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Resilience: Continuous renewal of competitive advantages

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Abstract Even in these financially challenging times, business performance always comes down to a firm's competitive advantages. Subsequently, how can companies sustain a long-run competitive advantage, especially in the face of increasing competition? Apart from the pat answer that innovation is critical to organizational survival, we argue that it is the innovation process and how companies manage it that forms the foundation of a resilient organization. Our research finds that organizational innovation processes take three main forms: reactive, proactive, and anticipatory innovators. It is from anticipatory innovators that resilient organizations emerge. Here, resilient organizations not only anticipate the needs of buyers but do so by creating an innovation orientation within the firm's culture. This culture-based focus goes beyond any specific innovation; it directs leaders to create an organizational culture that is receptive to innovative ideas and to the changes they produce. Here, the competitive advantage is not so much innovation per se but the organization's ability to continuously create competitive advantages based on innovations.

1. The essence of innovation

While innovation drives success and company growth, what are the conditions that give rise to innovative organizations—those that are able to repeatedly develop value-added improvements that propel firm success, innovation after innovation? How do firms like 3M or Apple add innovation atop innovation, while others fade away, are acquired, or go bankrupt? We argue that supporting continuous innovation is an underlying culture of resilience.

Think of organizations as organisms. As Darwin (1859) argued, organisms adapt to their environment or perish. How well they adjust determines whether they survive and, if they survive, how well they prosper. Unlike organisms that adapt based on random variations and natural selection, strategic planning and other decision-making processes enable firms to reconfigure resources in ways that are

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best adapted to the organization's goals and environment. Whether in the form of a new product, process, technology, or business model, the outcome of this resource configuration is called innovation (Christensen, 2006).

Staying with this biological metaphor, innovations can be thought of as the 'genetic mutations'—large and small—that spring from the organization. However, unlike genetic mutations, most innovations are not random. On the contrary, companies increasingly operate internal processes, which allow them to generate and manage innovations with an adequate structure and valuation, thus enabling them to decide which to pursue and which to abandon. These innovation projects are then vetted by decision makers against a larger schema of goals and strategies via planning, thereby reducing randomness with the intention of leading the organization along the intended path.

However, with decision making and analytical techniques widely available, why are some organizations more successful than others? For example, why did Sony—perhaps the true pioneer of portable personal music in the form of the Walkman—fall so far behind Apple in portable music devices? While Sony discontinued its Walkman in 2010, Apple launched another upgrade to both its iPad and iPhone in 2011, both of which can now store more music than a Walkman aficionado could ever imagine carrying. However, arguably, Sony had an enormous head start in shaping the personal portable music segment. Based on that lead, it developed a global brand along with sophisticated distribution and supply chain systems to support its consumer electronics division, positioning itself as the leader in this market.

As insightfully elaborated upon by Christensen (2011), on the surface, Apple was simply more innovative during the last decade compared to Sony, which was not able to understand or react to the technological evolution of the environment in which it operated. At a deeper level, Apple's success argues for a better ability to configure resources to operate in their industry when measured against such traditional goals as sales growth, profitability, market share, and related measures of business success, thereby leading it to be the world's most highly valued corporation.

How can we then explain how Sony lost its first-mover advantage? Why was it not able to sustain its competitive advantage and thrive? When analyzing companies' competitive advantages, a fundamental question arises: How can companies sustain and enhance their competitive advantages? We believe what is lacking is a concept that captures the superior resource configuration capability displayed by Apple, which enables the development and sustainability of competitive advantages.

While corporate culture admittedly creates the context in which innovation flourishes or fails, the specific configuration of people, ideas, and execution needed to make innovation an ongoing source of competitive advantage is best summarized as resiliency.

2. The need for resilience

Organizational culture is the fiber and sinew of all firms. It can be thought of as an organization's personality—a curious blend of history, successes, failures, beliefs, myths, actions, and rewards. Each organizational combination is not only unique but changes through time, and the fact that organizations' cultures can change suggests that leaders can reshape the culture, leading to a more resilient organization.

