Global Business Strategy

Organizing for Worldwide Effectiveness: The Transnational Solution

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The enormous success of Japanese companies that burst into the international competitive arena in the 1960s and 1970s has triggered a barrage of analysis and advice in the Western business press. Most of this analysis highlighted the convergence of consumer preferences worldwide, the impact of changing technologies and scale economies on international industry structures, and the emergence of increasingly sophisticated competitive strategies that have led to a rapid process of globalization in a large number of worldwide businesses.[1]

As Western companies have searched for the source of the newcomers' incredible ability to sell everything from automobiles to zippers, one conclusion has gained increasing credibility: companies that are unable to gain firm strategic control of their worldwide operations and manage them in a globally coordinated manner will not succeed in the emerging international economy. There are few senior managers in the West who are unaffected by the implications of this message.

The concerns of top managers in Japan, however, have been quite different and have focused on the forces of localization that have also been gathering strength in the recent past. Like their Western counterparts, they have been sensitized not only by their own experiences, but also by stories in the Japanese business press, which have been focused on the growing barriers to trade and, most recently, the impact of a strengthening yen in offsetting the efficiencies of global-scale Japanese plants. These managers are much more sensitive to the flip side of globalization—the growing demand of host governments for local investments, the building resistance of consumers to standardized homogenized global products, and the changing economics of emerging flexible manufacturing technologies that are making smaller-scale production and more tailored products feasible.

In the course of a study of some of the world's leading Japanese, European, and American multinationals, we found that these globalizing and localizing forces are working simultaneously to transform many industries.[2] But for historical reasons, few companies have built the organizational capabilities to respond equally to both of these forces.

Many of the European- and American-based companies had well-established networks of fairly independent and self-sufficient national subsidiaries —"decentralized federations" we call them. Those with such organizations had little difficulty in responding to the increased demands from their host governments or adapting to shifts in consumer preferences worldwide, and their strategic posture was often literally multinational—multiple national positions, each highly sensitive to its local market. The problem with this strategy and the organizational structure that supported it was that it was difficult to coordinate and control these worldwide operations in order to respond to the global forces.

Most of the Japanese companies we studied had the opposite problem. Their operations tended to be concentrated in the home country—we term them "centralized hubs"—and this gave them the ability to capture the opportunities presented by the global forces. Indeed, the strategic posture of these companies was literally global—the world was considered as an integrated whole. Such an approach made these companies less successful in building worldwide operating units that were sensitive and responsive to the countervailing forces of localizaiton.[3]

Today's operating environment in many worldwide businesses demands more than efficient central management and flexible operations.

The Constraint of a Company's Heritage

As the international operating environment became more complex over the past decade or so, the great temptation for companies was to try to imitate the organizational characteristics and strategic postures of their competitors. For example, in the United States, multinational managers are being advised to "rein in far-flung autonomous subsidiaries, produce standardized global products, and pull decision-making power back to the home office," with the reminder that "this is a formula that, not coincidentally, many Japanese companies have used for years."[4]

But the appropriate response to the developing international demands cannot be captured in a formula—and certainly not one that is imitative of

companies in totally different situations. The problem is that while a company's tasks are shaped by its external environment, its ability to perform those tasks is constrained by what we term its "administrative heritage"—the company's existing configuration of assets, its traditional distribution of responsibility, and its historical norms, values, and management style.[5] This internal organizational capability is something that cannot be changed overnight or by decree, and one of the important lessons for management is to shift its attention from a search for the ideal organization structure to a quest for ways in which to build and leverage the company's existing capabilities to make them more responsive to the ever-changing external demands.

That is not to deny that there are lessons to be learned from other companies—indeed our research indicates quite the opposite. However, the important lesson is that either blind imitation simply to eliminate obvious differences or wholesale adoption of another company's organizational approach or strategic posture is likely to end in failure. In the first part of this article, we distill some of the important transferable lessons that *can* be learned from companies that manage global coordination effectively and from those that have been most succesful in developing and managing a responsive and flexible localized approach. Although the lessons are drawn from a broader study, we will emphasize the importance of a company's administrative heritage by comparing and contrasting the approaches of two leading consumer electronics companies and suggesting ways in which they can learn from each other.

But while such lessons are helpful, they do not provide the full solution. Today's operating environment in many worldwide businesses demands more than efficient central management and flexible local operations—it requires companies to link their diverse organizational perspectives and resources in a way that would allow them to leverage their capabilities for achieving global coordination and national flexibility simultaneously. In response to this need, a few companies have evolved beyond the simpler multinational or global approach to international business and developed what we term a *transnational* capability—an ability to manage across boundaries.[6] In the final part of the article, we will describe some of the characteristics of such an organization, and will suggest some steps that can be taken to build these capabilities.

Making Central Management Flexible: Lessons from Matsushita

For companies that expanded internationally by establishing fairly independent and self-sufficient subsidiary companies around the world, the task of imposing some kind of global direction or achieving some measure of coordination of activity is often a Herculean challenge. The problem that has confronted successive generations of top management at Philips is typical. The Dutch-based electronics giant has built a justifiable reputation as one

of the world's most innovative companies, yet has continually been frustrated in its attempt to deliver its brilliant inventions to the world's markets. The recent failure of its VCR system is a classic example.

