

ONE

Competitive Advantage, Organizational Coalignment, and Strategy

Top management must add value by enunciating the strategic architecture that guides the competence acquisition process. We believe an obsession with competence building will characterize the global winners of the 1990s. With the decade underway, the time for rethinking the concept of the corporation is already overdue. (Prahalad and Hamel, 1990: 91)

There are three major challenges facing organizations operating in today's violent and complex environment: environmental analysis, organizational analysis and strategic development.

Environmental Analysis. Every organization must configure its resources with regard to customers and competitors in such a way as to develop and sustain a competitive advantage. In a typical business environment organizational success involves a choice of competitive advantage that matches environmental contingencies and organizational competencies by providing a product/service which is notable for one of the following factors: low-cost, differentiation, product scope, or timing. These four sources of competitive advantage will be discussed in more detail below.

Organizational analysis. In order to sustain its advantage over time every organization must adapt to change and

unpredictable threats. It must effectively configure its resources, capabilities, customers and competitors to respond to changing conditions. Maintaining its competitive positioning and continuously improving its organizational coalignment across the value chain rejuvenates a firm's competitive advantage in a changing environment. However, even the most successful organizations and managers must face the possibility that despite efforts to maintain a competitive posture, a disaster may strike, for example, rapid product obsolescence due to technological breakthrough, unexpected entry of new competitors, development of substitute products, or a swift decline in the market size. The exact nature of such a crisis is extremely difficult to predict. However, managers must be prepared for such eventualities.

Strategic Development. To sustain its advantage a successful organization must develop its *own* skills and knowledge. An organization must be able to learn from its experiences, and be able to differentiate between a) generic and publicly available knowledge gained over time, and b) tacit practical skills that yield a lasting and firm-specific advantage. The distinction between these two types of knowledge or skills is of crucial importance (Nelson 1990). Generic knowledge of technology or management can be patented or written down, or at least communicated and understood by those familiar with similar solutions. Generic knowledge of the company cannot remain its property for long, even if patents or secrecy delay its widespread application (Cantwell 1993). Tacit knowledge and skills are generated within an organization by individuals and teams as a complex outcome of its evolution and experience. These knowledge and skills are unique and almost impossible to copy directly, with similar effect, by other organizations. Therefore it is these skills that are crucial for an organization's competitive advantage and its lasting success in the market.

RELATED RESEARCH

Each of these three areas has attracted an extensive body of organizational research. A set of managerial solutions has been developed as tools for each area. Generally specific solutions have been developed for the various problems involved in each managerial challenge. The research focuses on the link between an organization and its competitors, producing such important

concepts as competitive advantage, core competencies, and generic competitive strategies (Porter 1985, Prahalad and Hamel 1990, Porter 1980). Marketing studies have helped by developing a better understanding of the relationships among organizations, markets/products and customers (Deschamps and Nayak 1992). The growing body of literature dealing with tangible and intangible resources allows us to better understand the resource foundation of environmental and organizational analysis (Obloj and Joynt 1987; Itami and Roehl 1987; Grant 1991). The continuous development of organizational analysis has produced a tool known as "value chain analysis," which can be used for both functional and process investigation (Porter 1985; Cushman and King 1993; Cushman and King 1995). Organizational decline and crisis management research allows us to better understand the strengths and limitations of strategy, contingency planning and turnaround techniques (Hambrick and D'Aveni 1988; Meyer and Zucker 1989). The evolutionary economics approach by Nelson and Winter (1982) has led to a more coherent view of organizational evolution, learning and routines that embody the firm's localized and specific skills and competencies. The theory outlined in 1982 by Paul Romer modified the classical theory of growth, taking into account the importance of new ideas and practical, corporate knowledge about 'how to make things' (*The Economist*, January 4, 1992: 15).