The accelerating rate of change (D'Aveni, 1994) in business, society, and the world adds urgency to the search for resilience. The results of this accelerating change are greater market integration, the appearance of technological discontinuities, regulatory upheavals, geopolitical shocks, supply chain segmentation and disintermediation, abrupt shifts in consumer tastes, and hordes of non-traditional competitors (Hamel & Valikangas, 2003). This ongoing acceleration of change is driven in part by greater access to world markets (as evidenced by world merchandise exports more than doubling between 2003 and 2008 (World Trade Organization, 2009)), the increase of the consumer base (the world's middle class has been increasing at a rate of 70 million people per year (Wilson & Dragusanu, 2008)), and the enormous technological and communications advancements that magnify previous changes. Competition will always exist, but these cumulative changes have accelerated and intensified its pace.

Against this turbulent environment, survival depends on adaptability with reactive responders falling behind proactive responders and both succumbing to anticipatory, serial innovators. Traditional sources of competitive advantage—economies of scale, control through vertical integration, and even cohesive cultures—have given away to time-to-market economies, flat and flexible structures, and organizations with fluid cultures willing to experiment with the 'new.' Diversity, cross-functional teams, and a globally distributed workforce embedded in flat structures allow innovations in products, organizations, and processes to spring up in labs as well as foreign depots.

Consider research and development (R&D). Large, centralized R&D labs have produced a cornucopia of innovations from dial telephones to transistors at Bell Labs. Even today, the huge pharmaceutical R&D centers produce miracle cures. However, resilient organizations gain R&D advantages from increasingly 'open' models. For instance, Adobe, the digital technology provider, developed a highly effective process of collecting, evaluating, and implementing customer suggestions in order to expand its business. Even the staid pharmaceutical companies are plugging product pipeline gaps with acquisitions of bioscience firms. What their customers see is serial innovations, whether they are the result of acquisitions by Cisco or big pharma or internal innovations farmed out for production by others (as in Apple's case).

From a financial perspective, resilience can be identified when a company is able to maintain above-average returns even after absorbing the shocks of the competitive environment. To be able to do this in the long run, a company must continuously create competitive innovations.

This means companies need the competency to continuously develop or renew their configuration of intellectual, financial, technological, human, and other resources. This competency demands that leaders promote and manage a continuous internal ''creative destruction'' (Schumpeter, 1939). That is, leaders must recognize that even their current resource configurations—successful as they may be—must be either reconfigured by the firm or face destruction by competitors.

3. Toward greater resiliency

Like an organism, an organization must adapt to changes in its environment or face the risk of extinction. Both can adapt reactively, adjusting themselves after changes occur in their environment. However, unlike organisms, organizations can also adapt proactively or anticipatorily, reacting to future changes before they happen. An organization that adapts anticipatorily *and* repeatedly can be called resilient.

Miles and Snow (1978) offered a similar segmentation of business types with a split between defenders, analyzers, prospectors, and reactors. We believe that with the increasing competition rhythm, product-market domains tend to disappear ever faster, forcing companies to either adapt or perish.

Slow responders are reactors. They exacerbate their situation by allowing innovators to become established and grow. For example, Gillette's reaction to Wilkerson Swords' introduction of stainless steel blades enabled Wilkerson to gain a market foothold that is still profitable half a century later. Undoubtedly, conflicted by the tradeoff of introducing a much longer-lasting stainless blade and 'cannibalizing' their single-use 'Blue Blades,' Gillette's slow response enabled this stainless steel sword provider to the British Calvary to gain a stable foothold in the wet shave market. The error by leaders of the 'wet shave' market was repeated when BIC (a French maker of low value-added plastics) entered the market with disposable razors. Similar stories exist of other 'number ones' in their industries losing ground to upstarts: Anheuser Busch and its slow response to the introduction of light beer or Robitussin's poor response to Nyquil's 'night-time cold relief' segment.

Fast responders exhibit superior reactive ability. For instance, Street vendors and their suppliers are sometimes able to deliver the latest DVDs days—even hours—after a movie's theatrical release. Putting aside the illegality of copyright and intellectual property violations, this supply chain is able to use hand-stable video recorders to copy movies right off the screen and then produce duplicates literally overnight. Being fast responders, they are able to offer their customers the latest videos concurrent with the originator's new-release publicity. The speed and quality of these fast responders has even caused some Hollywood movies to go into same-day, world-wide release of hit movies and to issue authorized DVDs sooner and sooner in the product cycle—all to reduce the impact of illegal fast responders. Anheuser-Busch was a reactor, a slow responder, to the light beer innovation. Then, when the Japanese innovated with 'dry beer,' Anheuser-Busch was a fast responder, pioneering 'dry beer' in the United States. However, even fast responders are in a reactive mode, chasing the innovative ideas of others.

