Strategic Management of Market and Non-market Pressures: An Imperative for Long-term Success

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Whereas it seems obvious that the strategic management of market pressures is a major requirement for developing and sustaining competitive advantage, it is less clear whether and how the management of non-market pressures may affect corporate success. A historical comparative study investigates long-term success, using an eclectic perspective of competitive advantage that includes two types of capital: resource (market-related) and institutional (non-market-related). Historical analysis found that the long-term successful General Electric consistently produced resource and institutional capital, while the once successful, now extinct Westinghouse managed to produce but technology-based resource capital. Inductive theory building suggests insights into some major requirements for corporate long-term success. These include the organizational ability to fashion the environment and the organizational ability to concomitantly create value for its stakeholders and capture value for the organization, through the adequate management of economic (market-related) and normative (nonmarket-related) issues.

Hardly anyone would doubt that a robust financial position is a key indicator of corporate success. Whereas it seems obvious that doing well in the marketplace is good for the corporation, it is less clear whether and how a firm’s responses to nonmarket pressures affect corporate success over the long run.

In the strategic management literature, sustained competitive advantage has been used as a proxy for long-term success. In fact, Teece et al. (1997) have remarked that achieving and sustaining competitive advantage has been considered the fundamental question in the strategy field. Aiming at better understanding organizational long-term success, this paper investigates long-term success in the context of a historical study of two long-lived companies – General Electric (GE) and Westinghouse (WH) – and the industry they helped to build – the American electrical manufacturing industry.

Oliver’s eclectic perspective on sustainable competitive advantage (Oliver, 1997) guides historical analysis, which provides two types of results. First, pattern matching analysis identifies the extent to which GE’s and WH’s longitudinal behavior have matched the literature; second, inductive theory building suggests insights into some major requirements for corporate long-term success. These include the organizational ability to fashion the environment and the organizational ability to concomitantly create value for its stakeholders and capture value for the organization, through the adequate management of economic (market-related) and normative (nonmarket-related) issues.

THEORETICAL BACKGROUND

‘How firms achieve and sustain competitive advantage’ has been considered the fundamental question in the strategic management field (Teece et al., 1997). Competitive advantage is believed to explain a firm’s outstanding performance, and consequently to enable business growth. Several perspectives have been used to scrutinize the sources of competitive advantage. While industry analysis (Porter, 1980) examines industry structure at a certain point in time, the resource-based view (Penrose, 1980; Wernerfelt, 1984; Barney, 1991; Peteraf, 1993; Barney, 1997) identifies firm-specific resources, and the dynamic capabilities framework (Teece et al., 1997; Eisenhardt and Martin, 2000) explains value creation in high-velocity changing environments. Those complementary perspectives indicate that several things contribute to the development of competitive advantage: the firm’s correct positioning within an industry structure (Porter, 1980), the possession and exploitation of valuable, rare,
difficult to imitate resources (Barney, 1997), and the development of managerial and organizational processes shaped by firm specific assets and the paths available to it (Teece et al., 1997; Eisenhardt and Martin, 2000).

Illuminating as those explanations are, one must go beyond the analysis of competitive advantage within an economic perspective to explain organizational success and failure of long-lived, multi-business firms. As Porter (1987) has stated, competition takes place at the business level, where managers engage in battles against rival firms in the marketplace. At the corporate level, on the other hand, as firms grow, managers face the challenges of running ever more diversified, complex, disunited organizations in a heterogeneous, changing environment. In addition, sustained competitive advantage also depends on the firm’s ability to manage the institutional context within which economic decisions are made (Oliver, 1997). According to Oliver, two types of rationality affect organizational decisions: economic and normative.

Economic perspectives, such as the resource-based view, attribute organizational success to the generation of economic rents that result from firm heterogeneity. Economics-based theorizing assumes economic rationality, which is motivated by efficiency and profitability. Decision processes tend to be systematic, deliberate, and oriented toward economic goals, seeking to optimize resource choices (Oliver, 1997). In the context of economic rationality, efficiency and inimitability are key resource attributes.

In turn, institutional approaches emphasize that organizational conformity to social expectations produce homogeneity among firms, and contribute to organizational success and survival. Institutional theory stresses normative rationality, which has to do with “choices induced by historical precedent and social justification” (Oliver, 1997, p. 701). Decision processes are likely to be habitual, unreflective, and embedded in norms and traditions, aiming to justify resource choices. Conformity and legitimacy constitute key resource attributes in the context of normative rationality.

Oliver (1997) maintains that a combined analysis of the economic and institutional contexts sheds light on the successful development of sustained competitive advantage, in turn, a necessary condition for organizational long-term success. These two complementary aspects, economic and institutional contexts, are addressed next.