A large volume of research and analysis still exists in different theoretical "pockets" that lack an integrating theoretical framework. Each pocket produces separate practical implications and tools, in effect forcing managers to deal with each problem separately under the general umbrella of the continuous improvement movement. It is our conviction that sufficient theoretical formulations and practical tools exist to develop an integrated framework of continuous improvement, the central question of which is simply, "How to become more successful?" Prior to entering into the main body of our theoretical analysis in Chapter 2, we will attempt to integrate the relationships among key themes arising from the literature dealing with the continuous improvement process. We shall explore (1) environment: the role of competitive advantage in a global, volatile and complex environment, (2) organizational value chain: the importance of coordination across organizational functions and processes, and (3) strategy: the basic linking pin between envi-

ronmental and organizational resources. Strategy allows for the development of a system for environmental scanning, planned environmental linkages and the accumulation of practical, tacit knowledge.

ENVIRONMENTAL ANALYSIS AND COMPETITIVE ADVANTAGE

Success brings on imitators, who respond with superior features, lower prices, or some new way to draw customers away. Time, the denominator of economic value, eventually renders nearly all advantages obsolete. (Williams, 1992: 29)

Every firm that wants to operate successfully in a competitive environment must develop some source of competitive advantage to help satisfy its customers' needs. Strategic management literature suggests four generic sources of product competitive advantage: cost, differentiation, focus and time (Porter 1985; Cushman and King, 1992, 1995).

Four Sources of Competitive Advantage

Cost. A company can develop an overall cost advantage in various ways, such as by exploiting favorable environmental conditions (for example, access to cheap resources), developing efficient-scale facilities, maintaining tight control over fixed and variable costs, and intelligently cutting the costs of organizational activities. The essence of this cost-cutting drive is simple: to maintain lower costs than those of market rivals while offering goods/services of comparable value to the customer. Well-known examples include Japanese automakers (for example, Toyota, Honda, Mazda, Mitsubishi), earth-moving equipment managers (Komatsu), and electronic consumer goods producers

(Sony, JVC), which have consistently produced higher value goods at lower unit costs than comparable American and European manufacturers.

Differentiation. A company can gain a competitive advantage through product differentiation by creating products/services with at least one feature perceived as unique by customers. The possibilities for product differentiation are practically unlimited and can be observed in all types of industries along many dimensions. Examples include user-friendly software (Apple Computers), advanced engineering (Mercedes automobiles), unusual design (Bang & Olufsen hi-fi equipment), reliable appliances (Maytag, Electrolux), and trustworthy service (L.L. Bean). The essential feature of a product differentiation strategy lies in the development of brand loyalty and low price sensitivity by customers.

Product Line Scope. A company can achieve a competitive advantage based on the scope of the product offering in two ways. One method is through a broader range of products/services than that offered by competitors. General Motors provides its customers worldwide with small, medium, large, luxury, and sport cars; station wagons; minivans; pick-ups and trucks, thus creating a competitive advantage based on a wide product and market scope. The second method for achieving a scope competitive advantage is through a steady focus on limited markets/products, aiming for perfection in those segments. For example, Volvo concentrates only on sedans, station wagons, and trucks. Classic examples of a narrow focus competitive advantage are marketing niches developed by Rolls-Royce or Lamborghini in cars; Philip-Patek, Blancpain and Rolex in watches; and H. Rubinstein in cosmetics. The focused scope of these producers made their brands status symbols.

Time to Market. A firm may gain a competitive advantage by managing time better than its competitors. Joseph Schumpeter, a noted economist, discussed this source of competitive advantage many years ago. He wrote on the advantage enjoyed by a classical innovator who was the first to market with a product. Cushman and King (1993) call this form of advantage high-speed management. Examples include Apple Corporation's development, production and marketing of user-friendly, personal computers; Chrysler Corporation's mini-vans; and Sony's development of the Walkman. These firms all beat

potential competitors to market, capturing large market shares and high profits, and enhancing their respective brand image.

While all firms in today's market are seeking an opportunity to master at least one of the generic sources of competitive advantage, it is important to stress that the choice of effective competitive advantage is not absolute. It depends upon the unique dynamic created by the behavior of customers and competitors' tactics. Let us review the major customer and competitive trends that are developing in the market and their influence on the development of a competitive advantage.

Consumer and Competitor Environmental Trends

Customers. Today's markets are characterized by quick market saturation, a shrinking product life cycle, convergence of customers' tastes and needs, and volatility in market segments and niches.

