On Competition

Updated and Expanded Edition

Michael E. Porter

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CHAPTER 1

The Five Competitive Forces That Shape Strategy

Michael E. Porter

IN ESSENCE, THE JOB OF THE STRATEGIST is to understand and cope with competition. Often, however, managers define competition too narrowly, as if it occurred only among today's direct competitors. Yet competition for profits goes beyond established industry rivals to include four other competitive forces as well: customers, suppliers, potential entrants, and substitute products. The extended rivalry that results from all five forces defines an industry's structure and shapes the nature of competitive interaction within an industry.

As different from one another as industries might appear on the surface, the underlying drivers of profitability are the same. The global auto industry, for instance, appears to have nothing in common with the worldwide market for art masterpieces or the heavily regulated health-care delivery industry in Europe. But to understand industry competition and profitability in each of those three cases, one must analyze the industry's underlying structure in terms of the five forces. (See figure 1.1.)

If the forces are intense, as they are in such industries as airlines, textiles, and hotels, almost no company earns attractive returns on investment. If the forces are benign, as they are in industries such as software, soft drinks, and toiletries, many companies are profitable. Industry structure drives competition and profitability, not whether an industry produces a product or service, is emerging or mature, high tech or low tech, regulated or unregulated. While a myriad of factors can affect industry profitability in the short run—including the weather and the

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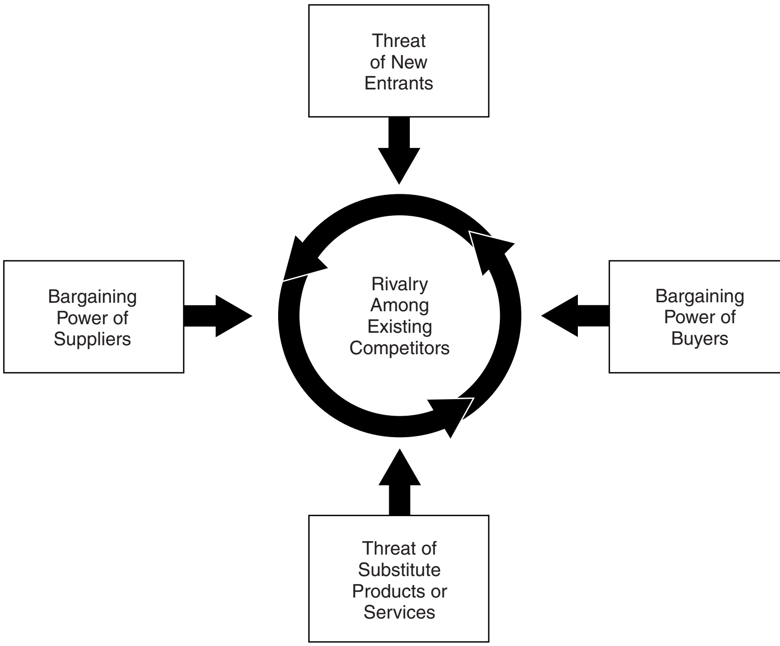

Figure 1.1 The Five Forces That Shape Industry Competition

business cycle—industry structure, manifested in the competitive forces, sets industry profitability in the medium and long run. (See figure 1.2.)

Understanding the competitive forces, and their underlying causes, reveals the roots of an industry's current profitability while providing a framework for anticipating and influencing competition (and profitability) over time. A healthy industry structure should be as much a competitive concern to strategists as their company's own position. Understanding industry structure is also essential to effective strategic positioning. As we will see, defending against the competitive forces and shaping them in a company's favor are crucial to strategy. (See the inserts "Industry Analysis in Practice" and "Typical Steps in Industry Analysis.")

Forces That Shape Competition

The configuration of the five forces differs by industry. In the market for commercial aircraft, fierce rivalry between dominant producers Airbus and Boeing and the bargaining power of the airlines that place

Industry Analysis in Practice

Good industry analysis looks rigorously at the structural underpinnings of profitability. A first step is to understand the appropriate time horizon. One of the essential tasks in industry analysis is to distinguish temporary or cyclical changes from structural changes. A good guideline for the appropriate time horizon is the full business cycle for the particular industry. For most industries, a three-to-five-year horizon is appropriate, although in some industries with long lead times, such as mining, the appropriate horizon might be a decade or more. It is average profitability over this period, not profitability in any particular year, that should be the focus of analysis.