The economic context and organizational long-term success

A firm’s outstanding economic performance undoubtedly contributes to nurture the organization’s propensity to continue to exist, because, in principle, stakeholders’ different aspirations can conceivably be fulfilled. An outstanding performance can eliminate or postpone plans of discarding the organization or some part of it. When GE acquired RCA in the 1980s, for example, one of RCA’s divisions, the television network NBC, was a candidate divestiture. Yet, as NBC has been a superior performer, GE has kept it.

According to the industrial organization perspective, firm’s performance depends on the pressure exerted by the competitive forces on industry players’ profitability (Porter, 1980). Superior performance is obtained by positioning the firm in a way to exploit market power.

In Barney’s view (1997) a firm exhibits an above-normal performance whenever it “generates with its resources economic value greater than what owners of those resources expect” (p. 33). Given the unlikelihood that mere luck may drive sustained outstanding performance, competent management of resources, skills and capabilities has been widely prescribed in the literature (Penrose, 1980; Andrews, 1965; Chandler, 1977, 1990; Barney, 1997) associated with the resource-based view (RBV). The VRIO framework for analysis of resources (Barney, 1997) maintains that exploiting a Valuable, Rare, and costly to Imitate resource generates above normal economic performance and sustained competitive advantage if there are Organizational capabilities to exploit those resources. The resource-based view
(Penrose, 1980; Wernerfelt, 1984; Barney, 1991; Peteraf, 1993) attributes competitive advantage to a firm’s ability to exploit VRIO resources, and advantage loss to resource substitution (Peteraf and Bergen, 2003).

Drawing on RBV, the dynamic capabilities perspective (Teece et al., 1997; Eisenhardt and Martin, 2000) addresses the formation and sustainability of competitive advantage in environments of rapid technological change (Teece et al., 1997; Eisenhardt and Martin, 2000), in moderately dynamic markets (Eisenhardt and Martin, 2000), and in environments subject to lower rates of change (Zollo and Winter, 2002).

‘Dynamic capabilities’ is a construct under construction. It has to do with the firm’s ability to build (Teece et al., 1997), gain (Eisenhardt and Martin, 2000), release (Eisenhardt and Martin, 2000), integrate (Teece et al., 1997; Eisenhardt and Martin, 2000) and reconfigure (Teece et al., 1997; Eisenhardt and Martin, 2000) resources. These include difficult to transfer, firm-specific assets such as technological, financial, and reputational (Teece et al., 1997). According to Teece et al. (1997), competitive advantage resides in the firm’s managerial and organizational processes, fashioned by its asset position and the paths available to it, while for Eisenhardt and Martin (2000), competitive advantage “lies in the resource configurations that managers build using dynamic capabilities” (p. 1117). In addition to the change and renewal features, Zollo and Winter (2002) emphasize a constancy character of dynamic capabilities: they are structured and persistent, constituting systematic methods for modifying the firm’s operating routines. According to those authors, the association of dynamic capabilities with persistence and systematic approaches to problem solving entails that “an organization that adapts in a creative but disjointed way to a succession of crises is not exercising a dynamic capability.” (p. 340) As Winter (2003) maintains, firms may change without having a dynamic capability: “they may be pushed into a ‘firefighting’ mode, a high-paced, contingent, opportunistic and perhaps creative search for satisfactory behavior. It is useful to have a name for the category of such behaviors that do not depend on dynamic capabilities – behaviors that are largely non-repetitive and at least ‘intendedly rational’ and not merely reactive or passive” (p. 992). Winter (2003) proposes to call ‘ad hoc problem solving’ those firefighting behaviors.

It can be said, therefore, that from an economic viewpoint, long-term success requires the firm to manage its resource capital (Oliver, 1997). This comprises developing a systematic approach to master two fundamental issues: first, change and continuity in order to foster, respectively, the renewal and reconfiguration of VRIO resources and processes; and second, securing the persistence of rents those resources and processes generate.

The institutional context and organizational long-term success

Institutional theory is multifaceted (Scott, 1987). Every institutional perspective addresses institutions and institutionalization processes, though different varieties emphasize different aspects of social systems. Zucker’s (1987) synthesis of institutional theories of organization distinguishes two main streams: the organization as institution view and the environment as institution perspective. These are often referred as “old” and “new” institutionalism, respectively.

According to the “old” stream, the transformation of organizations into institutions means that as the organization gains stability, it loses flexibility, because stability gives rise to habits, making it difficult to implement administrative changes. Describing organizational character as comprised of “repetitive modes of responding to internal and external pressures” (Selznick, 1957, p. 16), Selznick views institutionalization as a process of organizational character formation. By investigating institutionalized practices outside the organization, “new” institutionalism has contributed the notion of inter-organizational field, connoting “the existence of a community of organizations that partakes of a common meaning system and
whose participants interact more frequently and fatefuly with one another than with actors outside of the field” (Scott, 1995:6). According to Meyer and Rowan (1977), both technology and regulation are sources of organizational practices in a field. New organizational practices come into being by virtue of technical or economic requirements of the task. Once such practices gain legitimacy, others in the field imitate the practices and uncritically accept their validity and value. As practices spread throughout a field, this one becomes isomorphic (DiMaggio and Powell, 1983), practices are hard to change, and efficiency is reduced. Conformity to field practices results from taking-for-granted social norms, which define the “way things are” and/or the “way things are to be done” (Scott, 1987).

