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Competing on Resources

by David J. Collis and Cynthia A. Montgomery

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Reprint R0807N

Competing on Resources

The Idea in Brief

What gives your company a competitive edge? Your **strategically valuable resources**—the ones enabling your enterprise to perform activities better or more cheaply than rivals. These can be *physical assets* (a prime location), *intangible assets* (a strong brand), or *capabilities* (a brilliant manufacturing process). For example, Japanese auto companies have consistently excelled through their *capabilities* in lean manufacturing.

Strategically valuable resources have five characteristics, say Collis and Montgomery: 1) They're difficult for rivals to copy. 2) They depreciate slowly. 3) Your company—not employees, suppliers, or customers—controls their value. 4) They can't be easily substituted for. 5) They're superior to similar resources your competitors own.

To keep your edge sharp, build your strategies on resources that pass these five tests. Regularly invest in those resources. And acquire new ones as needed, as Intel did by adding a brand name—Intel Inside—to its technological resource base.

The Idea in Practice

Collis and Montgomery recommend these practices for managing your strategically valuable resources:

PUT YOUR RESOURCES TO THE TEST

A resource is strategically valuable if it passes five tests:

- **It's hard to copy.** Some resources are hard for rivals to copy because they're physically unique; for example, a desirable real estate location. Others must be built over time, such as Gerber's brand name for baby food.
- **It depreciates slowly.** Disney's brand name was so strong that it survived almost two decades of benign neglect between Walt Disney's death in 1966 and the installation of Michael D. Eisner and his management team in 1984.
- **Its value is controlled by your company.** Your firm—not individual employees, suppliers, distributors, or customers—keeps the lion's share of profits generated by the resource. Your company does not lose a critical resource when a key employee leaves.
- **It's not easily substituted.** Because of easy substitution, the steel industry lost a major market in beer cans to aluminum-can makers.
- **It's better than competitors' similar resources.** A maker of medical-diagnostics test equipment bested rivals at designing an easy interface between its machines and people who use them. Armed with this capability, it expanded into doctors' offices, a fast-growing segment of its market. There, its equipment could be operated by office personnel, not just technicians.

INVEST IN YOUR MOST VALUABLE RESOURCES

Continually invest in building and maintaining your strategically valuable resources.

► Example:

Eisner revived Disney's commitment to animation, a capability at which it excelled. He invested \$50 million in *Who Framed Roger Rabbit* to create the company's first animated feature-film hit in many years. Disney then quadrupled its output of animated feature films, bringing out successive hits, including *The Lion King*.

UPGRADE YOUR RESOURCES

To stave off the inevitable decay in your resources' value, move beyond what your company is already good at.

► Example:

Diversified manufacturer Cooper Industries realized it lacked global management capabilities. It addressed the problem by acquiring Champion Spark Plug. Champion had numerous overseas plants and could provide the skills Cooper needed to manage international manufacturing.

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Editor's Note: This influential 1995 article (originally published as "Competing on Resources: Strategy in the 1990s") introduced the resource-based view of the firm to practitioners hungry for a new approach to strategy. It brings together the strengths of Michael E. Porter's externally focused five-forces framework with those of the internally focused competing-on-capabilities view.

As recently as 10 years ago, we thought we knew most of what we needed to know about strategy. Portfolio planning, the experience curve, PIMS, Michael E. Porter's five forces—tools like these brought rigor and legitimacy to strategy at both the business unit and the corporate level. Leading companies, such as General Electric, built large staffs that reflected growing confidence in the value of strategic planning. Strategy consulting boutiques expanded rapidly and achieved widespread recognition. How different the landscape looks today. The armies of planners have all but disappeared, swept away by the turbu-

lence of the past decade. On multiple fronts, strategy has come under fire.

At the business unit level, the pace of global competition and technological change has left managers struggling to keep up. As markets move faster and faster, managers complain that strategic planning is too static and too slow. Strategy has also become deeply problematic at the corporate level. In the 1980s, it turned out that corporations were often destroying value by owning the very divisions that had seemed to fit so nicely in their growth/share matrices. Threatened by smaller, less hierarchical competitors, many corporate stalwarts either suffered devastating setbacks (IBM, Digital, General Motors, and Westinghouse) or underwent dramatic transformation programs and internal reorganizations (GE and ABB). By the late 1980s, large multibusiness corporations were struggling to justify their existence.

Not surprisingly, waves of new approaches to strategy were proposed to address these multiple assaults on the premises of strategic

planning. Many focused inward. The lessons from Tom Peters and Bob Waterman's "excellent" companies led the way, closely followed by total quality management as strategy, re-engineering, core competence, competing on capabilities, and the learning organization. Each approach made its contribution in turn, yet how any of them built on or refuted the previously accepted wisdom was unclear. The result: Each compounded the confusion about strategy that now besets managers.