Despite the fact that it was generally acknowledged to be technologically superior to the competitive VHS and Beta formats, the Philips V2000 system failed because the company was unable to commercialize it. Within the company there is no shortage of theories to explain the failure: some suggest that those who developed the product and its competitive strategy were too distant from the market; others feel the barriers between research, development, manufacturing, and marketing led to delays and cost overruns; and another group points to the fact that worldwide subsidiaries were uninvolved in the project and therefore uncommitted to its success. All these explanations reflect organizational difficulties and have some element of truth.

On the other hand, Matsushita Electric Company, Philips' archrival in consumer electronics, has built the global leadership position of its well-known Panasonic and National brands on its ability to control its global strategy from the center in Japan—yet it has been able to implement it in a flexible and responsive manner throughout its worldwide operations. As we tried to identify the organizational mechanisms that were key to Matsushita's ability to provide strong central direction and control without becoming inflexible or isolated, three factors stood out as the most important explanations of its outstanding success:

- gaining the input of subsidiaries into its management processes;
- ensuring that development efforts were linked to market needs; and
- managing responsibility transfers from development to manufacturing to marketing.

By examining how these core mechanisms work in Matsushita, managers in other companies may see ways in which they can gain more global coordination without compromising local market sensitivity.

Gaining Subsidiary Input: Multiple Linkages—The two most important problems facing a centrally managed multinational company are that those developing the new product or strategy may not understand market needs or that those required to implement the new direction are not committed to it. Matsushita managers are very conscious of these problems and spend much time building multiple linkages between headquarters and overseas subsidiaries to minimize their impacts. These linkages are designed not only to give headquarters managers a better understanding of country level needs and opportunities, but also to give subsidiary managers greater access to and involvement in headquarters decision-making processes.

Matsushita recognizes the importance of market sensing as a stimulus to innovation and does not want its centrally driven management process to

reduce its environmental sensitivity. Rather than trying to limit the number of linkages between headquarters and subsidiaries or to focus them through a single point (as many companies do for the sake of efficiency), Matsushita tries to preserve the different perspectives, priorities, and even prejudices of its diverse groups worldwide and tries to ensure that they have linkages to those in the headquarters who can represent and defend their views.

The organizational systems and processes that connect different parts of the Matsushita organization in Japan with the video department of MESA, the U.S. subsidiary of the company, illustrate these multifaceted interlinkages. The vice president in charge of this department has his career roots in Matsushita Electric Trading Company (METC), the organization with overall responsibility for Matsushita's overseas business. Although formally posted to the United States, he continues to be a member of the senior management committee of METC and spends about a third of his time in Japan. This allows him to be a full member of METC's top management team that approves the overall strategy for the U.S. market. In his role as the VP of MESA, he ensures that the local operation effectively implements the agreed video strategy.

At the next level, the general manager of MESA's video department is a company veteran who had worked for 14 years in the video product division of Matsushita Electric, the central production and domestic marketing company in Japan. He maintains strong connections with the parent company's product division and is its link to the local American market. Two levels below him, the assistant product manager in the video department (one of the more junior-level expatriates in the American organization) links the local organization to the central VCR factory in Japan. Having spent five years in the factory, he acts as the local representative of the factory and handles all day-to-day communication with factory personnel.

None of these linkages is accidental. They are deliberately created and maintained and they reflect the company's open acknowledgement that the parent company is not one homogeneous entity, but a collectivity of different constituencies and interests, each of which is legitimate and necessary. Together, these multiple linkages enhance the subsidiary's ability to influence key headquarters decisions relating to its market, particularly decisions about product specifications and design. The multiple links not only allow local management to reflect its local market needs, they also give headquarters managers the ability to coordinate and control implementation of their strategies and plans.

Linking Direction to Needs: Market Mechanisms—Matsushita's efforts to ensure that its products and strategies are linked to market needs does not stop at the input stage. The company has created an integrative process that ensures that the top managers and central staff groups are not sheltered from the pressures, constraints, and demands felt by managers on the front line of the operations. One of the key elements in achieving this difficult organi-

zational task is the company's willingness to employ "market mechanisms" for directing and regulating the activities located at the center. Because the system is unique, we will describe some of its major characteristics.

Research projects undertaken by the Central Research Laboratories (CRL) of Matsushita fall into two broad groups. The first group consists of "company total projects" which involve developing technologies important for Matsushita's long-term strategic position and that may be applicable across many different product divisions. Such projects are decided jointly by the research laboratories, the product divisions, and top management of the company and are funded directly by the corporate board. The second group of CRL research projects consists of relatively smaller projects which are relevant to the activities of particular product divisions. The budget for such research activities, approximately half of the company's total research budget, is allocated not to the research laboratories but to the product divisions. This creates an interesting situation in which technology-driven and market-led ideas can compete for attention.

Each year, the product divisions suggest research projects that they would like to sponsor and which would incorporate their knowledge of worldwide market needs developed through their routine multiple linkages to subsidiaries. At the same time, the various research laboratories hold annual internal exhibitions and meetings and also write proposals to highlight research projects that they would like to undertake. The engineering and development groups of the product divisions mediate the subsequent contracting and negotiation process through which the expertise and interests of the laboratories and the needs of the product divisions are finally matched. Specific projects are sponsored by the divisions and are allocated to the laboratories or research groups of their choice, along with requisite funds and other resources.

