

CONSTRUCTING COMPETITIVE ADVANTAGE: THE ROLE OF FIRM-CONSTITUENT INTERACTIONS

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Current models of competitive advantage emphasize economic factors as explanations for a firm's success but ignore sociocognitive factors. This paper integrates economic and cognitive perspectives, and shows how firms and constituents jointly construct the environments in which firms compete. We argue that competitive advantage is a systemic outcome that develops as firms and constituents participate in six processes that entail, not only use and exchange of resources, but also communication about and interpretations of those exchanges. The interpretations that firms and constituents make of competitive interactions affect decisions about how to exchange and use resources. As interpretations and evaluations of a given firm fluctuate, so do the resources the firm has access to and its competitive advantage in the marketplace. The actions and interpretations of constituents and rivals produce the shifting terrain on which competition unfolds. We illustrate these dynamics with a discussion of IBM's changing competitive advantage in the computer industry in the 1980s. Copyright © 1999 John Wiley & Sons, Ltd.

INTRODUCTION

For most of this century, IBM has inspired awe among managers and researchers alike for the market power it achieved. Over the years, the company erected formidable entry barriers in the mainframe market from extensive research, proprietary product design, scale economies, and the internalization of large network externalities achieved through standard-setting and customer service (Garud and Kumaraswamy, 1993). Strategy researchers working from the structure-conduct-performance paradigm would argue that the structure of the computer industry and IBM's near-monopoly position in it (Porter, 1980; Bar-

ney, 1986a, 1986b) was clearly the source of its much-envied competitive advantage.

In recent years, a second view has gained prominence in strategy research—the resource-based theory of the firm. It points instead to the unique bundle of resources that IBM commanded and to the spectrum of economic rents associated with those resources (Penrose, 1959; Barney, 1991; Peteraf, 1993). Working from this perspective, researchers would draw attention to the Nobel prizewinners on IBM's R&D staff or to its superbly trained sales force in order to demonstrate that scarce resources have generated Ricardian rents, whereas superior use of resources has generated Pareto rents for IBM. The company itself recognized the importance of its resource base in its 1982 annual report:

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Investments in research and development are providing a stream of new products ... Investments in plant and equipment are providing the capacity to manufacture those products in unprecedented volumes—on a scale that gives us a competitive

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edge in the industry. (IBM Annual Report, 1982: 2)

IBM's renowned CEO Thomas Watson Jr. has offered yet another explanation of the firm's competitive advantage:

[a corporation like IBM] ... owes its resiliency not to its form of organization or administrative skills, but to the power of what we call beliefs and the appeal those beliefs have for its people ... In other words the basic philosophy, spirit and drive of an organization have far more to do with its relative achievements than do technological and economic resources, organizational structure, innovation and timing. (Mercer, 1987: 48)

Researchers who relate organizational culture to competitive advantage would readily agree with him: The beliefs of organizational members and their identification with a firm affect how they make decisions and take actions and, as such, they affect every aspect of a firm's operations (Schein, 1985; Fiol, 1991; Hatch, 1993; Ginsberg, 1994).

Industry observers have argued in yet another vein. They suggest that a web of favorable interpretations surrounding IBM enabled its success:

During the past twenty years or so, IBM has built an awe-inspiring image. Many customers view IBM as a technological leader, an unbeatable competitor, an innovative supercompany. No matter that these perceptions are largely inaccurate: customers believe them. People who make their living observing, analyzing, and writing about the computer industry re-enforce this image. When IBM makes an announcement, industry 'experts' discount the chances of every competitor in IBM's shadow (McKenna, 1989: 2)

Are these alternative explanations of competitive advantage or do they reflect an evolving and improving explanation of the phenomenon of interest? In this paper we argue that these approaches focus on different domains of action in which competitive advantage is actually created. The first two perspectives emphasize the material content of economic exchanges, including resources and other valued objects. The other two perspectives emphasize the interpretational aspect of exchanges, that is, interpretations about exchange partners and what they offer. In

addition, two of these approaches focus on sources of competitive advantage that reside within a single firm, whereas the other two focus on sources that originate in the company's industry or organizational field. We suggest that these perspectives are complementary, rather than alternative accounts of competitive advantage. We develop a framework that shows interconnections among the different domains of action that can advance our understanding of the dynamics of building competitive advantage.

This paper describes the competitive terrain in terms of four action domains where competitive advantage is built and sustained. The framework connects the material and interpretational conditions in a single focal firm, as well as in its organizational field. We first describe the fragmented focus of existing theories on a single domain of action. We then discuss six processes that link the four domains. For analytical purposes we begin by examining the unique role of each process in building advantage. In reality these processes mutually determine each other, so in the final section we show the interconnectedness of these processes.

THE COMPETITIVE TERRAIN

Competitive advantage derives from activities that span the four domains of action described in Figure 1. These four domains of the competitive terrain derive from two dimensions.

The first dimension distinguishes the material and interpretational domains. It contrasts the emphasis by traditional strategy research on the role of material resources with the burgeoning literature that highlights how individual, group, and industry-level interpretational processes affect strategic interactions (Porac, Thomas, and Baden-Fuller, 1989; Walsh, 1995). Cognitive simplification (Schwenk, 1984), competitive blindspots (Zajac and Bazerman, 1991), competitive categorization (Porac and Thomas, 1990; Reger and Huff, 1993; Lant and Baum, 1995), industry recipes (Spender, 1989), industry mindsets (Phillips, 1994) are known to bias, constrain, channel, and otherwise influence how managers perceive their environments and make strategic choices. In this view, the competitive terrain is defined, not only by the resource conditions in various markets and potential rents associated

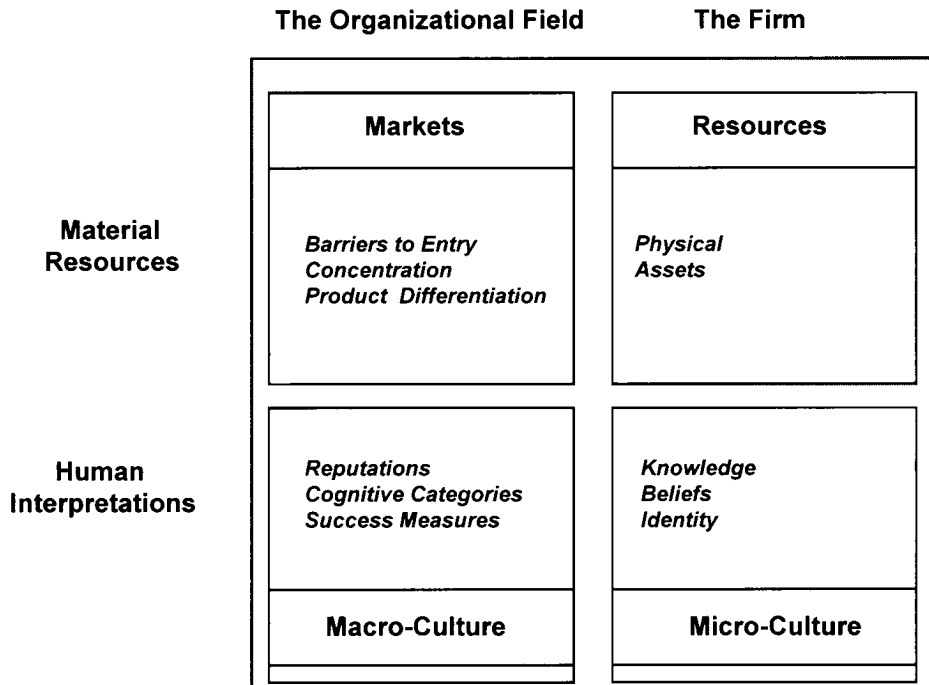


Figure 1. Sources of competitive advantage

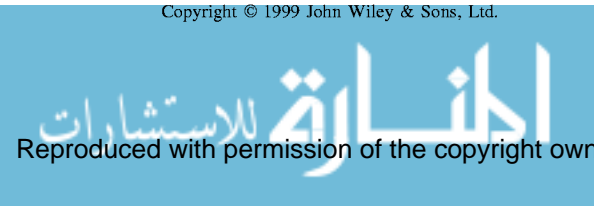
with them (Scherer and Ross, 1990; Barney, 1986b), but also by the knowledge, expectations, and sensemaking of firms' managers and of constituents that interact with firms in an industry. Sensemaking (Weick, 1995) in industries comprises comprehending, understanding, explaining, attributing, extrapolating, predicting (Starbuck and Milliken, 1988: 51) and—ultimately—deciding to engage in exchanges and to allocate resources.