Proactive firms initiate innovations in products or processes in hopes of gaining a competitive advantage. Introducing a new product may lead to an entirely new market segment—return to the stainless steel blades, light beer, or night-time cold relief examples. A more recent example can be found in Nintendo's Wii game console. The payoff for proactive introductions initially comes in the form of first-mover advantage, which may be parleyed into a dominate market positions, such as Miller's 'lite' beer or Vick's Nyquil. Even if the industry leader regains control over the segment, as Gillette has done with stainless steel blades in all their various configurations, the first mover may still own a profitable segment, as appears to be the case with Wilkerson Sword and BIC.

Anticipatory firms go beyond mere innovations and create internal processes and conditions that lead to resiliency, which is in turn evidenced by successive innovations. While Wilkerson was a proactive innovator, BIC has proven to be an anticipatory innovator that has proactively produced a succession of innovations from disposable razors, lighters, and pens to sailing surf boards. Beginning from a resource base competency of producing plastics, BIC has been able to anticipate customer needs as has Apple with its string of iPod, iPhones, iPads, and their variations. Contrast these repeated market-changing innovations with those from Miller or Wilkerson—essentially proactive, one-hit wonders. The Miller Brewing Company, for example, innovated by acquiring and then nationally distributing lite beer, but the owner, Philip Morris, was unable to create successive industry-changing innovations with its acquired subsidiary, eventually selling it off to South Africa Breweries. Similarly, Wilkerson Sword's stainless steel blade innovation was not followed by subsequent industry-changing innovations. While both Philip Morris/Miller and Wilkerson Sword are correctly classified as proactive innovators, neither proved resilient, as evidenced by their inability to build successive series of industry-changing innovations as BIC did in the 1960s and 1970s or Apple was able to do since the late 1990s. Resilient organizations are anticipatory responders that are able to follow up with successive industry-changing innovations.

The difference is not the capability to innovate, but rather the capability to do it over and over again. Proactive firms create changes that can materially define or redefine a market segment. Resilient firms go farther; they repeat their industry-impacting changes. Simply put, they are serial innovators. It is the difference between a Miller or a Wilkerson versus a BIC or an Apple.

While product innovations are easier to describe, ongoing process innovation can be as powerful. Non-product innovations may include superior production processes, which are not commonly visible to customers. Here, Toyota's fame production process provides an example as it often copied by responders. More obviously, a disruption can be caused by a new product or approach that is transformational. While a proactive firm may exploit a niche or even create an entire subsegment of an industry, anticipatory firms differ by becoming serial innovators. Besides Apple, think of 3M or in their innovative prime, IBM, General Electric, DuPont, or NASA. Here, the difference between proactive and anticipatory is the difference between innovation and continuous innovation.

Nevertheless, the question remains: What drives resiliency? What are the distinguishing features and competencies that create resilience? How can a company become sustainable in the long run?

4. Creating the identifiable characteristics of resiliency

While seeking to understand the drivers of resiliency, our research relied on 40 years of consulting efforts and considerable secondary research. The result is a hierarchical categorization that classifies firms based on how they respond to their competitive environments.

Research into firms able to maintain ongoing financial and market success suggests identifiable characteristics among those that outperform market peers in an increasingly competitive world. From this research, anticipatory firms achieve serial innovation by creating an internal environment that embraces four key dimensions: the leadership-followership interplay, organizational culture, strategic planning, and making innovation a way of life.

4.1. Leadership and followership interplay

Leadership is the organizing force that creates a resilient organization. Here, the concern is how the leader creates a forward-looking discussion between internal and external constituents of the company. Putting aside those who are naturally charismatic, resilient-building leaders seek to create an ongoing exploration of the outside forces likely to impinge on the firm's future success (Hamel & Prahalad, 1994). This future-oriented discussion creates an anticipation of what is to come (Moore & Sonsino, 2003) and energizes the company to achieve it. Even devoid of a specific innovation, discussion of the future and the external context sets an anticipatory context in which the future is *expected* to be different. That is, if attention to the future is heightened, external forces that are likely to emerge create greater organizational sensitivity and receptivity to the need for innovation. Whether these innovations are in products or processes; whether they are new skills sets or personnel policies that better accommodate child- or eldercare issues, for example; or whether they are an ongoing search for external partners, alliances, acquisitions, or technology, innovations are framed as needed success factors—not sources of unwarranted change.

