

THE NATURE OF THE LARGE CORPORATION

by

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ABSTRACT

The large corporation is the productive engine of the modern industrial world. The contemporary view of the corporation sees it not as an agglomeration of assets or contracts, but as a holder of specialized resources—rights, reputations, routines, and competencies. The very size of large corporations signals the presence of unusual concentrations of these specialized resources. The corporation's organization is both the repository of special competencies and the agent for the creation of new resources. Hence the critical distinctive feature of the modern large corporation is its organizational form.

We are presently in a period in which the "ideal" organizational form (or forms) is in flux. Fifteen-to-twenty years ago there was general agreement in Western countries that the *Full-Fledged M-form* represented an "ideal" towards which most large corporations ought to strive. The dominant managerial logic was based on efficiencies gained through control [C-Logic]. Simultaneously, in Japan an alternative ideal form evolved, emphasizing the values of problem-solving at low levels in the organization, extensive coordination, experimentation and organizational learning [L-Logic].

These two competing ideal logics each represented a distinct means whereby the organizational resources and competitiveness of the corporation were shaped within the local environment of relationships with other organizations and government policy. The market for corporate control in Anglo-Saxon countries, and the general trends of globalization, deregulation, and technological advance have, however, forced a collision between the two and broken yesterday's consensus and sense of certainty in both the East and the West.

Collision has spurred large firms towards dramatic internal transformations. In the West, these have commonly included moves to flatten the organization, re-centralize the overall strategic direction and emphasize goals other than profits, to increase coordination as well as operating autonomy for business-unit results, to rely more on working-level problem-solving and to leverage capabilities by identifying and disseminating best-practice within the firm. In Japan, there have been similar moves, but often seemingly in the opposite direction. There, are efforts to increase profit consciousness and the discipline of hierarchical controls as well as to lower total costs by a combination of further technical advance and accelerated internationalization.

In both cases, the elements of transformation are seldom all in harmony with one another and large firms are now experimenting to discover which combinations are effective. Rather than signaling convergence, these experiments seem destined to create a plurality of new forms and new logics. The success of each will depend crucially on restoring a new relationship with local environments that are themselves in a state of flux. Consequently, the large corporation is presently the locus of significant experimentation in socio-political-cultural forms of governing industrial and commercial activity.

THE NATURE OF THE LARGE CORPORATION

The large-scale corporation has assumed particular significance as the central “engine” that creates and allocates much of society’s critical wealth-creating resources. In this paper, we tell two stories to indicate how large-scale organizations have prospered since the end of World War Two. We look at the developments first in the USA, then turn to Japan as an indicator of behavior now visible in other Asian countries such as South Korea. De-regulation and global competition are now acting to bring together previously separated approaches to managing the complexities of large scale in ways that are upsetting the stability of national and international oligopolies. The consequences for other regions, such as the European Union, are implied in the arguments presented here, but are not developed in detail.

A central part of the argument is that the different regional experiences with wealth creation are based in large part upon a contest among alternative forms of organizing. And in looking at organizations, we have gone beyond the large-scale enterprise as defined by the legal boundaries of the corporation. It is possible for co-ordinated work across corporations to create resources and wealth of a form that neither markets nor hierarchies can achieve. Our analysis can readily be extended to include the modern “industrial district” and strategic alliances, but for clarity in the exposition we have excluded any detailed treatment of these additional challenges to the established order of large scale.

At the risk of over-simplification, we focus our discussion on three factors: the nature and significance of scale; differences in *managerial logic*¹ across firms; and the connections that link the large corporation to other economic actors and to society. The balance among the three factors goes a long way to explaining how the large US corporations, which had overtaken the British early in the century, were themselves challenged, sometimes fatally, by Japanese and more recently Korean and Taiwanese firms and how the Eastern challengers themselves are now finding that yesterday’s successes are not so readily replicated today. At the same time, European firms are experimenting with a variety of means to regain lost ground, but have made little impression except in a few sectors.²

As a result, it is appropriate to say that the most essential nature of the large corporation is the managerial logic that it employs. One has only to look at the bookshelf of popular management books to see that a new focus on *management* has replaced previous infatuations with strategy and financial engineering. However that same bookshelf shows that the search is proving difficult—there is precious little

¹We define a firm’s managerial logic to be the efficiency basis of its organization and managerial practices. A firm’s managerial logic is its “organizational” strategy for dealing with the conflicting issues of specialization and coordination, focus versus flexibility, incentive intensity and measurement cleanliness, decentralization versus coherence, etc. Note that this is not the same as the concept of “dominant logic,” introduced by Prahalad and Bettis [1986], which refers to the strategic logic spanning a set of related businesses.

²Some of these arguments have been presented by Best [1990]. Though his data are not original, he provides an excellent combination of arguments across discipline boundaries to indicate some of the main lines of development we amplify here.

theoretical guidance to shape thinking on these issues and the voices present a cacophony of conflicting concepts and priorities.

One reason why the search for improved managerial logics is proving so hard is the escalation of global competition. Corporations with fundamentally different managerial logics now compete head-to-head across many markets. And, as their direct investments across borders grow to create what the United Nations calls “deep level” integration of economic forces across national borders, so global competition also brings national systems of governance into collision. Our thesis is that, far from global competition creating convergence, it is acting to force experimentation with new combinations of resources. The result is a divergence of outcomes in a period of perhaps unprecedented uncertainty about how to organize large-scale activities.³ The search for the “one-best-way” to manage seems long out-dated.

This paper, then, is essentially about the search for a new coherence that defines the alternative possible natures of large corporations and their relationships with their host societies. We do not aim to provide answers but to seek ways to ask better questions. In so doing, we hope to provoke the kind of debate that holds out promise of a better understanding of both the power and the limitations of this form of economic organization.

Scale and Organizational Resources

What is special about the *large* corporation? To many people corporate size is assumed to produce economic power. Yet this logic, largely resting on the military analogy, is frequently specious. Kay [1993, p. 364] forcefully makes the point that the military analogy is responsible for

the almost universal overestimation of the importance of size and scale. Modern warfare is based on the destruction of opposing forces. . . . Business is not like that at all. Success in business derives from adding value of your own, not diminishing that of your competitors, and it is based on distinctive capability, not destructive capacity. Distinctive capability becomes harder, not easier, to maintain as size increases.

The position that the most salient characteristic of large corporations is simply their very size is natural if the corporation is seen as being merely an aggregation of assets brought under common ownership. Indeed, familiarity breeds contempt and citizens of the wealthiest nations normally take for granted the large corporations that have grown beyond their borders to global scale. But executives and government officials in less fortunate countries know that one cannot replicate these great corporations by simply aggregating assets.

The distinguishing feature of successful (profitable and growing) large corporations—that which sets them apart from the garden variety of local firm—is the depth, variety, and complexity of their specialized capabilities and reputations. There are

³ One of us wrote about divergence, based on data and observation from the 1980s, in Stopford and Strange [1991]. Since then the trends of divergence seem to have been reinforced.

two compelling reasons why large size is associated with the presence of scarce and valuable capabilities:

1. Large size by itself is a source of inefficiency because as size increases the firm's problems of coordination multiply and its ratio of administrative to productive personnel increases. Thus, a large corporation must either be subsidized by a rent stream or develop special managerial capabilities that ameliorate the potential costs of size.
2. Large size in global markets is won through successful competition with other world-class firms in relatively open markets rather than in markets benefiting from protection or idiosyncratic local tastes. It thus signals the presence of valuable and difficult to replicate skills, knowledge, and competencies.

This perspective, that the corporation is best viewed as a bundle of distinctive specialized resources, has come to be called the *resource-based view* of the firm. It now plays a crucial role in our understanding of competitive strategy and general management. Specialized distinctive resources are built over time through the interplay of investment and activity. Largely intangible, their stock at any moment embodies the investment decisions, learning-by-doing, and accumulated knowledge generated by the organization's past activities. They are the source of differential efficiencies among firms and are the base from which general management must build the corporation's future. They are a hard-won storehouse of accumulated wisdom, values, rules-of-thumb, know-how, information, technology, and patterns of human coordination.