The second dimension divides the competitive terrain into domains of action that fall either *outside* or *inside* a focal firm. Resource-based theories, for instance, emphasize the importance of the internal domain—firm-specific capabilities, knowledge, and assets—in creating competitive advantage (Penrose, 1959). Industrial economists point to external factors predominantly in a firm's product market, such as product differentiation or market concentration (Scherer and Ross, 1990). In our view, the external domain includes all constituents, who engage in exchanges in product, factor, labor, and capital markets. It also includes institutional intermediaries that transmit and magnify information about firms and constituents.

Competitors affect the construction of competitive advantage by taking actions in the four

domains and creating options for constituents. Rivalry manifests itself in the variety of options made available to constituents. The choices that constituents make among competitive offerings measure the relative success of a firm's strategies and the degree to which it has gained advantage. Insofar as firms interact with the same constituents and vie for their attention, approval, and resources, they are each other's competitors (Freeman and Hannan, 1983). Thus, the boundaries of an industry and a market are determined not only by how firms define their businesses (Abell, 1980) but also by how constituents understand and choose among these businesses. Therefore, the external domain is better described not as an industry but as an organizational field consisting of actors who interact repeatedly, exchange information, form coalitions, and are aware of each other (DiMaggio and Powell, 1984).

The two dimensions describe four domains of action in which firms and constituents interact. The external-material domain consists of various *markets*—principally the product, labor, factor, and capital markets—in which firms and constituents exchange resources. In the internal-material domain a *firm's resources* are deployed in the production of goods and services. In the internal-



interpretational domain knowledge, values, and beliefs mold the firm's *micro-culture*. In the external–interpretational domain expectations, performance standards, and evaluations of firms evolve and form the industry's *macro-culture*.

Markets

The structure–conduct–performance paradigm calls attention to external market conditions, such as the number of buyers and sellers, entry barriers, scale economies, and other cost structures, as well as the extent of firms' diversification, vertical integration, and product differentiation as determinants of market power (Bain, 1956; Mason, 1957; Porter, 1980). In this view, competitive advantage is a result of differential market power, which enables dominant firms to control prices and earn monopoly rents.

Resources

Resource-based theory (Penrose, 1959; Barney, 1991) attributes advantage in an industry to a firm's control over bundles of unique material, human, organizational, and locational resources and skills that enable unique value-creating strategies (Barney, 1991). Heterogeneous resources create distinct strategic options for a firm that, over time, enable its managers to exploit different levels of economic rent (Peteraf, 1993). A firm's resources are said to be a source of competitive advantage to the degree that they are scarce, specialized, appropriable (Amit and Schoemaker, 1993), valuable, rare, difficult to imitate or substitute (Barney, 1991).

Although resource-based theories routinely use the term 'resources' to refer to both material and cognitive resources such as knowledge, culture, and reputation (Conner, 1991), we include in the resource domain solely material resources—the physical and financial assets that firms and constituents deploy. We do so because drawing a distinction between these resources can enhance our understanding of how each type of resource contributes to rents. As Conner (1991: 145) puts it: 'Recognizing such levels [of resources] appears especially important in preventing resource-based theory from becoming tautological: at some level, everything in the firm becomes a resource and hence resources lose explanatory power.' Although knowledge and beliefs of firms'

members and observers may carry competitive benefits similar to those derived from possessing valuable resources, they differ from material resources in the way they are developed, sustained, and managed.

Micro-culture

In contrast to market and resource models that advance an economic rationale for the existence of competitive advantage, cognitive research emphasizes the importance of a firm's strategic decision-makers and their interpretations of economic conditions (Daft and Weick, 1984; Porac and Thomas, 1990; Zajac and Bazerman, 1991). Managers' interpretations are 'deductions from the world legitimated within the organization' (Weick, 1979a: 42), whether from its culture (Schein, 1985), knowledge base (Spender, 1989), or identity (Albert and Whetten, 1985; Fiol, 1991). We use the term 'micro-culture' to refer to the knowledge, values, and identity beliefs in a firm consistent with a broad definition of culture as 'the pattern of shared beliefs and values that give the members of an institution meaning and provide them with rules for behavior ...' (Davis, 1984: 1).

Knowledge, values, and beliefs are resources that create sustainable competitive advantage insofar as they are valuable, rare, and difficult to imitate (Spender, 1993; Barney, 1986a; Fiol, 1991). In addition, knowledge, values, and beliefs create an advantage for a firm through their influence on information processing and behavior (Ginsberg, 1994). As cognitive structures unique to a firm (Weick, 1979a), they enable its strategists to make superior evaluations of the rent-earning potential of the firm's resources relative to outsiders (Penrose, 1959; Barney, 1986b). They also guide the actions of all members of a firm and enable it to enact a systematic strategic direction (Meyer, 1982; Reger *et al.*, 1994).

Macro-cultures

Researchers have also called attention to the importance of interpretations external to a firm—to the 'macro-culture' of its industry and the transactional network from which it derives (Huff, 1982; Spender, 1989; Abrahamson and Fombrun, 1992, 1994). A macro-culture arises from the interactions between firms and their constituents,

mediated by institutional intermediaries, such as the media and various specialized organizations (Hill and Jones, 1992; Fombrun, 1996). As constituents and firms interact and exchange information, they construct a web of interpretations characterized by: (1) a widespread exchange of information and interpretations among firms and constituents; (2) varying degrees of knowledge and understanding about the industry and the firms inside it; (3) a multiplicity of interpretations, many of which are of a persuasive, self-serving nature; (4) some degree of agreement about standards of performance in an industry; and (5) evaluations of firms relative to these standards and their rivals that give content to their reputations. Insofar as the interpretations of constituents create preferences for some firms (and their products, stocks, and the like) over others, favorable interpretations are a source of advantage.

We use the example of computer-maker IBM—a company renowned for its successes as well as its changing fortunes—to examine actions in the four domains. Although IBM's uniqueness limits generalizability, the dramatic changes that have taken place in the firm's competitive position in the last 20 years make the company a 'revelatory case' (Yin, 1994) in terms of the dynamic processes that underlie the construction of competitive advantage. In the last section, we trace the cycle of interactions that led to the shifting fortunes of IBM in the computer industry in the 1980s.

THE PROCESSES OF COMPETITIVE ADVANTAGE

Each of the four domains described in the previous section is associated with a more or less developed body of research. However, observing and researching firms' and constituents' activities in any single domain is not sufficient to explain how a firm, like IBM, gained and sustained its competitive advantage. As Astley and Van de Ven, (1983: 267) argued: 'To say that A causes B and B causes A may be predictive, but intellectually sterile until one can explain the processes by which the reciprocal relationship unfolds over time.' We contend that competitive advantage is a systemic outcome of six processes that connect these domains. Furthermore, through these connecting processes the four domains constitute and

mutually produce each other. For analytic purposes, we begin by examining each process separately; in the subsequent sections we show their dynamic interconnectedness.