The system creates intense competition for projects (and the budgets that go with them) among the research groups, and it is this mechanism that forces researchers to keep a close market orientation. At the same time, the product divisions are conscious that it is their money that is being spent on product development and they become less inclined to make unreasonable or uneconomical demands on R&D.[7]

The market mechanism also works to determine annual product styling and features. Each year the company holds what it calls merchandising meetings, which are, in effect, large internal trade shows. Senior marketing managers from Matsushita's sales companies worldwide visit their supplying divisions and see on display the proposed product lines for the new model year. Relying on their understanding of their individual markets, these managers pick and choose among proposed models, order specific modifications for their local markets, or simply refuse to take products they feel are unsuitable. Individual products or even entire lines might have to be redesigned as a result of input from the hundreds of managers at the merchandising meeting.

Managing Responsibility Transfer: Personnel Flows—Within a national subsidiary, the task of transferring responsibility from research to manufacturing and finally marketing is facilitated by the smaller size and closer proximity of the units responsible for each stage of activity. This is not so where large central units usually take the lead role, and Matsushita has built some creative means for managing these transitions. The systems rely heavily on the transfer of people, as is illustrated by the company's management of new product development.

First, careers of research engineers are structured so as to ensure that most of them spend about five to eight years in the central research laboratories engaged in pure research, then they spend another five years in the product divisions in applied product and process development, and finally they spend the rest of their working lives in a direct operational function, usually production, wherein they take up line management positions. More important, each engineer usually makes the transition from one department to the next along with the transfer of the major project on which he has been working.

The research project that began Matsushita's development of its enormously successful VCR product was launched in the late 1950s under the leadership of Dr. Hiroshi Sugaya, a young physicist in the company's Central Research Laboratory. As the product evolved into its development stage, the core members of Dr. Sugaya's team were kept together as they transferred from CRL to the product development and applications laboratory located in the product division. After a long and difficult development process, the product was finally ready for commercial production in 1977, and many of the team moved with the project out into the Okanyama plant.[8]

In other companies we surveyed, it was not uncommon for research engineers to move to development, but not with their projects, thereby depriving the companies of one of the most important and immediate benefits of such moves. We also saw no other examples of engineers routinely taking the next step of actually moving to the production function. This last step, however, is perhaps the most critical in integrating research and production both in terms of building a network that connects managers across these two functions, and also for transferring a set of common values that facilitates implementation of central innovations.

Another mechanism that integrates production and research in Matsushita works in the opposite direction. Wherever possible, the company tries to identify the manager who will head the production task for a new product under development and makes him a full-time member of the research team from the initial stage of the development process. This system not only injects direct production expertise into the development team, but also facilitates transfer of the innovation once the design is completed. Matsushita also uses this mechanism as a way of transferring product expertise

from headquarters to its worldwide sales subsidiaries. Although this is a common practice among many multinationals, in Matsushita it has additional significance because of the importance of internationalizing management as well as its products.

As with the multiple linkages and the internal market mechanisms, this organizational practice was a simple, yet powerful tool that seemed to be central to Matsushita's ability to make its centrally driven management processes flexible, sensitive, and responsive to the worldwide opportunities and needs. More important, these three organizational mechanisms are simple enough to be adopted, probably in some modified form, by other companies. They meet the needs of those trying to build an organization process that allows management at the center more influence and control over worldwide operations, without compromising the motivation or operating effectiveness of the national units.

Making Local Management Effective: Lessons from Philips

If Matsushita is the champion of efficient centrally coordinated management, its Netherlands-based competitor, Philips, is the master of building effective national operations worldwide. And as surely as Philips' managers envy their Japanese rival's ability to develop products and strategies in Osaka that appear to be implemented effortlessly around the globe, their counterparts in Matsushita are extremely jealous of Philips' national organizations that are not only sensitive and responsive to their local environments, but are also highly innovative and entrepreneurial.

For example, the company's first color TV set was built and sold not in Europe, where the parent company is located, but in Canada, where the market had closely followed the U.S. lead in introducing color transmission; Philips' first stereo color TV set was developed by the Australian subsidiary; teletext TV sets were created by its British subsidiary; "smart cards" by its French subsidiary; a programmed word processing typewriter by North American Philips—the list of local innovations and entrepreneurial initiatives in the company is endless.

While Matsushita has had no difficulty in establishing effective sales organizations and assembly operations around the world, top management has often been frustrated that its overseas subsidiaries do not exhibit more initiative and entrepreneurial spark. Despite pleas to its overseas management to become more self-sufficient and less dependent on headquarters for direction, the company has found that the decentralization of assets that accompanies its "localization" program has not always triggered the kind of independence and initiative that had been hoped for.

Out of the many factors that drive Philips' international organization, we were able to identify three that not only appear central to the development

and maintenance of its effective local management system, but also may be adaptable to other organizations that are trying to promote national innovativeness and responsiveness within a globally integrated organization:

- Philips' use of a cadre of entrepreneurial expatriates;
- an organization that forces tight functional integration within a subsidiary; and
- a dispersion of responsibilities along with the decentralized assets.

A Cadre of Entrepreneurial Expatriates—Expatriate positions, particularly in the larger subsidiaries, have been very attractive for Philips' managers for several reasons. With only 7% or 8% of its total sales coming from Holland, many different national subsidiaries of the company have contributed much larger shares of total revenues than the parent company. As a result, foreign operations have enjoyed relatively high organizational status compared to most companies of similar size with headquarters in the United States, Japan, or even the larger countries in Europe. Further, because of the importance of its foreign operations, Philips' formal management development system has always required considerable international experience as a prerequisite for top corporate positions. Finally, Eindhoven, the small rural town in which corporate headquarters is located, is far from the sophisticated and cosmopolitan world centers that host many of its foreign subsidiaries. After living in London, New York, Sydney, or Paris, many managers find it hard to return to Eindhoven.