Leadership that sponsors a discussion about the future environment creates a foundation for change. Only through an ongoing discussion about the firm's future and the external environment can members grow to understand that environmental context well enough for the organization to anticipate and adapt. Connecting marketplace turbulence to future success turns technological, sociological, and cultural changes into potential sources of competitive advantage through the anticipation of changes to come. Perhaps most important, leaders create the expectation that the future will be different. Then the change message becomes, "Look for change. Anticipate it. Be ready for it." Resistance to change declines in favor of pursuing the next source of competitive advantage. Perhaps more significantly, leadership's dialog within the organization—if it cascades from top management to lower levels in the organization—creates an open culture of resilience.

4.2. An open organizational culture

Possibly the most relevant characteristic of a resilient company (and perhaps the most difficult to develop) is an open and trusting environment. In such an environment, all opinions are heard, and one can speak the truth without fear of the consequences. Specifically, performance appraisals are replaced with mentoring relationships, lessening (if not removing) 'us-versus-them' evaluations. Organizational members are encouraged to experiment and learn without jeopardizing their carriers if failure happens. Even failure is seen as a learning opportunity, not a place-the-blame exercise. In such an environment, empowered employees are able to explore all their capabilities and entrepreneurial spirit aligned with the company's objectives. Google's employees, for example, are given 'free time' to pursue creative ideas even when beyond their traditional job descriptions. Similarly, employees at 3M, Gillette, and others allow 'employee time.' On the executive level, Warren Buffet gives mangers of Berkshire Hathaway's far flung empire considerable latitude.

Another cultural element of a resilient company is having the confidence in its future growth and success while simultaneously having an unbiased and analytical approach to those challenges. The result is a 'can-do' analytical viewpoint that may be best illustrated by the culture Steve Jobs of Apple was able to re-instill upon his return (Isaacson, 2011). Hewlett Packard or Johnson & Johnson have been examples of an environment in which people are driven by the company's core values (through the 'HP Way' or Johnson & Johnson's 'Credo').

4.3. Strategic planning

Beyond leadership and having an open organizational culture, resilient companies place considerable focus on the strategic planning process. Strategic planning is the adaptive mechanism that highlights the anticipatory environment and the firm's current competitive fit. Whether labeled with the 1960's concern for gap analysis or today's dressed up opportunity evaluation, the result is a baseline understanding from which scenario planning and innovation spring. Ultimately, the strategic planning process is *the* adaptive mechanism that directs the organization's anticipatory evolution.

Ideally, the process focuses on where the business can be 'world class'—even if in a narrow niche. Embedded in the process is the fundamental idea of continuous improvement applied to strategic, product, and process innovations. That is, the firm becomes better at improving its adaptive mechanisms of planning and implementation. Continuous improvement in strategic processes, however, is a minimum but insufficient condition of success. The quality movement is correct: continuous improvement is necessary for survival, especially when competitors are continuously improving also. However, as Sony's embrace of total quality management (TQM) and continuous improvement demonstrates, merely making processes better can be a recipe for failure because TQM focuses on improvement. Improvement takes place until a competitor innovates in ways to undermine the continuous improvements—as when Apple fatally wounded the Walkman with its iPod. No amount of improvement or defect reduction would enable the Walkman to compete with the innovative iPod.

Strategic thinking must move beyond mere improvement to continuous innovation. Otherwise, strategists risk focusing inwardly and narrowly on 'better' (often in the sense of improving on what is), while dominant players look externally with a wider focus searching for a 'better' that is different and innovative. Admittedly, anticipatory thinkers do seek continuous improvement in internal processes. Concurrently, they look outward, beyond internal process improvement. They create a culture that also expects (and therefore seeks) innovations that go beyond better to unique, making innovation a way of life—a way of life that starts with the strategic planning processes. What distinguishes resilient firms' planning process is that they go beyond the simple (and often simplistic) definition of strategic goals. Efforts focus on what kind of firm they seek to be and how they can achieve a competitive advantage that enables them to get there.

4.4. Making innovation a way of life

Ultimately, the defining characteristic of a resilient company is the widely shared belief that innovation is both good and expected. Resilient companies make innovation a part of their organizational cultures, putting it at the core of their growth strategies by viewing innovation as the means to achieve competitive advantage. Developing independent organic structures that see change as potential opportunities, dedicating resources (i.e., human and capital), and monitoring results are first steps. In turn, success demands a balance of continuity (for stability) and change (for new competitive advantages). Such firms become ambidextrous organizations able to manage their current business better while searching and expecting new business that lies ahead. This ideal culture does not just emerge but must be led by future-oriented opportunity seekers.