Of all a corporation's resources, its organizational resources—its repertoire of routines, competencies and capabilities—are the most subtle and most powerful. Organizational resources are developed largely through learning-by-doing and therefore reflect the past sequence of activities. A competence, for example, may be diffuse, such as a culture of cooperation across divisions, or sharply focused, such as an error-free billing system. Competencies may be highly specific, such as the design of women's shoes, or very extensible,⁴ such as organic chemistry or software engineering. Competencies and capabilities are not only built through use, they are degraded when unused. Thus, the relationship between a firm's products, activities, and its organizational resources is necessarily dynamic.

Resources and Scale

The appropriate scale of a corporation flows from a balance between the economic pressure for expansion and the firm's capability to manage a larger and more complex firm. There are four forces that normally act to favor expansion:⁵

- Advances in production technology have often required increases in scale or scope to realize their benefits.

⁴See Rumelt [1974, p.133] for a discussion of extensible technologies.

⁵The relative sizes of corporations will vary by industry. Corporations serving larger markets (e.g. petroleum vs. silverware) and those selling higher-value products (e.g., automobiles vs. television sets) will, other things being equal, tend to be larger.

- Where tastes have homogenized, and especially when combined with reducing costs and advances in transportation and communication, markets have been continually widened — many are now global in scope.
- Product innovations, when successful, induce demand-driven growth that is magnified by the existing scale of market access.
- Specialized technical or market knowledge “spills over” from the area in which it was first gained and presents opportunities in related technologies, products, and markets.

A corporation’s ability to grow in response to these forces depends upon the development of managerial competencies to direct, coordinate, and control a larger enterprise. Those firms which have actually achieved large scale are those which have faced and solved the substantial problems in governing a large organization.⁶

It follows that limits on organizational resources act to constrain the growth and size of the firm. As scale increases, so do managerial problems. Size increases the difficulty of coordinating large groups of specialists; size makes it more difficult to move information from its source to the locations where it can be best used. Size dilutes the effects of each individual’s efforts, and thus makes motivation more difficult. Size insulates and buffers the organization as a whole against isolated and local challenges, thus making responsiveness more difficult. Size increases the span of activity beyond that which even the most skillful senior manager can be familiar, making the intelligent direction of the enterprise more difficult. Thus, (successful) large corporations are those which have found ways of managing that address these difficulties. These difficulties have never been solved or eliminated, but successful firms have found ways of managing that contain the costs below the gains to scale and growth.

Managerial Logic

The academic field most centrally concerned with the reason for multi-activity firms, and hence for most large corporations, is the transactions-cost branch of organizational economics.⁷ The central question asked by this field is: *When is it better to have activities carried out by independently owned and managed firms and when is it better to combine those activities within a single firm?* The intellectual framework used to address this question normally makes theoretical efficiency comparisons between a set of one-activity owner-managed firms and a corporation combining these activities, administered by a cadre of hired managers. Unsurprisingly, scholars are far from agreeing on solutions to this problem. Whereas some see integration as primarily solving the “hold-up” problem,⁸ others point to the issue of monitoring team pro-

⁶Chandler’s [1990] historical study of large enterprise in the U.S., Britain, and Germany takes this as its main conclusion.

⁷For a good sample of this line of thought see Williamson and Winter [1991].

⁸“Hold-up” occurs when one party in a transaction takes advantage of the other party’s sunk commitment to the transaction. See Klein, Crawford, and Allen [197?] and Williamson [19??].

duction,⁹ or the creation of mutually trusting social groups,¹⁰ the problem of knowledge transfer and encapsulation,¹¹ or the solution to “design-type” coordination problems.¹²

We do not wish to explicate the details of transaction cost economics, but call attention to the comparison it posits—administration by managers versus market-place transactions. According to this perspective, the test of a managerial or organizational arrangement is whether or not it is more efficient than market alternatives. We disagree. For a large corporation there is an additional requirement: *a managerial or organizational arrangement must be at least as efficient than those of competing large corporations*. With this shift in perspective we unfortunately lose the clarity obtained by basing comparisons upon the well-understood market transaction. But we gain the ability to understand more fully the evolution of managerial practices, to explore the conflict between organizations that are constructed on very different administrative and social principles, and to connect organizational choices more directly to choices of competitive strategy.

In comparing organizations we wish to look beyond “form” and consider systems of incentives, human resource practices, career patterns, integrative and coordinative mechanisms, assumptions about the locus of knowledge and problem solving, decision processes, patterns of shared beliefs, organizational cultures, etc. To make this clear we shall use the term *managerial logic* rather than “form” or “structure.” For us, a large company’s managerial logic is its way of solving the problem of organizational efficiency and effectiveness—its way of managing more efficiently or more capably than its competitors. Just as a firm’s competitive strategy is its particular way of dealing with the economics of production and market competition, so its managerial logic is its particular internal “strategy” for dealing with the issues of organizational economics and social conditions.

We cannot offer here a simple taxonomy of managerial logics or even an exhaustive listing of the constituent elements of managerial logics. However, it is useful to note that a company’s managerial logic usually represents its approach to dealing with fundamental trade-offs like these:

Specialization and Coordination. A deep principle in economics, due to Adam Smith, is the presence of gains to specialization. Yet one basis for specialization denies another. In addition, specialized units must be somehow coordinated and the necessity for coordination may limit the gains to specialization. Similarly, the necessity for great specialization may make coordination extremely difficult and costly.

Incentive Intensity and Coordination. Individual effort towards the accomplishment of local unit goals is enhanced by incentives tied to clear measures of unit performance. Yet these efforts can be dysfunctional from a corporate perspective as any real measures are necessarily incomplete. Incentives tied

⁹Alchain and Demsetz [19??].

¹⁰Ouchi [19??].

¹¹Arrow [19??], Demsetz [19??].

¹²Milgrom and Roberts [19??].

to overall corporate performance, by contrast, are less motivating because of the weak connection between individual effort and overall results in a large corporation.

Decentralization and Direction. Market place activity is purely decentralized with the price system acting to coordinate action. In firms, more direction is sought, but striking the best balance between decentralization (or delegation, or empowerment) and direction (or planning, or leadership) is not simple. Bounded rationality offers one constraint on the amount of “direction” any manager can undertake. From another perspective, Milgrom and Roberts [1992] suggest that “design” problems, where there are strong well-understood interactions among the choices of sub-units are best handled by direction. Other problems are better handled by delegation and mutual adjustment.

Routinization and Flexibility. In a stable world, efficiency is normally served by routinization whereas flexibility is needed to cope with a changing environment. More subtly, effective routinization may make the firm’s environment more stable by holding competition at bay, but may also create inertia that limits learning and the perception of needs for change.

Some Examples

To clarify the concept of managerial logic we present some examples taken from the broad classification of organizations introduced by Williamson [1975]: the U-Form, the M-Form, and the H-Form. The U-Form structure is specialized around functions (i.e., sales, manufacturing) and is “Unitary” in that it is a whole, within which no part can easily stand alone. The M-Form is the multi-divisional structure which is characteristic of most large corporations in the Western world. In a M-Form each division is a “business” with its own profit-and-loss account, but each division/business also shares resources, to some extent, with other divisions and each division’s strategy is developed in negotiation with higher-level managers and other divisions. The H-Form is essentially a “holding” company with a small headquarters office. The constituent businesses are fully separate from one another, the headquarters unit supplying monitoring and financial control. Most H-Forms have diversified into unrelated businesses and are commonly known as conglomerates.

It is worth noting that this classification system is nested. That is, an H-Form can own businesses which are in turn H, M, or U- Forms. M-Forms can consist of divisions which are themselves M-Forms or U-Forms. U-Forms have no sub-structure in this schema.

H-Form Managerial Logic

The true conglomerate (e.g., Hanson Trust, Teledyne) consists of a small headquarters office and a portfolio of unrelated business firms. Conglomerates don’t compete with one another, so the managerial logic of a conglomerate must pass only the simpler test of transaction-cost economics—does the union of operating companies common ownership and a headquarters unit create value?

The managerial logics of conglomerates are almost always centered on incentives. The value proposition is necessarily that the incentive structure of the conglomerate is

superior to that of the natural market place. How can this be true? First, note that the relevant comparison is not with the owner-managed firm, but a professionally managed firm with either distant private ownership¹³ or diffuse public ownership. Thus, the headquarters' task is to provide monitoring, control, and managerial incentives that are superior to those provided by distant private or diffuse public owners. Traditional successful conglomerates did this through loss avoidance: the elimination of waste, constraints on spending and perks, and constraints on the reinvestment of capital in mature businesses. The managerial logic of the true conglomerate is loss avoidance through financial control.