The point of industry analysis is not to declare the industry attractive or unattractive but to understand the underpinnings of competition and the root causes of profitability. As much as possible, analysts should look at industry structure quantitatively, rather than be satisfied with lists of qualitative factors. Many elements of the five forces can be quantified: the percentage of the buyer's total cost accounted for by the industry's product (to understand buyer price sensitivity); the percentage of industry sales required to fill a plant or operate a logistical network of efficient scale (to help assess barriers to entry); the buyer's switching cost (determining the inducement an entrant or rival must offer customers).

The strength of the competitive forces affects prices, costs, and the investment required to compete; thus the forces are directly tied to the income statements and balance sheets of industry participants. Industry structure defines the gap between revenues and costs. For example, intense rivalry drives down prices or elevates the costs of marketing, R&D, or customer service, reducing margins. How much? Strong suppliers drive up input costs. How much? Buyer power lowers prices or elevates the costs of meeting buyers' demands, such as the requirement to hold more inventory or provide financing. How much? Low barriers to entry or close substitutes limit the level of sustainable prices. How much? It is these economic relationships that sharpen the strategist's understanding of industry competition.

Finally, good industry analysis does not just list pluses and minuses but sees an industry in overall, systemic terms. Which forces are underpinning (or constraining) today's profitability? How might shifts in one competitive force trigger reactions in others? Answering such questions is often the source of true strategic insights.

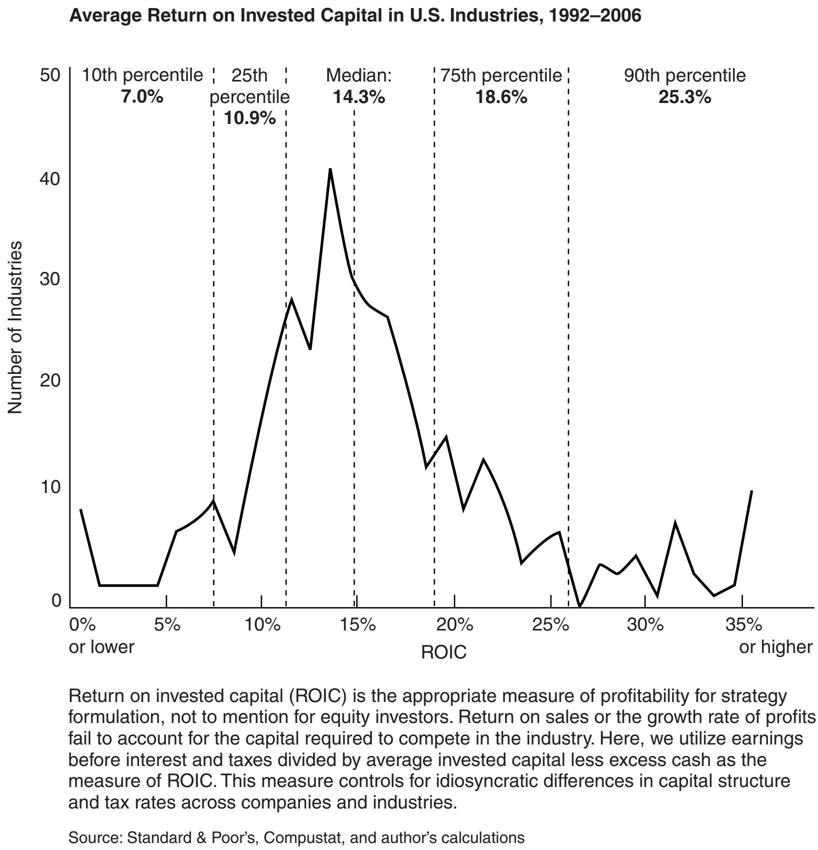

Figure 1.2 Differences in Industry Profitability
The average return on invested capital varies markedly from industry to industry. Between 1992 and 2006, for example, average return on invested capital in U.S. industries ranged as low as zero or even negative to more than 50%. At the high end are industries like soft drinks and prepackaged software, which have been almost six times more profitable than the airline industry over the period.

huge orders for aircraft are strong, while the threat of entry, the threat of substitutes, and the power of suppliers are more benign. In the movie theater industry, the proliferation of substitute forms of entertainment and the power of the movie producers and distributors who supply movies, the critical input, are important.