5. The leadership of implementation

So how does a leader create resilience? Resilience is not some spontaneous occurrence that befalls some firms and not others in some unpredictable or random fashion, nor is it something that can be bought as an add-on or friendly acquisition. Like most core competencies, it must be home grown and nurtured through time. As already mentioned, the leader must begin by engaging in an external-oriented discussion about the future. What challenges will the firm likely faced? What will be different in three or five years? How will competitors in their industry change? What do customers actually value, want, and need? This discussion process is ongoing, actually never ending. It is supplemented with briefings, clippings, books, and others prods to break people out of their day-to-day (and largely internal) orientation, focusing attention on the future external competitive environment in search of opportunities that match existing or developable competencies. Restated, leaders must strengthen competencies to meet future opportunities and simultaneously must monitor the environment for external opportunities that redefine needed competencies in the future. Also, given the inherent uncertainty of the future, leaders must explore multiple possible futures often through scenario planning that can sensitize them to emerging trends or opportunities. However, considering unfolding future scenarios assumes a balanced understanding of internal competencies ("what we can do well") and "what we must do."

Underlying this macro-discussion of the future is behavioral change. Specifically, executives need to monitor their public pronouncements and other behaviors. What are they asking about? What concerns do they express? Is the conversation with subordinates and board members about current results and the immediate future, or is it externally and future oriented? If so, that will be the focus. Of course, day-to-day performance matters. However, if that is the exclusive—even primary—focus at the top, it will model the culture to the very bottom of the organization chart.

Leadership is needed at all levels—beginning with the chief executive officer and board—that serves as both a model and a change master of expectations. Are problems and opportunities filtered through the lens of the intermediate and long-run future? Are problems and opportunities evaluated against the future environment? Perhaps even more fundamental is a distinction made between problems and opportunities. Too often problems are impediments. When that is the case, problem solving becomes the focus, and solving organizational problems—necessary as it is—differs from pursuing opportunities, which implies using the best resources to chase growth. Simply put, is the organization a problem-solving or opportunity-seeking entity? A 'problem-solving' orientation in the C-Suite focuses largely on the past ('what went wrong?') and inside the firm ('who is going to fix what?'). An 'opportunity-seeking' orientation directs the company to develop or acquire resources that offer competitive advantages to pursue future opportunities. No amount of problem solving would allow the Walkman to compete with an Apple iPod, for example.

Monitoring the mix of problems and opportunities in leaders' speeches can give a rough calibration of a firm's likely resiliency. Similarly, does the leader assign the 'best people' to current problems or to future opportunities? Soft measures, admittedly, but priorities reverberate through the organization with great clarity; actions do speak louder than words. Problem solving too often leads to problem avoidance followed by problem analysis, not anticipating future opportunities.

At the operating level, even first-line supervisors realize that innovations mean extra work demanding time and resources. Also, while there is often ample recognition for failure, rewards for success may be few. So, when a new idea is presented as a precursor to innovation, supervisors and middle management may quickly bury suggestions and ideas under a mound of objections: How will it work? How much will it cost? Who will be responsible for implementation? Important as these questions are to implementation, they are often asked of the originator in the form of barriers, not challenges to be overcome on the way to implementing new ideas. Merely asking these questions often suggests a reluctance to consider and implement new ideas. Even the least skilled supervisors know that the 'boss' will pepper any innovative-generating idea with these and other questions. While all profess the firm's need to continuously search for the 'holy grail' of innovation, the behavior expressed at the supervisor-employee boundary can undermine specific ideas and innovations while sending a message that 'higher-ups' actually look for reasons to quash new ideas. Stillborn, ideas and innovations are encapsulated among peers, too seldom seeing the light of implementation in such organizations.

Resiliency survives better on the upward percolating flow of ideas and innovations. Perhaps no single marker does as much to differentiate anticipatory from reactive responders as the ratio between top-down and bottom-up ideas. Top-down ideas are more likely to meet employee resistance than bottom-up ideas, though the former typically have more resources readily assigned. Worse, management appears resistant to change when it challenges bottom-up ideas rather than facilitating them. If equilibrium between upflow and top-down cannot be achieved, this increases the challenge of a balanced approach to idea management.