Though essential to fostering stability and permanence, institutionalization processes are not deemed to result in long-term competitive advantage. Well-established, not easily replaceable, obsolete practices within organizations or throughout fields may lead organizations and fields to operate at sub-optimal levels. According to Oliver (1997), neutralizing a propensity for long-term inefficiency requires competent management of two classes of capital: resource capital, i.e. “the value-enhancing assets and competencies of the firm”, and institutional capital, “the firm’s capability to support value-enhancing assets and competencies” (Oliver, 1997, p. 709). Competent management of organizational capital includes organizational practices that enable obtaining and enhancing the firm’s resource and institutional capital, while protecting the firm from capital depletion. Select examples of such practices include formal evaluations of resource capital on an ongoing basis, and cultivation of exclusive interfirm linkages in different industries and countries.

**Theoretical implications**

According to the economic perspective, the idiosyncratic resource capital of firms cause heterogeneity among firms, and successful firms are those that manage their resource capital for sustainable competitive advantage. As for the normative perspective, the firms’ propensity to conformity produces homogeneity among firms, and successful firms are those that gain support and sustain legitimacy.

Even though the economic and normative perspectives belong to quite different theoretical streams, not only they complement each other, but, within the context of sustainable competitive advantage, in certain respects, they converge. Their apparently conflicting views (i.e. economic vs. social) and logic (i.e. efficiency vs. conformity) contribute complementary valuable inputs to understanding corporate long-term success. Moreover, most processes of the dynamic capabilities construct (Teece et al, 1997; Eisenhardt and Martin, 2000), are likely to build, enhance and preserve the firm’s organizational capital.

From an integrated perspective, therefore, the route towards sustained competitive advantage would require the organization to: (i) consistently accumulate valuable assets (resources and skills in technological, financial and reputational areas); (ii) consistently use systematic processes on accumulated resources, so as to build, gain, release, integrate, and reconfigure those resources; (iii) consistently change vis-à-vis the ever-changing environment. The empirical investigation of long-term success in this paper scrutinizes the fulfillment of above mentioned requirements.

**RESEARCH METHOD**

Two design features are mandatory in a study investigating organizational long-term success. It must be longitudinal, and it must examine an organization that is likely to have experienced long-term success. Whenever possible, the study should also analyze a comparable organization that failed to sustain success over the long run. The historical analysis of General Electric and Westinghouse, from the late 1870s to the late 1990s fits those
requirements. In what concerns the analysis of empirical data on the two companies and the electrical industry, the initial framework of analysis consists of the three requirements mentioned at the end of the previous section.

Data sources


Longitudinal indicators

The longitudinal design requires that indicators should be consistent over time. I have developed a performance indicator, defined as the firm’s annual profits as a percentage of the US GNP. According to Ghemawat (1999), a firm that earns superior financial returns relative to its competitors over the long run is said to enjoy long-term competitive advantage. Therefore, by comparing the performance curves of rival firms, one can establish whether a firm has enjoyed long-term competitive advantage over a given period of time.

Historical events data.

The sources of historical data provided evidence about the firms, the relevant environment, industry segments and individuals who played important roles in the history of the companies and of the industry. The author and four graduate students in management scrutinized the sources of historical data. The reviewed literature provided major guidelines for selecting factual evidence. Selznick (1957) provided the rationale for establishing evidence of institutionalization at the organizational level. According to him, institutionalization is a process of character formation, and the organizational character is made up of repetitive modes of responding to external and internal pressures. The reading of the material sought, therefore, to identify relevant historical facts regarding not only environmental changes, but also responses and initiatives of each company. Overall, the team searched for evidence of stability or change in the firms, industry, and environment. We used Excel spreadsheets to organize the historical evidence collected. Each entry comprised the following fields: source identification; levels of analysis (individuals, firms, other organizations, industry, and environment); time period; the evidence itself (a quote from the source); code; comments. The coding of each entry consisted of identifying elements of economic and/or normative rationalities, as well as specific features of the dynamic capabilities construct, such as gain, release, reconfiguration, and integration of resources. All those involved in coding the entries were familiar with the literature and took part in a
training session the author conducted. Although entries were coded by one single individual, the author double-checked most of the coding in the course of the analysis.

Data analysis

Historical analysis compared organizational and environmental behavior to the literature. Three features of the analytic process deserve mention. First, the extensive time period (twelve decades) of analysis has naturally favored breadth to the detriment of depth. As a result, the analysis concentrated on macro rather than micro level organizational processes. Second, the analysis process concentrated on data that allowed longitudinal comparison between the GE and WH, having put aside data that was longitudinally non-comparable. Third, data analysis consisted of pattern matching between historical data and the initial framework of analysis, followed by inductive analysis regarding data that did not fit the framework.