A framework that has the potential to cut through much of this confusion is now emerging from the strategy field. The approach is grounded in economics, and it explains how a company's resources drive its performance in a dynamic competitive environment. Hence the umbrella term academics use to describe this work: the *resource-based view of the firm* (RBV). The RBV combines the *internal* analysis of phenomena within companies (a preoccupation of many management gurus since the mid-1980s) with the *external* analysis of the industry and the competitive environment (the central focus of earlier strategy approaches). Thus the resource-based view builds on, but does not replace, the two previous broad approaches to strategy by *combining* internal and external perspectives.¹ It derives its strength from its ability to explain in clear managerial terms why some competitors are more profitable than others, how to put the idea of core competence into practice, and how to develop diversification strategies that make sense. The resource-based view, therefore, will be as powerful and as important to strategy in the 1990s as industry analysis was in the 1980s. (See the sidebar "A Brief History of Strategy.")

The RBV sees companies as very different collections of physical and intangible assets and capabilities. No two companies are alike because no two companies have had the same set of experiences, acquired the same assets and skills, or built the same organizational cultures. These assets and capabilities determine how efficiently and effectively a company performs its functional activities. Following this logic, a company will be positioned to succeed if it has the best and most appropriate stocks of resources for its business and strategy.

Valuable resources can take a variety of forms, including some overlooked by the nar-

rower conceptions of core competence and capabilities. They can be *physical*, like the wire into your house. Potentially, both the telephone and cable companies are in a very strong position to succeed in the brave new world of interactive multimedia because they own the on-ramp to the information superhighway. Or valuable resources may be *intangible*, such as brand names or technological know-how. The Walt Disney Company, for example, holds a unique consumer franchise that makes Disney a success in a slew of businesses, from soft toys to theme parks to videos. Similarly, Sharp's knowledge of flat-panel display technology has enabled it to dominate the \$7 billion worldwide liquid crystal display (LCD) business. Or the valuable resource may be an *organizational capability* embedded in a company's routines, processes, and culture. Take, for example, the skills of the Japanese automobile companies—first in low-cost, lean manufacturing; next in high-quality production; and then in fast product development. These capabilities, built up over time, transform otherwise pedestrian or commodity inputs into superior products and make the companies that have developed them successful in the global market.

Competitive advantage, whatever its source, ultimately can be attributed to the ownership of a valuable resource that enables the company to perform activities better or more cheaply than competitors. Marks & Spencer, for example, possesses a range of resources that demonstrably yield it a competitive advantage in British retailing. (See the exhibit "How Marks & Spencer's Resources Give It Competitive Advantage.") This is true both at the single-business level and at the corporate level, where the valuable resources might reside in a particular function, such as corporate research and development, or in an asset, such as corporate brand identity. Superior performance will therefore be based on developing a *competitively distinct* set of resources and deploying them in a well-conceived strategy.

Competitively Valuable Resources

Resources cannot be evaluated in isolation, because their value is determined in the interplay with market forces. A resource that is valuable in a particular industry or at a particular time might fail to have the same value in a different industry or chronological context.

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For example, despite several attempts to brand lobsters, so far no one has been successful in doing so. A brand name was once very important in the personal computer industry, but it no longer is, as IBM has discovered at great cost. Thus the RBV inextricably links a company's internal capabilities (what it does well) and its external industry environment (what the market demands and what competitors offer). Described that way, competing on resources sounds simple. In practice, however, managers often have a hard time identifying and evaluating their companies' resources objectively. The RBV can help by bringing discipline to the often fuzzy and subjective process of assessing valuable resources.

For a resource to qualify as the basis for an effective strategy, it must pass a number of external market tests of its value. Some are so straightforward that most managers grasp them intuitively or even unconsciously. For instance, a valuable resource must contribute to the production of something customers want at a price they are willing to pay. Other tests are more subtle and, as a result, are commonly misunderstood or misapplied. These often turn out to cause strategies to misfire.

1. The test of inimitability: Is the resource hard to copy? Inimitability is at the heart of value creation because it limits competition. If a resource is inimitable, then any profit stream it generates is more likely to be sustainable. Possessing a resource that competitors easily can copy generates only temporary value. But because managers fail to apply this test rigorously, they try to base long-term strategies on resources that are imitable. IBP, the first meat-packing company in the United States to modernize, built a set of assets (automated plants located in cattle-rearing states) and capabilities (low-cost "disassembly" of beef) that enabled it to earn returns of 1.3% in the 1970s. By the late 1980s, however, ConAgra and Cargill had replicated these resources, and IBP's returns fell to 0.4%.

Inimitability doesn't last forever. Competitors eventually will find ways to copy most valuable resources. But managers can forestall them—and sustain profits for a while—by building their strategies around resources that have at least one of the following four characteristics:

The first is *physical uniqueness*, which almost by definition cannot be copied. A wonderful

A Brief History of Strategy

The field of strategy has largely been shaped around a framework first conceived by Kenneth R. Andrews in his classic book *The Concept of Corporate Strategy* (Richard D. Irwin, 1971). Andrews defined strategy as the match between what a company *can* do (organizational strengths and weaknesses) within the universe of what it *might* do (environmental opportunities and threats).