Quick market saturation and a shrinking product life cycle are related but distinct phenomena. Market saturation results from the practice of rapid imitation by both traditional competitors and new entrants as long as the proprietary technology and patents can be broken, bypassed or exploited in unexpected ways. Quick market saturation of the PC market around the world resulted from the development of cheap clones and new sales tactics. The latter are especially visible in the U.S. where mail-order companies such as Gateway 2000, Packard Bell, Dell and other firms flood the market with cheap clones. Saturation of the PC market has made customers discriminating and corporations vulnerable. In the June, 1990 issue of *Computer Shopper*, 129 companies advertised personal computers. The following year 135 firms advertised in the June 1991 issue. However, only 65 of them appeared in the two consecutive years (Kupfer 1991: 120).

Shrinking life cycles result from the speed of technological and marketing innovations generating new products and services. The duration of the lifecycle in different markets varies, (for example, in Japan's soft drink market over 1,000 new products are introduced each year!). However, most markets exhibit a clear trend of shrinking product life cycles. The unprecedented speeding up of product life cycles in the computer and car markets is a warning to slower, revolving markets.

The global convergence of consumers' tastes and needs is a second important global trend caused by the increasing predominance of market economies, the wide-reaching distribution of international brands, and a high-speed telecommunications network spreading information about common customer needs and tastes.

The recent (1992) opening of Disneyland near Paris, France, precipitated a bitter public debate on the dominance of American consumer values and tastes in Europe. Many companies, (for example, Wrigley and Gillette) entering the markets of Poland, the Czech Republic, Slovakia, and the former Soviet Union are merely dubbing their international ads without adaptation. Companies have not needed to localize the creative aspect of their advertising efforts because consumer preferences in East European markets are similar to consumer preferences elsewhere in the world. However, a growing homogeneity of the needs and tastes in different markets coexists with increasing product volatility.

Increasing product volatility is caused by the complex and dynamic nature of the consumer-product dynamic. Consumers' needs and tastes are changing. Those changes have become more subtle and dynamic. As a result the traditional segmentation of markets is becoming obsolete and being replaced by interlocking "slices." Representative of this trend is the car market. For decades the American car market has been split into the five major socioeconomic segments developed in the late twentieth century by Alfred Sloan of General Motors. However, during the 1980s, customers' needs and tastes were increasingly redefined. Different lifestyles, values and expectations function as basic variables, slicing the market in hundreds of ways and destabilizing traditional market segments (Drucker 1991: 173).

Competitors

The competitive environment is characterized by increasing hostility, growing complexity and a quickening rate of change.

The essence of hostile competition in the main domestic and global markets is a drive to eliminate competitors by resorting to cost cutting, increased differentiation, and higher speeds of product improvement and replacement. This increasingly

aggressive type of competition characterizes a company searching for any type of competitive advantage in order to dominate its competitors through increased market shares and profitability.

The complexity of competition is characterized by several factors. First, the large number of competitors in major markets is changing rapidly, making traditional economic models of stable oligopolistic competition obsolete. Second, the industrial products, consumer products, and financial and futures markets are connected in increasingly sophisticated ways. The competitive position of a company may be determined by the cost and quality of its products, but the possibility of buying in the futures markets and financial hedging of future deliveries complicates competitive positioning. Third, the complexity of competition is affected by the increasing number of stakeholders regulating markets either directly or indirectly. Often these stakeholders, such as governmental agencies, interest groups, and participants in the distribution channel, make competition much less predictable.

The high speed of change in the market is a converging push and pull result of pressure from consumers and efforts made by competitors. The development of consumer needs (for example, a lasting need for more powerful PCs) drives the introduction of endless improvements to existing products. The efforts to leapfrog the competition result in inventions like the Chrysler minivan, the Hewlett-Packard laserprinter, and Goodyear's Aquatred tire.

ENVIRONMENTAL TRENDS AND COMPETITIVE ADVANTAGE

These market trends on the part of both consumers and competitors converge and influence the search for competitive advantage in the following ways:

Duration. Every competitive advantage, regardless of its nature, is only temporary. Its foundation can be destroyed by competitive dynamics and/or consumer behavior. This means that managers must constantly analyze and isolate or upgrade the firm's competitive advantage.