Sorting out the spreadsheets by time period produced a chronological order (Hill, 1993) of the selected events and processes. This enabled to establish organizational and environmental change paths. Change paths underwent two main analyses: within-case and cross-case (Eisenhardt, 1989). Through within-case analysis, evidence of similar organizational behavior at different points in time and under different management teams suggested institutionalization of such behavior in the analyzed organization. By means of cross-case analysis, parallel comparisons (Hill, 1993) between the chronologies of GE and WH enabled to compare the institutionalization processes of two companies that in several respects faced quite the same environment. In addition, sorting out into topics (Hill, 1993) allowed the scrutinizing of organizational responses and initiatives so as to identify processes mentioned in the literature, such as: gain, release, reconfiguration, and integration of resources.

Finally, conceptual insights emerged in the course of analyzing responses and initiatives that did not fit the initial framework of analysis. The outcome of this inductive process is presented in the discussion section.

HISTORICAL BACKGROUND

“Famous name Westinghouse fades away” announced a newspaper (Aeppel, 1997). The opening sentence following the headline was thought-provoking: “How does the century-old name of an American industrial giant such as Westinghouse Electric Corp. vanish so quickly?” The 110 years old Westinghouse Corporation had decided to split up to focus on its broadcasting businesses, while its longtime rival, General Electric still thrived.

From their inception, General Electric (GE) and Westinghouse (WH) were high-tech companies in an industry that diversified into numerous related industrial sectors. Westinghouse Electric Company, a new venture George Westinghouse launched in 1886, was formed to develop the alternating-current (ac) system of electrical distribution when the direct-current (dc) system was dominant. General Electric Company was formed in 1892 by means of a combination of two pioneer, high-tech firms in the electrical industry: Edison General Electric (EGE) and Thomson-Houston (T-H).

They electrified cities, provided those with illumination, made thousands of consumer products, pioneered in electronics and telecommunications. They diversified both functionally and technologically. Besides inventing and manufacturing, they branched out into marketing, distribution and finance. To develop increasingly complex products and systems, they extended their knowledge into the electrical, mechanical, chemical and nuclear fields. In so doing, both companies experienced continuous growth, reaching gigantic sizes.
The industry’s first two decades were prototypical of high-velocity, ruthless environments. For one, different waves of substitute technology significantly eroded players’ competitive advantage. To start with, electrical lighting – arc lighting and incandescent lighting – emerged to replace gas illumination systems. Arc lighting was used to illuminate open-air places, while incandescent lighting illuminated interiors. Over time, however, Thomas Edison’s incandescent lamps would replace arc carbon lamps and become the standard illuminating technology. In power transmission, George Westinghouse’s alternate current (ac) system challenged Edison’s direct current (dc), and after a fierce battle Westinghouse’s ac became the standard transmission system for long distances. Moreover, at the competitive level, granted patents were hardly effective in protecting an inventor’s rights against those numerous imitators entering the industry. However, at the corporate level, patents ownership affected the companies’ value as of cross-licensing agreements, and mergers and acquisitions. There formed, then, quite a vigorous market for patent negotiation.

Throughout its third decade, the industry developed into a duopoly with hundreds of small companies orbiting GE and WH. From then on, for several decades the two companies competed in the same businesses and markets, ferociously fighting a technological battle in many fronts of scientific knowledge. They shared, though, a number of common commercial practices, having joined efforts to sometimes promote classes of products, other times to chase new entrants, and still other times to face changes in legislation. Small companies sought to align their businesses with the top two in an environment of controlled price and production quotas. This conferred quite some stability on the industry as a whole.

In the aftermath of WWII, though, industry stability and duopolistic dominance started to fade away. The carefully crafted set of industry relations was challenged. A number of Court decisions ruled out established industry procedures and agreements, producing the dismantlement of industry structure. Under the new rules, tough commercial competition entered the business landscape. While the two big companies continued to diversify their activities, high-tech start-ups entered new promising technology fields, bringing in new, flexible, fast-moving contenders. In fields undergoing major technological revolution, such as electronics, leading pioneers, such as GE and WH, failed to keep up with innovation and ended up quitting those businesses altogether. From the 1960s on GE’s diversification started to diverge from WH’s. As a result, by the mid 1970s their business portfolios kept but narrow similitude. Even in common businesses, they used different procedures, such as in the case of nuclear plants, which caused WH such a huge loss that this company faced bankruptcy threat. Figure 1 shows the evolution of performance indicators for GE and WH over eight decades.

Figure 1 suggests that GE kept a competitive advantage (Ghemawat, 1999) over its closest rival throughout the whole period. In addition, the area between the two performance
curves (indicated by the dark grey colour in figure 2) can be seen as a proxy for the amplitude of GE’s competitive advantage over WH.