How firms build competitive advantage

Firms construct their distinctive strategic positions through three generic processes: (1) they pick *strategic investments*, (2) they make *strategic projections*, and (3) they develop a *strategic plot*. We describe these processes from the perspective of a single focal firm. However, they represent the strategic behavior of all competing firms in an industry. To what degree and in what form different competitors engage in any of them is an empirical question. The similarity of competitors' actions in an industry varies with the degree of imitability (Lippman and Rumelt, 1982) and isomorphism (DiMaggio and Powell, 1984). In turn, the conditions of imitability and isomorphism are created through processes that are initiated by constituents, and which we elaborate later in the paper. Figure 2 shows how the processes initiated by firms span markets, firms' resources and micro-cultures, and industry macro-cultures.

Strategic investments

A firm's strategic investments create value for constituents by providing them with options that satisfy their interests. Constituents exchange resources with firms whose options they perceive to be of superior value. A given firm regularly makes investments to build competitive advantage, whether by developing new products, augmenting its distribution channels, or enhancing its production capability. The fundamental purpose of strategic investments is to create and exploit opportunities for positive economic rents (Rumelt, Schendel, and Teece, 1991). Through investments firms secure more favorable configurations of industry factors (Porter, 1980) and protect those favorable positions from rivals (Caves and Porter, 1977; Bogner, Mahoney, and Thomas, 1994).

What drives strategic investments are the resources available to the firm and the productive uses its top managers envision for them (Penrose, 1959). Thus, strategic investments originate simultaneously in a firm's resource base and in its culture. Traditional approaches to competitive

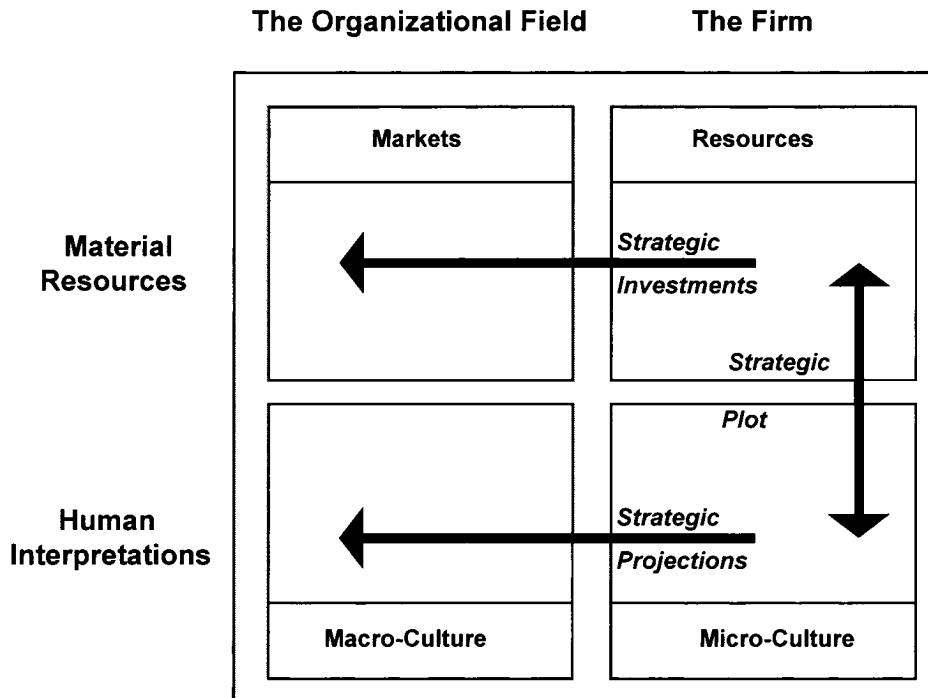


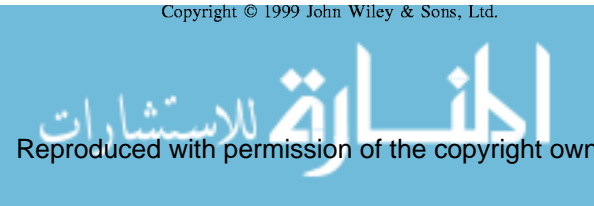
Figure 2. How firms build competitive advantage

advantage emphasize how resources are used to gain positions better than those of competitors (Porter, 1980). In our view, investments build competitive advantage when they create value for specific resource-holders. Kim and Mauborgne (1997), for example, found that high growth companies did not focus on competitors but on customer needs—an approach they termed ‘the logic of value innovation.’ By not focusing on competitors, value-innovators better distinguish the factors that deliver value from the factors the industry competes on. They concentrate resources on investments that have the highest impact on customer evaluations. They do so by eliminating product features that the industry takes for granted or adding features that the industry has ignored. Similarly, a focus on suppliers’ value may require strategic investments in developing cooperative relationships, in contrast to a competitor focus that may require bidding down suppliers’ prices to outperform rivals on costs of inputs. Kim and Mauborgne (1997: 106) observed that ‘... ironically, value innovators do not set out to build advantages over the competition, but they end up achieving the greatest advantages.’

Strategic investments create value for constituents both by satisfying needs and by creating

needs. Otherwise, firms tend to overinvest in existing customers and to ignore customers in emergent markets (Christensen and Bower, 1996). By making investment choices about customer groups, product functions, and the resources and technologies necessary to serve them, a firm satisfies its constituents, as well as defines its business and its competitors (Abell, 1980). Thus, a firm’s targeted investments to particular resource-holders also affect the competitive conditions of its rivals. Rivals, in turn, make strategic investments to protect their positions and relationships with resource-holders, be it through innovations, acquisitions, or other strategic actions.

Take the computer industry. The erosion of IBM’s formidable competitive advantage in the industry can be traced partly to the strategic investments made by Apple when it introduced the personal computer (PC). Although Apple did not invent the PC, it was the first company to develop a customer-friendly product. As Langlois (1992: 16) points out: ‘What made Apple II so successful was its compromise between technology and marketing ... Compared with earlier hobbyist machines like the Altair or the IMSAI, the Apple II was an integrated and understandable product ...’



Through its strategic investments, Apple not only offered a new product to the market, but it also changed our collective understanding of the computer. IBM quickly responded by investing in the development of a comparable product with 'off-the-shelf' components and a licensed operating system (DOS). However, as we demonstrate later in the paper, it failed to sustain the level and type of investments necessary to compete in the market it helped create.

Strategic investments can undermine the competitive advantage of a firm when they are insufficient, misdirected, or their value is not understood by constituents. Inadequate investments not only fail to attract resources in the material domain but also raise doubts about the strategic direction of the firm and taint its overall reputation in the interpretational domain.

Strategic projections

Even well-targeted investments may not contribute to competitive advantage if their value is not apparent to constituents. To stimulate and enhance favorable interpretations of their investments firms engage in strategic projections. Strategic projections are controlled images projected in social interaction through communication to secure favorable evaluations by others (Schlenker, 1980). As such, they resemble the impression management tactics of individuals (Goffman, 1959; Tedeschi, 1981).

Whereas strategic investments also may serve as signals and indirectly convey information about a firm (Shapiro, 1983), strategic projections are explicit communications about characteristics of the firm. They appear in a wide range of forms including advertising, logo development, financial reports, and press releases (Salancik and Meindl, 1984). For example, IBM's 1981 annual report listed a number of information sources available to stockholders. Sources included: 'A Report of the Annual Meeting,' 10-K and 10-Q Reports to the Securities Exchange Commission, 'The IBM Dividend Reinvestment Plan Booklet,' 'IBM Equal Opportunity Programs,' 'IBM Business Conduct Guidelines,' 'IBM US Retirement Plan Information,' IBM support programs (for education, community service, etc.), and 'IBM Operations in South Africa.' These documents addressed aspects of IBM's operations that are likely to be of concern to different constituents

and presented different images of the company—as an investment opportunity, as an employer, as a member of a community, and as a citizen of the world.