Conglomerates that employ more complex managerial logics run into difficulties. When companies like Litton Industries or LTV tried to manage both great diversity and investment in fast-moving high-technology businesses they failed. The knowledge, attitudes, and practices required to manager entrepreneurial growth are different than, and perhaps antithetical to, the logic of financial control.¹⁴

M-Form Logics

The essential feature of the M-Form is that the business units are embedded in a complex infrastructure of shared resources, services, and administration. As Ouchi [1984, pp. 23-24] puts it

What is most important about the M-Form organization is that its operating units are partially interdependent. . . . The chief executive of an M-Form organization may ask each division manager to operate independently and to attempt simply to maximize profits. . . . However, if people take their "bottom line" measures too seriously, that is, if they attempt to maximize profits to the exclusion of all else, then trouble will emerge. . . . In time, this attempt at local profit maximization will eat up the company's social endowments and everyone will wake up one day to find that a competitor has overtaken the company by investing more in the future.

The fundamental tension in the M-Form is between the economies of shared resources, obtained by coordination and cooperation, and the economies of focused effort, obtained by incentives tied to clear measures of local profit. The tension is inescapable because coordination and cooperation interfere with clarity of measurement.¹⁵ Hill [1994] argues that the choice between the logic of resource-sharing and the logic of "governance" through clear measures and incentives are incompatible and companies must choose between these modes, not attempt to mix them.

In addition, to the "incentive intensity versus coordination" dimension, M-Forms can differ with regard to the degree to which strategy and policy has been decentralized. In some M-Forms, top management does the preponderance of strategic think-

¹³The private owner sells his or her firm to the conglomerate as a substitute for retiring from the task and hiring professional managers.

¹⁴ For a fuller discussion of alternative means by which Headquarters can add value to the operating units and of the need for clear choices of means, or styles of behavior, see Goold, Campbell and Alexander [1994].

¹⁵ See Rumelt [1995] for a more complete discussion.

ing, giving the divisions primarily operating roles. In other M-Forms, strategy is delegated to the divisions, or "SBUs" and top management merely acts to review the internal logic and consistency of strategy plans. These modes, and the range of alternatives between them, represent different managerial logics.

Another important area of distinction among M-Forms is in their managerial logic with regard to innovation. Some M-Forms seek innovation through acquisition and by putting incentive pressure on division managers to innovate. Others approach the issue by providing special resources and a set of cultural norms that permit would-be entrepreneurs to go "off-line" and develop their new-product or new-business ideas. Still others rely on central research efforts. Finally, a few M-Forms have mastered the art of paying as much attention to their core competencies as their business units (e.g., Canon).¹⁶ By bringing together specialists in "stretch" projects, such firms explicitly seek the development of new and deeper competencies along with new products.

Environmental conditioning and policy choice

The H and M-Forms are constructed of U-Form organizations. The U-Form includes both managerial functions and all the basic operating activities of the business. Hence the U-Form presents the most complex range of managerial logics and embodies the most fundamental of the choices of priorities of behavior.

To indicate the type of connections we have in mind, consider two essential elements of U-Form managerial logic. One is the balance between specialization and coordination; the other is the choice of location for both defining and solving problems. In the standard organization of most Western businesses, coordination among the functions is chiefly accomplished by hierarchy. That is, a superior level in the organization develops a plan which defines the activities of specialized sub-units in such a way that coordination will be achieved. The responsibility for identifying problems rests with the hierarchical coordinator, as does the generation of solutions. This managerial logic appears to have benefits when the nature of the optimal solution (or solution method) is known and when there are great costs to misalignment. This reliance on hierarchy is closely associated, as we show later on, with reliance on *control* as a principal weapon for building competitiveness.

An alternative is to achieve coordination by mutual adjustment among specialized sub-units. Most often associated with Japan,¹⁷ but not exclusively Japanese [e.g., Michelin and Motorola], this type of managerial logic appears to have superior abilities at pursuing *continuous improvement*. The reason is that the information required to make improvements rests at the working level. Hence, the effective use of this information requires a method of problem definition and coordinated solution that is non-hierarchical—one resting on mutual adjustment. This managerial logic appears to have great benefits when the "optimal" solution is unknown and to be discovered,

¹⁶The concept of core competence is due to Prahalad and Hamel [1991].

¹⁷Aoki [1990].

often by trial-and-error. A dominant characteristic of the logic is reliance on *organizational learning* as a route to creating competitiveness.

There are many occasions when it is unclear which of these two alternatives truly is the better. What is known and what has to be discovered is often a matter of managers' perspectives. An incumbent leader may believe it possesses all the answers to efficient operation, whereas a challenger is perforce reliant on some form of strategic innovation. In many industries today, the competitive battle is as much to do with alternative conceptions of strategy and alternative logics for building resources and capabilities as it is with a battle between firms of different sizes all playing the same game. Because competitiveness rests so much on managerial capability, David can and often does defeat Goliath.¹⁸

We believe, as we indicated earlier, that these choices are heavily conditioned by the environment outside the firm that provides much of the incentive structure for investment. The resource view of the corporation implies that the organization is a living organism, and like other living organisms, is critically affected in its development by its surrounding environment. Thus, the basic logics associated with large scale can, over time, begin to diverge in different localities. To make the point, we explore below how firms in the USA and those in Japan have developed in different environments and have thus received quite different stimuli for managerial choice. The reader should note that these stimuli are not wholly deterministic, for there is much variation of response within each nation to common stimuli. Nevertheless, the national stories provide a setting for exploration of the complex set of relationships that, over time, come to shape the detailed development and application in daily behavior of a chosen path of managerial logic.

A critical test of the relatedness of all these issues is in the area of product development. At least three different managerial logics have been observed at work here. One logic requires each specialist unit state and/or negotiate its "*interface*" requirements and then has each unit work within these constraints. This approach works more or less like the price system, but with the more complex statements of sub-unit "*interfaces*" taking the place of prices. Units are free to design their sub-systems as they choose as long as the "*interface*" statement is met. A second logic is *sequential team* efforts. Here a preliminary design team, normally cross functional in composition, produces a documented design and passes it on to detailed design groups. This team or teams then completes the design, passing the work on to industrial engineers who deal with the creation of manufacturing tools and methods. Finally, production engineers set up a manufacturing system for the product and operate it. A third logic is *overlapping sequential teams*. Here the "*hand-off*" from one design phase to the next is much more gradual, with detailed discussions, for example, between design and industrial engineering groups before the design team finishes its work. By investing in more costly coordination capabilities and routines, this managerial logic provides earlier identification of downstream problems that can save time, improve quality and eventually lower total unit costs. In their study of automobile design, Clark and Fujimoto [1991] show that most US and European car makers use

¹⁸ For considerable evidence of the new forms of contest in European and US industries, see Baden-Fuller and Stopford [1994].

sequential design processes, whereas best practice Japanese firms use the overlapping approach. Their analysis is that much of the gap between the 34-month development time in the US and the 24-month development time in Japan can be attributed to this managerial practice.

Just as the managerial response in the USA to this gap must, to be effective, embrace the fundamental ideas of deep-seated managerial logic, so we believe at a more macro level that economic policy choice should include explicit consideration of organizational resources and behavior. Failure to do so has led resources has led to a number of national policy disasters. For example, when the US Congress granted savings and loan institutions the same powers as banks, in order to level the playing field and "save" them from their undiversified asset portfolios in the early 1980s, it acted on pure economic and financial economics accounts of competition. In particular, it failed to understand the consequences of placing unsophisticated organizations in direct competition with banks which had built stores of reputation and competence over decades, if not centuries. Similarly, failure to think through the problems of the former Soviet Union in organizational and institutional terms has led to advising the freeing of markets without concomitant attention to the character and competencies of the organizations which would act in those markets.

Failure to consider the issues of industrial decline on the USA and Europe in organizational terms has led to widespread mis-prescription for the cures. In Britain there is strong evidence that decline was linked to the failure of organizations to build the complex administrative systems necessary to achieve scale and scope in the chemical, electrical, and complex machinery industries.¹⁹ Nevertheless, British industrial policy aimed at granting scale through consolidation and demand management.²⁰ In the US, the dominant public policy view continues to be that the deterioration in relative competitiveness is simply evidence of the rest of the world "catching-up" by adopting methods pioneered in America.²¹ Despite a great deal of academic analysis of the special organizational characteristics that enable Japanese competitiveness,²² US public policy continues to be driven by the assumption that national competitiveness depends upon the structure of markets rather than the practices of management.