ANALYSIS RESULTS

This section organizes the analysis results according to the three requirements towards sustained competitive advantage: valuable assets, systematic processes, and change capabilities.

Assets (resources and skills)

While both firms that formed GE (EGE and T-H) were pioneers in the industry, WH was a challenger (Chandler, 1990). In fact, WH fought its way into an emerging industry whose two most prominent companies, EGE and T-H, had already secured important business positions and good reputation. WH’s major weapon, technological innovation, became its way of life, and a clear trait of character. From the very beginning, WH defied the electrical industry worldwide when George Westinghouse proposed the ac system. Much like most players in the nascent electrical industry, WH sought to build a strong position in patents ownership (Teece et al, 1997) through both internal development and patent acquisition. Due to its technological assets, WH engaged in several disputes with rival firms over intellectual property. Those time-consuming, unproductive conflicts did considerably scale down after the 1896 patents cross-licensing agreement with GE. The agreement established that WH’s and GE’s value of production was to be proportional to each company’s patents value, i.e in a ratio of five (GE) to three (WH). Throughout its whole existence, WH’s R&D consistently produced patentable innovation, and was respected by its rivals accordingly. For example, in the early 1980s, Jack Welch mentioned to an MBA audience that GE’s managers needed to concentrate on fighting competitors like WH in the marketplace, rather than struggling with each other in the political arena.

WH’s reputation in technology was consistently high throughout its existence, so much so that WH was often involved in government-sponsored high-tech projects. Its financial reputation, however, experienced ups and downs. Although the 1893 economic crisis did not affect the financially robust WH, the 1907 Financial Panic in the American economy put WH in an extremely poor position. It also brought about the ousting of George Westinghouse in 1911, and the phasing out of the founder’s myth. Over time WH recovered financially, but its financial robustness was more often than not less strong than GE’s. In fact, from time to time, WH would face losses or quasi-losses (refer to figure 1).

Throughout its history, GE developed and sustained high technological, financial, and reputational assets. The inauguration of GE’s Research Laboratory in 1900 was a turning point in GE’s innovation-related activities. Its researchers’ eclectic scientific background – chemistry, physics, and mathematics – paired up with its director’s open-minded approach to research, opened up the way for diversified original research projects. As a result, the Lab gave GE not only numerous patents and a dominant position in the lamp industry (through the invention of the ductile tungsten filament), but also two nobel prizes – Irving Langmuir in chemistry in 1932 and Ivar Giaever in physics in 1973. In addition to the outstanding technological reputation, GE enjoyed strong reputation among financiers and industry players. On one single occasion GE faced financial difficulties. This happened shortly after its foundation as a result of the 1893 Financial Panic in the American economy. Thereafter and throughout its existence, the company embraced conservative financial policy and enjoyed a strong reputation in the financial markets. Among industry players, the company also enjoyed a strong reputation as an effective industry coordinator, both in the United States and abroad.
Systematic processes on resources

Building and gaining technological resources was a recurrent trait of character at WH. Much like GE, WH’s remarkable technological assets provided WH with a continuing source of technology-based resources. On the other hand, WH failed to consistently integrate resources. In lieu of integration, fragmentation was one of WH’s distinctive traits of character. As a matter of fact, WH was created as a member of George Westinghouse’s fragmented empire. George Westinghouse’s approach to firm growth consisted of adding quasi-autonomous manufacturing units both domestically and internationally, while reserving to George Westinghouse himself the role of integrator. Under his command, WH grew in the same fragmented way, both domestically and internationally. Over time, fragmentation was consistently reinforced. As George Westinghouse was ousted, the arrival of his replacement, Guy Tripp, an outsider financier, introduced another kind of fragmentation: not only were manufacturing units kept apart from each other, but top management became considerably more dissociated from WH’s operations. In fact, upon Tripp’s arrival, although WH’s finances were put back in shape, fragmentation was reinforced. A. Robertson, who replaced Tripp upon his sudden death, introduced a third type of fragmentation involving manufacturing and marketing units. In the 1960s, pursuing a utopian expansion goal, Donald Burnham gave managers autonomy to grow their businesses. As a result, an amazingly diversified business portfolio was built and this entirely uncoordinated expansion caused enormous losses for several years. In turn, these persistent losses triggered a major unsystematic reconfiguration of WH’s resource base, whereby the company released its resources on a need-for-cash basis through opportunistic divestment decisions.

GE has consistently managed to build, gain and whenever suitable release resources. High-tech from its inception, GE secured a continuous flow of knowledge creation by founding and consistently supporting its Research Laboratory. In addition, whenever advisable, GE also engaged in alliances and acquisition moves. GE connected and reconnected webs of collaboration both within and around the firm (Eisenhardt and Martin, 2000), engaging in alliances with other industry players (Eisenhardt and Martin, 2000), proposing agreements, licensing rivals, and promoting industry associations. Through acquisitions of firms and patent rights, GE brought in new resources (Eisenhardt and Martin, 2000). Release of resources was carefully managed comprising business exit, such as electronic computers in the 1960s, and business swaps, such as the exchange of GE’s electronics for Thomson’s medical equipments.