In general, through strategic projections firms: (1) provide more information about their strategic investments—information which constituents may use in making their decisions; (2) offer to constituents ready-made interpretations of their investments; and (3) impress desirable symbols in constituents' minds. In addition to influencing interpretations, strategic projections contribute to the formation of firm-related schemata, such as corporate reputations (Fombrun, 1996; Rindova, 1997). Specific interpretations and reputational schemata affect how constituents evaluate a firm and how they choose to allocate the resources they control. Strategic projections, therefore, affect both the interpretational domain and the material domain.

Like inadequate strategic investments, inadequate strategic projections may undermine a firm's competitive advantage. Strategic projections that misrepresent a firm's investments may have legal consequences (as in the case of false advertising) or may destroy a firm's credibility and trustworthiness (Fombrun, 1996). Further, because strategic projections come in a variety of forms, they can easily convey disparate images of a firm. The more consistent strategic projections are with one another and with a firm's strategic investments, the more useful they are to constituents in making interpretations and the more they contribute to the construction of competitive advantage.

IBM carefully controlled its strategic projections. 'Every commercial and every advertisement we did had to be submitted to Tom Watson and his brother, Dick, at the top. It was all done at the top level. I think that's just as it should be' (David Ogilvy, quoted in Gregory, 1993). In terms of content, they projected an image that complemented IBM's dominant position in the mainframe market. According to McKenna (1989: 112):

IBM's image is unlike that of any other company. IBM is very much concerned with being perceived not only as a company, but as a national resource. It has tried to position its products as essential ingredients for national economic growth.

Strategic plot

The process that accounts for the consistency between a firm's material resources and its micro-culture, as well as between its strategic investments and projections, is the formation of a strategic plot. A firm's strategic plot reflects some continuity in its activities. It contributes to competitive advantage by providing a long-term context, within which constituents can attribute meaning to specific investments and projections. It reflects the firm's intended strategy—its business definition (Abell, 1980) and generic type (Porter, 1980; Miles and Snow, 1978), as well as emergent strategy—resulting from the co-evolution of material resources and organizational culture. On one hand, the development of strategic plots depends on managers' understandings of the resources the firm controls and the potential combinations of these resources in productive services (Penrose, 1959). A belief system, such as a firm's 'dominant logic' (Prahalad and Bettis, 1986), guides a firm's strategic choices, and through them, the resources it seeks to acquire and combine. On the other hand, the dominant logic of a firm grows out of managerial experience with existing resources and reflects them (Mahoney and Pandian, 1992). Micro-cultural elements develop to support current uses of resources. Leonard-Barton (1992) found that high-tech organizations are culturally biased toward their engineering staff and often give them privilege in decision-making. For instance, although IBM systematically invested in R&D, it exhibited a cultural bias toward its marketing and sales function. This bias contributed to some of the inadequate strategic investments it made in the PC market in the 1980s. Both a firm's micro-culture and its resource commitments determine the strategic plot from which its investments and projections originate.

Throughout most of its existence until the 1980s IBM followed a strategic plot to produce proprietary technology and to market it to 'Blue Chip' companies through close client contact. IBM's entry in the microcomputer market was a radical departure from this plot. The PC was developed by a small team working separately from the firm's bureaucratic headquarters—a separation which was key to the PC's success (*Business Week*, 1983). True to its focus on marketing, IBM opened its own retail arm in

order to reach its new customer base directly. The 1981 Annual Report explains the rationale: ... we are dealing with larger numbers of customers and prospective customers. In response to that, we are introducing new marketing approaches to make our products more readily available.'

Thus, IBM changed its investments toward standardized, 'off-the-shelf' components but did not change its micro-cultural beliefs about what it takes to compete in an industry. Instead of upgrading its PC models, it opted to sell substandard products and chose to rely on its established reputation to attract customers. Its existing strategic plot also affected the design of its stores—to their detriment:

To keep its stores classy, IBM eschewed the usual tacky trappings of computer retailing—flashy in-store displays, brochures, and racks of impulse items near the cash registers ... According to a competitor 'IBM's inhibitions make the Product Centers a delight to compete with.' (Petre, 1984: 80)

Thus, the firm's micro-culture bounded its strategic projections and undermined the effectiveness of its strategic investments in developing and marketing the PC.

Consistency among the three processes initiated by a firm enhances its competitive advantage; inconsistencies can cause one of the domains (either resources or culture) to lag behind and misfire. Strategic projections not supported by investments can lead to loss of credibility; investments not supported by strategic projections may fall short of realizing their value-creating potential; and if both processes are not supported by the strategic plot of the firm, they will lack the continuity to feed into a virtuous cycle that constructs competitive advantage. However, the processes initiated by a firm are only one side of the coin: The construction of competitive advantage also depends on how external constituents in the organizational field respond to and revise competitive conditions.

How the actions of constituents influence competitive advantage

Constituents alter competitive conditions and contribute to the construction of competitive advantage through three processes: (1) resource allo-

cations among firms; (2) definitions of success; and (3) development of industry paradigms—shared understandings among constituents about how firms in an industry create value. Figure 3 depicts these processes and shows how they interrelate the four domains of action.

Resource allocations

Constituents engage in interactions with firms to further their own objectives: They allocate the resources that they control by making buying and selling decisions, investment decisions, and employment decisions. Each decision shifts resources to alternative uses and contributes to determining which firms enjoy competitive advantage.

Assessments of ‘better value’ depend partly on constituents’ own objectives, and partly on the strategic investments and strategic projections that competing firms have made. Assessing the value that firms offer is a complex task performed with incomplete information. Cognitive limitations in perception and interpretation prevent constituents from making accurate assessments (Schwenk, 1984). Given limitations in evaluating firms and industries, constituents routinely rely on ready-

made interpretations in the ambient macro-culture of the industry (Abrahamson and Fombrun, 1992, 1994). Just as the strategic investments of firms originate both in their resource bases and their micro-cultures, so are the resource allocations of constituents informed by the macro-culture of the organizational field.

Macro-cultures facilitate constituents’ sense-making. They do so by providing constituents with industry paradigms and by supplying them with definitions of success. For example, reputational ratings are an element of a company’s macro-culture that help reduce uncertainty about firms’ likely behaviors or future levels of performance (Weigelt and Camerer, 1988; Rao, 1994; Fombrun, 1996). Much as individual schemata encourage automatic information-processing and foster schema-consistent behavior (Fiske and Taylor, 1990; Gioia, 1986), so do reputational schemata encourage constituents to make resource allocations and to sustain their allocations in reputation-consistent directions (Wartick, 1992). IBM is a case in point. As the *Economist* (1993: 24) points out: ‘IBM’s share price reached its historic peak in 1987, well after it was clear to Mr. Akers and his team that the company would never hit the inflated targets publicized two years before.’