Although the power of Andrews's framework was recognized from the start, managers were given few insights about how to assess either side of the equation systematically. The first important breakthrough came in Michael E. Porter's book *Competitive Strategy: Techniques for Analyzing Industries and Competitors* (Free Press, 1980). Porter's work built on the structure-conduct-performance paradigm of industrial-organization economics. The essence of the model is that the structure of an industry determines the state of competition within that industry and sets the context for companies' conduct—that is, their strategy. Most important, structural forces

(which Porter called the five forces) determine the average profitability of the industry and have a correspondingly strong impact on the profitability of individual corporate strategies.

This analysis put the spotlight on choosing the "right industries" and, within them, the most attractive competitive positions. Although the model did not ignore the characteristics of individual companies, the emphasis was clearly on phenomena at the industry level.

With the appearance of the concepts of core competence and competing on capabilities, the pendulum swung dramatically in the other direction, moving from outside to inside the company. These approaches emphasized the importance both of the skills and collective learning embedded in an organization and of management's ability to marshal them. This view assumed that the roots of competitive advantage were inside the organization and that the adoption of new strategies was constrained by the current level of the company's resources. The external environment received

little, if any, attention, and what we had learned about industries and competitive analysis seemed to disappear from our collective psyche. The emerging resource-based view of the firm helps to bridge these seemingly disparate approaches and to fulfill the promise of Andrews's framework. Like the capabilities approaches, the resource-based view acknowledges the importance of company-specific resources and competencies, yet it does so in the context of the competitive environment. The resource-based view shares another important characteristic with industry analysis: It, too, relies on economic reasoning. It sees capabilities and resources as the heart of a company's competitive position, subject to the interplay of three fundamental market forces: demand (does it meet customers' needs, and is it competitively superior?), scarcity (is it imitable or substitutable, and is it durable?), and appropriability (who owns the profits?). The five tests described in the article translate these general economic requirements into specific, actionable terms.

real estate location, mineral rights, or Merck's pharmaceutical patents simply cannot be imitated. Although managers may be tempted to think that many of their resources fall into this category, on close inspection, few do.

A greater number of resources cannot be imitated because of what economists call *path dependency*. Simply put, these resources are unique and, therefore, scarce because of all that has happened along the path taken in their accumulation. As a result, competitors cannot go out and buy these resources instantaneously. Instead, they must be built over time in ways that are difficult to accelerate.²

The Gerber Products brand name for baby food, for example, is potentially imitable. Re-creating Gerber's brand loyalty, however, would take a very long time. Even if a competitor spent hundreds of millions of dollars promoting its baby food, it could not buy the trust that consumers associate with Gerber. That sort of brand connotation can be built only by marketing the product steadily for years, as Gerber has done. Similarly, crash R&D programs usually cannot replicate a successful technology when research findings cumulate. Having many researchers working in parallel cannot speed the process, because bottlenecks have to be solved sequentially.

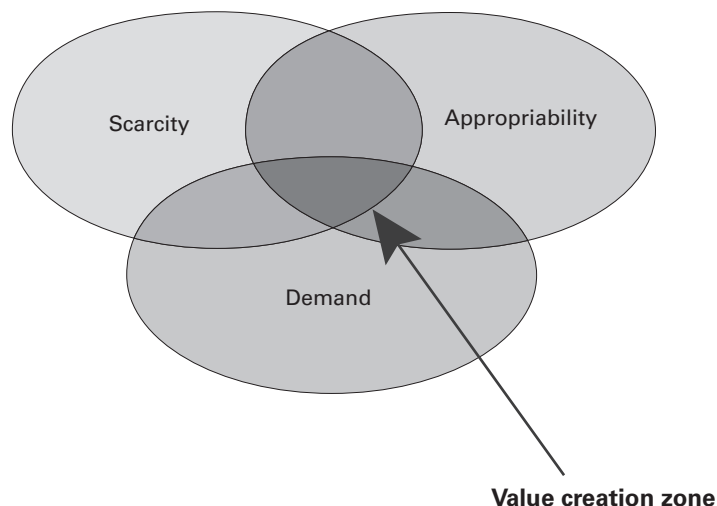
All this builds protection for the original resource.

The third source of inimitability is *causal ambiguity*. Would-be competitors are thwarted because it is impossible to disentangle either what the valuable resource is or how to recreate it. What *really* is the cause of Rubbermaid's continued success in plastic products? We can draw up lists of possible reasons. We can try, as any number of competitors have, to identify its recipe for innovation. But, in the final analysis, we cannot duplicate Rubbermaid's success.

Causally ambiguous resources are often organizational capabilities. These exist in a complex web of social interactions and may even depend critically on particular individuals. As Continental and United try to mimic Southwest's successful low-cost strategy, what will be most difficult for them to copy is not the planes, the routes, or the fast gate turnaround. All of those are readily observable and, in principle, easily duplicated. However, it will be difficult to reproduce Southwest's culture of fun, family, frugality, and focus because no one can quite specify exactly what it is or how it arose.

The final source of inimitability, *economic deterrence*, occurs when a company preempts a competitor by making a sizable investment in

What Makes a Resource Valuable?



The dynamic interplay of three fundamental market forces determines the value of a resource or a capability.