The Full-Fledged M-Form in the USA

The common characteristic of all modern business enterprises is the vertical specialization of lower, middle, and top management. Such firms first appeared in the middle of the 19th century in the railroad and telegraph industries and were taken as models for the industrial and commercial firms that developed during the "Second Industrial Revolution" of 1880-1920. Chandler [1962] chronicles the innovation of the

¹⁹See the discussion in Chandler [1990].

²⁰See the discussion in Best [1990, p. 4-5].

²¹Best [1990, p.5].

²²See Dore [1973], Ouchi [1979], Cusamano [1989], Aoki [1990], and Kodama [1995] for examples of this line of research.

M-Form at DuPont in 1921, a new administrative structure responsive to the inability of top management to plan and coordinate the operations of an increasingly diversified product line.

The M-Form structure assigned to top management the entrepreneurial and administrative roles. The entrepreneurial role was that of determining strategy and the proper accumulation and deployment of technical and physical resources. Administratively, top management's role was to monitor and evaluate the performance of the operating divisions and their managers.

The M-Form permitted firms to grow well beyond the confines of their original markets. Once this structure had been adopted, further diversification through acquisition became simpler to implement. This allowed firms to escape the risks of being tied to a fixed set of markets or technologies, but it also permitted companies to set growth goals that were unrelated to market conditions or inherent competitive advantage.

By the mid-1970s the continued growth and diversification of M-Form companies, together with the views on size, organization, and management then dominant in US society, had created what we call the *Full-Fledged M-Form*. This type of organization differed in several ways from the original M-Form:

- The FFM-Form possessed at least two levels of "division" managers. Normally, business units were aggregated into groups, which then reported to top management. In some cases, like General Electric, SBUs²³ managers reported to business units, which reported to divisions, which reported to sectors, which finally reported to headquarters, giving five layers of general managers.
- The FFM-Form delegated the entrepreneurial function of strategy to the divisions or SBUs. Higher levels of general management sat in a review capacity over the plans generated by lower level managers.
- Aided by tools such as the BCG Portfolio Chart, top-management strategy at the FFM-Form centered on acquisitions and divestitures and the pattern of cash generation and cash use among the business units.
- The FFM-Form took great pains to eliminate the sharing of resources whenever possible. The objective was to give each business full control over the resources necessary to carry out its mission and, therefore, to generate clear and comparable measures of business performance.
- Although the FFM-Form attempted to maintain patterns of relatedness among businesses, the end result of long logical chains of relatedness was that General Electric operated in jet engines and broadcasting, General Mills operated in breakfast cereals and knitwear, and Eastman Kodak operated in photographic supplies and pharmaceuticals. With this level of product diversity, top management had little choice but to control via financial results rather than provide strategic leadership.

²³Strategic Business Units (SBUs) were the smallest unit responsible for having strategic plans.

The creation of the FFM-Form came about in the US due to a variety of converging trends and beliefs about management and organization. Among the most important were these:

- The strong belief that general management was a skill apart from the knowledge of any particular business. The war seems to have intensified this belief, perhaps because it forced and permitted milling companies to make timers, automobile companies to make aircraft, and broad planning and logistics authority to academics. For example, moving from his position as President of the Ford Motor Company to Secretary of Defense under Kennedy, Robert McNamara [1995] realized that he had no experience at national security or high-level government affairs. But he also

had no patience with the myth that the Defense Department could not be managed. It was an extraordinarily large organization, but the notion that it was some sort of ungovernable force was absurd. I had spent fifteen years as a manager identifying problems and forcing organizations—often against their will—to think deeply and realistically about alternative courses of action and their consequences. . . . This all reflected an approach to organizing human activities that I had developed at Harvard and applied in the army during the war and later at Ford, and in the World Bank. Put very simply, it was to define a clear objective for whatever organization I was associated with, develop a plan to achieve that objective, and systematically monitor progress against the plan [pp. 23-24].

- The diffusion of the managerial logic of the FFM-Form by McKinsey & Company and the Harvard Business School. McKinsey, in particular, was the main source of expertise on how to design and build a divisionalized firm. This diffusion was, of course, aided by the relative growth and success of these firms in the US and in Europe.
- During the early post-war era, the belief in scale was widely shared in US society. Indeed, scale was seen as the source of American success in the war and the Manhattan Project dramatically showed what could be done with “big science.” Consequently, for a time, it was legitimate for the giant corporation to be regarded as an agent for progress. It may not have been liked, but it was respected.
- In the managerial logic of the FFM-Form, divisional managers were relatively autonomous and expected to produce results. They were effectively told “do what you think best, short of breaking the law, but make your budget.” In many ways they were empowered by the FFM-Form long before the term had become fashionable. The idea of each manager and business having “autonomy” and being judged on merit appealed to the American sense of liberty and mobility.
- The development of the FFM-Form was consonant the tenor of the times in the 1950s and early 1960s. Rationality, fairness, union legitimacy and a belief in Big Government to support Pax Americana in the world were reflected in the workings of the large organization. Moreover, there was an implicit support for the development of manufacturing industry in the form of high levels of spending on education—to provide the basic skills industry demanded—

and on efficient infrastructure—to help provide cost efficiencies. Under these conditions, the fact that the domestic market was both very large, even in international terms, and homogeneous meant that corporations could expand rapidly without much further learning: the original innovation could be exploited and refined by repeated routines of increasingly bureaucratized codification.

- In the postwar era the Antitrust Division of the Federal Trade Commission acted vigorously to block and reverse both vertical and horizontal mergers. The ammunition for this action came from the Celler-Kefauver Act (1950) which outlawed mergers which *might* lessen competition. As a result, many firms sought growth through mergers into unrelated markets.²⁴

Hoskisson and Hitt [1994] suggest that the M-Form provides initial benefits to a growing firm because it adds strategic controls to financial controls, thereby reducing opportunistic behavior among managers and fostering longer-term vision. However, “continued diversification produces a loss of strategic control and an overemphasis on financial controls. Overemphasis on financial controls stifles innovation and reduces long-term competitiveness” [1994, p. 38]. Fligstein [1990, p. 362] provides empirical support for the proposition that the spread of the M-Form diminished the number of corporate presidents with manufacturing backgrounds and increased the number with backgrounds in finance.

With hindsight it seems evident that the FFM-Form took things “too far.” In particular, it seems apparent that corporate managers in the FFM-form can all too readily lose contact with the human system. In addition, one can observe that it tended to substitute acquisitive growth for Schumpeterian competition. Additionally, the FFM-Form replaced strategic thinking based on the detailed specifics of a business with easy to digest bland generalities. Indeed, the incremental, periodic re-balancing of the portfolio on the Spartan basis of “feed the successful; starve the weak” served to stifle attempts at renewal or renaissance within the organization.

Despite these criticisms, it should be recognized that the FFM-Form came into being, in part, by out-performing competing organizations. Its eclipse, we argue in what follows, was due to challenges from new quarters: Japanese competition, an invigorated market for corporate control, deregulation, globalization, and advances in information technology.

The Japanese Story

In 1945, Japan had no resources except labor, yet the rise of large entrepreneurial firms drove an unprecedented expansion of well over fifty-fold by the mid-1980s. Explanations in the West for this success have lagged well behind the reality, partly because Japan did not fit conventional Western notions of competitiveness. From the vantage point of the mid-1990s, it remains all too easy to ascribe the triumph to vague notions of “Japan, Inc.” and administrative guidance, forgetting the bitter class strug-

²⁴Qualitative evidence on this point is developed by Fligstein [1990].

gles in the late 1940s and the lack of any pre-war showing of international competitiveness by Japanese companies.

Perhaps most telling in illustrating how far and how fast Japan moved from its past, and just how misleading are the general Western impressions of a docile society, willingly accepting the whip of big business, is the relatively muted response of the Japanese economy to government production directives during the war. Goldsmith's [1946] (as cited in Best [1990]) analysis shows that Japan's munitions expenditures rose only 15 times in constant money terms during 1939-1946, compared to 22 times in the UK, and an astonishing 140 times in the USA. This pattern flies in the face of the current belief that neither of the latter societies have the social cohesion necessary to generate sharp work discipline while managing rapid structural change.²⁵ The story of the last 40 years is one of a new "earned" culture of big business being created by a combination of dynamism in the private sector and a series of policy initiatives that had the, perhaps unforeseen, consequences of providing the incentive structure needed to spur two of the most distinctive managerial innovations in the post-war era: the logic of continuous improvement and the harnessing of high strategic intent within a culture of learning and discovery.