Collectively, all these factors have led to the best and the brightest of Philips' managers spending much of their careers in different national operations. This cadre of entrepreneurial expatriate managers has been an important agent in developing capabilities of local units, yet keeping them linked to the parent company's overall objectives. Further, unlike Matsushita where an expatriate manager typically spends a tour of duty of three to six years in a particular national subsidiary and then returns to the headquarters, expatriate managers in Philips spend a large part of their careers abroad continuously working for two to three years each in a number of different subsidiaries.

This difference in the career systems results in very different attitudes. In Philips, the expatriate managers follow each other into assignments and build close relations among themselves. They tend to identify strongly with the national organization's point of view, and this shared identity makes them part of a distinct subculture within the company. In companies like Matsushita, on the other hand, there is very little interaction among the expatriate managers in the different subsidiaries, and most tend to see themselves as part of the parent company temporarily on assignment in a foreign country.

One result of these differences is that expatriate managers in Matsushita are far more likely to take a custodial approach which resists any local

changes to standard products and policies. In contrast, expatriate managers in Philips, despite being just as socialized into the overall corporate culture of the company, are much more willing to be advocates of local views and to defend against the imposition of inappropriate corporate ideas on national organizations. This willingness to "rock the boat" and openness to experimentation and change is the fuel that ignites local initiative and entrepreneurship.[9]

Further, by creating this kind of environment in the national organization, Philips has had little difficulty in attracting very capable local management. In contrast to the experience in many Japanese companies where local managers have felt excluded from a decision-making process that centers around headquarters management and the local expatriates only, local managers in Philips feel their ideas are listened to and defended in headquarters.[10] This too, creates a supportive environment for local innovation and creativity.

Integration of Technical and Marketing Functions within Each Subsidiary—Historically, the top management in all Philips' national subsidiaries consisted not of an individual CEO but a committee made up of the heads of the technical, commercial, and finance functions. This system of three-headed management had a long history in Philips, stemming from the functional backgrounds of the founding Philips brothers, one an engineer and the other a salesman. Although this management philosophy has recently been modified to a system which emphasizes individual authority and accountability, the long tradition of shared responsibilities and joint decision making has left a legacy of many different mechanisms for functional integration at multiple levels. These integrative mechanisms within each subsidiary in Philips enhance the efficiency and effectiveness of local decision making and action in the same way that various means of cross-functional integration within Matsushita's corporate headquarters facilitates its central management processes.

In most subsidiaries, integration mechanisms exist at three organizational levels. First, for each product, there is an article team that consists of relatively junior managers belonging to the commercial and technical functions. This team evolves product policies and prepares annual sales plans and budgets. At times, subarticle teams may be formed to supervise day-to-day working and to carry out special projects, such as preparing capital investment plans, should major new investments be felt necessary for effectively manufacturing and marketing a new product.

A second tier of cross-functional coordination takes place at the product group level, through the group management team, which again consists of both technical and commercial representatives. This team meets monthly to review results, suggest corrective actions, and resolve any interfunctional differences. Keeping control and conflict resolution at this low level facilitates sensitive and rapid responses to initiatives and ideas generated at the local level.

The highest level coordination forum within the subsidiary is the senior management committee (SMC) consisting of the top commercial, technical, and financial managers in the subsidiary. Acting essentially as a local board, the SMC provides an overall unity of effort among the different functional groups within the local unit, and assures that the national unit retains primary responsibility for its own strategies and priorities. Again, the effect is to provide local management with a forum in which actions can be decided and issues resolved without escalation for approval or arbitration.

Decentralized Authority and Dispersed Responsibility—While Matsushita's localization program was triggered by political pressures to increase local value added in various host countries, the company had also hoped that the decentralization of assets would help its overseas units achieve a greater measure of local responsiveness, self-sufficiency, and initiative. To management's frustration, such changes were slow in coming.

Philips, on the other hand, had created such national organizations seemingly without effort. The difference lay in the degree to which responsibility and authority were dispersed along with the assets. Expanding internationally in the earliest decades of the century, Philips managers were confronted by transport and communications barriers that forced them to delegate substantial local autonomy to its decentralized operating units. The need for local units to develop a sense of self-sufficiency was reinforced by the protectionist pressures of the 1930s that made cross-shipments of products or components practically impossible. During World War II, even R&D capability was dispersed to prevent it from falling into enemy hands, and the departure of many corporate managers form Holland reduced the parent company's control over its national operations abroad.

In the postwar boom, while corporate managers focused on rebuilding the war-ravaged home operations, managers in foreign units were able to capitalize on their well-developed autonomy. Most applied their local resources and capabilities to build highly successful national businesses, sensitive and responsive to the local needs and opportunities. In doing so, they achieved a degree of local entrepreneurship and self-sufficiency rare among companies of Philips' size and complexity.

Although it would be impossible for another company to replicate the historical events that resulted in this valuable organizational capability, the main characteristics of their development are clear. First, it must be feasible for offshore units to develop local capabilities and initiative, and this requires the decentralization of appropriate managerial and technological resources along with the reconfiguration of physical assets.