Complexity. Companies must match the complex and volatile nature of markets with equally complex and adaptive

strategies to upgrade their competitive advantage. Companies anchoring their competitive advantage simultaneously in low cost, differentiated product quality and focus, and high-speed adaptation are better off than their competitors who are missing one of these elements.

Consistency. The complexity of competitive advantage combined with the need for its adaptation means that the process of rejuvenating competitive advantage cannot be performed in random ways through an occasional burst of managerial energy. The volatile and complex nature of the business environment implies a need for a systematic approach to analyzing the structural and dynamic sources of potential advantage (Cavaleri and Obloj 1993).

AN ORGANIZATION AS A COMPLEX VALUE CHAIN

A useful way to analyze an organization is as a set of activities called a "value chain." We will discuss in more detail the value chain concept developed by Porter (1985) in Chapter 6, as we define coalignment. However, we will now begin with three perspectives inherent in the value chain: functional, process and extended. We will identify how these analytical perspectives help to define the potential sources of organizational competitive advantage.

Functional Perspective

A functional perspective of the value chain views the organization as a system of two main activity types: line (primary) and staff (support).¹ The main feature of line activities is their direct involvement in transforming inputs into outputs. Line activities are mainly "energy-processing" activities (for example, storing, manufacturing, and transporting). In contrast, staff activities are primarily "information-processing" activities (accounting, training, research and development).

Such an approach to organization can be useful, as it draws scholars' and managers' attention to the clear, functionally-based differences as a potential source of competitive advan-

tage. A firm can gain an advantage over its competitors due to relative excellence of some primary activities. These primary activities are in turn dependent on organizational resources and practical skills embodied in some functions of the staff activities. For example, the competitive advantage of such corporations as Xerox and Polaroid depended for many years on well-defended proprietary technology. A competitive advantage can also be derived directly from the support activities, for example, speed of information processing and new product development as demonstrated with Intel microprocessors or in the skillful management of supplier relations, as demonstrated by the Mark and Spencers retail chain.

Business Process Perspective

An organization can be analyzed in a more dynamic fashion as a series of processes. This approach calls for identifying potential sources of competitive advantage in the interrelations of different functional activities. The performance of various functional activities influences the efficiency of other activities; thus, a real competitive advantage must be sought in those organizational processes that spread across an organization, that is, product R&D, production processes, and sales and customer service.

The business process perspective of the value chain combines discrete functions into overlapping business processes and maintains that process can become an outstanding capability and therefore a source of competitive advantage. For example, in the pharmaceutical industry, Merck dominates its competitors due to superior research and development, which results in a stream of innovative drugs, while Glaxo International's excels in effecting short drug approval times and innovative sales methods throughout the world.

Vital to developing a competitive advantage through business process analysis is understanding how various elements of an organization interact in continuous process. However, in the volatile and complex business environment, such an analysis must be extended into larger industrial structures and markets and reach out into the organization's environment (Porter 1985; Rockart and Short 1989; Cushman and King, 1992, 1995; Cavaleri and Obloj 1993).

Extended Perspective

An analysis of the organization as an open system that includes its suppliers, uses, competitors, and other stakeholders, for example, government agencies, has been advocated since the 1970s; however, it is recently gaining significance due to three primary factors.

The pace of market development (notably in pharmaceuticals, chemicals, semiconductors, microprocessors, computers, and food production) quickly makes the knowledge and technology accumulated by organizations obsolete. Therefore organizations must constantly scan the environment and coalign with suppliers, competitors and customers. Linkages with suppliers allow for increased cost control, while coaligning with customers assures timely information on current needs, expectations, and limitations. Alliances with competitors allows the sharing of costs of both adaptations and innovations.

The complexity of changes fueled by technological developments, substitutes, and changing market segments demands a corresponding complex network of linkages. Therefore, organizations' alliances are more commonly transgressing traditional industrial boundaries and increasing the overall number of linkages.

The intensity of global competition and practice of benchmarking speeds up imitations of and improvements on functional- and process-based competitive advantages.

While it can be argued that these three causes are not equally strong in all markets, a combined effect is clear: functional and process-based advantages are and will be increasingly difficult to sustain. Therefore the external coalignment seen in negotiated linkages with major stakeholders in the environment, as well as resulting processes, are quickly becoming the third source of competitive advantage that world class competitors are probing and developing.