From its inception GE sought to develop capabilities to integrate resources (Eisenhardt and Martin, 2000; Teece et al., 1997) of two former rivals – EGE’s pioneer innovation skills and T-H’s improvement innovation expertise. GE’s Research Lab eclectic orientation is another example of GE’s capabilities to integrate resources for innovation. In addition, GE also developed important capabilities to integrate resources outside the innovation context. Managerial search for economies of scale and scope guided the reorganization of the units the newly formed GE inherited, according to the best service each unit could provide. An exemplary case involved the consolidation of lamp manufacturing. GE ran a competition between T-H’s plant at Lynn and EGE’s plant at Harrison, in order to select the best lamp manufacturer and shut down the other. Harrison won the contest and kept producing lamps – despite the fact that most of GE’s top management had been formerly with T-H. Throughout the years GE consistently made efforts to handle increasing diversity by fostering integration and recombinant of its heterogeneous resources, skills and capabilities, so as to foster organizational unity (Selznick, 1957). GE’s portfolio of products reached different categories of customers, requiring therefore, specific marketing, distribution, and financing policies. GE managed to avoid the diversity trap, whereby heterogeneity produces organizational fragmentation, which may compromise an organization’s integrity (Selznick,
Examples of GE’s systematic efforts to integrate its parts include a corporate advertisement policy in the 1920s, an organizational program to foster the “GE family” and attach the GE monogram to every product in the 1930s, the carefully planned, and tested, coordinated decentralization in the 1950s, its human resources managerial system, and myths management.

The cultivation of myths (Selznick, 1957), an integrating tool, has been a recurrent feature at GE. GE has promoted symbols as a way to reinforce its identity inside the company and its legitimacy around the company (Meyer and Rowan, 1977; Oliver, 1997). Coffin maintained the cult of Thomas Edison, popularized the Research Laboratory as “The House of Magic”, and pushed his successors – Owen Young and Gerard Swope – into the public eye. While Coffin himself refrained from becoming a symbol, the reputations of engineers and inventors such as Willis Whitney, Irving Langmuir and Charles Steinmetz were largely promoted. Over the years, most of GE’s CEOs and several of GE’s managerial procedures set new standards of behavior and best practices to business in general. Quite often GE has been described as the ‘best managed company in the world’. By nurturing such a high organizational image, the threat of fragmentation by virtue of organizational rivalry (Selznick, 1957) has been neutralized.

Another recurrent trait is reconfiguration of resources. This includes transfer processes for replication enabling to copy, transfer, and recombine resources, especially knowledge-based assets (Eisenhardt and Martin, 2000). As often as possible, GE has replicated its expertise in solving technological problems to solve administrative and business issues. GE’s systematic problem solving of administrative issues sought objectivity, an approach supported by extensive, relevant information, and measurement through indicators. Consistent emphasis on measurement has been persistently stimulated to the point of having Jack Welch mention the company’s efforts to measure ‘soft’ qualities of its personnel. Other reconfiguration examples include applying marketing skills to handle labor relations in the 1950s, and recombining age-old financial skills to technological knowledge to produce new lines of business at GE Capital. In fact GE Capital has been consistently reconnecting “webs of collaboration among various parts of the firm to generate new and synergistic resource combinations among businesses” (Eisenhardt and Martin, 2000: 1107).

Change capabilities vis-à-vis the environment

WH developed limited ability to fashion the environment. WH’s technological expertise and innovativeness did undoubtedly contribute to shape the electrical industry in technology matters. As for inter-organizational relations, although WH shared center stage with GE, it was mostly up to GE to initiate and lead industry arrangements. As the second-best player in the industry, WH bargained with GE for privileged conditions in their agreements, and together the two dominated the industry. Although the second-best learned to deal with the number 1 company, WH failed to become skillful in handling the environment, and would tend to follow, rather than set, industry trends in matters outside technology. Additionally, WH also developed limited ability to adapt to the changing environment. The progressive dismantling of industry stability built through GE’s inter-organizational initiatives, found WH ill-prepared to face the new environment following WWII. WH progressively moved into unrelated fields such as auto rental, land development, mail order, home building and office furniture, becoming a diversified conglomerate of unrelated businesses.