While this is necessary, it is not sufficient, however, as Matsushita and many other companies have begun to recognize. Local initiatives and entrepreneurial action must not only be feasible, they must also be desirable for local managers. This requires the legitimate delegation of responsibilities

and authority that not only gives them control over the decentralized resources, but rewards them for using them to develop creative and innovative solutions to their problems.[11] Only when the decentralization of assets is accompanied by a dispersion of responsibilities can local management develop into a ligitimate corporate contributor rather than simple implementers of central direction.

Building Transnational Capabilities: Lessons from L.M. Ericsson

In multinational corporations, the location of an opportunity (or threat) is often different from where the company's appropriate response resources are situated. This is so because environmental opportunities and threats are footloose, shifting from location to location, while organizational resources, contrary to the assumptions of many economists, are not easily transferable even within the same company. Further, the location of a company's strategic resources—plants and research centers are good examples—is related not only to actual organizational needs and intentions, but also to the idiosyncracies of the firm's administrative history. The result is a situation of environment-resource mismatches: the organization has excessive resources in environments that are relatively noncritical, and very limited or even no resources in critical markets that offer the greatest opportunities and challenges.

Such environment-resource mismatches are pervasive in MNCs. For many historical reasons, Ericsson has significant technological and managerial capabilities in Australia and Italy, even though these markets are relatively unimportant in the global telecommunications business. At the same time, the company has almost no presence in the United States, which not only represents almost 40% of world telecommunications demand but is also the source of much of the new technology. Procter & Gamble is strong in the United States and Europe, but not in Japan where important consumer product innovations have occurred recently and where a major global competitor is emerging. Matsushita has appropriate technological and managerial resources in Japan and the U.S., but not in Europe, a huge market and home of archrival Philips.

Rectifying these imbalances in the configuration of their organization resources is taking these companies a long time and, since the relative importance of different environments will continue to change, the problem will never be fully overcome. The need, therefore, is not simply to make adjustments to the geographic configuration or resources, but also to create organizational systems that allow the spare capacity and slack resources in strong operating units to be redirected to environments in which they are weak.

Simply creating effective central and local management does not solve this mismatch problem, and to succeed in today's demanding international

environment, companies must develop their organizational capabilities beyond the stages described in the first part of this article. The limitation of companies with even the most well-developed local and central capabilities is that the location of resources also tends to determine the locus of control over those resources. Whether organizationally mandated or not, local management develops strong influence on how resources available locally are to be used. Further, organizational commitments are usually hierarchical, with local needs taking precedence over global needs. Consequently, at the core of resolving the problem of environment-resource mismatches is the major organizational challenge of loosening the bonds between ownership and control of resources within the company.

Among the companies we studied, there were several that were in the process of developing such organizational capabilities. They had surpassed the classic capabilities of the *multinational* company that operates as decentralized federation of units able to sense and respond to diverse international needs and opportunities; and they had evolved beyond the abilities of the *global* company with its facility for managing operations on a tightly controlled worldwide basis through its centralized hub structure. They had developed what we termed *transnational* capabilities—the ability to manage across national boundaries, retaining local flexibility while achieving global integration. More than anything else this involved the ability to link local operations to each other and to the center in a flexible way, and in so doing, to leverage those local and central capabilities.

Ericsson, the Swedish telecommunications company, was among those that had become most effective in managing the required linkages and processes, and we were able to identify three organizational characteristics that seemed most helpful in facilitating its developing transnational management capabilities:

- an interdependence of resources and responsibilities among organizational units;
- a set of strong cross-unit integrating devices; and
- a strong corporate identification and a well-developed worldwide management perspective.

Interdependence of Resources and Responsibilities—Perhaps the most important requirement of the transnational organization is a need for the organizational configuration to be based on a principle of reciprocal dependence among units. Such an interdependence of resources and responsibilities breaks down the hierarchy between local and global interests by making the sharing of resources, ideas and opportunities a self-enforcing norm. To illustrate how such a basic characteristic of organizational configuration can influence a company's management of capabilities, let us contrast the way in which ITT, NEC, and Ericsson developed the electronic digital

switch that would be the core product for each company's telecommunications business in the 1980s and beyond.

From its beginnings in 1920 as a Puerto Rican telephone company, ITT built its worldwide operation on an objective described in the 1924 annual report as being "to develop truly national systems operated by the nationals of each company." For half a century ITT's national "systems houses" as they were called within the company, committed themselves to integrating into their local environments and becoming attuned to national interests and market needs. All but the smallest systems houses were established as fully integrated, self-sufficient units with responsibility for developing, manufacturing, marketing, installing, and servicing their own products.

With the emergence of the new digital electronic technology in the 1970s, however, this highly successful strategic posture was threatened by the huge cost of developing a digital switch. Since no single systems house would be able to muster the required technological and financial resources on its own or recoup the investment from its local market, the obvious solution was for ITT to make the System 12 digital switch project a corporate responsibility. However, given their decade of operating independence, the powerful country unit managers were unwilling to yield the task of developing the new switch to the corporate R&D group—and indeed, little expertise had been gathered at the center to undertake such a task.