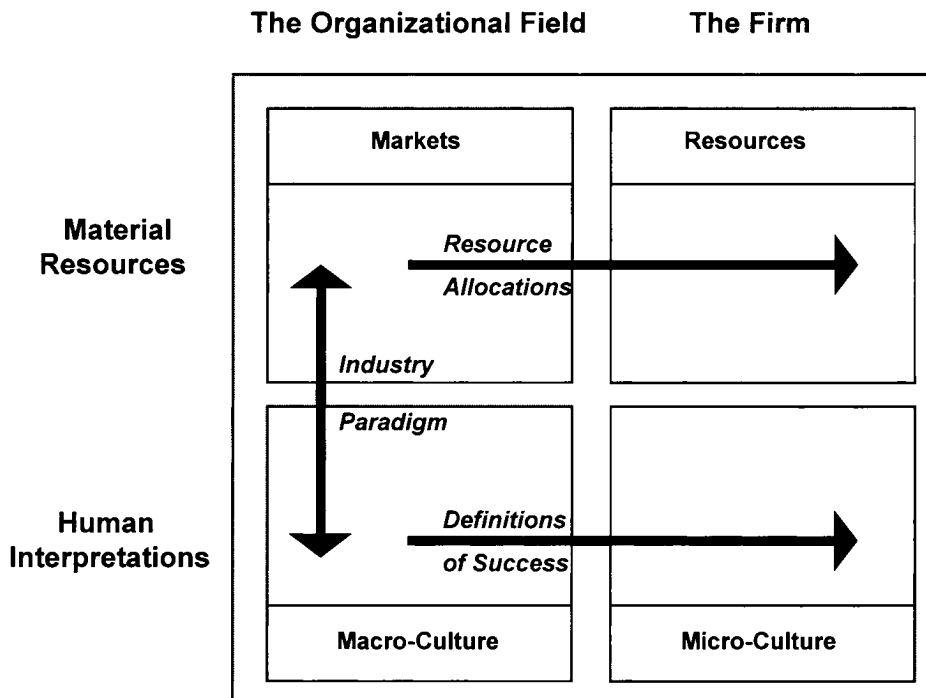


Figure 3. How constituents affect a firm’s competitive advantage

By individually channeling resources to favored firms, constituents create in aggregate the various markets for firms' products and services. As constituents shift their resource allocations, they change market conditions and, through them, the resources a firm has access to. Constituents' choices gradually build the resource and structural conditions of an industry. These choices support some firms and reject others, convert some products and stocks into fads and fashions, and render others obsolete. From the choices of constituents, a restructured industry, and the relative competitive positions of firms in the industry, emerge.

Definitions of success

Constituents express their judgments of firms, not only through their resource allocations, but also through direct statements about the relative success of firms in meeting their expectations. Definitions of success contribute to a firm's competitive advantage by affecting the firm's overall position in the interpretational domain that surrounds an industry. As constituents observe, interpret, and make sense of firms and their actions, they also exchange information, organize, and even take collective action to influence firms (Hill and Jones, 1992). Constituents compare their direct evaluations of firms against institutionally transmitted information emanating from other constituents and the media (Hill and Jones, 1992; Fombrun and Shanley, 1990), and use this information to categorize firms and judge their ability to deliver value. Categorizing rivaling firms into strategic groups, rank-ordering them in reputational rankings, and featuring them as exemplars are common ways through which constituents provide firms with direct definitions of success.

Cognitive strategic groups result when observers perceive competing firms to be more or less similar on important strategic dimensions (Porac and Thomas, 1990; Lant and Baum, 1995; Reger and Huff, 1993). Cognitive simplification and elaboration lead constituents to develop categories to which they assign firms; interaction and exchange of information among constituents lead them to share categorizations of firms (Reger and Huff, 1993).

Differential perceptions about firms act as mobility barriers that surround strategic groups (Fombrun and Zajac, 1987; Reger and Huff, 1993). Category membership itself is graded:

Some firms come to represent the industry more than others and some firms are more stable members of a group (Porac and Thomas, 1990). Over time, the prototypical firm is equated with success and becomes the benchmark against which all others are evaluated. For example, until the early 1980s IBM seemed 'to be the industry itself' (McClellan, 1984: 58), whereas its mainframe competitors were commonly described as the 'Bunch—an unflattering acronym for Burroughs, Univac, NCR, Control Data, and Honeywell.

Reputational rankings are another manifestation of constituents' differential perceptions of firms that affect competitive advantage. Whereas competitive categorizations reflect the map of the industry that constituents have constructed, reputational rankings reflect an ordering, a status hierarchy with implications about the superiority and inferiority of its members. Reputational rankings assess firms' performances on different criteria and directly compare firms with one another (Fombrun and Rindova, forthcoming). Reputational rankings incorporate the demands of resource-holders, which may differ significantly and, as such, may generate contradictory rankings. For instance, some companies top the lists of 'best places to work;' others are ranked 'most environmentally responsible;' and others yet are ranked as 'most admired companies' overall. These lists regularly constructed by institutional intermediaries define multiple success measures in an industry.

By placing firms at different levels in reputational rankings, constituents not only create exemplars and role models for competing firms to follow, but also collectively define the success criteria that firms seek to include in their micro-cultures (Fombrun, 1996). Business school deans report that they 'live and die' by the highly popular rankings of business schools published by *Business Week* and *U.S. News and World Report* (Martins, 1998: 295). Hall (1992) reports that the managers he surveyed considered company reputation and product reputation to be the two most important intangible assets contributing to their firms' success. Although research on the effects of reputational rankings on firms' cultural practices is limited, social identity theory suggests that the definitions of success used by external constituents influence a firm's identity. Reputational rankings act like institutional mirrors: As firms observe their reflections in those insti-

tutional mirrors, they adjust their micro-cultures and material resources to conform better to the definitions of success set by constituents (Dutton and Dukerich, 1991). These mirrors, however, often reflect the cumulative interpretations of observers rather than the current state of the firm. IBM topped *Fortune's* survey of the most admired companies throughout most of the 1980s. This position of the firm in the interpretational domain served as a confirmation of its strategies and did not urge a company-wide overhaul of its micro-culture and resources.

Industry paradigms

In order to allocate resources among firms in an industry, constituents try to understand the products, prospects, and dynamics of the industry. They rely not only on information about firms' actions, but also on interpretative frameworks that explain what those actions mean (Weick, 1995). Dosi (1982) suggests that industry members develop 'technological paradigms' that guide the problems they work on and the kinds of solutions they propose to address those problems. In similar ways, constituents in an organizational field develop shared understandings about such critical assessments as what constitutes efficient allocation of resources in the industry; which products are better; and how to assess risk/return trade-offs in the industry. These shared understandings, along with the preferences of constituents they guide and the advantageous positions of firms they confer, constitute key elements of industry paradigms.

Shared understandings arise both from the strategic projections of firms and from the interpretations provided by institutional intermediaries, such as 'buy-sell' recommendations of financial analysts or product evaluations by consumer organizations. In the computer industry, for instance, an article appeared in *Forbes* magazine in 1979 which told of the growing use of personal computers and showed a half-page photo of Ben Rosen, one of the most respected electronic analysts on Wall Street, using an Apple computer as an analyst's tool. Key constituents and institutional intermediaries affect the development of the industry paradigm through their own interpretations and resource allocations. As they interpret industry conditions, investors, bankers, and analysts, for instance, confirm an industry paradigm

by authorizing flows of financial capital to perceived 'winners' and denying funds to perceived 'losers.' New ventures that attempted to compete with IBM in its heyday invariably ran into lack of venture capital to support their ideas (McKenna, 1989). In similar ways, customers affect the development of the industry paradigm by purchasing the products of winners and ignoring those of losers. Their resource allocations broadcast signals about the relative success of competing firms.

COMPETITIVE ADVANTAGE AS A SYSTEMIC OUTCOME

Competitive advantage develops as firms and constituents strategically target each other in the material and interpretational domains. It results both from actions initiated by firms and those taken by constituents in response. These actions are multidimensional in that they affect outcomes in all four domains; they are also interconnected in that they form multiple cycles of activities through which the four domains are continuously constructed and reproduced. For these reasons, competitive advantage is a systemic outcome, rather than an outcome of isolated activities (Porter, 1985). Figure 4 diagrams the inter-relatedness of the six processes of which competitive advantage is a systemic outcome.