Conclusions

Let us summarize the discussion of an organization as a value chain up to this point. We clarified the three potential sources of competitive advantage as identified through value

chain analysis: (1) functional activities, utilizing the best of organizational resources; (2) organizational processes, building unique or at least better capabilities than those of competitors; and (3) linkages with the environment that allow for the expansion, refinement, and improvement of organizational capabilities. These are different but interrelated sources of competitive advantage with one common dominant theme.

A sustainable competitive advantage can be achieved only by effectively matching the functions and processes across the organization with the configuration of the environment as defined by suppliers, customers, and competitors. Value chain analysis is a tool for the continuous search for improved external and internal coalignment leading to a competitive advantage. To compete effectively in the market, management must develop a strategy encompassing the company's competitive advantage.

STRATEGY: A LINKING PIN

A firm's ability to stay viable, that is, to earn a profit in excess of its cost of capital, depends upon two factors: industry attractiveness and individual company strategy. The first factor, the attractiveness of the environment (industry) in which a company is positioned, has been traditionally stressed by economists. The industry attractiveness factor, part of the economic theory of the firm, has recently lost some of its predictive and explanatory power. Empirical research has failed to support the direct relation between a firm's profitability and its industrial environment (Rumelt 1987; Porter 1991). Variance components analysis to rates of return on capital performed by R. Rumelt (1987: 141) illustrates the weak correlation.

Table 1.1 Results of Variance Components Analysis of Return on Capital, 1,292 U.S. Corporations

| | INDUSTRY DEFINITION | |
|--|---------------------|---------|
| | 3-DIGIT | 4-DIGIT |
| Variance due to industry effects | 3.9 | 4.7 |
| Variance due to firm effects within industries | 19.2 | 17.6 |

Source: Rumelt, R. 1987, *Theory, Strategy, and Entrepreneurship*, In: Teece, D. J. (ed), *The Competitive Challenge*, New York, Harper and Row: 141

According to Rumelt (1987: 141), "The data show that the variance in long-run profitability within industries is three to five times larger than the variance across industries. Clearly, the important sources of excess (or subnormal) profitability in this data set were firm-specific rather than the results of industry membership."

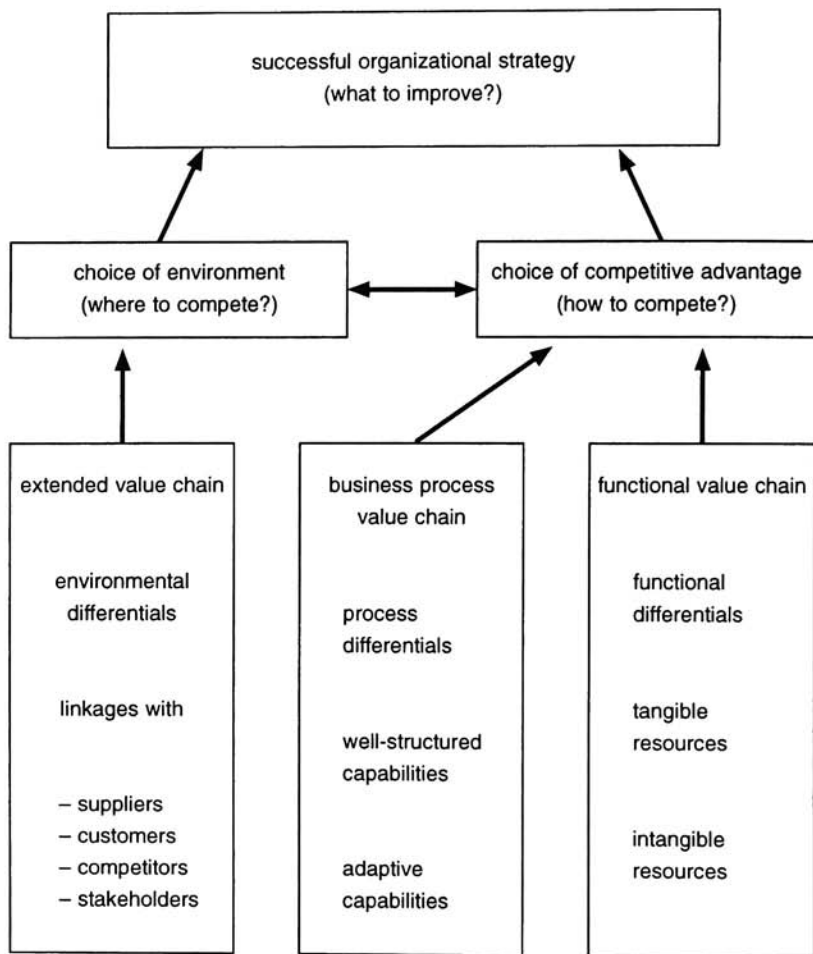
The second factor, a company strategy superior to that of its competitors, is traditionally stressed by management theory. Strategy should link organizational functions and processes with the environment in such a way as to secure a sustainable competitive advantage for the firm. This means that an organization must (1) obtain and utilize its tangible resources and develop intangible resources to ensure higher efficiency and effectiveness than its competitors, and (2) manage processes of product development, production, and marketing better than its competitors, while (3) negotiating favorable linkages with all important stakeholders in the environment. The framework of this complex process is shown in Figure 1.1.