National Policy

Perhaps the most crucial point of departure for Japan was the determination soon after the end of the war not to follow the principles of comparative advantage, but to seek market leadership in scale-intensive and technology-intensive industries. Best [1990, p.188] writes that MITI realized "the problem with passively accepting the composition of industries that are generated by the 'market' is that the market, left alone, can reinforce productive backwardness. . . . from the early days, MITI officials argued that Japanese productive services would suffer [under the conditions of free trade], consumers would seek foreign products, and Japan would become a permanent follower in production capabilities."

Japanese policy makers did not accept that the market was a "given" and set out to move beyond conventional notions of static resource endowments. Success would come from an appropriate balance among the organization of the firm, the nature of work, the sector and the state at large. Instead of choosing to allocate resources in terms of comparative resource endowments, they sought growth by focusing on sectors where there was hope of gain from the development of superior organizational capability.

One example is in the steel industry, where, despite the shortage of capital, the decision was taken to build large-scale steel plants. The results were stunning: in about two decades Japan had grasped international leadership and had driven down costs to new lows by the application of the latest technologies embodied in deep-water, export-oriented plants.²⁶ Just as Andrew Carnegie had overwhelmed the British steel industry by a combination of scale and technology a century before, so the

²⁵Perhaps just as curiously, the growth rate in Germany was a meagre 7 times, even lower than Russia's ten-fold growth.

²⁶For details see Magaziner and Hout [1980].

US steel industry suffered the same fate without fully realizing at the time just how savage was the onslaught.²⁷

One should note that MITI's influence and that of the Ministry of Finance has not relied on strong statutory powers. US regulatory agencies have more direct investigatory powers and the US court procedures ensure far greater compliance than has been the case in Japan. MITI failed, for example, in its attempts to re-structure the automobile industry both in the middle 1950s and the early 1960s, and more recently failed to block Kobe Steel's diversification into electronics. Instead, MITI gained great influence through its "administrative guidance" procedures, supported by a multiplicity of consultative bodies for important sectors and specific issues like credit allocations from the banks.

A central feature of the Japanese approach to creating new strength has been dubbed the "reserved competition" policy.²⁸ This is the process whereby a sector that has been targeted for industrial development is initially heavily protected from both imports and inward investment. The protection, however, is limited by the accompanying policy of inducing many domestic firms to enter the sector and to compete vigorously with each other. The multi-entrant approach is completely opposite in both logic and effect to the "national champion" approach that has been common in many European countries. For example, more than 40 firms entered the TV set business in the early years.²⁹ There are over 100 machine tool makers, eleven major automobile assemblers, eight computer manufacturers: indeed, in every sector where Japan has achieved global success there are multiple domestic producers fighting it out in the local market.

In the reserved sectors, the initial policies of protection were supplemented by those of promotion: technology imports, financial assistance, domestic demand creation and, but not always, appropriate infrastructure developments. The winners were always, by definition, going to be domestic firms. The mechanisms promoting domestic competition, however, had the effect of breeding new forms of efficiencies and new standards of world-class competitiveness. They were in marked contrast to the European mechanisms of support for its "champions" whose near-monopoly positions bred complacency, under-investment and enormous difficulties later on in adjusting to changed world conditions.

The policies of "reserved competition" cannot be regarded as the entire story of creating new industries. Other factors were also important. For example, the enterprise-based union structure helped speed the adoption of new technologies that required novel forms of work. The national consensus to rebuild the economy in a hurry as a means to restore pride, undoubtedly fostered workplace harmony, the rapid diffusion of imported technologies and a general willingness to experiment with novel

²⁷The South Korean steel industry is now having some of the same impact on the Japanese industry. Spurred by the high Yen, POSCO is now able to land steel in Japan at 20% below the costs of Nippon steel. Perhaps there is an inevitable cycle in some industries, where the leaders are unable to hang on to their lead and, as Marshall suggested many years ago, behave like the giant trees in the forest that lose their vitality and fall over. But in other sectors, there are alternatives, as the main text elaborates.

approaches to old problems. Moreover, the dynamism of many management teams—see the alter section on High Intent—allowed the advantages of the offerings of public policy to be picked up and deployed with few of the [Western] debilitating consequences of receiving government assistance.

The Origins of Continuous Improvement

The combined effects of reserved competition and managerial dynamism can be seen clearly in the widespread choice of continuous improvement as a dominant managerial logic. It can be argued that the policy of inducing multiple entrants into new industries forced the firms to abandon the idea of striving for scale economies as the *sole* route to durable success. Many had to learn how to find ways of serving the relatively small, fragmented domestic market and as their export policies developed later they also had to learn how to adapt rapidly to differences in consumers preferences around the world. In an era of “catch-up,” they had to move quickly; to value the provision of variety in the product range, and to do so with production techniques suitable for small-batch manufacturing. National policy helped focus resources and provided a shared vision of a resurgent Japan, but the Japanese “miracle” was not due to efficient national resource allocation: no-one could see ahead to the needs of next-generation competition. The crucial events were the discovery and development of new approaches to the management of manufacturing operations, and later of product development.

In examining the origins of the new Japanese methods, the example of the Japanese automobile industry in general and the Toyota Motor Corporation in particular is instructive. In Toyota, the central actor was Taiichi Ohno, an engineer who joined Toyota when the company absorbed the family spinning and weaving concern.³⁰ Ohno’s first contributions were as classical as those of any Western engineer: in 1948 he began a major effort to eliminate waste and cut costs in the engine machine shop. Using time and motion studies, Ohno rigorously applied the ideas of re-engineering worker motions, tasks, machine utilization patterns, and the assignment of men to machines. Aided by the absence of task-based unions or work rules preventing job re-definitions, he modified machines to keep work in place without manual effort, to make lubrication automatic, and to stop machine action when the work was done. With these methods he was able to have a single worker set up, operate, and maintain between 5 and 10 machines simultaneously.

The second concept Ohno applied turned out to have revolutionary consequences. Toyota’s basic challenge was to deal with the problem of being a small producer in an industry where giant producers obtained large scale economies from long production runs. Ohno came to the conclusion that Toyota’s factories must operate in a continuous flow pattern, with little or no in-process inventory and with very short set-up times for jobs. To move towards this continuous flow ideal he instituted “just-in-

²⁸ The term was coined by Ozawa [1994]

²⁹ By the mid-1980s, however, only 6 major producers had survived [Morita, 1986, p. 226]

³⁰Our account follows that of Cusamono [1985, Ch. 5], who drew on many original sources, including Ohno [1978].

time" production techniques and vigorously pursued the reduction of set-up times. Set-up times were cut by purchasing special equipment but mostly by re-thinking the task. Western auto producers accepted 3 hour set-up times for stamping dies as the cost for large-lot mass production. Toyota cut this to 15 minutes by 1962 and then to 3 minutes by 1971.

The accomplishment of "just-in-time" production was more complicated. The idea was that each work station would produce only in response to the actual demand of the following work station; if there were no demand, there would be no production. If such a system could be made to work, the complex task of production planning could be eliminated, replaced by a self-regulating system that also kept inventories to a minimum. A necessary step in this direction was the reduction in set-up times. But the more demanding problem was that, lacking buffer inventories, any breakdown stalled all subsequent processing steps. With remarkable tenacity Ohno took this fragility as a challenge: breakdowns would be analyzed by teams of production workers, the reasons discovered, and fixes to the system then made. It took years, but this approach gradually turned the Toyota workforce into a set of problem solving teams that used breakdowns, and then any quality problem, as opportunities for improvement. The end result was a production system that generated only a fraction of the errors built into US automobiles and did so at lower cost.

What this story makes clear is that the continuous improvement system at Toyota did not begin with "empowerment" or "teams." Rather, the pursuit of the concept of smooth production flow generated the need for *problem solving by workers*. The Toyota production system emerged from a mixture of inspiration, necessity, and tenacity.