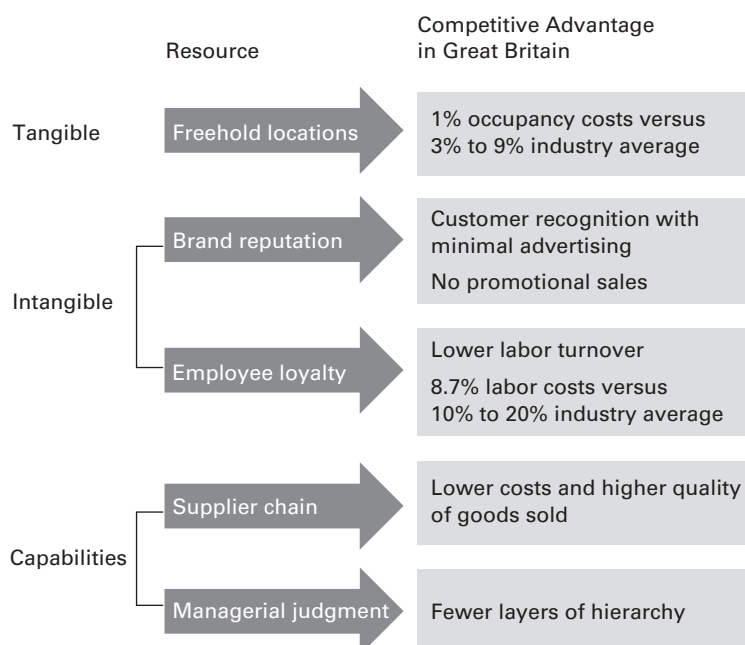
an asset. The competitor could replicate the resource but, because of limited market potential, chooses not to. This is most likely when strategies are built around large capital investments that are both scale sensitive and specific to a given market. For example, the minimum efficient scale for float-glass plants is so large that many markets can support only one such facility. Because such assets cannot be redeployed, they represent a credible commitment to stay and fight it out with competitors who try to replicate the investment. Faced with such a threat, potential imitators may choose not to duplicate the resource when the market is too small to support two players the size of the incumbent profitably. That is exactly what is now occurring in Eastern Europe. As companies rush to modernize, the first to build a float-glass facility in a country is likely to go unchallenged by competitors.

2. The test of durability: How quickly does this resource depreciate? The longer lasting a resource is, the more valuable it will be. Like inimitability, this test asks whether the resource can sustain competitive advantage over time. While some industries are stable for years, managers today recognize that most are so dynamic that the value of resources depre-

ciates quickly. Disney's brand name survived almost two decades of benign neglect between Walt Disney's death and the installation of Michael D. Eisner and his management team. In contrast, technological know-how in a fast-moving industry is a rapidly wasting asset, as the list of different companies that have dominated successive generations of semiconductor memories illustrates. Economist Joseph A. Schumpeter first recognized this phenomenon in the 1930s. He described waves of innovation that allow early movers to dominate the market and earn substantial profits. However, their valuable resources are soon imitated or surpassed by the next great innovation, and their superior profits turn out to be transitory. Schumpeter's description of major companies and whole industries blown away in a gale of "creative destruction" captures the pressure many managers feel today. Banking on the durability of most core competencies is risky. Most resources have a limited life and will earn only temporary profits.

3. The test of appropriability: Who captures the value that the resource creates? Not all profits from a resource automatically flow to the company that "owns" the resource. In fact, the value is always subject to bargain-

How Marks & Spencer's Resources Give It Competitive Advantage



In practice, core competence has too often become a “feel good” exercise that no one fails.

ing among a host of players, including customers, distributors, suppliers, and employees. What has happened to leveraged buyout firms is revealing. A critical resource of LBO firms was the network of contacts and relationships in the investment banking community. However, this resource often resided in the individuals doing the deals, not in the LBO firms as a whole. These individuals could—and often did—depart to set up their own LBO funds or move to another firm where they could reap a greater share of the profits that their resource generated. Basing a strategy on resources that are not inextricably bound to the company can make profits hard to capture.

4. The test of substitutability: Can a unique resource be trumped by a different resource? Since Porter’s introduction of the five-forces framework, every strategist has been on the lookout for the potential impact of substitute products. The steel industry, for example, has lost a major market in beer cans to aluminum makers in the past 20 years. The resource-based view pushes this critical question down a level to the resources that underpin a company’s ability to deliver a good or service. Consider the following example. In the early 1980s, People Express Airlines challenged the major airlines with a low-price strategy. Founder Donald C. Burr pursued this strategy by developing a unique no-frills approach and an infrastructure to deliver low-cost flights. Although the major airlines were unable to replicate this approach, they nevertheless were able to retaliate using a *different* resource to offer consumers equivalent low-cost fares—their computer reservation systems and yield-management skills. This substitution eventually drove People Express into bankruptcy and out of the industry.