GE, on the other hand, developed strong abilities to shape, whenever possible, and to adapt to the environment, whenever needed. In fact, GE played a remarkable role in shaping inter-organizational relations that were institutionalized (DiMaggio and Powell, 1983; Meyer and Rowan, 1977; Scott, 1995; Oliver, 1997). GE’s first president, Charles Coffin, understood
that GE’s continued existence required a certain environmental stability. To reap the potential benefits of Edison’s lamp patents GE initiated a number of coordinating actions in the industry: supplier agreements in 1895 (glass bulb, lamp-making machinery), patents cross-licensing agreements with WH (1896), market sharing agreements (1896), the organization of the incandescent lamp manufacturing association (ILMA) in 1896, financing rivals (1901), and licensing product and process patents. ILMA set prices based on GE’s prices and fixed production volume keyed to GE’s sales. GE financed independent lamp manufacturers through a holding company (National), 75% owned by GE. GE’s licenses established a quota system that regulated each licensee’s volume production relative to GE’s production, and more often than not granted WH special privileges. GE’s manufacturing of lamp bases for the whole industry enabled GE to control volume production. Rivals did not challenge GE’s price levels, since these enabled all players to reap handsome results.

On several occasions, the Justice Department filed antitrust suits against GE, WH and smaller companies challenging industry schemes that kept rivalry under control. Such suits referred to businesses as varied as the lamp business (in 1911 and 1924), the radio business (in 1930), and the apparatus business (in the late 1950s). GE played a leading role in defending industry practices. But whenever needed, GE revised them. An example of GE’s successful defense of industry practices is the 1926 Supreme Court decision stating that GE owned patent rights that covered entirely the manufacturing of electric lights with tungsten filaments. This decision in fact held that a license to produce a patented product may include a price-fixing clause, therefore securing to GE the monopoly of their making, using and vending. On the other hand, whenever needed, GE revised procedures, discontinued some and created other ones to comply with court decisions. For example, following the October 1911 consent decree, GE agreed to stop setting the prices that wholesalers and retailers could charge for GE’s lamps and initiated the agency plan of selling lamps, through which local dealers became agents under contract of GE. Stocks of lamps were not sold to them outright but taken on consignment. As a result, GE retained lamps ownership while they were in the agents’ hands, and relinquished ownership only when the agent sold the lamps. Thus the sale by an agent to a consumer was a first sale rather than a resale. In consequence, GE circumvented the prohibition to set prices to wholesalers and retailers. As the lamp owner, GE was entitled to set prices as it saw fit.

The 1961 trial, known in the press as “the electrical conspiracy” formalized the deinstitutionalization (Oliver, 1992) of industry practices which, for several decades, had managed to secure stability and profits to industry players. Though painful, GE’s adaptation to new competitive rules, managed to keep the company close to its technological and functional capabilities.

DISCUSSION

Table 1 summarizes historical analysis results, which suggest that throughout the investigated period GE’s behavior has consistently fit the requirements for sustaining competitive advantage. In a consistent way, GE accumulated valuable assets, made use of systematic processes to support and renew its accumulated resources, fashioned the environment whenever possible, and adapted to it whenever necessary. On the other hand, WH’s behavior failed to consistently fit the mentioned requirements. In sum, historical evidence suggests that GE fulfilled some necessary conditions for developing a sustainable competitive advantage, while WH did not.

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<th>Assets (resources and skills)</th>
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<th>WH</th>
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<td>Technological</td>
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</tr>
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<tr>
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<td>Fragmentation instead</td>
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<td>Reconfiguring</td>
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<th>Change Capabilities vis-à-vis the environment</th>
<th>Consistently developed</th>
<th>Limited ability</th>
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<td>Limited ability</td>
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<tr>
<td>Fashioning</td>
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<td>Limited ability</td>
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Table 1 – Summary of analysis results

Inductive work on historical data added another category of change capability that contributes relevant explanation for long-term success – the organization’s ability to fashion the environment through interorganizational relationships (IORs). Although organizational adaptation to external pressures and IORs are topics widely mentioned in organizational and strategic management studies, fashioning the environment is less frequently discussed in the literature. The comparative case study suggests that IORs constitute important building blocks of the organizational ability to fashion the environment, create value and capture value. These ideas are discussed below.

From a business viewpoint, for a number of decades GE and WH were very similar in several respects: products, markets, commercial practices, industry-shaping technology. From the organizational and industry perspectives, however, they consistently differed over time. Organizationally, the two companies strongly differed, for example, in what concerns their organizational character (Selznick, 1957). On account of GE’s ability to replicate its technology-related competence, GE’s distinctive competences were quite broad. As for WH, on the other hand, its distinctive competence was mainly concentrated on a specific function – research and development. Another aspect that distinguished the two firms’ character regards leadership. Factual evidence suggests that GE’s leadership played an active role in the formation and nurturing of internal values and myths, in shaping organizational traits that foster and protect organizational integrity and renewal, and in scrutinizing the environment. On the other hand, at WH, leadership omission left internal conflicts unattended, institutionalized procedures unchecked, and WH exposed to threatening environmental changes. In addition, WH engaged in utopian expansion and opportunistic firefighting behavior, which weakened the company both financially and institutionally.

