can be an enemy or a friend; being too early or too late can be fatal. The crux is to row with tide, not against it. Strategically, ignoring this principle is perilous.

Technology

A breakthrough, proprietary product is no guarantee of success, but it certainly creates a formidable competitive advantage (see Exhibit 2.4).

Flexibility

Maintaining the capacity to commit and decommit quickly, to adapt, and to abandon if necessary is a major strategic weapon, particularly when competing with larger organizations. Larger firms can typically take six years or more to change basic strategy and 10 to 20 years or more to change the culture.

Opportunity orientation

To what extent is there a constant alertness to the marketplace? A continual search for opportunities? As one insightful entrepreneur put it, "Any opportunity that just comes in the door to us, we do not consider an opportunity. And we do not have a strategy until we are saying no to lots of opportunities."

Pricing

One of the most common mistakes of new companies, with high-value-added products or services in a growing market, is to underprice. A price slightly below to as much as 20% below competitors is rationalized as necessary to gain market entry. In a 30% gross margin business a 10% price increase results in a 21% increase in gross margin and will lower the breakeven sales level for a company with \$900,000 in fixed costs to \$2.5 million from \$3 million. At the \$3 million sales level, the company would realize an extra \$180,000 in pre-tax profits.

EXHIBIT 2.4 Major inventions by U.S. small firms in the 20th century.

Acoustical suspension speakers	Fluid flow meter	Piezo Electronic devices
Aerosol can	Fosin fire extinguisher	Polaroid camera
Air conditioning	Geodesic dome	Prefabricated housing
Airplane	Gyrocompass	Pressure-sensitive cellophane
Artificial skin	Heart valve	Quick frozen foods
Assembly line	Heat sensor	Rotary oil drilling bit
Automatic fabric cutting	Helicopter	Safety razor
Automatic transfer equipment	Heterodyne radio	Six-axis robot arm
Bakelite	High capacity computer	Soft contact lens
Biosynthetic insulin	Hydraulic brake	Solar fish monitoring
Catalytic petroleum cracking	Learning machine	Spectrographic grid
Continuous casting	Link trainer	Stereographic image sensing
Cotton picker	Nuclear magnetic resonance	

Source: Small Business Association.

Distribution channels

Having access to the distribution channels is sometimes overlooked or taken for granted. New channels of distribution can leapfrog and demolish traditional channels; take for instance, direct mail, home shopping networks, infomercials, the coming revolution in interactive television in your own home, and the Internet.

Room for error

How forgiving is the business and the financial strategy? How wrong can the team be in estimates of revenue, costs, cash flow, timing, and capital requirements? How bad can things get, yet be able to survive? If some single engine planes are more prone to accidents, by 10 or more times, which planes do you want to fly in? High leverage, lower gross margins, and lower operating margins are the signals in a small company of these flights destined for fatality.

GATHERING INFORMATION

The data available about market characteristics, competitors, and so on, are frequently inversely related to the real potential of an opportunity; that is, if market data are readily available and if the data clearly show significant potential, then a large number of competitors will enter the market and the opportunities will diminish.

The good news: Most data will be incomplete, inaccurate, and contradictory, and their meaning will be ambiguous. For entrepreneurs, gathering the necessary information and seeing possibilities and making linkages where others see only chaos are essential.

Leonard Fuld defined competitor intelligence as highly specific and timely information about a corporation.¹⁷ Finding out about competitors' sales plans, key elements of their corporate strategies, the capacity of their plants and the technology used in them, who their principal suppliers and customers are, and a good bit about the new products that rivals have under development is difficult, but not impossible, even in emerging industries, when talking to intelligence sources.¹⁸

Using published resources is one source of such information. Interviewing people and analyzing data also is critical. Fuld believes that since business transactions generate information which flows into the public domain, one can locate intelligence sources by understanding the transaction and how intelligence behaves and flows.¹⁹

This can be done legally and ethically. There are, of course, less-than-ethical tactics, which include conducting phony job interviews, getting customers

to put out phony bid requests, and lying, cheating, and stealing. Entrepreneurs need to be very careful to avoid such practices and are advised to consult an attorney when in doubt.