At the highest theoretical level we have a generic problem central to all successful organizational strategies: "What to improve?" The answer to this question must take into consideration two major questions that reside at the next level: 1) How to compete? 2) Where to compete? Moving to the third theoretical level in Figure 1.1, we have the problem of how to develop an organizational competitive advantage of cost, differentiation, scope, or time within a certain environment. Value chain analysis is the best approach to attack this problem. The distinction among functional, business process, and extended value chain perspectives allows us to concentrate on three drivers of competitive advantage explaining the fit between environment and competitive advantage: organizational capabilities and resources and linkages. Let us turn our attention to defining and strategically identifying resources and capabilities. An analysis of linkages appears in following chapters.

Resources and Capabilities Defined

Resources are basic inputs to business activities. The typical resources of the firm include financial and human resources, physical facilities, product and process technologies, brands, patents and general know-how. The strategic impor-

Figure 1.1
Basic Links Among Strategy, Environment, and Competitive Advantage



tance of intangible resources differs from that of tangible resources (Hall 1992). Intangible resources such as brand names, copyrights and patents, know-how, and so forth are more durable and more difficult to identify and replicate than tangible assets. Thus, a strategic advantage that exploits intangible assets is more difficult for competitors to copy and more recognizable to customers. Empirical research supports this assertion.

An exhaustive, longitudinal study (Hall 1992) of CEOs across British industrial sectors researched their perspective on the relative importance of intangible resources to overall company success. The analysis in Table 1.2 shows surprising unanimity over three major intangible resources: company reputation, product reputation and employee know-how. The relatively high ranking of supplier and distributor know-how indicates the importance of extended linkages with these groups.

The same study also shows that the replacement period for intangible resources is quite long. The three resources rated as the most important were also rated as the most durable, with an average of 10.8 years for company reputation, 6.0 years for product reputation, and 4.6 years for employee know-how (Hall 1992: 142).

For both tangible and intangible resources to enhance competitive advantage they must be combined in a meaningful way to create organizational capabilities.

Capabilities may be defined as the set of resources that are utilized in processes in a productive way (Grant 1991; Hall 1992).² Organizations perform in a cyclical manner. Over time, capabilities are molded either into standard, well-structured

Table 1.2 The Relative Importance of the Contribution Made by Intangible Resource to the Overall Success of the Business in 1987 and 1990

| INTANGIBLE RESOURCE | RANKING* | |
|-------------------------------|----------|------|
| | 1990 | 1987 |
| Company Reputation | 1 | 1 |
| Product Reputation | 2 | 2 |
| Employee Know-How | 3 | 3 |
| Culture | 4 | 5 |
| Networks | 5 | 4 |
| Specialist Physical Resources | 6 | 6 |
| Data Bases | 7 | 10 |
| Supplier Know-How | 8 | 7 |
| Distributor Know-How | 9 | 8 |
| Public Knowledge | 10 | 9 |

* 1: Most important, 10: Least important.