5. The test of competitive superiority: Whose resource is really better? Perhaps the greatest mistake managers make when evaluating their companies’ resources is that they do not assess them relative to competitors’. Core competence has too often become a “feel good” exercise that no one fails. Every company can identify one activity that it does relatively better than other activities and claim that as its core competence. Unfortunately, core competence should not be an internal assessment of which activity, of all its activities, the company performs best. It should be a harsh external assessment of what

it does better than competitors, for which the term *distinctive competence* is more appropriate. How many consumer packaged-goods companies assert that their core competence is consumer marketing skills? They may indeed all be good at that activity, but a corporate strategy built on such a core competence will rapidly run into trouble because other competitors with better skills will be pursuing the same strategy.

The way to avoid the vacuousness of generic statements of core competence is to disaggregate the corporation’s resources. The category *consumer marketing skills*, for example, is too broad. But it can be divided into subcategories such as effective brand management, which in turn can be divided into skills such as product-line extensions, cost-effective couponing, and so on. Only by looking at this level of specificity can we understand the sources of a company’s uniqueness and measure by analyzing the data whether it is competitively superior on those dimensions. Can anyone evaluate whether Kraft General Foods’ or Unilever’s consumer marketing skills are better? No. But we can demonstrate quantitatively which is more successful at launching product-line extensions.

Disaggregation is important not only for identifying truly distinctive resources but also for deriving actionable implications. How many companies have developed a statement of their core competencies and then have struggled to know what to do with it? One manufacturer of medical-diagnostics test equipment, for example, defined one of its core competencies as instrumentation. But this intuitively obvious definition was too broad to be actionable. By pushing to deeper levels of disaggregation, the company came to a powerful insight. In fact, its strength in instrumentation was mainly attributable to its competitive superiority in designing the interface between its machines and the people who use them. As a result, the company decided to reinforce its valuable capability by hiring ergonomists, and it expanded into doctors’ offices, a fast-growing segment of its market. There, the company’s resources created a real competitive advantage, in part because its equipment can be operated by office personnel rather than only by technicians.

Although disaggregation is the key to identifying competitively superior resources,

sometimes the valuable resource is a combination of skills, none of which is superior by itself but which, when combined, make a better package. Honeywell's industrial automation systems are successful in the marketplace—a measure that the company is good at something. Yet each individual component and software program might not be the best available. Competitive superiority lies either in the weighted average (the company does not rank first in any resource, but it is still better on average than any competitor) or in its system-integration capability.

The lesson for managers is that conclusions about critical resources should be based on objective data from the market. In our experience, managers often treat core competence as an exercise in intuition and skip the thorough research and detailed analysis needed to get the right answer.

Strategic Implications

Managers should build their strategies on resources that meet the five tests outlined above. The best of these resources are often intangible, not physical, hence the emphasis in recent approaches on the softer aspects of corporate assets—the culture, the technology,

and the transformational leader. The tests capture how market forces determine the value of resources. They force managers to look inward and outward at the same time.

However, most companies are not ideally positioned with competitively valuable resources. More likely, they have a mixed bag of resources—some good, some mediocre, and some outright liabilities, such as IBM's monolithic mainframe culture. The harsh truth is that most companies' resources do not pass the objective application of the market tests.

Even those companies that are fortunate enough to have unusual assets or capabilities are not home free. Valuable resources must still be joined with other resources and embedded in a set of functional policies and activities that distinguish the company's position in the market—after all, competitors can have core competencies, too.

Strategy requires managers to look forward as well. Companies fortunate enough to have a truly distinctive competence must also be wise enough to realize that its value is eroded by time and competition. Consider what happened to Xerox. During what has become known as its “lost decade,” the 1970s, Xerox believed its reprographic capability to be

What Ever Happened to the Dogs and Cash Cows?

In the late 1960s and early 1970s, the wisdom of the day was that companies could transfer the competitive advantage of professional management across a broad range of businesses. Many companies responded to the perceived opportunity: Armed with decentralized structures and limited, but tight, financial controls, they diversified into a number of related and unrelated businesses, mostly through acquisition. In time, such conglomerates came to resemble miniature economies in their own right. There appeared to be no compelling limits to the scope of corporations.

As the first oil crisis hit in 1973, corporate managers faced deteriorating performance and had little advice on how to act. Into this vacuum came the Boston Consulting Group and portfolio management. In BCG's now famous growth/share matrix, corporate management was finally given a tool with which to reassert control over its many divisions.

This simple matrix allowed managers to classify each division, since renamed a strategic business unit, into a quadrant based on the growth of its industry and the relative strength of the unit's competitive position. There was a prescribed strategy for each position in the matrix: Sustain the cash-generating cows, divest or harvest the dogs, take cash from the cows and invest in question marks in order to make them stars, and increase the market share of the stars until their industry growth slowed and they became the next generation of cash cows. Such simple prescriptions gave corporate management both a sense of what their strategy should accomplish—a balanced portfolio of businesses—and a way to control and allocate resources to their divisions.

The problem with the portfolio matrix was that it did not address how value was being created across the divisions, which could be as diverse as semiconductors and hammers. The

only relationship between them was cash. As we have come to learn, the relatedness of businesses is at the heart of value creation in diversified companies. The portfolio matrix also suffered from its assumption that corporations had to be self-sufficient in capital. That implied that they should find a use for all internally generated cash and that they could not raise additional funds from the capital market. The capital markets of the 1980s demonstrated the fallacy of such assumptions.