By exercising their considerable influence, the European systems houses were able to capture the strategic initiative on System 12, but then began disagreeing about who should take what role in this vital project. Many of the large systems houses simply refused to rely on others for the development of critical parts of the system; others rejected standards that did not fit with their view of local needs. As a result, duplication of effort and divergence of specifications began to emerge, and the cost of developing the switch ballooned to over $1 billion.

The biggest problems appeared when the company decided to enter the battle for a share of the deregulated U.S. market. Asserting its independence, the U.S. business launched a major new R&D effort, despite appeals from the chief technological officer that they risked developing what he skeptically termed "System 13." After further years of effort and additional hundreds of millions of dollars in costs, ITT acknowledged in 1986 it was withdrawing from the U.S. central switching market. The largest and most successful international telecommunications company in the world was blocked from its home country by the inability to transfer and apply its leading edge technology in a timely fashion. It was a failure that eventually led to ITT's sale of its European operations and its gradual withdrawal from direct involvement in telecommunications worldwide.

If effective global innovation was blocked by the extreme independence of the organizational units in ITT, it was impeded in NEC by the strong dependence of national subsidiaries on the parent company. The first person

in NEC to detect the trend toward digital switching was the Japanese manager in charge of the company's small U.S. operation. However, his role was one of selling corporate products and developing a beachhead for the company in the U.S. market. Because of this role, he had a hard time convincing technical managers in Japan of a supposed trend to digitalization that they saw nowhere else in the world.

When the U.S. managers finally were able to elicit sufficient support, the new NEAC 61 digital switch was developed almost entirely by headquarters personnel. Even in deciding which features to design into the new product, the central engineering group tended to discount the requests of the North American sales company and rely on data gathered in their own staff's field trips to U.S. customers. Although the NEAC 61 was regarded as having good hardware, customers felt its software was unadapted to U.S. needs. Sales did not meet expectations.

Both ITT and NEC recognized the limitations of their independent and dependent organizations systems and worked hard to adapt them. But the process of building organizational interdependence is a slow and difficult one that must be constantly monitored and adjusted. In our sample of companies, Ericsson seemed to be the most consistent and experienced practitioner of creating and managing a delicate balance of interunit interdependency. The way in which it did so suggests the value of a constant readjustment of responsibilities and relationships as a way of adapting to changing strategic needs while maintaining a dynamic system of mutual dependence.

Like ITT, Ericsson had built, during the 1920s and 1930s, a substantial worldwide network of operations sensitive and responsive to local national environments; but like NEC, it had a strong home market base and a parent company with technological, manufacturing, and marketing capability to support those companies. Keeping the balance between and among those units has required constant adjustment of organizational responsibilities and relationships.

In the late 1930s, management became concerned that the growing independence of its offshore companies was causing divergence in technology, duplication of effort, and inefficiency in the sourcing patterns. To remedy the problem they pulled sales and distribution control to headquarters and began consolidating responsibilities under product divisions. While worldwide control improved, the divisions eventually began to show signs of isolation and short-term focus. Thus, in the early 1950s the corporate staff functions were given more of a leadership role. It was in this period that the central R&D group developed a crossbar switch that became an industry leader. As the product design and manufacturing technology for this product became well-understood and fully documented, however, Ericsson management was able to respond to the increasing demands of host governments to transfer more manufacturing capacity and technological know-how abroad. Once again, the role of the offshore subsidiaries increased.

This half a century of constant ebb and flow in the roles and responsibilities of various geographic, product, and functional groups allowed Ericsson to build an organization in which all these diverse perspectives were seen as legitimate and the multiple capabilities were kept viable. This multidimensional organization gave the company the ability to quickly sense and respond to the coming of electronic switching in the 1970s. Once it had prevented the emergence of strong dependent or independent relationships, product development efforts and manufacturing responsibilities could be pulled back to Sweden, without great difficulty. Where national capabilities, expertise, or experience could be useful in the corporate effort, the appropriate local personnel were seconded to headquarters. Having established overall strategic and operational control of the digital switching strategy, however, corporate management at Ericsson was then willing to delegate substantial design, development, and manufacturing responsibilities to its international subsidiaries, resulting in a reinforcement of the interdependence of worldwide operations.

Sourcing of products and components from specialized plants have long provided a base of interdependence, but recently that has been extended to product development and marketing. For example, Italy is the company's center for global development of transmission system development, Finland has the leading role for mobile telephones, and Australia develops the company's rural switch. Further, headquarters has given some of these units responsibility for handling certain export markets (e.g., Italy's responsibility for developing markets in Africa). Increasingly, the company is moving even advanced core system software development offshore to subsidiary companies with access to more software engineers than it has in Stockholm.[12]

Dynamic interdependence is the basis of a transnational company—one that can think globally and act locally.

By changing responsibilities, shifting assets, and modifying relationships in response to evolving environmental demands and strategic priorities, Ericsson has maintained a dynamic interdependence among its operating units that has allowed it to develop entrepreneurial and innovative subsidiary companies that work within a corporate framework defined by knowledgeable and creative headquarters product and functional groups. This kind of interdependence is the basis of a transnational company—one that can think globally and act locally.

Interunit Integrating Devices—Although the interdependence of resources and responsibilities provides a structural framework for the extensive use of interunit cooperation, there is a need for effective organizational integrating mechanisms to link operations in a way that taps the full potential of the interdependent configuration.