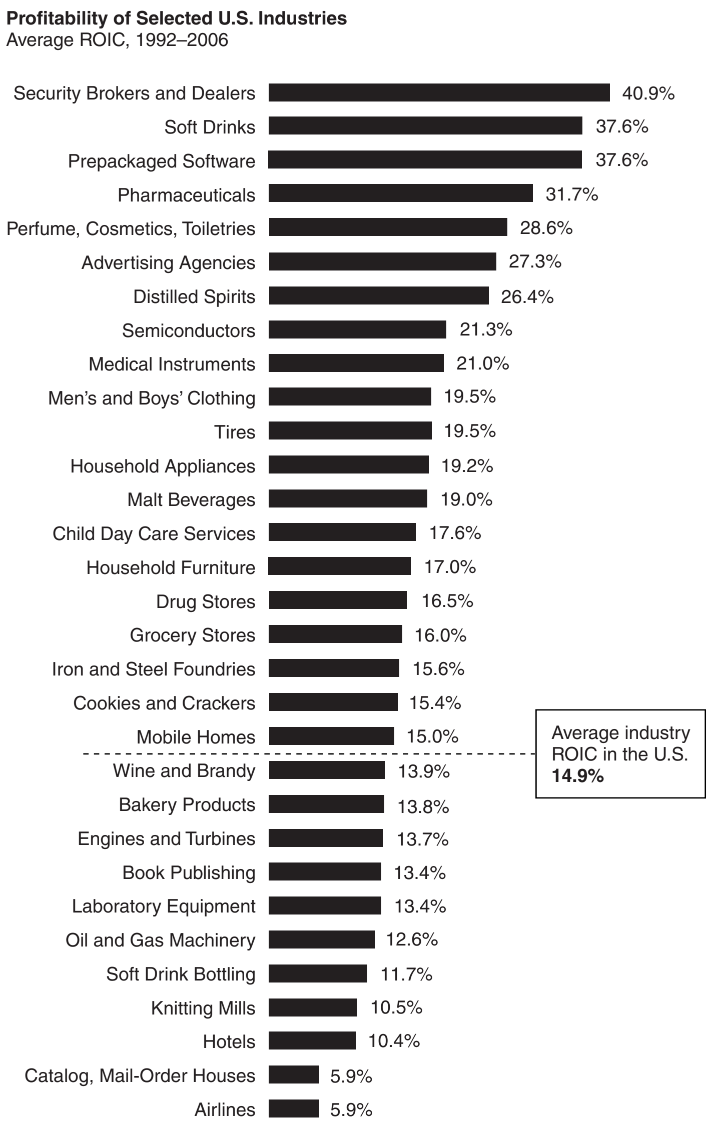

Figure 1.2 Continued

The strongest competitive force or forces determine the profitability of an industry and become the most important to strategy formulation. The most salient force, however, is not always obvious.

For example, even though rivalry is often fierce in commodity industries, it may not be the factor limiting profitability. Low returns in the photographic film industry, for instance, are the result of a superior substitute product—as Kodak and Fuji, the world's leading producers of photographic film, learned with the advent of digital photography. In such a situation, coping with the substitute product becomes the number one strategic priority.

Industry structure grows out of a set of economic and technical characteristics that determine the strength of each competitive force. We will examine these drivers in the pages that follow, taking the perspective of an incumbent, or a company already present in the industry. The analysis can be readily extended to understand the challenges facing a potential entrant.

THREAT OF ENTRY

New entrants to an industry bring new capacity and a desire to gain market share that puts pressure on prices, costs, and the rate of investment necessary to compete. Particularly when new entrants are diversifying from other markets, they can leverage existing capabilities and cash flows to shake up competition, as Pepsi did when it entered the bottled water industry, Microsoft did when it began to offer internet browsers, and Apple did when it entered the music distribution business.