Although we divided competitive interactions into material and interpretational domains for analytical purposes, these levels reciprocally determine each other: Material cues originate in resource exchanges and affect interpretations; interpretations in turn affect choice and execution of material activities (Porac *et al.*, 1989.) For example, constituents' definitions of success provide firms with an interpretational context for understanding the resource allocations of constituents across firms, as well as with input for adjusting their micro-cultural world-views. In addition, they directly construct the material domain by guiding exchange—related choices. As Porac *et al.* (1989: 399–400) observed:

material and cognitive aspects of business rivalry are thickly interwoven ... Technical transactions along the value chain provide an ongoing stream of cues that must be noticed and interpreted by organizational decision-makers ... Transactions are themselves partially determined by the cogni-

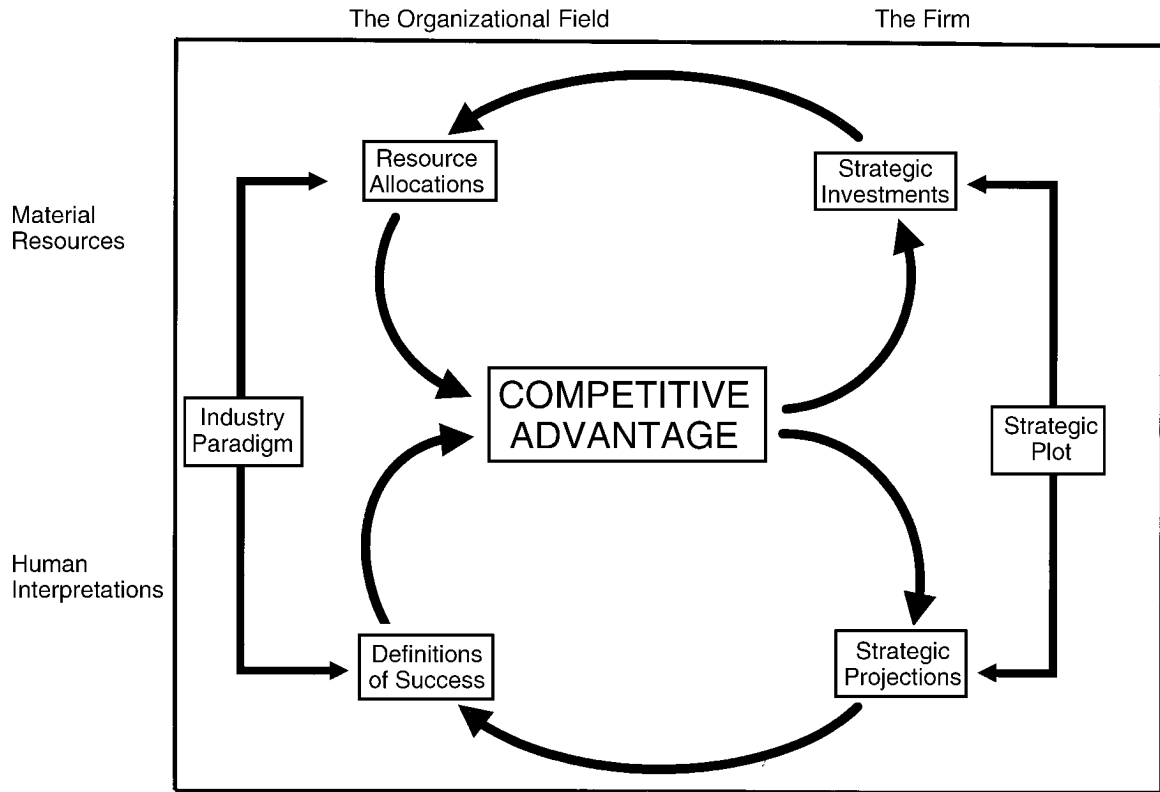


Figure 4. A systematic model of competitive advantage

tive constructions of organizational decision-makers. Beliefs about the identity of competitors, suppliers, and customers focus the limited attentional resources of decision-makers on some transactional partners to the exclusion of others ...

Although material and interpretational conditions produce each other, the development of competitive advantage is not an automatic process. Both firms and constituents selectively invest and allocate resources, project and reflect images. Weick (1995: 81) describes the processes of selective perception and action as enactment and extraction of cues:

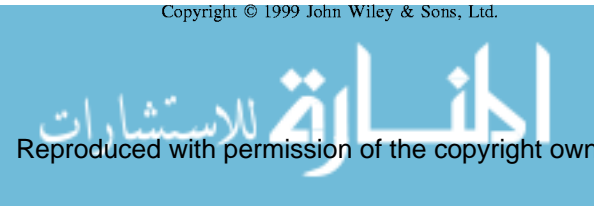
Cues are enacted in the sense that each competitor makes strategic choices on the basis of its beliefs, and these choices put things out there that constrain the information that the firms get back. What the firm gets back affects the next round of choices.

In the model presented in Figure 4, firms 'put out there' technologies, products, investments, and communications. Constituents use the cues

provided by firms in their own enactment cycle of resource allocations and communications. They 'extract' cues

in the sense that others see these enacted changes and extract them as cues of larger trends. Thus, others come to use the same cues for their strategic choices, as does the firm that first enacted those cues and made them available for extraction.

In turn, firms read into constituents' allocations and definitions of success signals about market trends that guide their subsequent investments and projections. Industry features, such as dominant designs, industry concentration, mobility barriers, isolation mechanisms, reputational orderings, exemplars, winners and losers, emerge and crystallize from these processes. Thus, firms and constituents externalize their strategic choices in the material and interpretational domains through the processes of investments, projections, allocations of resources, and definitions of success. They also objectify and internalize the resulting pattern of interactions by forming strategic plots and



industry paradigms through which they adjust beliefs and behaviors in ways that reflect the objectified reality. Along the way, therefore, firms and constituents jointly construct the competitive reality that they come to inhabit.

IBM UNDER FIRE

In this section we use the framework presented in Figure 4 to show how the combined actions of firms and constituents shifted the competitive terrain on which IBM ultimately floundered.

Apple created a new market in 1977 through carefully targeted strategic investments and projections that developed the personal computer and positioned it as a customer-friendly machine. IBM acted 'as a venture capitalist' and allowed a small task force to 'develop as a start-up company' and to create IBM's version of the PC with off-the-shelf components and Microsoft's DOS operating system (*Business Week*, 1983: 76). In so doing, the firm accelerated its entry into the PC market but radically departed from its strategic plot as an integrated manufacturer of proprietary mainframe technology. Most observers evaluated the move positively and applauded IBM for the speed with which it countered Apple's radical innovation and described it as a '... stunning coup in personal computers ... a telling sign of the company's ability to adapt to the new computer marketplace' (McClellan, 1984: 57). Others attributed its success to its well-established reputation in the macro-culture of the organizational field. *Business Week* (1986: 62) wrote: '... the PC symbolized the overwhelming power of the IBM name. Although the machine incorporated few innovations and no distinctive technology, by mid-83 the IBM logo had made it the dominant personal computer sold to businesses.'

IBM's investment in the PC and its reputation gave impetus to the development of a new industry paradigm, which encouraged constituents to shift resources to PC-compatible producers and their suppliers. IBM's entry into the personal computers 'legitimized the small new machines' (*Economist*, 1993) and made them attractive, particularly to business clients. 'Faced with hundreds of brands of unknown personal computers to choose from, business customers suffered "computer shock" and turned to the computer giant for relief' (*Business Week*, 1983: 76).