Compared to some companies in our study where relationships among national companies were competitive and where headquarter-subsidiary interactions were often of an adversarial nature, the organizational climate in Ericsson appeared more cooperative and collaborative. The establishment and maintenance of such attitudes was important since it allowed the company's diverse units to work together in a way that maximized the potential of their interdependent operations. We identified three important pillars to Ericsson's success in interunit integration:

- a clearly defined and tightly controlled set of operating systems;
- a people-linking process employing such devices as temporary assignments and joint teams; and
- interunit decision forums, particularly subsidiary boards, where views could be exchanged and differences resolved.

Ericsson management feels strongly that its most effective integrating device is strong central control over key elements of its strategic operation. Unlike ITT, Ericsson has not had strong or sophisticated administrative systems (it introduced strategic plans only in 1983), but its operating systems have long been structured to provide strong worldwide coordination. Knowing that local modifications would be necessary, the company designed its digital switch as a modular system with very clear specifications. National units could custom-tailor elements of the design to meet local needs without compromising the integrity of the total system design. Similarly, Ericsson's global computer-aided design and manufacturing system allowed the parent company to delegate responsibility for component production and even design without fear of losing the ability to control and coordinate the entire manufacturing system.

Rather than causing a centralization of decision making, management argues that these strong yet flexible operating systems allow them to delegate much more freely, knowing that local decisions will not be inconsistent or detrimental to the overall interests. Rather than managing the decisions centrally, they point out they are managing the parameters of decisions that can be made by local units, thereby retaining the flexibility and entrepreneurship of those units.

But in addition to strong systems, interunit cooperation requires good interpersonal relations, and Ericsson has developed these with a long-standing policy of transferring large numbers of people back and forth between headquarters and subsidiaries. It differs from the more common transfer patterns in both direction and intensity, as a comparison with

NEC's transfer process will demonstrate. Where NEC may transfer a new technology through a few key managers, Ericsson will send a team of 50 or 100 engineers and managers from one unit to another for a year or two; while NEC's flow is primarily from headquarters to subsidiary, Ericsson's is a balanced two-way flow with people coming to the parent not only to learn, but also to bring their expertise; and while NEC's transfers are predominantly Japanese, Ericsson's multidirectional process involves all nationalities.[13]

Australian technicians seconded to Stockholm in the mid-1970s to bring their experience with digital switching into the corporate development effort established enduring relationships that helped in the subsequent joint development of a rural switch in Australia a decade later. Confidences built when a 40-man Italian team spent 18 months in Sweden in the early 1970s to learn about electronic switching, provided the basis for the subsequent decentralization of AXE software development and the delegation of responsibility for developing the corporate transmission systems to the Italian company.

But any organization in which there are shared tasks and joint responsibilities will require additional decision-making and conflict-resolving forums. In Ericsson, often divergent objectives and interests of the parent company and the local subsidiary are exchanged in the national company's board meetings. Unlike many companies whose local boards are pro forma bodies whose activities are designed solely to satisfy national legal requirements, Ericsson uses its local boards as legitimate forums for communicating objectives, resolving differences and making decisions. At least one, and often several senior corporate managers are members of each board, and subsidiary board meetings become an important means for coordinating activities and channelling local ideas and innovations across national lines.

If changes have been slow in coming, it is not for the lack of strategic clarity about the need for change but for want of the organizational ability to implement the desired change.

National Competence, Worldwide Perspective—If there is one clear lesson from ITT's experience, it is that a company cannot manage globally if its managers identify primarily with local parochial interests and objectives. But as NEC has learned, when management has no ability to defend national perspectives and respond to local opportunities, penetration of world markets is equally difficult. One of the important organizational characteristics Ericsson has been able to develop over the years has been

a management attitude that is simultaneously locally sensitive and globally conscious.

At the Stockholm headquarters, managers emphasize the importance of developing strong country operations, not only to capture sales that require responsiveness to national needs, but also to tap into the resources that are available through worldwide operation. Coming from a small home country where it already hires over a third of the graduating electrical and electronics engineers, Ericsson is very conscious of the need to develop skills and capture ideas wherever they operate in the world. But, at the same time, local managers see themselves as part of the worldwide Ericsson group rather than as independent autonomous units. Constant transfers and working on joint teams over the years has helped broaden many managers' perspectives from local to global, but giving local units systemwide mandates for products has confirmed their identity with the company's global operations. It is this ability for headquarters and subsidiary managers to view the issues from each other's perspective that distinguishes the company that can think globally yet act locally.

Conclusion: Organizational Capability is Key

There are few companies that have not recognized the nature of the main strategic tasks facing them in today's complex international business environment. Philips' managers have understood for years that they need to build global scale, rationalize their diverse product lines, and establish a more integrated worldwide strategy. And while their counterparts at Matsushita have recently made localization a company watchword, this is just the culmination of years of effort to build more self-sufficient and responsive national subsidiaries which the company recognizes it will need to remain globally competitive. If changes have been slow in coming to both companies, it is not for the lack of strategic clarity about the need for change but for want of the organizational ability to implement the desired change.

In the course of our study, we found that managers engaged in a great deal of cross-company comparison of organizational capabilities. And the managerial grass inevitably looked greener on the other side of the corporate fence. Philips' managers envied their Japanese competitors' ability to develop global products, manufacture them centrally, and have them launched into markets worldwide on a time cycle that would be virtually impossible in their own organization. On the other hand, as Matsushita's managers face growing pressure from host governments worldwide, and as they feel the vulnerabilities of their central sourcing plants in an era of the strong yen, they view Philips' worldwide network of self-sufficient, well-connected, and innovative national organizations as an asset they would dearly love to have. But the apparently small step from admiration to emulation of another company's strategic capabilities usually turns out to be a long and dangerous voyage.