Source: Hall R. 1992. The Strategic Analysis of Intangible Resources, Strategic Management Journal, vol. 13, no. 2, p. 139

procedures or adaptive procedures (Cavaleri and Obloj 1993). The essence of standard procedures that effectively employ different sets of resources lies in their efficiency, simplicity, and repetitiveness, as in procedures of preventative maintenance, depositing a check, and dealing with customer complaints. The more stable the transformation process in an organization, the more appropriate are standardized procedures. The explanation of such a relationship takes three factors into account. First, standard procedures ensure the continuity of functional resources, for example, materials, finances, human inputs; the acquisition of resources and the regularity of operations. Second, standardization minimizes the cost of operations minimizing the necessary time, attention to, and sophistication of skills. Third, the stability of transformational processes allows for the accumulation of knowledge, through experience, about potentially disruptive events and the development of responsive procedures.

In addition to standard procedures, organizations develop adaptive procedures in cases for which the task is neither routine nor extremely complex. The essence of such adaptive capability is its degree of innovation. A typical example of such a procedure is new product development that incorporates various procedures such as recognizing customer needs, establishing an R&D budget, monitoring and evaluating prototypes, evaluating competitive products, running market tests, and so forth.

Having established definitions for and relations between resources and capabilities as a basis for strategy, we will now explore how these resources and capabilities are linked and managed in a systematic way, and identify the strategic sources of knowledge that help to utilize them effectively.

Strategic Identification of Resources

Utilizing a functional perspective helps in the identification and analysis of resources as inputs into the organizational functions and processes. Three strategic questions have theoretical and practical relevance for the identification of resources:

1. Can the company utilize fewer resources across different functional activities while supporting a similar volume of business? The answer lies in searching for low cost and/or scope

competitive advantages, as exercised by many aggressive acquirers, new management teams, and turnaround specialists. Economizing the use of resources involves some standard strategic moves, for example, limiting the number of products and the services offered, slashing inventory, cutting the workforce and selling equipment, spinning off some logistical activities, such as maintenance and transport, or merging functional department. For example, Chevron decided in 1992 to lower its costs by more than \$60 million with two moves: (1) merging support activities across different business units and focusing technological development efforts, and (2) streamlining operations at the level of primary activities, mainly by trimming the workforce. ASEA Brown Boveri streamlines operations when acquiring a new company by laying off one-third of the employees working at the company headquarters. An important effect of such resource pruning is a cost advantage over competitors and a clear customer/competitor focus.

2. Can existing resources be used more effectively? Many competitive advantages are derived from strategies that dramatically increase the productivity of existing tangible and intangible resources. Probably the most commonly underdeveloped and under-utilized resource in American and European companies is human skills and abilities. Tapping these resources in an intensive way through quality circles enabled Japanese corporations to gain a decisive low cost-high quality competitive advantage and upgrade the qualifications of their workforce in the global markets of the 1980s. A dramatic example of increased productive exploitation of resources was the famous turnaround of the NUMMI factory. GM closed the factory in 1982 due to low productivity and quality, absenteeism, grievances, and drug and alcohol abuse. The plant reopened in 1984 with the same employees under Japanese management. Almost immediately, the NUMMI factory became a model for gains in productivity and quality achieved by a different approach to the same resources. The rigid GM hierarchical management system gave way to the empowerment of both managers and workers through team organization. The employees' skills were upgraded and fully utilized by job enrichment and rotation, while their problem-solving skills were simplified by pushing both competencies and responsibility down the line (Niland 1989). The same basic resource, employees' skills, was used in a different, more intensive way.

3. Do any resources need to be acquired? The functional analysis of resources might reveal that an organization does not have some crucial resources needed to develop a competitive advantage. Clinical examples of such situations can currently be found in Eastern European enterprises in Poland, Hungary, the Czech Republic, or Slovakia. Even though some of these firms have potential advantages due to a cheap, skilled labor-force and modern equipment, few can utilize the resources due to a lack of management expertise, especially in marketing and sales. Lack of management skills is literally breaking down entire strategies. To become competitive in world markets, these firms must either acquire knowledge and skills in the areas of marketing and sales (for example, by hiring Western managers or marketing agencies) or develop the skills internally.