The PC quickly became a preferred tool for data-processing by thousands of executives. IBM became the dominant supplier of PCs, with 35 percent of the market in 1984. In tandem, investors flocked to the firm's shares, and IBM's stock price moved steadily upwards from \$57 in 1981 to \$96 in 1982, \$122 in 1983, and \$123 in 1984, at a time when the stocks of many of its smaller rivals fell. To many observers, it appeared that IBM had done it again: Despite the firm's late entry, it had come to control, not only the marketplace, but also the minds of constituents. In those years between 1982 and 1986 the company topped *Fortune's* reputational rankings of most admired companies and its market value reached a record \$97 billion in 1986.

By the mid-1980s, however, IBM's dominance in PCs was actually beginning to dissipate. New companies made more strategic investments in cost reduction and product innovation. A new industry paradigm with 'a high premium on innovation, flexibility, and adaptability—all IBM weaknesses ...' emerged. 'Many elements of IBM's corporate culture, such as emphasis on fighting for market share rather than opening new markets, are not well suited to today's fast changing markets.'

The new industry paradigm in the computer industry included a different set of success measures than the one IBM had mastered. They included: open architecture, continuous innovation, commodity prices, lower switching costs for consumers and declining brand loyalty. Thus, a new industry paradigm, a different pattern of resource allocations, and a changing macro-culture of the organizational field characterized IBM's competitive environment in the late 1980s. At IBM, however, the changes were few. It entered a new market with a set of investments, which departed from its traditional resource base and micro-culture. However, when the market picked up, it folded the PC group back into its operations and applied its traditional competitive tactics rooted as they were in its micro-culture and resource strengths. According to a competitor:

In the first eight years of that product [the personal computer], what did IBM do to it? ... They did no operating system enhancements; they did no graphics enhancements; they did no networking enhancements ... They laid the biggest goose egg for a golden goose opportunity. They did nothing to that product, no engineering ...

It's all sales and distribution and marketing and advertising—and Charlie Chaplin running around with a flower. (A computer industry executive, quoted in McKenna, 1989: 71–72)

IBM was locked into a 'mainframe mentality' born of the old industry paradigm: It confidently assumed that it was going to sell to its PC customers the products that it produced rather than the products that they wanted. The result was a lack of strategic investments and projections that could successfully differentiate IBM's machines from clones. Lack of added value encouraged constituents to shift their resource allocations to rivals—to lower-cost producers of clones and to firms that were more responsive to their increasingly complex data-processing needs. As one information systems manager of a large bank put it: 'If we can put two machines for the price of one, it's a blessing and a much better utilization of corporate assets' (Harris *et al.*, 1986: 152).

At IBM, it took over seven quarters of slowing revenue growth, a 27 percent drop in profits, and declining earnings estimates by analysts before the company announced a long-overdue change in its strategic plot. The business press reported it as IBM undergoing its 'toughest self-scrutiny in years' (Harris *et al.*, 1986: 152).

However, in the process of reevaluating its strategic plot, IBM took actions consistent with its extant resource base and micro-culture, rather than with the changes in the industry. In an industry driven by innovation IBM chose to cut costs by (1) redeploying employees from administration into its sales force instead of laying them off; (2) slashing R&D budgets; and (3) freezing new hiring. In doing so, it crippled two key sources of renewal that further undercut its ability to create value for customers. This strategy was based on deeply ingrained cultural beliefs about the importance of the marketing function and about loyalty to employees. IBM's long-standing cultural and resource biases continued to affect its strategic choices throughout the decade. They limited IBM's ability to create value in ways consistent with the expectations formed in the new industry macro-culture.

In contrast, rival Apple invested heavily throughout the decade in new product development, producing in quick succession a series of innovative PCs that climaxed with the introduction of the Macintosh in 1988. It also produced

some of the most sophisticated strategic projections in the industry, including a famous ad alluding to IBM as 'The Big Brother' (Orwell, 1982).

Indeed, for a long time IBM continued to behave as if the combined actions of thousands of entrepreneurial rivals, sophisticated users, and savvy investors had not changed industry conditions. Barr, Stimpert, and Huff (1992) provide evidence of a similar process in the railroad industry. In their study, one firm failed to adapt to the changing conditions in the industry, not because it failed to notice the changes, but because it failed to change its interpretations of how those changes would affect its performance. In remarkably similar ways, lack of change in the internal interpretational domain of IBM led to lack of actions that would have enabled it to sustain its advantage.

Most analysts, however, attributed IBM's loss of competitive advantage to its loss of control over the technological standard and the market. As the *Economist* (1993: 23) put it:

IBM could not sensibly have decided to stay out of the personal computer market. But the way it plunged in was a historic blunder ... Standardization has opened the industry to thousands of new entrants ... The market exploded and IBM became the world's biggest PC maker. But it had lost control ...

This explanation suggests that IBM lost its advantage when it lost its quasi-monopolistic dominance in the market. Our theoretical perspective suggests instead that IBM lost its advantage because it could not reinvent the strategic plot that aligned its resources and micro-culture, and so could not respond to the new definitions of success and resource allocations of constituents. Overall, IBM's loss of competitive advantage in the PC market reflected the firm's failure to see how competitive advantage emerges from the combined actions of firms and constituents in both material and interpretational domains.

CONCLUSION

We began by presenting multiple answers that researchers and practicing managers give to the fundamental question of strategy—why some firms are more successful than others (Porter,

1991). The four approaches we identified represent both prominent and emerging views of competition and competitive advantage. Our dissatisfaction with those approaches derived from several limitations.

Economic theories of competitive advantage ignore the interpretations on which various actors base their actions and through which they construct industry positions and resource distributions. Competition unfolds within a complex network of transactions among producers, suppliers and customers—a network that functions at two levels of analysis: material and interpretational. A growing body of research in strategy has begun to address the interpretations of decision-makers and to develop a cognitive perspective which ‘rather than being an alternative to more traditional accounts of rivalry ... complements and fills in the gaps of previous theorizing’ (Porac *et al.*, 1989: 401). In similar ways, we suggest that a cognitive perspective complements economic theories of competitive advantage by accounting explicitly for the cognitive processes that underlie resource shifts.

Second, theories of competitive advantage tend to focus on competitive interactions among rivals and to ignore the role of resource-holders. Both resource-dependence theory (Pfeffer and Salancik, 1978) and stakeholder theory (Freeman, 1984), however, have argued that resource-holders have a powerful effect on a firm’s success. Consistent with these theories, we argued that competitive advantage depends, not only on the material resources that firms possess and deploy, but also on firms’ ability to win favorable interpretations from the field of constituents and intermediaries.

Third, these approaches tend to leave unexplained how the strategic actions of both firms and resource-holders actually create the industry conditions within which rents are generated (Stimpert, Huff, and Huff, 1994). Whereas the implications for competitive advantage of each of the four domains—markets, firm resources, micro-cultures, and macro-cultures—have been explored by various theoretical perspectives on their own, they cannot explain the creation of structural conditions in these domains. These structures emerge from the constitutive effect of various processes that connect the four domains. Our framework emphasizes the interconnectedness of these domains and the systemic nature of competitive advantage. It alerts

researchers and managers to the fact that actions in one domain produce consequences in another; that each domain exists through its links to the others; and that actions of various constituents and competitors affect how these domains change.

Thus, the framework advances several fundamental principles for building competitive advantage: (1) competition takes place, not only over material resources, but over the *interpretations of multiple constituents* about how firms create value in an industry; (2) firms develop superior industry positions from instrumental actions that are intended, not only to defeat competitors, but to *influence the perceptions and actions of constituents*; (3) firms and constituents enact the competitive terrain on which competition in industries unfolds.