This management resistance (actual or perceived) to bottom-up change often leads to top-down sources of innovation. Of course, mandated innovation still encounters the same 'why-it-won't-work' organizational culture that necessitated the top-down approach in the first place. The result in either case crushes—or at least delays—the implementation of innovation, and innovation delayed is often innovation denied. Instead, what is needed is a culture in which ideas are worked for their possibilities, and problems are transformed into challenges. Admittedly, the 'who, 'what,' 'when,' and 'how much' questions must be asked and answered, and ideas and innovations must be vetted against economic, technical, and other realities. However, regardless of the direction of the innovation flow (top down or bottom up), the pivotal consideration is at the intersection of leadership and organizational culture. Is the organization one of flaw finding or challenge solving? Do managers up and down the hierarchy see their role as furthering innovation or defending against errors?

Returning to the future/external focus offers a driver by which leaders can change the organizational culture toward a more resilient one. A future-oriented discussion that identifies and defines the salient competitive, technological, regulatory, market, and other changes creates a compelling and increasingly organization-wide predisposition to support innovative changes. With the need for innovation highlighted by external forces, leaders can then ask how the firm responds to that upcoming future. Innovation becomes mandated by the competitive environment, not some top-down directive.

With that springboard, rewards (e.g., promotions, publicity, and pay) can be targeted at examples of innovative responses, setting new cultural norms for the firm. Yes, the process is slow, but cultural change always is.

6. Toward a resilient future

The most tangible outcome of a resilient company is its ability to anticipatorily innovate and do it repeatedly. Resilient companies make innovation (OECD & Eurostat, 2005) a part of the organization's culture through leadership and planning. These characteristics do not ensure sustainability but rather create the internal environment for sustainability. Innovation becomes less of a stated goal or some unread vision statement and more a by-product of the organization's culture and processes. Companies able to manage innovation embrace both ends of a continuum: continuity and change. They become ambidextrous organizations (O'Reilly & Tushman, 2004) able to manage their current business and also search for new business opportunities that lie ahead.

Schumpeter's work (1942) predicted some of the phenomena we have described: firms becoming increasingly less able to sustain strategic advantages in a wide range of industries and sustained competitive advantage becoming more about renewal than some 'permanent' competitive advantages. Indeed, competitive advantages are not sustainable per se; they tend to be absorbed by the market and competitors in the long run. Also, with the electronic revolution and globalization of competitive markets, sustaining advantage is becoming more about continuously creating new competitive advantages ahead of others (Werther & Kerr, 1995).

Once managers have accepted that competitive advantages also have a lifecycle, creating an organizational culture that supports ongoing innovation becomes an increasingly important capability. In fact, this organization-based competency is the essence of a resilient company: creating a corporate culture characterized by anticipatory and repeated innovation. Restated, a resilient organization may be the only source of sustainable competitive advantages in an increasingly competitive world.

Appendix 1. Industry and resource-based perspectives: Two views of sustainable competitive advantage

A company able to attain consistent above-average returns when compared to competitors is said to possess a sustainable competitive advantage. At the core of our inquiry is the fundamental question: What can companies do to continually develop new competitive advantages?

There are two perspectives on the development and sustainability of competitive advantage: the environment perspective (industrial organization school) and the internal perspective (resource-based model). On one hand, the environment perspective, which is mainly associated with Porter (1980), focuses on industry structure and firms' choices of strategic positions. Nyquil's Nighttime Cold Relief hit a seam in the cold relief market. Under this perspective, the performance of a company mainly depends on the industry in which it is present. Companies' competitive advantages emerge from their positioning in structurally attractive markets. Here, the relevant unit of analysis becomes the industry in which companies perform. Good examples of industries in which a company obtains competitive advantage simply by being in those industries are highly regulated markets (e.g., utilities market). It is substantially hard to enter these markets because of the permits, legislation, and the often huge investments demanded. Therefore, companies already operating inside this market are able to achieve results above what would happen if it was a barriers-free market. This perspective goes back to basic micro economics, which states that companies operating in non-perfect markets can attain above-average returns.