Strategic Identification of Capabilities

In a most fundamental sense, companies have at their disposal similar resources: people, money, technology, facilities, and so forth, which are allocated to functions, processes, or linkages. But from a strategic point of view, organizations differ with respect to how efficiently and intensively they utilize those resources. Another major difference occurs in terms of how capabilities are spread across main processes of the value chain: product development, product delivery, and customer service. In the traditional consulting jargon, the best, highly utilized capabilities are called "organizational strengths." A company's strengths are defined relative to those of its competitors. To say that successful strategies should exploit strengths is a cliché of strategic management literature. McDonald's key success factor is its ability to transfer operational and managerial know-how and to achieve consistent levels of service in outlets around the world. Mercedes-Benz has been focused for years on perfecting its engineering and development process. Marks and Spencer is famous for its ability to establish a relationship with suppliers that ensures a high level of product quality. Coca-Cola's worldwide dominance on the soft-drink market can be attributed to a well-coordinated marketing effort. Toyota's main strengths were initially developed in the process of product delivery (low-cost cars) and more recently expanded to product development (differentiated Lexus model) and customer service.

Well-structured capabilities in one or all of the processes influence a firm's ability to attain product focus, low cost, and differentiation competitive advantages. These capabilities are directly related to the continuous improvement of every turn of the business cycle.

Adaptive capabilities influence a firm's ability to achieve a speed-competitive advantage. They relate to the innovative configuration of the resources within the processes. Benetton and Limited, apparel chains, link their stores with suppliers through innovative computer networks to speed up deliveries. Today's state-of-the-art, adaptive capabilities will likely become standard routines by the end of the decade. All automakers around the world are emulating the formerly innovative Japanese approach to product development by using cross-functional teams from the initial stages of product development. Jan Carlzon turned around the ailing Scandinavian Airline System in the 1980s by reconfiguring product delivery and service processes. Two innovative ideas for the service process involved establishing a new category of service called Euroclass and assigning to gate managers the responsibility for adherence to departure times. These moves established SAS's differentiation in the airline market. The process of product delivery was improved using self-managed and cross-functional teams that concentrated on 150 separate improvement projects spread over major organizational processes.

While some companies, such as 3M, which produces thousands of new or revised products annually, have made innovation their routine capability, most have not done so. Successful companies punctuate their routine operations with new and innovative procedures.

Strategic Identification of Sources of Knowledge

Linkages, resources, and capabilities are developed by organizational members using three main sources of knowledge: professional, technical, and practical.

Professional knowledge is a result of the general education process, which allows individuals to understand, memorize, and apply ideas, principles, and theories developed in different domains of science. Professional knowledge defines the basic ontological and epistemological assumptions and principles of

rational conduct by allowing managers to build general frameworks for interpreting organizational problems in psychological, economic, political, and systemic ways.

Technical knowledge results from a specialized education process that enables an individual to understand how professional principles and assumptions are applied to processes. Technical knowledge helps in focusing on the description and explanation of tangible relations among an organization's inputs, transformation process and outputs and corresponding information flows. Processes of automated transport systems, robotics, and accounting are typical examples of applying technical knowledge.

Practical knowledge is developed from particular individual and team experience in the work place. In other words, practical knowledge is time- and place-specific, focusing on how to perform certain responsibilities effectively and under specific contingencies.

The three sources of knowledge that result from general, technical, and practical (on-the-job) education always overlap in real life. They all have their public and tacit components whose relation is relatively evident. While professional and technical knowledge is mainly public, practical knowledge, built upon case study analysis, is partially tacit and difficult to codify and transfer. Properly exploited practical knowledge enables organizations to build winning combinations of resources and capabilities.

CONCLUSIONS

This chapter's theoretical framework addresses the central question of the continuous improvement process: How to become more successful? We discussed the major premises and practical implications of complex and dynamic relationships between two major explanatory variables of successful strategic improvement: environment and competitive advantage. We addressed the major trends in today's business environment and the types of competitive advantage that organizations might pursue. Then we moved to answer the underlying question about principal drivers of proper adaptation of competitive advantage to environmental forces and trends. Our conclusion, based upon value chain analysis, was that these drivers include resources, capabilities, and external linkages. Professional, technical, and practical