The managerial logic of continuous improvement is radically different from that of the typical firm. Continuous improvement is not obtained by simply setting goals, adjusting incentives, and designing better equipment. Rather, it grows out of reflective problem solving on the shop floor. It also implies a great deal of non-hierarchical coordination between work groups. Thus, a problem detected in the paint shop might have its origin in a stamping press or even a rolling mill. The lack of inventory *forces* immediate response rather than pushing more defects into inventory. Immediate response can only be obtained if there is cooperative information sharing and joint problem solving. Thus, continuous improvement *requires* that workers be empowered to identify and solve problems, it *requires* that they be broadly trained in the technologies and processes used in production, and *requires* very high levels of mutual cooperation and coordination. This, in turn, implies that incentives cannot be tied to production volumes or to short-term individual unit or shop performance.

The spirit of continuous improvement rapidly became an industry norm. In automobiles, as elsewhere, it had the effect of reinforcing intensive competition in the industry. So strong was this development that as early as 1955, MITI tried to curb what it regarded as dangerous "excessive competition" by promoting its "people's car." Modeled on Volkswagen's success in capturing European economies of scale, MITI's plan attempted to allocate production among producers. The idea was rejected, but MITI persisted. In 1961, just as Japan was beginning to open its borders to imports of commercial vehicles and later passenger automobiles, MITI introduced its "producer-group" concept in which small groups of assemblers would specialize in

each segment of the industry [much as was tried in Brazil at about the same time]. Once again, the idea was resisted. Each producer was determined to continue along its own path of development.

The application of *high-coordination* managerial logic to product development has had equally important consequences. By more closely linking design and manufacturing activities, high-coordination development teams generate products that are less costly to produce and which have fewer quality problems. By speeding up the product-development cycle (through overlapping coordination), members of high-coordination development teams gain more experience at product development and the company is able to introduce new versions and new variations at a faster pace than competitors. Thus, the ability to compress time has emerged as a new source of competitive advantage. One should note, however, that this ability was not created overnight: it has required the investment of nearly thirty years of persistent experimentation to reach capabilities sufficiently robust as have competitive strengths. Now many large Japanese enterprises are reaching towards trying to systematize research and development, predictably through methods of intense coordination and cooperation, called "fusion" to provide for yet further advantages.³¹

The Origins of High Intent

In addition to managerial logics of continuous improvement, leading Japanese corporations have exhibited extraordinary levels of "strategic," or entrepreneurial, "intent."³² Companies like Sony, Canon, Komatsu, and Honda have exhibited ambitions that far exceeded their resources. For example, in 1962 the chief research technologist at Canon read an A. D. Little report which stated that Xerox's patent position was impregnable. He "had objections to that conclusion"³³ and started a project seeking ways around Xerox's patents. Six years later Canon had learned a lot about patenting and had developed the New Process, and in six more years it worked reliably and well. By 1981, Canon executives talked of waging total war on Xerox.

This kind of long-term entrepreneurial ambition flows from the same mysterious roots as entrepreneurship in any culture—a mixture of ego, intuition, and skill. But in Japan there was the added impetus of the humiliating defeat of a society that highly prized the values of the warrior. These entrepreneurs were not only seeking personal fulfillment, they also have sought respect in the eyes of the world for Japan and her accomplishments.

Can such ambitions be rationalized? They have succeeded too many times to be a statistical anomaly. In these entrepreneurial firms managers aggressively seek market leadership and strategic innovation, even when they are themselves very small relative to the world leaders. The market is not taken as a "given." Canon, for example, has taken world leadership positions in cameras, then in photo-copiers, then in laser-printer engines, then in bubble-printers, and then in mask aligners. Clearly, such

³¹See Kodama [1995].

³²The term "strategic intent" was coined by Hamel and Prahalad [1989].

³³As reported by Jacobson and Hillkirk [1986, p. 147].

ambitions cannot be rationalized were they to be universal. But, we see these high intents as functional and effective when they are used to drive competitive developments against non-entrepreneurial bureaucratic firms managed by financial officers.

Suppliers and the Political Context

Many of the special aspects of “Japanese” managerial logics are reinforced when the enterprise can work in harmony with closely proximate suppliers. The effective competitive unit is not limited by equity boundaries of firm ownership, but can extend to the limits of *kieretsu*-type collaboration among separate enterprises.³⁴ It is common in Japan to use the analogy of the “manor house” [the assembler] surrounded by villagers who are well organized to meet the manor’s needs for orderly and timely supply of parts and components. In this manorial system, the manor house often takes the greater share of the risk of adjustment. For example, Sony provides its suppliers of plastic mouldings with the precision dies needed. The reasoning is that Sony retains the right to change models at very short notice and that it would be “unfair” to expect the supplier to take the risk that the expensive dies might be discarded within weeks of installation.

Many supplier networks go beyond such simple risk-sharing to include design sharing. For complex sub-assemblies, Toyota, for example, enlists the design talents of its major suppliers very early in the design process. There are commonly extended buyer-supplier dialogues as to the best design possibilities. To be effective, these dialogues need high degrees of mutual confidence and trust, achievable only when built upon long-term relationships. These are quite distinct from the supplier relationships that, until recently, have been traditional in Western organizations, where cost considerations and bidding for short-term volume contracts were dominant.

The high-coordination “Japanese” managerial logic flourishes best when it is also supported by public policy that is enterprise-friendly. In addition to the state providing basic education and infrastructure, there is a need to support a multiplicity of inter-organizational associations that provide for some of the allocative functions and adjustment mechanisms that would otherwise be supplied by the market. To protect the long-term nature of the relationships, some degree of stability is required; market shocks in this system have damaging consequences. But to provide non-market mechanisms is to risk stifling adjustment and innovation. Clearly a delicate balance is needed, especially as the external environment changes and challenges the effectiveness of approaches that have served Japan so well for decades.

Collision, Change, and Transformation

By the mid 1970s the Japanese had developed a new managerial logic based on high coordination, continuous improvement, and high intent: call it the L-Logic (Learning) because it emphasizes discovery and learning rather than planning and

³⁴ These boundaries are not limited to the producer groups that have re-formed around the loyalties that persisted after the pre-war *Zaibatsu* had been dissolved. They extend through multiple networks of sub-contracting and have a logic that is quite distinct from that in the H-Form firms in West.

control as the central elements of management. In the US and Western Europe, the dominant managerial logic was that of hierarchical coordination within businesses that were strategically directed within FFM-Form organizations: call this the C-Logic (Control) because it emphasizes strategic control and operating efficiencies gained by thorough planning and the design of appropriate incentives.

The growing strength of the forces of global competition over the past twenty years has brought the L and C Logics into collision. No longer can they be regarded as alternatives, based upon the location of the headquarters. Today, they pose challenges for the pursuit of dominance in every domestic market. Understanding the nature of these challenges has become a central issue for many executives, for consultants, for management scholars and teachers. At first, Western companies believed that Japanese firms relied on lower wages, then more automation. The collusion of MITI and Japan Inc. was then hypothesized. The problem was redefined as cultural, then political, then economic. Only in recent years have we in the West come to understand that the L-Logic is a genuine managerial innovation, one that can be transferred elsewhere, but also one that is not simply a "technique," but an approach to management and organization that is based on fundamentally different ways of thinking and behaving.

Should Western enterprises learn how to emulate the "new" Logic? The answer to such a question should, we posit, be strongly negative. There are two reasons. First, the crisis in Japan raises new questions about the durability of the L-Logic for the next generation of global competition. Second, is the near impossibility of successfully imposing a fresh and unadjusted alternative logic on to a set of tightly related norms and ideals of behavior. Understanding of the alternatives is no more than a point of departure for adaptation and innovation.

The prolonged recession in Japan, combined with fundamental changes in the political and bureaucratic structures of central government, has caused many Japanese firms to re-examine their own policies. Some, like Mitsubishi Heavy Industries, have announced plans to introduce performance measurement systems in their major units based principally on calculations of profitability. Others, like Matsushita and Toray, have created product divisions that have many of the structural characteristics of Western SBUs. Many of the largest firms are talking openly about the need to assert the kinds of "discipline" seen clearly in the USA.