In addition, the growth/share matrix failed to compare the competitive advantage a business received from being owned by a particular company with the costs of owning it. In the 1980s, many companies built enormous corporate infrastructures that created only small gains at the business unit level. During the same period, the market for corporate control heated up, focusing attention on value for shareholders. Many companies with supposedly model portfolios were accordingly dissolved.

inimitable. And while Xerox slept, Canon took over world leadership in photocopiers.

In a world of continuous change, companies need to maintain pressure constantly at the frontiers—building for the next round of competition. Managers must therefore continually invest in and upgrade their resources, however good those resources are today, and leverage them with effective strategies into attractive industries in which they can contribute to a competitive advantage.

Investing in resources. Because all resources depreciate, an effective corporate strategy requires continual investment in order to maintain and build valuable resources. One of Eisner's first actions as CEO at Disney was to revive the company's commitment to animation. He invested \$50 million in *Who Framed Roger Rabbit* to create the company's first animated feature-film hit in many years and quadrupled its output of animated feature films—bringing out successive hits, such as *Beauty and the Beast*, *Aladdin*, and *The Lion King*.

Similarly, Marks & Spencer has periodically reexamined its position in its only business—retailing—and has made major investments to stay competitive. In the early 1980s, the British company spent billions on store renovation, opened new edge-of-town locations, and updated its procurement and distribution systems. In contrast, the U.S. retailer Sears, Roebuck diversified into insurance, real estate, and stock brokerages, while failing to keep up with the shift in retailing to new mall locations and specialty stores.

The mandate to reinvest in strategic resources may seem obvious. The great contribution of the core competence notion is its recognition that, in corporations with a traditional divisional structure, investment in the corporation's resources often takes a backseat to optimizing current divisional profitability. Core competence, therefore, identifies the critical role that the corporate office has to play as the guardian of what are, in essence, the crown jewels of the corporation. In some instances, such guardianship might even require explicitly establishing a corporate officer in charge of nurturing the critical resources. Cooper Industries, a diversified manufacturer, established a manufacturing services group to disseminate the best manufacturing practices throughout the

company. The group helped “Cooperize” acquired companies, rationalizing and improving their production facilities. The head of the services group, Joseph R. Coppola, was of a caliber to be hired away as CEO of Giddings & Lewis, the largest U.S. machine tool manufacturer. Similarly, many professional service firms, such as Coopers & Lybrand, have a senior partner in charge of their critical capabilities—client-relationship management, staff training, and intellectual development. Valuable corporate resources are often supradivisional, and, unless someone is managing them on that basis, divisions will underinvest in them or free ride on them.

At the same time, investing in core competencies without examining the competitive dynamics that determine industry attractiveness is dangerous. By ignoring the marketplace, managers risk investing heavily in resources that will yield low returns. Masco did exactly that. It built a competence in metalworking and diversified into tightly related industries. Unfortunately, the returns from this strategy were lower than the company had expected. Why? A straightforward five-forces analysis would have revealed that the structure of the industries Masco entered was poor—buyers were price sensitive with limited switching costs, entry barriers were low, and suppliers were powerful. Despite Masco's metalworking expertise, its industry context prevented it from achieving exceptional returns until it developed the skills that enabled it to enter more attractive industries.

Similarly, if competitors are ignored, the profits that could result from a successful resource-based strategy will dissipate in the struggle to acquire those resources. Consider the value of the cable wire into your house as a source of competitive advantage in the multimedia industry. Companies such as Time Warner have been forced by competitors, who can also see the value of that wire, to bid billions of dollars to acquire control of even modest cable systems. As a result, they may never realize substantial returns on their investment. This is true not only for resources acquired on the market but also for those core competencies that many competitors are simultaneously trying to develop internally.

Upgrading resources. What if a company has no unusually valuable resources? Unfortunately, that is a common experience when

resources are evaluated against the standard of competitive superiority. Or what if a company's valuable resources have been imitated or substituted by competitors? Or perhaps its resources, like Masco's, are valuable only in industries so structurally unattractive that, regardless of how efficiently it operates, its financial returns will never be stellar. In these cases—indeed, in nearly all cases—companies must continually upgrade the number and quality of their resources and associated competitive positions in order to hold off the almost inevitable decay in their value.

Upgrading resources means moving beyond what the company is already good at, which can be accomplished in a number of ways. The first is by adding new resources, the way Intel added a brand name, Intel Inside, to its technological resource base. The second is by upgrading to alternative resources that are threatening the company's current capabilities. AT&T is trying to build capabilities in multimedia now that its physical infrastructure—the network—is no longer unique or as critical as it once was. Finally, a company can upgrade its resources in order to move into a structurally more attractive industry, the way Nucor, a U.S. steel company, has made the transition from competitive, low-margin, downstream businesses, such as steel joists, into more differentiated, upstream businesses, such as thin-slab cast-steel sheets.