The threat of entry, therefore, puts a cap on the profit potential of an industry. When the threat is high, incumbents must hold down their prices or boost investment to deter new competitors. In specialty coffee retailing, for example, relatively low entry barriers mean that Starbucks must invest aggressively in modernizing stores and menus.

The threat of entry in an industry depends on the height of entry barriers that are present and on the reaction entrants can expect from incumbents. If entry barriers are low and newcomers expect little retaliation from the entrenched competitors, the threat of entry is high and industry profitability is moderated. It is the *threat* of entry, not whether entry actually occurs, that holds down profitability.

Typical Steps in Industry Analysis

Define the relevant industry:

- What products are in it? Which ones are part of another distinct industry?
- What is the geographic scope of competition?

Identify the participants and segment them into groups, if appropriate:

Who are

- the buyers and buyer groups?
- the suppliers and supplier groups?
- the competitors?
- the substitutes?
- the potential entrants?

Assess the underlying drivers of each competitive force to determine which forces are strong and which are weak and why.

Determine overall industry structure, and test the analysis for consistency:

- *Why* is the level of profitability what it is?
- Which are the *controlling* forces for profitability?
- Is the industry analysis consistent with actual long-run profitability?
- Are more-profitable players better positioned in relation to the five forces?

Analyze recent and likely future changes in each force, both positive and negative.

Identify aspects of industry structure that might be influenced by competitors, by new entrants, or by your company.

Barriers to entry. Entry barriers are advantages that incumbents have relative to new entrants. There are seven major sources:

1. *Supply-side economies of scale.* These economies arise when firms that produce at larger volumes enjoy lower costs per unit because they can spread fixed costs over more units, employ more efficient technology, or command better terms from suppliers. Supply-side scale economies deter entry by forcing the aspiring entrant either to come into the industry on a large scale, which requires dislodging entrenched competitors, or to accept a cost disadvantage.

   Scale economies can be found in virtually every activity in the value chain; which ones are most important varies by industry.[1] In microprocessors, incumbents such as Intel are protected by scale economies in research, chip fabrication, and consumer marketing. For lawn care companies like Scotts Miracle-Gro, the most important scale economies are found in the supply chain and media advertising. In small-package delivery, economies of scale arise in national logistical systems and information technology.

2. *Demand-side benefits of scale.* These benefits, also known as network effects, arise in industries where a buyer's willingness to pay for a company's product increases with the number of other buyers who also patronize the company. Buyers may trust larger companies more for a crucial product: Recall the old adage that no one ever got fired for buying from IBM (when it was the dominant computer maker). Buyers may also value being in a "network" with a larger number of fellow customers. For instance, online auction participants are attracted to eBay because it offers the most potential trading partners. Demand-side benefits of scale discourage entry by limiting the willingness of customers to buy from a newcomer and by reducing the price the newcomer can command until it builds up a large base of customers.

3. *Customer switching costs.* Switching costs are fixed costs that buyers face when they change suppliers. Such costs may arise because a buyer who switches vendors must, for example, alter product specifications, retrain employees to use a new product, or modify processes or information systems. The larger the switching costs, the harder it will be for an entrant to gain customers. Enterprise resource planning (ERP) software is an example of a product with very high switching costs. Once a company has installed SAP's ERP system, for example, the costs of moving to a new vendor are astronomical because of embedded data, the fact that internal processes have been adapted to SAP, major retraining needs, and the mission-critical nature of the applications.

4. *Capital requirements.* The need to invest large financial resources in order to compete can deter new entrants. Capital may be necessary not only for fixed facilities but also to extend customer credit, build inventories, and fund start-up losses. The barrier is particu-

larly great if the capital is required for unrecoverable and therefore harder-to-finance expenditures, such as up-front advertising or research and development. While major corporations have the financial resources to invade almost any industry, the huge capital requirements in certain fields limit the pool of likely entrants. Conversely, in such fields as tax preparation services or short-haul trucking, capital requirements are minimal and potential entrants plentiful.