Note that the sources of information given below are just a start. Much creativity, work, and analysis will be involved to find intelligence and to extend the information obtained into useful form. For example, a competitor's income statement and balance sheet will rarely be handed out. Rather, they most likely must be derived from information in public filings or news articles or from credit reports, financial ratios, and interviews.²⁰

Published Sources

The first step is a complete search of material in libraries and on the Internet. You can find a huge amount of published information, databases, and other sources about industry, market, competitor, and personnel information. Listed below are sources for gathering information to help you get started.

Guides and Company Information

Information is available in special issues of *Forbes* and *Fortune* and in the following:

- *Thomas Register*.
- *Directory of Corporate Affiliations*.
- *Standard & Poor's Register of Corporations, Directors and Executives*.
- *Standard & Poor's Corporation Records*.
- *Dun & Bradstreet Million Dollar Directory*.
- *Dun & Bradstreet Billion Dollar Directory; America's Corporate Families*.
- *Dun & Bradstreet Principal International Businesses*.
- *Dun & Bradstreet Business Information Reports*.
- *Moody's Manuals*.
- *World Almanac*.
- *Encyclopedia of Business Information Sources*, edited by Paul Wasserman.
- *Business Information Sources*, by Lorna Daniels.
- *Directory of Industry Data Sources*, by Harfax.
- *Business Information*, by Michael Lavin.
- *Financial Analyst's Handbook*, by Sumner Levine.
- *Value Line Investment Survey*.
- *Encyclopedia of Small Business Resources*, by David E. Gumpert and Jeffrey A. Timmons.

Overviews and General Industry Information

Overviews of American industries, such as:

- *Moody's Investors Industrial Review.*
- *Standard & Poor's Industry Surveys.*
- *U.S. Industrial Outlook*, U.S. Department of Commerce.
- *Current Industrial Reports*, U.S. Department of Commerce.
- Census Information from the U.S. Department of Commerce.
- *County Business Patterns*, U.S. Department of Commerce.
- *Industry Surveys*, Standard & Poor's.
- *Forbes Annual Report on American Industry.*
- *The Wall Street Transcript.*
- *Inside U.S. Business.* by Philip Mattern.

Statistics and Financial and Operating Ratios

Industry statistics listed under the subject heading *statistics* in library catalogs, and under Standard Industrial Classification (SIC) code numbers in publications (see the *Standard Industrial Classification Manual*). Such information also can be obtained from trade associations. There are also guides to statistics, general collections of industry statistics, and sources of composite financial and operating ratios, such as:

- *Statistical Abstract of the United States*, U.S. Bureau of the Census.
- *Encyclopedia of Business Information Sources*, edited by Paul Wasserman.
- *Economic Indicators.*
- *Statistical Reference Index.*
- *American Statistics Index.*
- *Statistics Sources.*
- *Basebook*, Predictcasts.
- *Statistical Service*, Standard & Poor's.
- *County Business Patterns*, U.S. Bureau of the Census.
- U.S. Bureau of the Census publications on certain industries.
- Competitive assessments of certain industries in the United States by the U.S. International Trade Administration.
- *Summary of Trade and Tariff Information*, U.S. International Trade Administration.
- Studies of media and markets by Simmons Market Research Bureau, Inc.

- *Industry Norms and Key Business Ratios*, Dun & Bradstreet.
- *Annual Statement Studies*, Robert Morris Associates.
- *Analysts Handbook*, Standard & Poor's.
- *Almanac of Business and Industrial Financial Ratios*, published by Prentice-Hall.

Projections and Forecasts

Projections and forecasts listed under the subject heading in library catalogs and publications, such as:

- *Predictcasts Forecasts.*
- *Predictcasts F&S Index.*

Market Data

An overall guide to sources of data on consumer and industrial markets can be found in such publications as:

- *Data Sources for Business & Market Analysis*, Scarecrow Press.
- *Basebook*, Predictcasts.
- *US Industrial Outlook Handbook.*
- *Findex* (Find/SVP).

Consumer Expenditures

Data on consumer expenditures can be found in such publications as:

- *Editor & Publisher Market Guide.*
- *US Census Reports (Business, Housing, etc.).*
- *Survey of Buying Power*, published by Sales Management, Inc.