Perhaps the most successful examples of upgrading resources are in companies that have added new competencies sequentially, often over extended periods of time. Sharp provides a wonderful illustration of how to exploit a virtuous circle of sequentially upgrading technologies and products, what the Japanese call “seeds and needs.” In the late 1950s, Sharp was an assembler of televisions and radios, seemingly condemned to the second rank of Japanese consumer electronics companies. To break out of that position, founder Tokuji Hayakawa, who had always stressed the importance of innovation, created a corporate R&D facility. When the Japanese Ministry of International Trade and Industry blocked Sharp from designing computers, the company used its limited technology to produce the world's first digital calculator in 1964. To strengthen its position in this business, Sharp backward integrated into manufacturing its own specialized semiconductors and made a strong commit-

ment to the new liquid crystal display technology. Sharp's bet on LCD technology paid off and enabled it to develop a number of new products, such as the Wizard electronic organizer. Over time, the superiority of its display technology gave Sharp a competitive advantage in businesses it had previously struggled in, such as camcorders. Its breakthrough product, Viewcam, captured 20% of the Japanese market within six months of release in 1992.

At each stage, Sharp took on a new challenge, whether to develop or improve a technology or to enter or attack a market. Success in each endeavor improved the company's resources in technology, distribution, and organizational capability. It also opened new avenues for expansion. Today, Sharp is the dominant player in the LCD market and a force in consumer electronics.

Cooper provides another example. Challenged to justify its plan to acquire Champion Spark Plug in 1989, when fuel injection was replacing carburetors and so extending the life of spark plugs, Cooper reasoned that it had the resources to help Champion improve its position, as it had done many times before with products such as Crescent wrenches, Nicholson files, and Gardner-Denver mining equipment. But what really swung the decision, according to Cooper chairman and CEO Robert Cizik, was the recognition that Cooper lacked a critical skill it needed for the future—the ability to manage international manufacturing. With its numerous overseas plants, Champion offered Cooper the opportunity to acquire global management capabilities. The Champion acquisition, in Cizik's view, was a way to upgrade Cooper's resources. Indeed, a review of the company's history shows that Cooper has deliberately sought to improve its capabilities gradually by periodically taking on challenges it knows will have a high degree of difficulty for the organization.

Leveraging resources. Corporate strategies must strive to leverage resources into all the markets in which those resources contribute to competitive advantage or to compete in new markets that improve the corporate resources. Or, preferably, both, as with Cooper's acquisition of Champion. Failure to do so, as occurred with Disney following the death of its founder, leads a company to be undervalued. Eisner's management team, which extended the scope of Disney's activities into

Add new competencies sequentially, and learn to exploit the virtuous circle of “seeds and needs.”

For More on the Resource-Based View

Raphael Amit and Paul J.H. Schoemaker, "Strategic Assets and Organizational Rent," *Strategic Management Journal*, January 1993.

J.B. Barney, "Strategic Factor Markets: Expectations, Luck and Business Strategy," *Management Science*, October 1986.

Kathleen R. Conner, "A Historical Comparison of Resource-Based Theory and Five Schools of Thought Within Industrial Organization Economics: Do We Have a New Theory of the Firm?" *Journal of Management*, March 1991.

Ingemar Dierickx and Karel Cool, "Asset Stock Accumulation and Sustainability of Competitive Advantage," *Management Science*, December 1989.

Margaret A. Peteraf, "The Cornerstones of Competitive Advantage: A Resource-Based View," *Strategic Management Journal*, March 1993.

Richard P. Rumelt, "Theory, Strategy, and Entrepreneurship," *The Competitive Challenge: Strategies for Industrial Innovation and Renewal*, ed. David J. Teece (Ballinger, 1987).

Birger Wernerfelt, "A Resource-Based View of the Firm," *Strategic Management Journal*, April–June 1984.

hotels, retailing, and publishing, was installed in response to a hostile-takeover threat triggered by the underutilization of the company's valuable resources.

Good corporate strategy, then, requires continual reassessment of the company's scope. The question strategists must ask is, How far can the company's valuable resource be extended across markets? The answer will vary widely because resources differ greatly in their specificity, from highly fungible resources (such as cash, many kinds of machinery, and general management skills) to much more specialized resources (such as expertise in narrow scientific disciplines and secret product formulas). Specialized resources often play a critical role in securing competitive advantage, but, because they are so specific, they lose value quickly when they are moved away from their original settings. Shell Oil's brand name, for example, will not transfer well outside autos and energy, however valuable it is within those fields. Highly fungible resources, on the other hand, transfer well across a wide range of markets but rarely constitute the key source of competitive advantage.

The RBV helps us understand why the track record of corporate diversification has been so poor and identifies three common and costly strategic errors companies make when they try to grow by leveraging resources. First, managers tend to overestimate the transferability of specific assets and capabilities. The irony is that because valuable resources are hard to imitate, the company itself may find it difficult to replicate them in new markets. Despite its great success in Great Britain, Marks & Spencer has failed repeatedly in attempts to leverage its resources in the North American market—a classic example of misjudging the important role that context plays in competitive advantage. In this case, the concepts of path dependency and causal ambiguity are both at work. Marks & Spencer's success is rooted in its 100-year reputation for excellence in Great Britain and in the skills and relationships that enable it to manage its domestic supply chain effectively. Just as British competitors have been unable to duplicate this set of advantages, Marks & Spencer itself struggles to do so when it tries to enter a new market against established competitors.