These principles suggest several important implications for strategy research and practice.

First, our framework suggests that *the development of competitive advantage is an interactive process*. Whereas traditional strategy research has focused on existing industry structures and established conditions, the systemic model we propose enriches structural analysis by pointing to the fluidity of industry conditions themselves. Our focus on interactions derives from a voluntaristic perspective which views social structures as ‘continuously constructed, sustained, and changed by actors’ definitions of the situation—the subjective meanings and interpretations that actors impute to their worlds as they negotiate and enact their organizational surroundings’ (Astley and Van de Ven, 1983: 249). In this way, we seek to overcome the structuralist bias of extent theorizing about strategy in which ‘... features of social existence denominated as structures tend to be reified and treated as primary, hard and immutable, like the girders of a building, while the events or social processes they structure tend to be seen as secondary or superficial’ (Sewell, 1992: 1).

Our framework shows various processes through which interactions between firms and constituents take place. The framework suggests that researchers and managers should study activities more traditionally included in the domain of strategy, such as value-chain activities, as well as activities related to presenting the firm to outside observers. In many cases, strategic responses consist of explanations or statements of position and identity (Elasbach, 1994; Fiol and Kooovor-Misra, 1997).

Second, our framework also suggests that *competitive advantage is built through a social influence process*. Through what mechanisms is social influence exercised? Research on organizational culture has amassed evidence on how firms shape the values and beliefs of organizational members (Schein, 1985; Kunda, 1992; Hatch, 1993). This research today, however, has not examined the impact of a firm's micro-culture on its positioning in the marketplace. Recent work in the area of organizational identity and reputation shows that organizational culture and identity are closely coupled with organizational image and reputation (Gioia and Thomas, 1996) and that they foster both processes of identification internally and of differentiation externally (Rindova and Schultz, 1998). Thus, strategy researchers can benefit from investigating how firms imprint their identity on the environment; how they socialize suppliers, distributors, consumers, and other constituents; and how they construct larger communities around their own micro-cultures. For instance, the computer industry has created vivid examples of companies, such as Apple, Intel, and Microsoft, that have successfully extended their cultural beliefs outward to a broader community of users, suppliers, and distributors. Apple's iconoclastic culture became a part of its users' identity, which they upheld in the face of the overwhelming dominance of the IBM standard. Our framework demonstrates both how organizational culture is externalized through projections and how these projections affect the macro-culture of the organizational field. In doing so, they shape the interpretational context within which observers come to understand the various behaviors of a firm.

Research on industry-level cognitive phenomena has emphasized primarily the taken-for-granted, and therefore real effect of cognitive factors but has ignored the active construction of cognitive structures (Walsh, 1995). One exception is Abrahamson and Fombrun (1992), who pointed to the role of media, government agencies, and educational institutions in the creation of macro-cultures. The systemic model we propose offers insight about how firms actively manage their industry cultures through strategic projections and how constituents interpret resource shifts to deduce trends. Future research might examine the competing influences of rivals, intermediaries and constituents and their relative impact on macro-cultural content (Abrahamson and Fombrun, 1994; Rao, 1994).

Third, our framework emphasizes that *competitive advantage is built on relationships*. In neo-classical economics, on which most strategy research has drawn, 'markets as institutional settings are epitomized by impersonal, arms-length, spot transactions. Firms, in contrast, provide many opportunities for sustained interaction, conversation and sociability ...' (Nahapiet and Ghoshal, 1998: 258). Our framework suggests that constituents form interpretations about a firm or an industry based on their cumulative experiences with it. They also form interpretations about various dimensions of a firm, rather than the content of a specific transaction (Rindova, 1997). From a relationship point of view, a firm develops strategies mindful of the consequences of its actions for various actors. It also takes into consideration how its relationship with one constituent group may be used by other constituent groups to infer its moral principles (Jones, 1995). Therefore, relational strategies should be understood not only in the context of exchange dyads but in the context of transactional networks and organizational fields.

Relationships with constituents, we argue, are not just exchanges but sustained social interactions in which past impressions affect future behaviors. Furthermore, once formed favorable impressions become intangible assets, because they generate competitive benefits for a firm (Fombrun, 1996; Dierickx and Cool, 1989). The nascent research on intangibles has recognized that they are embodied in people (Hall, 1993). A critical step in the development of this research will be to recognize that many intangible assets are also relational and to identify relationship-building strategies, which enable firms to develop such assets.

Finally, we suggest that *building competitive advantage is a learning process*. Whereas traditional theories of competitive advantage emphasize the protection of industries and resources from entry and imitation, we emphasize the gradual, as well as more discontinuous, changes in the four domains of action—changes that enable firms to restructure industries and create new rent-related opportunities. Therefore, rather than focusing on the protection of asset stocks, we emphasize how firms create robust flows which renew their valuable assets—both tangible and intangible. Our framework echoes the criticism of Moran and Ghoshal (1996) that strategy research has paid too much attention to rent

protection and exploitation to the neglect of rent creation.

Our framework charts one such path to rent creation, which involves close contact with various constituents. Through this contact, we argued that firms change, influence, and build relationships. They also learn by observing the moves and the signals that multiple constituents and rivals undertake. From a learning point of view, firms use these cues to anticipate inevitable shifts in the competitive terrain

Implications for practice

To strategists, the systemic framework we propose shows that competitive advantage does not derive from any single source—be it industry conditions or corporate culture. Rather, advantage is an outcome of a cycle of processes. Weick (1979b: 52) warned that ‘... managers get into trouble because they forget to think in circles.’ In part it is because organizational structures inhibit thinking in cyclical terms: Each process in the cycle is typically managed by a separate function and level in the organization. Moreover, different professionals normally manage the knowledge base associated with each domain. For example, economists are generally charged with forecasting market behaviors; line managers with developing investment proposals; human resource specialists with managing the systems that support the firm’s micro-culture; and marketing and public relations staffs with monitoring and maintaining the macro-culture. Differentiation along these lines makes cyclical thinking difficult to achieve. A firm’s strategists should recognize the disparity created by their internal structures and actively exploit the interdependencies according to the systemic logic of competitive advantage. To attain and sustain competitive advantage, strategies in one domain must be consistent with strategies developed in another; and strategies coordinated across domains will achieve better results.

Many researchers have suggested that interpretations about firms are more actively constructed in the early life of a firm (Aldrich and Fiol, 1994; Suchman, 1995). The systemic model calls attention to the fact that industry paradigms emerge from interactions between firms and constituents and reflects the legitimacy of technologies, individual firms, and even strategic groups.

When the industry paradigm changes it undermines the legitimacy of established firms. Therefore, the acquisition of legitimacy may be a strategic activity that occurs, not only at the beginning of a firm’s life, but every time its competitive terrain shifts.

Finally, interpretational variables introduce a new set of time lags into models of competitive interaction. Since interpretations such as corporate reputations are inertial, a firm may be able to continue to attract resources for a period of time even when its strategy is no longer viable, as the case of IBM shows. Such a firm may be misled into believing that it enjoys actual advantage when it is using up accumulated goodwill. When constituents find out that their reputation-based expectations are not met, they may have extreme negative reactions. Projecting an image leads to social expectations that amount to obligations to behave in ways consistent with the image (Schlenker, 1980). Violating these obligations can have grave social consequences. At the firm level these social consequences have profound implications for the firm’s economic performance.

Ultimately, the systemic model that we propose makes it very clear why control over resources alone is not enough to reproduce competitive success. Even firms with exceptional resource bases can fall with astonishing speed when they lose the confidence of resource-holders. Therefore, firms need to audit their reputational base as well as their market positions, their cultural compatibility with constituents as well as their resource adequacy.

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