Market Studies

Market studies of particular industries and products available from such companies as:

- Predictcasts (Cleveland, Ohio).
- Simmons Market Research Bureau (New York, New York).
- Arthur D. Little, Inc. (Cambridge, Massachusetts).
- Business Communications Company (Stamford, Connecticut).

- Frost & Sullivan, Inc. (New York, New York).
- Morton Research Corporation (Merrick, New York).
- Theta Technology Corporation (Wethersfield, Connecticut).

Data Services

A listing of on-line databases appeared in the June 1984 *Personal Software*. Data services and databases, such as:²¹

- Dialog Information Service, Inc. (Knight-Ridder, Inc.).
- CompuServe Information Service Company (H&R Block, Inc.).
- Dow Jones News/Retrieval Service (Dow Jones & Company).
- *Lexis, Nexis, Mesis* (Mead Corporation).
- The Information Bank (Parsippany, New Jersey).
- Information Data Search, Inc. (Brookline, Massachusetts).
- Economic Information Systems (New York, New York).

Articles

Magazine and newspaper articles published by trade associations, government agencies, and commercial publishers. Lists can be found by consulting periodical indexes and directories, such as:

- *The Directory of Directories*.
- *Predicasts F&S Index*.
- *Business Periodicals Index*.
- *Guide to Special Issues and Indexes of Periodicals*.
- *Public Affairs Information Service Bulletin*.
- *Applied Science and Technology Index*.
- *The Wall Street Journal Index*.
- *New York Times Index*.
- *Encyclopedia of Business Information Sources*.
- *Standard Periodical Directory*.
- Library directories of current periodical publications.

Other Sources

- *Wall Street Transcript*.
- *CIRR: Company & Industry Research Reports*.

- *Encyclopedia of Associations*.
- *National Trade and Professional Associations of the United States and Canada and Labor Unions*.
- *Ayer Directory of Newspapers, Magazines, and Trade Publications*.
- Brokerage house reports.
- Trade association material.
- Books and other material listed in library catalogues under the name of the industry.
- NASA Industrial Applications Centers and several universities, such as Southeastern Oklahoma State University, the University of New Mexico, the University of Southern California, and the University of Pittsburgh provide technically oriented reports, studies, and literature searches.
- Company annual reports.

Biographical

- *Standard & Poor's Register of Corporations, Directors and Executives*.
- *Dun & Bradstreet Reference Book of Corporation Managements*.
- *Who's Who* directories.

Other Intelligence

Everything entrepreneurs need to know will not be found in libraries, since this information needs to be highly specific and current. This information is most likely available from people—industry experts, suppliers, and the like.

Summarized below are some useful sources of intelligence.

Trade Associations

Trade associations, especially the editors of their publications and information officers, are good sources of information.²² Especially, trade shows and conferences are prime places to discover the latest activities of competitors.

Employees

Employees who have left a competitor's company often can provide information about the competitor, especially if the employee departed on bad terms. Also, a firm can hire people away from a competitor. While consideration of ethics in this situation is important, certainly the number of experienced people in any industry is limited, and competitors must prove that a company hired

a person intentionally to get specific trade secrets in order to challenge any hiring legally. Students who have worked for competitors are another source of information.

Consulting Firms

Consulting firms frequently conduct industry studies and then make this information available. Frequently, in such fields as computers or software, competitors use the same design consultants, and these consultants can be sources of information.

Market Research Firms

Firms doing the market studies, such as those listed under published sources above, can be sources of intelligence.

Key Customers, Manufacturers, Suppliers, Distributors, and Buyers

These groups are often a prime source of information.

Public Filings

Federal, state, and local filings, such as filings with the Securities and Exchange Commission (SEC) or Freedom-of-Information Act filings, can reveal a surprising amount of information. There are companies that process inquiries of this type.

Reverse Engineering

Reverse engineering can be used to determine costs of production and sometimes even manufacturing methods. An example of this practice is the experience of Advanced Energy Technology, Inc., of Boulder, Colorado, which learned first-hand about such tactics. No sooner had it announced a new product, which was patented, when it received 50 orders, half of which were from competitors asking for only one or two of the items.

Other

Classified ads, buyers guides, labor unions, real estate agents, courts, local reporters, and so on, can provide clues.