These signals of a general malaise and dissatisfaction with the established order are accompanied by similar malaise in the wider environment. For example, MITI has recently declared that de-regulation is essential to restore the momentum of progress. Yet, as late as 1993, MITI was advocating a continuance of regulations as a means to preserve the advantages so carefully built up over the preceding 40 years. But the combination of a high Yen, political weakness at home and rising consumer demand for the fruits (i.e., price reductions) of Japan's success in so many global industries have led to a questioning of priorities both within enterprises and the various

associations that link together the main units of the “iron triangle” of Japanese governance.³⁵

Under these circumstances, it would be foolish for Western companies merely to emulate Japanese L-Logics, even if that were technically possible. Similarly, the Japanese flirtation with Western approaches to management should not be regarded as imitation. The close links between functional practices and managerial logics mean that one cannot cherry-pick some of the practices and policies and discard others. As has been observed in the response of Western automobile assemblers, “superimposing lean-production methods on existing mass-production systems causes great pain and dislocation.”³⁶

In both cases, there now seems to be a process of creative innovation and adaptation going on, no doubt spurred in part by the examples of past successes based on unfamiliar behaviors. Instead, the collision has set off a cycle of managerial innovation, one still in progress, that is moving to create new managerial logics. Thus, by 1995, most large Western companies are under perhaps more competitive pressure from other transformed innovative Western firms than they are from Japanese L-Logic companies.

Innovation in the West

Adding force to the innovative spur from the collision of logics has been the increasing wave of takeovers and restructurings induced by the Anglo-Saxon markets for corporate control. Whether it was the voluntary restructuring of General Mills, shedding its toy, fashion, and catalog sales businesses, or the involuntary restructuring of RJR-Nabisco engineered by KKR, the strong message sent was one of increasing distrust in the resource allocations being made by the FFM-Form companies. The new logic was clear: “don’t own what you don’t know how to manage, stop headquarters bloat, and stop taking rents from successful businesses and investing them in pointless acquisition premiums and projects with inadequate returns.”

Faced with a revolt in the market for corporate control and increasing competition from L-Logic competitors, Western companies have been forced to change. At General Electric, the exemplar FFM-Form company in 1980, CEO Jack Welch delayered management, eliminating thousands of planning and staff position, downsized plants, and dropped losing businesses. In addition, he preached a new culture of “speed, simplicity, and self-confidence,” and demanded that business managers involve employees in the joint project of re-engineering each of GE’s businesses.

³⁵ The close relationships among big business, central bureaucracies and the government [the Liberal Democratic Party] have been called the ‘iron triangle.’ The links, however, are softening. The system has to adapt to the reality of a two-party structure of government, to the waning power of central bureaucracies to insulate Japanese industry and consumers from international pressures, and to the implications that the accumulating direct overseas investments creates conflicts of priority for Japanese firms. No longer is the health of the domestic economy and the maintenance of domestic full employment axiomatically the prime consideration of corporate strategy.

³⁶ Womack *et al* [1990, p. 12]

What has been the logic of the response of Western companies and how is it different from the L-Logic? Simply put, most innovators have responded to "lean manufacturing" with a mixture of TQM and "lean management." Some have gone so far as to install "just-in-time" systems, but few have really achieved continuous improvement based on production-floor problem solving. Instead, management groups have sought to re-engineer work processes and management systems, sometimes relying on consultants and other times using cross-functional internal teams.

In general, the current intense interest in "transformation" among Western companies can be understood as the need to move beyond the logics of the FFM-Form and hierarchical coordination—to undo what was yesterday's "ideal form" and develop a new managerial logic. The task is difficult because incremental adjustment doesn't help and because there is no clear outstanding model to emulate. In general, the kinds of initiatives transforming companies have undertaken are these:

1. *Delaying.* The creation of "flat" organizations, or "horizontal" organizations, is accomplished by removing middle-management roles, decentralizing authority, and dramatically increasing the span managed by senior officers. The idea is to eliminate waste and bureaucratic impediments to action. It is also claimed that a delayed organization, like a "just-in-time" factory, is less complex and hence easier to comprehend, evaluate, and lead.
2. *Vision.* As companies increase their focus there is a simultaneous demand for decentralization of entrepreneurship and overall guidance for the whole. The idea of strategic "vision" has come to replace the portfolio charts of the FFM-Form. "Vision," like "intent," implies an overall sense of direction that guides but does not direct the strategies and actions of individual business units.
3. *TQM.* Total Quality Management programs have played a significant role in altering the managerial logic of Western companies. At first seen as somewhat "soft," these programs have proven themselves to hard-headed cost-conscious managers. The heart of the program is establishing the legitimacy of a superordinate goal other than profit and generating the coordinative mechanisms to follow through on its accomplishment. Companies have found that product quality, or customer satisfaction, is a much more motivating goal than owner's profit. They have also discovered that the coordination created by TQM programs helps identify new efficiencies. Finally, they have discovered that savings from higher quality more than pay for the effort.
4. *Coordination.* At the heart of many transformations is a move away from incentive-based individual action and hierarchical coordination. Instead, the new managerial logic emphasizes close coordination between units, sharing of information and resources, and the use of cross-functional teams to solve problems.
5. *Decentralization.* For many companies, shedding bureaucracy means increased decentralization—more operating autonomy and responsibility for business units. This managerial logic is in line with a long-term trend in Western management practice, but it can come into conflict with the logic of vision-led strategy and tight coordination.

6. *Speed.* Quality or customer orientation replaces abstract profit goals with more tangible intermediate objectives; another objective frequently placed in this role is *time*. Many companies have turned to time-based definitions of competitiveness. Some stress faster factory throughput, others look at speed of response to customer orders, while others focus on the speed with which business managers respond to opportunities or threats.
7. *Empowerment.* Moving from hierarchical to mutual-adjustment modes of coordination and problem solving *requires* empowering employees. If these modes are not required, empowerment may not be necessary. Some firms have mistakenly tried to empower employees without changing the other aspects of their managerial logics, with predictable results.
8. *Leveraging.* Benchmarking and leveraging internal capabilities are specific areas of coordination and resource sharing that deal with intellectual capital—the firm's capabilities. Under this new logic, managers are expected to seek out best practice and install it in their own operations. Managers who have best-practice operations are expected to help spread the know-how to other units.

These elements of managerial logic all (except decentralization) represent departures from the logic paradigm of 1980. All have helped some companies make a transition to a new way of managing. And while there is a great deal of emphasis on decentralization in almost all transformation programs, these changes in logic actually represent a considerable increase in the role of the senior management group. Delaying pushes tasks that were previously assigned to middle managers both up and down. Vision-led strategy burdens the CEO with a much greater responsibility for entrepreneurial leadership than did the old methods of financial or strategic control. And the old "full autonomy" has been replaced by a set of principles and methods—empowerment, re-engineering, time-compression, etc.—that each business manager is expected to master. The new logic of decentralization no longer means "do what you want, just make your budget;" it now means "make your budget *and* walk the talk."

Innovations in Japan

The path of evolution from low-wage strategies, to reliance on scale in many industries, to the development of advantages based on the L-Logic has not been a linear one for large Japanese corporations. It has required considerable creativity and a willingness to experiment with new ways of defining work patterns. The contemporary challenges we have hinted at earlier now seem to be requiring another twist in the strand of evolution. Product-market conditions have altered because of exchange rate movements and new competition from Asia and a resurgent USA. Political conditions have also changed, perhaps irreversibly. The local context of government and domestic relationships has altered and the end of the Cold War has brought an end to the USA's special treatment of Japan as a showplace for capitalism and democracy—it is now just another trading partner. To add a further challenge, many Japanese firms are re-thinking their logic and strategy at a time when many of their entrepreneurial founders are retiring. Thus the internal relationships and senses of power and perspective are also altered.

Innovation is needed in at least three agendas. First is cost reduction, for few exporters are profitable at an exchange rate of Y90=US\$1. Japanese firms have been forced to abandon, or at least seriously modify, many of the principles that have become enshrined as the epitome of "Japanese management," for more of the same will not reduce costs fast enough. Life-time employment can no longer be guaranteed and many large employers, including Toyota, Hitachi and NEC, have laid off workers both in their factories and, more tellingly, in their headquarters.³⁷ But such moves alone, however draconian, will not restore adequate and lasting profitability. Consequently, many Japanese firms are building networks of lower-cost supply throughout East Asia.³⁸ Firms like Bridgestone and Toray have become or are about to become net importers to Japan. Their relationships with government and domestic supplier networks have been drastically altered and trust needs to be re-built along new lines as yet unspecified.