Second, managers overestimate their ability

to compete in highly profitable industries. Such industries are often attractive precisely because entry barriers limit the number of competitors. Entry barriers are really resource barriers: The reason competitors find it so hard to enter the business is that accumulating the necessary resources is difficult. If it could be done easily, competitors would flock to the opportunity, driving down average returns. Many managers fail to see the connection between company-level resources and industry-level profits and convince themselves that they can vault the entry barrier, without considering which factors will ultimately determine success in the industry. Philip Morris's entry into soft drinks, for example, foundered on the difficulties it faced managing the franchise distribution network. After years of poor performance in that business, it gave up and divested 7-Up.

The third common diversification mistake is to assume that leveraging generic resources, such as lean manufacturing, will be a major source of competitive advantage in a new market—regardless of the specific competitive dynamics of that market. Chrysler seems to have learned this lesson. Expecting that its skills in design and manufacturing would ensure success in the aerospace industry, Chrysler acquired Gulfstream Aerospace—only to divest it five years later in order to concentrate on its core businesses.

Despite the common pitfalls, the rewards for companies that leverage their resources appropriately, as Disney has, are high. Newell is another stunning example of a company that has built a set of capabilities and used them to secure commanding positions for products in a wide range of industries. Newell was a modest manufacturer of drapery hardware in 1967, when a new CEO, Daniel C. Ferguson, articulated its strategy: The company would specialize in high-volume production of a variety of household and office staple goods that would be sold through mass merchandisers. The company made a series of acquisitions, each of which benefited from Newell's capabilities—its focused control systems; its computer links with mass discounters, which facilitate paperless invoicing and automatic inventory restocking; and its expertise in the "good-better-best" merchandising of basic products, in which retailers typically choose to carry only one brand, with several quality and price levels. In turn, each acquisition gave Newell yet another op-

portunity to strengthen its capabilities. Today, Newell holds leading market positions in drapery hardware, cookware, glassware, paintbrushes, and office products and maintains an impressive 15% earnings growth annually. What differentiates this diversified company from a host of others is how it has been able to use its corporate resources to establish and maintain competitive advantage at the business unit level.

However, even Newell benefits from the attractiveness of the markets in which it competes. All its products are infrequently purchased, low-cost items. Most consumers will not spend time comparison shopping for six glasses, nor do they have a sense of the market price. Do you know if \$3.99 is too much to pay for a brass curtain rod? Thus Newell's resources are all the more valuable for being deployed in an attractive industry context.

...

Whether a company is building a strategy based on core competencies, is developing a learning organization, or is in the middle of a transformation process, those concepts can all be interpreted as a mandate to build a unique set of resources and capabilities. However, this must be done with a sharp eye on the dynamic industry context and competitive situation,

rigorously applying market tests to those resources. Strategy that blends two powerful sets of insights about capabilities and competition represents an enduring logic that transcends management fads.

That this approach pays off is demonstrated by the impressive performance of companies such as Newell, Cooper, Disney, and Sharp. Although these companies may not have set out explicitly to craft resource-based strategies, they nonetheless capture the power of this logic and the returns that come to those who do.

1. To date, the most attention paid to the integration of the two perspectives has been by Michael E. Porter in *Competitive Advantage: Creating and Sustaining Superior Performance* (Free Press, 1985) and, in the dynamic context, in his article "Towards a Dynamic Theory of Strategy," *Strategic Management Journal*, Winter 1991.

2. These ideas were first discussed in two articles published in *Management Science*: Ingemar Dierickx and Karel Cool, "Asset Stock Accumulation and Sustainability of Competitive Advantage," December 1989; and J.B. Barney, "Asset Stocks and Sustained Competitive Advantage," December 1989.

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Competing on Resources

Further Reading

ARTICLE

The Core Competence of the Corporation

by C.K. Prahalad and Gary Hamel

Harvard Business Review

April 2001

Product no. 6528

The authors focus on capabilities (which they call core competencies) as strategically valuable resources. To invest in your capabilities: 1) *Clarify them* by articulating your strategy (including the markets your company intends to compete in) and then listing the capabilities that support the strategy. 2) *Build them* by investing in needed technologies, infusing resources throughout your business units, and forging strategic alliances that give you access to needed expertise. 3) *Cultivate a capabilities mindset* by reminding managers that strategic capabilities are corporate—not unit—resources. Ask managers to redeploy people who best perform those capabilities as needed across units. Also, bring managers together to identify next-generation capabilities and ways to acquire them.

COLLECTION

The Tangible Power of Intangible Assets

by Dave Ulrich, Norm Smallwood,

Nitin Nohria, William Joyce,

Bruce Roberson, Robert S. Kaplan, and

David P. Norton

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customer connectivity (building enduring, trusting relationships with targeted customers), efficiency (managing costs), and speed (making important changes rapidly).

- In “Measuring the Strategic Readiness of Intangible Assets,” Robert S. Kaplan and David P. Norton provide tools for assessing how prepared your company is to use its intangible assets to execute its competitive strategy.
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