It is important not to overstate the degree to which capital requirements alone deter entry. If industry returns are attractive and are expected to remain so, and if capital markets are efficient, investors will provide entrants with the funds they need. For aspiring air carriers, for instance, financing is available to purchase expensive aircraft because of their high resale value, one reason why there have been numerous new airlines in almost every region.

5. *Incumbency advantages independent of size.* No matter what their size, incumbents may have cost or quality advantages not available to potential rivals. These advantages can stem from such sources as proprietary technology, preferential access to the best raw material sources, preemption of the most favorable geographic locations, established brand identities, or cumulative experience that has allowed incumbents to learn how to produce more efficiently. Entrants try to bypass such advantages. Upstart discounters such as Target and Wal-Mart, for example, have located stores in freestanding sites rather than regional shopping centers where established department stores were well entrenched.

6. *Unequal access to distribution channels.* The new entrant must, of course, secure distribution of its product or service. A new food item, for example, must displace others from the supermarket shelf via price breaks, promotions, intense selling efforts, or some other means. The more limited the wholesale or retail channels are and the more that existing competitors have tied them up, the tougher entry into an industry will be. Sometimes access to distribution is so high a barrier that new entrants must bypass distribution channels altogether or create their own. Thus, upstart

low-cost airlines have avoided distribution through travel agents (who tend to favor established higher-fare carriers) and have encouraged passengers to book their own flights on the internet.

7. *Restrictive government policy.* Government policy can hinder or aid new entry directly, as well as amplify (or nullify) the other entry barriers. Government directly limits or even forecloses entry into industries through, for instance, licensing requirements and restrictions on foreign investment. Regulated industries like liquor retailing, taxi services, and airlines are visible examples. Government policy can heighten other entry barriers through such means as expansive patenting rules that protect proprietary technology from imitation or environmental or safety regulations that raise scale economies facing newcomers. Of course, government policies may also make entry easier—directly through subsidies, for instance, or indirectly by funding basic research and making it available to all firms, new and old, reducing scale economies.

Entry barriers should be assessed relative to the capabilities of potential entrants, which may be start-ups, foreign firms, or companies in related industries. And, as some of our examples illustrate, the strategist must be mindful of the creative ways newcomers might find to circumvent apparent barriers.

Expected retaliation. How potential entrants believe incumbents may react will also influence their decision to enter or stay out of an industry. If reaction is vigorous and protracted enough, the profit potential of participating in the industry can fall below the cost of capital. Incumbents often use public statements and responses to one entrant to send a message to other prospective entrants about their commitment to defending market share.

Newcomers are likely to fear expected retaliation if:

- Incumbents have previously responded vigorously to new entrants.

- Incumbents possess substantial resources to fight back, including excess cash and unused borrowing power, available productive capacity, or clout with distribution channels and customers.

- Incumbents seem likely to cut prices because they are committed to retaining market share at all costs or because the industry has high fixed costs, which create a strong motivation to drop prices to fill excess capacity.

- Industry growth is slow so newcomers can gain volume only by taking it from incumbents.

An analysis of barriers to entry and expected retaliation is obviously crucial for any company contemplating entry into a new industry. The challenge is to find ways to surmount the entry barriers without nullifying, through heavy investment, the profitability of participating in the industry.

THE POWER OF SUPPLIERS

Powerful suppliers capture more of the value for themselves by charging higher prices, limiting quality or services, or shifting costs to industry participants. Powerful suppliers, including suppliers of labor, can squeeze profitability out of an industry that is unable to pass on cost increases in its own prices. Microsoft, for instance, has contributed to the erosion of profitability among personal computer makers by raising prices on operating systems. PC makers, competing fiercely for customers who can easily switch among them, have limited freedom to raise their prices accordingly.

Companies depend on a wide range of different supplier groups for inputs. A supplier group is powerful if:

- It is more concentrated than the industry it sells to. Microsoft's near monopoly in operating systems, coupled with the fragmentation of PC assemblers, exemplifies this situation.

- The supplier group does not depend heavily on the industry for its revenues. Suppliers serving many industries will not hesitate to extract maximum profits from each one. If a particular industry accounts for a large portion of a supplier group's volume or profit, however, suppliers will want to protect the industry through reasonable pricing and assist in activities such as R&D and lobbying.