On the other hand, the internal perspective argues that differential performance is fundamentally due to firm heterogeneity rather than the industry in which a company is inserted (Barney, 1991; Wernerfelt, 1984). Firms that are able to gather or combine resources and capabilities that are rare, valuable, non-substitutable, and difficult to imitate will achieve a competitive advantage. The resource-based model argues that a company's intrinsic characteristics—not the industry in which it operates—have greater influence over performance. Admittedly, positioning is important, but a firm's characteristics ultimately determine how it performs. Take Zara for instance. The Spanish clothing retailer developed such an integrated and, at the time, innovative value chain system, causing it to become one of the leading companies in the ferociously competitive sector of fashion design and sales. Zara was able to develop a system by assembling different resources (i.e., design, production, distribution, and sales) in a specific way, which allowed it to obtain above-average results in a highly competitive industry. Here, sustainability of the company's competitive advantage depends on its ability to innovate with both 'new' fashions and then with an innovative supply chain that quickly and efficiently restocks items that prove successful at better matching sales with inventory and minimizing discounts to get rid of surplus inventories. Thus, in Zara's case, its competitive advantage comes from continuous innovation in products and its efficient restocking ability. While others can create new fashions, few have the ability to continuously innovate both their fashion designs and the delivery system.

These two perspectives on sustainable competitive advantages present considerable differences. The environment perspective focus on firms' external industry context with the sustainability of competitive advantages dependent on maintaining entry barriers. The internal perspective looks at firm capabilities, with the sustainability of competitive advantages dependent on using resources to develop competencies that provide a competitive edge.

With the increased competition worldwide, companies' competitive advantages have begun to disappear at a faster rate. Companies must ask themselves several questions: What are my competitive advantages? Are they threatened? How can I manage their evolution?

How can a company manage competitive advantages if they are exogenous to the company and dependent on its industry positioning? Certainly a company can try to influence the development of entry barriers, but that is often met with limited success. Think of Microsoft and the influence it is able to exercise on the information technology sector. However, at the same time, it faces constant lawsuits attacking its ability to control effective entry into segments in which it is dominant. When a company relies solely on positional advantages, it is subject to market conditions that are increasingly in flux.

Over longer time frames, sustainable competitive advantage rests on the fit between resources and the environment. Given that companies develop competitive advantages based on resources, the process by which they manage these resources determines what competitive advantages they are able to develop. In addition, how well companies—like other organisms—are able to continually transform internal resources into sustainable competitive competencies that reflect market conditions ultimately determines their economic success or failure.

Appendix 2. Methodology

How does one evaluate resiliency? Our approach was to undertake a qualitative evaluation of how organizations strategically respond to their competitive environments and how well they managed their competitive advantages in face of change. The main assumption was that a company that was sustainable in the long run was able to continuously renew/develop new competitive advantages. Hence, identifying the reasons leading to this longevity guided us to discover the factors enabling the renewal/development of competitive advantages. Although the existence of these factors does not guarantee the sustainability of competitive advantages, they greatly contribute to creating the organizational culture that allows this. These responses were broken into temporal classifications. The fundamental dividing line was those companies that reacted to environmental changes versus those that created changes in the industry.

The subject firms analyzed covered the performance of more than 50 companies over a 60-year timeline, analyzing the companies in terms of stock market performance, main characteristics, and leadership and organizational practices. Starting with the top performers of various industries over time, we were able to look at policies, leadership traits, planning processes, implicit and explicit reward structures, and values. From this admittedly qualitative and, at times, subjective analysis, we arrived at the main characteristics of long-term, top-performing resilient companies that formed the basis for this article.

Gillette, for example, was slow to react to the stainless steel threat from Wilkerson, and similarly, Anheuser-Busch was slow to react to the threat of ‘lite’ beer. In contrast to reactive firms, proactive companies (e.g., Wilkerson and Miller Lite) initiated change in an attempt to force competitors to react to their innovative offerings. The third category, anticipators, were those firms that anticipated technological, customer, or other trends and went beyond merely leading change but actually refocused the industry in new ways. Miller’s lite beer rollout is one example of redefining the industry, anticipating the intersection of an aging population and a growing concern about health and obesity. Similarly, Nyquil redefined the cough syrup market into a day- versus a night-time context and then promptly dominated the night-time cold relief segment, and Sony made the personal portable and programmable music industry possible, which is now dominated by Apple. While Apple and Sony are correctly labeled as anticipatory because they anticipated consumer needs, Apple stands out as resilient as evidenced by its ongoing ability to repeatedly anticipate consumer needs (leading it to be the most valuable firm on earth. . .for now).

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