From the industry perspective, whenever possible, GE sought to introduce practices and rules, and force them upon the environment. If not possible, GE would seek to anticipate environmental change so as to get prepared for it. WH’s leadership, on the other hand, seems to have neglected WH’s potential role in shaping processes around the company. As a result, GE’s coordinating actions fostered institutionalization of cooperative behavior among suppliers and rivals. This sort of cooperation produced industry standardization in technology and commercial practices, resulting in handsome outcomes for industry players. Over time, whatever GE made standard became the national standard, and in several respects, isomorphism took place in the industry. In sum, GE developed valuable institutional capital (Oliver, 1997) that emphasized continuous improvement, technological and managerial innovation, intra- and inter-firm knowledge sharing, and training programs that accelerate the
adoption of technological and managerial innovation. WH’s institutional capital, on the other hand, was poor.

The set of IORs GE built – patents cross-licensing agreements, supplier agreements, production volume agreements, trade associations, product and process licenses, minority equity in rival firms – sought to create value for industry players from both economic and normative viewpoints. GE made use of asymmetry (the monopoly power its patents provided) to foster industry stability (fashioning long-term agreements with suppliers, buyers/distributors and rivals). GE’s initiatives sought to accomplish two goals: economic efficiency (handsome financial returns for industry players) and legitimacy (by building and protecting industry image in the American society). GE’s continued investment in R&D and in managerial best practices improvement sought to maintain or augment GE’s ascendancy over actual and potential rivals, reinforcing therefore asymmetry. It can be said that GE built a system of IORs that consistently addressed four of Oliver’s (1990) six critical contingencies of IORs – asymmetry, stability, efficiency, legitimacy. A distinctive feature of this system contributes explanation for its several decade long success: the system successfully managed the delicate balance between economic and normative issues at the industry level. The interdependence between enduring financial returns of industry players (subject to market pressures) and industry legitimacy (subject to nonmarket pressures) was consistently acknowledged and appropriately addressed. In sum, GE’s system of IORs managed to create both economic and normative value for relevant stakeholders on a continuing basis.

Besides creating value for relevant stakeholders, GE made consistent efforts to capture market- and nonmarket-related value for the company itself. In what concerns the capture of market-related value, in addition to technological skills, GE developed managerial capabilities that enabled it to efficiently face ever more complex business, organizational and environmental issues. Throughout its existence, GE’s management has systematically sought to improve its processes, in order to foster productivity, generate profits and secure substantial funds for reinvestment. As for the capture of nonmarket-related value, since its foundation, was GE aware of the potential threat of the American antitrust law for big, diversified companies, such as GE. GE’s management understood, therefore, that the company’s existence required a perpetual fight for its legitimacy. This included building and nurturing a strong multipayer industry, where a big, diversified number 2 company, such as WH, provided valuable protection against antitrust suits. Once more, GE managed to balance economic and normative issues so as to capture both economic and normative value.

It is worth mentioning that achieving an adequate balance between economic and normative issues associated with market- and nonmarket-related pressures is quite challenging. The highly successful IBM, which fashioned and dominated the computer industry for several decades failed to capture value in the microcomputer industry, and eventually left this segment. In the early 1980s, IBM made use of asymmetry (its huge reputation and deep knowledge of the computer business) to foster industry stability (through its design of the IBM-PC). IBM pursued efficiency (fast entry through alliances with software and hardware suppliers) and brought legitimacy to the new field (through its reputation). IBM undoubtedly created economic and normative value for field players. The company, however, failed to capture value, because the IORs it build left unattended the nurturing of IBM’s asymmetry and transferred knowledge-based asymmetry to the hands of partners such as Microsoft and Intel.

CONCLUSION

The historical comparative study of General Electric and Westinghouse, the top two companies in the American electrical manufacturing industry, supports Oliver’s (1997)
contention that the economic and the normative perspectives contribute complementary insights into explaining sustained competitive advantage. More generally, the study findings provide insights into the development of organizational long-term success.

This study puts forward an eclectic value perspective that distinguishes value creation (for stakeholders) from value capture (for the organization) taking into consideration both market- and nonmarket-related contexts. The paper suggests that to achieve enduring success, corporations are required to consistently create value for their relevant stakeholders, as well as to consistently capture value from its value creating initiatives. Value creation and value capture must address both market-related (economic) and nonmarket-related (normative) issues. Furthermore, the findings suggest that adequate management of IORs is likely to play a critical role both in value creation and value capture requiring the organization to skillfully address four critical contingencies of IORs: asymmetry and efficiency (market-related), stability and legitimacy (nonmarket-related).

The emerging insights may offer initial input for academics and practitioners to revisit strategic management tools and issues such as balanced scorecards, corporate social responsibility and dynamic capabilities, to name a few. Finally, additional research on the initial conditions of organizations and environment may clarify which auspicious and adverse circumstances are likely to favor or preclude firms from successfully responding to the imperatives of long-term success: concomitantly addressing market- and nonmarket-related pressures in order to create and capture value on a continuing basis.

REFERENCES