What we suggest is that managers ignore battle cries calling for "standardization, rationalization, and centralization" or any other such simplistic quick-fix formulas. What is needed is a more gradual approach that, rather than undermining a company's administrative heritage, both protects and builds on it. Having built flexible central and local management capabilities, the next challenge is to link them in an organization that allows the company to do what it must to survive in today's international environment—think globally and act locally. For most worldwide companies it is the development of this transnational organizational capability that is key to long-term success.

References

1. See for example, Theodore Levitt, "The Globalization of Markets," *Harvard Business Review* (May/June 1983), pp. 92–102; Michael Porter, "Changing Patterns of International Competition," *California Management Review,* 28/2 (Winter 1986): 9–40; and Gary Hamel and C.K. Prahalad, "Do You Really Have a Global Strategy," *Harvard Business Review* (July/August 1985), pp. 139–148.
2. The research on which this article is based consisted of a three-year-long in-depth study of nine leading American, Japanese, and European multinational companies in three diverse industries. We interviewed over 235 managers in the headquarters and a number of different national subsidiaries of these companies to uncover how these companies with their diverse national backgrounds and international histories were adapting their organizational structures and management processes to cope with the new strategic demands of their operating environments. The companies studied were Philips, Matsushita, and General Electric in the consumer electronics industry; Ericsson, NEC, and ITT in the telecommunications switching industry; and Unilever, Kao, and Procter & Gamble in the branded packaged products business. The complete findings of this study will be reported in our forthcoming book *Managing Across Borders: The Transnational Solution* to be published by the Harvard Business School Press.
3. For a more detailed explication of the decentralized federation and centralized hub forms of multinational organizations, see Christopher A. Bartlett, "Building and Managing the Transnational: The New Organizational Challenge," in Michael E. Porter, ed., *Competition in Global Industries* (Boston, MA: Havard Business School Press, 1986).
4. "Rebuilding Corporate Empires—A New Global Formula," *Newsweek,* April 14, 1986, p. 40.
5. The concept of administrative heritage is explained more fully in Christopher Bartlett (op. cit.) and also in Christopher Bartlett and Sumantra Ghoshal, "Managing Across Borders: New Strategic Requirements," *Sloan Management Review* (Summer 1987) pp. 7–17.
6. The organization we describe as the transnational has a long but discontinuous history in the international management literature. The concept of such an organizational form was manifest in Howard Perlmutter's celebrated paper, "The Torturous Evolution of the Multinational Corporation," *Columbia Journal of World Business* (January/February 1969), pp. 9–18. Similarly, C.K. Prahalad and Yves Doz's idea of a multifocal organization is described in *The Multinational Mission: Balancing Local Demands and Global Vision* (New York, NY: The Free Press, 1987); Gunnar Hedlund's definition of the heterarchy in "The Hypermodern MNC—A Heterarchy?" *Human Resource Management* (Spring 1986), pp. 9–35; and Roderick White and Thomas Poyneter's description of the horizontal organization in "Organizing for Worldwide Advantage," presented at

the seminar on Management of the MNC at the European Institute for Advanced Studies in Management, Brussels, on June 9–10, 1987, are conceptually similar to what we describe as the transnational organization, though the models differ significantly in their details.

7. Westney and Sakakibara have observed a similar system of internal quasi-markets governing the interface between R&D and operating units in a number of Japanese computer companies. See Eleanor Westney and K. Sakakibara "The Role of Japan-Based R&D in Global Technology Strategy," *Technology in Society,* No. 7, (1985).
8. See Richard Rosenbloom and Michael Cusumano, "Technological Pioneering and Competitive Advantage: Birth of the VCR Industry," *California Management Review,* 29/4 (Summer 1987): 51–76, for a full description of this interesting development process.
9. See John Van Mannen and Edgar H. Schein, "Toward a Theory of Organizational Socialization," in Barry Staw, ed., *Research in Organizational Behavior* (Greenwich, CT: JAI Press, 1979) for a rich and theory-grounded discussion on how such differences in socialization processes and career systems can influence managers' attitudes towards change and innovation.
10. See Christopher Bartlett and Hideki Yoshihara "New Challenges for Japanese Multinationals: Is Organizational Adaptation Their Achilles' Heel?" *Human Resource Management,* 27/1 (Spring 1988): 1–25, for a fuller discussion of some of the personnel management implications of managing local nationals in a classic centralized hub Japanese organization.
11. The need for both feasibility and desirability for facilitating innovativeness of organizations has been suggested by Lawrence Mohr, "Determinants of Innovation in Organizations," *American Political Science Review,* 63 (1969).
12. For a detailed discussion of how managers make such choices and how new responsibilities and relationships are developed, see Christopher Bartlett and Sumantra Ghoshal, "Tap Your Subsidiaries for Global Reach," *Harvard Business Review* (November/December 1986), pp. 87–94.
13. The effectiveness of personnel transfers as an integrative mechanism in multinational companies has been highlighted by many authors, most notably by E. Edstrom and J.R. Galbraith, "Transfer of Managers as a Coordination and Control Strategy in Multinational Organizations," *Administrative Science Quarterly* (June 1977).