A second agenda for innovation is in restructuring domestic industries. The resistance to merger has been crumbling in face of persistent overcapacity. Mergers in the banking industry have become an accepted part of the industrial landscape and the post-merger moves to revitalize the combined enterprises resemble moves in the West. Even in chemicals and automobiles, merger is now a matter for open discussion. Allied to the blunt instrument of industry restructuring is the enhancement of specialization alliances. For example, Sharp supplies Sony with the LCD display panels on its new generation of video cameras, while Sony supplies precision mechanics for Sharp's competing product. Collaboration allows each firm to focus on further developing its own core competence without reducing the intensity of competition in a continuously extending product range in the consumer markets. Such developments can seriously heighten the barriers to entry for others, for the effective incumbent competitor has become a *multiple* of the two collaborators.

A third agenda is accelerated globalisation beyond the creation of the regional supply network. As many Japanese firms are discovering, their internal management processes depend critically upon tacit knowledge and extensive, even daily, communication among the central team players.³⁹ Tacit knowledge, precisely because it is so difficult to articulate and codify to the point where it can enter the manuals of C-Logic enterprises, requires teams to be able to share experience intuitively. In Japan, this has been accomplished by routines such as *nemawashi*, the seemingly endless discussions of investment and other proposals. These routines, however, do not internationalize readily, partly because of the problem of distance and partly because so much of the communication has relied on a common language and a common conditioning culture.

³⁷ For many Japanese multinationals the struggle to cut headcount has introduced new dilemmas. Attempts to preserve domestic employment while layoff shave been made in foreign facilities have, as in the case of Bridgestone in the USA, been challenged publicly. Whose interests in the worldwide organization are of prime interest to top management? A differential response breaches the essential requirement in the L-Logic of incentives to retain high coordination.

³⁸ For some data and analysis, see Tachiki [1994].

³⁹ The importance of tacit knowledge to the L-Logic is well defined by Nonaka [1995].

All three agendas challenge many dimensions of the deeply ingrained L-Logic and will require more than marginal adjustment to the established order of management. Some preliminary investigation has indicated that Japanese managers are acutely aware of the extent of the needed adjustments and also of the need to move sequentially: everything cannot be changed simultaneously. Though all are working hard on the cost-reducing agenda, most are facing uncomfortable choices between the other two. So severe are the problems that even major firms like Hitachi, despite their slogan of "Speed, challenge and globalization" have deferred their global extension until they have made more progress on their domestic restructuring.⁴⁰ As before, creative innovation in managerial logic will come only in steps and perhaps only slowly.

External Challenges

All large corporations today face two external challenges that are likely to spur further innovation in the effective response. One is to do with the harnessing of resources in alliance, contract- and trust-based relationships, and the other is to do with the rise of the industrial district. Both provide extra alternatives to scale-based advantages. Though a full exploration of these developments is beyond the scope of this short paper, they cannot be ignored as they directly affect European conditions.⁴¹

Nearly a quarter of all new international business establishments made in the last five years have been in some form of joint venture or alliance. Some of these are in the form of joint commitments to long-term relationships, just as in the Japanese *keiretsu* groups or the more recent specialization collaborations mentioned above. Some of them, however, assume great international significance when they span several continents and bind together leading players, just as in the emerging structure for the telecommunications industry, where for example, Cable and Wireless has built a federation of national players. In air transport, British Airways is building a structure of harmonized operations among Qantas, US Air and several others. In other cases the alliances may cover only some of the functions, such as research—for example those among Toshiba, IBM and Siemens. An alliance among separate enterprises can create an entity that possesses some of the benefits of large scale without necessarily incurring the costs of hierarchy we discussed earlier.

Can an alliance develop and retain sufficient internal discipline to create both the advantages of scale and the possibility of learning and rapid adaptation? That is a key question that is being tested out in the markets today. The answer will no doubt depend upon whether managers can evolve new practices that synthesize what is already known and that also rely upon entirely new principles.

⁴⁰ These observations are preliminary findings from an investigative collaboration between John Stopford and Yoko Ishikura in Tokyo.

⁴¹ In part, the omission has been deliberate, because of the great variety of operating environments within Europe. Generalisations are elusive and seldom helpful: what has conditioned behavior in the UK has been vastly different from German conditions. Moreover, there are European firms that have escaped the local conditioning forces to build world-scale operations either on L-Logic or C-Logic principles. Thus, the two stories we have told apply to some extent to Europe, at the level of the individual firm.

The second external challenge comes from the development of the industrial district in new guises. Even in an era of global competition, it is clear that many of the sources of competitiveness remain local and embedded within specialized infrastructures, as in Silicon Valley, the Po Valley and the City of London. The notion of a district as a new competitor is an extension of the notion of the Japanese "manor." Instead of being dependent upon a single, dominant assembler who sets all the rules, the district is a local cluster of businesses, as in Italian textiles. Here the agglomeration of small firms acts, Brusco's [1982] terms, as a "collective entrepreneur." They can achieve continuous innovation and have evolved ways to restructure without the benefits of hierarchical controls. To do this there is extensive use of spin-off firms, assisted by one or more of the original firms.

To flourish, the district requires the support of many coordinating institutions, involving local and national bodies. In Italy these are such bodies as the *Confederazione Nazionale dell' Artigianato* and have their origins in the immediate post-war communist associations. These associations work in tandem with many producer associations.⁴² The combined result is that some districts manage to combine decentralization, continuous innovation with social integration.

Whether the district alone can pose a challenge to the large enterprise is an open question. In some cases, it seems clear that the district—as in Silicon Valley—depends critically upon the presence and vitality of major multinationals. In other cases, and other industries, the district may survive and prosper without the presence of an large enterprises. In either event, no large-scale enterprise can afford to overlook the possible benefits of association with vibrant districts that can supply some or many of the ingredients of next-generation competitiveness. But to gain such benefits, the L-Logic of high coordination will undoubtedly need amendment and development, if only to allow for the greater requirements for political and social engagement.

Conclusions

Though it has become fashionable to promote the idea that the future belongs to the small, nimble enterprise, the facts seem to point elsewhere. Many large-scale enterprises have enormous vitality and can resolve many of the dilemmas we have illustrated above. Indeed it is this ability to combine seeming opposites that marks the progress of leading firms such as ABB, General Electric, NEC, Shell, and even perhaps IBM as it fights its way back into the ranks of the leading profit earners of the world. No doubt there is a place for many small-scale enterprises to make the running, especially when located in the vital industrial districts that are emerging in some parts of the world, but their role is easily exaggerated.

Resolving the managerial dilemmas of scale and adaptability requires experimentation and transformation. It seems sure that there will be multiple outcomes. The certainties of yesterday and a belief in "one-best-way" to manage in any industry have been replaced by a willingness to try out alternative possibilities. Competitive

⁴² Best [1990, Ch.7] provides an excellent description of what he calls the 'Third Italy'.

outcomes are no longer decided solely by the size of the weapons brought onto the field, but also by the human and organizational ingenuity of each enterprise to gain the maximum stretch and leverage from the available physical resources.

The emerging nature of the large corporation can be seen in the heightened attention to finding new relationships that bind the organization into the fabric of the host society and so provide an extra form of momentum for progress. These relationships are both social and political. Social experimentation is taking the form of seeking new ways to engender co-operation and co-ordination among individuals of many different cultures and levels of educational ability. In this role, the large corporation is re-evaluating the nature of work and forms of contract that provide the energy and durability needed for long-term development. These themes—developed in detail in the companion papers—mean that the workplace must take its place in society alongside the churches and similar institutions. Rather than fight against the grain of society, the large corporation increasingly works with the grain of social priority.

The political role is not that of party politics, but one of being a positive force for developing benefits for all the stakeholders in the enterprise. Modern society will not accept as legitimate the enterprise that always puts the interests of shareholders above others. The experiments with alternative systems of measurements and rewards are part of the new “politics,” just as much as is the debate in Japan about the nature of the effective linkages among big business, central bureaucracy and political policy.

We cannot forecast the outcomes of these experiments, but all the evidence we have seen suggests forcibly that the role of the manager is shifting as the nature of the large corporation continues to evolve. Managers are being required to become politicians and in the multinationals they need to assume the clothes and perspective of the diplomat. Managers are also increasingly being pressed to find new ways to increase the social cohesion and to accelerate the collective learning of the organization. The challenges of the turbulence of all the experiments in the global market place mean that the nature of tomorrow’s successful large corporation will be determined chiefly by the speed with which managerial logics can be improved and adapted to the specific social and political circumstances of the served countries and industries.

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